

SAJHRM

SA JOURNAL OF HUMAN RESOURCE MANAGEMENT



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Circulation Enquiries: orders@aosis.co.za

Journal Title: *SA Journal of Human Resource Management / SA Tydskrif vir Menslikehulpbronbestuur*
Website: <http://www.sajhrm.co.za>
General Enquiries: submissions@sajhrm.co.za

ISSN: 1683-7584 (print)
ISSN: 2071-078X (online)

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Mega Digital (Pty) Ltd, South Africa



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ISSN: 1683-7584 (print)
ISSN: 2071-078X (online)

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Job demands and resources of workers in a South African agricultural organisation

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Dates:

Received: 13 Feb. 2014

Accepted: 28 Nov. 2014

Published: 26 Mar. 2015

How to cite this article:

Asiwe, D.N., Hill, C., & Jorgensen, L.I. (2015). Job demands and resources of workers in a South African agricultural organisation. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #634, 16 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.634>

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Orientation: Understanding the job demands and resources experienced by workers in an agricultural organisation.

Research purpose: The objective of this study was to examine the validity and reliability of the Adapted Job Demands and Resources Scale (AJDRS) as well as to establish prevalent job demands and resources of employees in an agricultural organisation. Demographic differences were also investigated.

Motivation of the study: The agricultural sector of any national economy plays a very important role in the overall welfare of the country. Identifying the prevalent job demands and resources in an agricultural organisation is therefore of paramount importance since the negative consequences of employees experiencing very demanding jobs with few resources have been well documented in stress literature.

Research approach, design and method: A cross-sectional survey design was used. The sample consisted of 443 employees in an agricultural organisation. The AJDRS was used to measure the research variables.

Main findings: The findings of this research show evidence for the factorial validity and reliability of the AJDRS. Statistical differences were found with regard to the job demands and resources experienced by employees in different positions.

Practical/managerial implications: Interventions to improve the perceived job demands and resources in the organisation should focus on physical resources (equipment).

Contribution/value-add: This study contributes to knowledge concerning the job demands and resources that are prevalent in an agricultural organisation in South Africa.

Introduction

The workplace has undergone tremendous changes over the last few decades. Organisations must survive in highly competitive local and global economies. The extent to which an organisation is able to attain organisational goals and objectives through the dedication of its workforce is an important factor in the organisation's ability to remain in business (Fay & Buhrmann, 2004). Whilst most organisations now expect employees to put in extra time, effort, skills and to be flexible with regard to working hours, these organisations are not ready to offer these employees opportunities to grow, continued employment and job security (Cooper, Dewe & O'Driscoll, 2001; Maslach, Schaufeli & Leiter, 2001). Employees experience increased workloads and intense pressure to perform, as well as decreased job control (Häusser, Mojzisch, Niesel & Schulz-Hardt, 2010). These organisational changes also have an impact on individuals' jobs and could possibly influence workers' safety, health and well-being (Schaufeli & Bakker, 2004). Consequently, the once predictable and controlled work environment has become complex and unpredictable, impacting employees' energy and motivational levels, physical health and well-being (Bakker & Demerouti, 2007; French, Du Plessis & Scrooby, 2011; Nelson & Simmons, 2003; Rothmann & Jordan, 2006; Schaufeli & Bakker, 2004; Welthagen & Els, 2012).

The above discussion concurs with Rothmann, Mostert and Strydom (2006) that it is of paramount importance to investigate employees' experiences of the demands and resources in their work. The objective of this study was to investigate the job demands and resources of workers in a South African agricultural organisation. Specifically, the study aimed to (1) assess the validity and reliability of the Adapted Job Demands and Resources Scale, (2) to establish the prevalent job demands and resources of employees in an agricultural organisation and to (3) investigate differences in employees' job demands and resources that may exist based on the employees' demographic variables.

Literature review

Job demands and job resources

Different models have been propounded to explain the interaction between the demands of a job and the resources available to the employee. These models include the Job Characteristics model (Hackman & Oldham, 1976, 1980), the Job Demands Control model (Karasek, 1979), the Person-Environment Fit model (Lazarus & Folkman, 1984) and the Job Demands-Resources model (Demerouti, Bakker, Nachreiner & Schaufeli, 2001), to name a few.

The Job Characteristics model of Hackman and Oldham (1976, 1980) suggests that enriched or complex jobs are principally linked with employees' positive disposition to work and the work environment. These positive dispositions result in positive organisational outcomes such as increased job satisfaction, motivation and work performance. The Job Demands Control model of Karasek (1979) was developed in order to better understand job stress. The central assumption of this model is that the negative consequences of job stress could be moderated by an employee's total control over all aspects of their job, especially with regard to decision-making (Karasek & Theorell, 1990). According to this model, employees experience satisfactory control and job responsibility when they participate in organisational decision-making and have control of work conditions, the work setting and the amount of work (Mueller & McCloskey, 1990).

Another model of work-related stress is the Person-Environment Fit model, which was developed by Lazarus and Folkman (1984). This model views stress as resulting from a misfit between the requirements of the job (e.g. demands and resources) and the values, skills and traits of the individual (Cooper *et al.*, 2001; Winefield *et al.*, 2003). Implicit in this model is the assumption that such misfit may or may not take place depending on the person's ability to handle or cope with the situation.

A fourth model of job stress is the Job Demands-Resources model, which extends previous job stress models (Karasek, 1979; Siegrist, 1996) by incorporating ideas regarding different demands and resources, irrespective of the professional group being considered (Hakanen, Bakker & Demerouti, 2005). According to the developers of the Job Demands-Resources model (Demerouti *et al.*, 2001), every working condition can be categorised into two broad components, labelled job demands and job resources.

Job demands refer to aspects of the job that could possibly cause strain in situations where they surpass the individual's adaptive skills (Rothmann *et al.*, 2006). Job demands are therefore those physical, social or organisational aspects of the job that require sustained physical or mental effort and are associated with certain physiological and psychological costs (Demerouti *et al.*, 2001; Schaufeli & Bakker, 2004). Quantitative job demands refer to the amount of work required and the available time frame, whilst qualitative workload concerns the employees' affective responses to their jobs (Cooper

et al., 2001). Work overload or high demands may also occur if an individual does not have the necessary skills, abilities and support to meet these demands. Therefore, individuals who are overloaded with work could experience stress (Demerouti *et al.*, 2001; Karasek, 1979; Schaufeli & Bakker, 2004). Examples of excessive quantitative job demands that employees may be exposed to include feeling overwhelmed by perceived time pressures and deadlines, excessive work demands and informational overload (Montgomery, Peeters, Schaufeli & Den Ouden, 2003).

Job resources refer to the degree to which individual employees are offered career or growth opportunities by their jobs (Rothmann *et al.*, 2006). Job resources refer to those physical, psychological, social or organisational aspects of the job that may be functional in achieving work goals, reducing job demands, and the associated physiological and psychological costs, and stimulating personal growth and development (Bakker & Demerouti, 2007; Demerouti *et al.*, 2001; Schaufeli & Bakker, 2004). Job resources include social support (supervisory and collegial), job enhancement opportunities in the form of increased control, participation in decision-making, reinforcement (Richardsen & Burke, 1993), as well as recognition, opportunities for growth and rewards (Rothmann, 2002).

According to Rothmann *et al.* (2006), job resources exist at the following levels within an organisation: (1) at the organisational level (growth opportunities, remuneration, job security), (2) at the level of the organisation of work role (role clarity, participation in decision-making), (3) at the interpersonal level (team climate, supervisory and collegial support) and (4) at the task level (task significance, task performance feedback, task identity).

Job demands and resources in different organisations

Work-related stress research in the South African context indicates that different organisations experience different types of job demands and job resources (Rothmann, 2005). Previous researchers in South Africa have identified specific job demands and resources which could be potential causes of stress in different occupations. Specific professions and industries studied include emergency workers (Naudé & Rothmann, 2003), quantity surveyors (Bowen, Cattell & Edwards, 2013), local government (Rothmann, Jackson & Kruger, 2003), engineering (Rothmann & Malan, 2004), mining workers (Hodgskiss & Edwards, 2013), educators (Jackson & Rothmann, 2005; De Witt & Lessing, 2013), insurance (Coetzer & Rothmann, 2006), reformed church ministers (Buys & Rothmann, 2010), the South African Police Service (Pienaar & Rothmann, 2006; Rothmann, Kleyn, Louw & Makgala, 2003), nursing (Rothmann, Van der Colff & Rothmann, 2006), pharmacists (Rothmann & Malan, 2007) and academics (Rothmann & Barkhuizen, 2008; Rothmann *et al.*, 2006).

Most of these research studies highlighted the most prevalent job demands as being work overload, excessive paperwork,

insufficient time to meet deadlines, performing tasks not in their job description (role ambiguity), working long hours and having little control over their work; meanwhile, insufficient remuneration, lack of recognition, lack of growth and advancement opportunities, poorly motivated staff members, colleagues not doing their jobs, staff shortages, job insecurity, lack of control and lack of organisational, managerial and collegial support were identified as problems in terms of job resources (cf. Barkhuizen & Rothmann, 2008; Coetzer & Rothmann, 2006; Jackson & Rothmann, 2005; Naudé & Rothmann, 2003; Pienaar & Rothmann, 2006; Rothmann, 2005; Rothmann, Kleyn, Louw & Makgala, 2003; Rothmann & Malan, 2004).

The agricultural sector: The agricultural sector of a country is important in providing food and revenue for its populace as well as raw materials and fibre for a variety of industries. Agriculture also provides the opportunity to assure food security for the poor and to contribute to a climate of low inflation (Zuma, 2008). According to the Alliance for Commodity Trade in Eastern and Southern Africa (ACTESA, 2013) it is vital that the agricultural sector of South Africa functions optimally since it contributes to the economy of the nation. Apart from farmers and farm workers, the agricultural sector also includes agricultural organisations whose primary objective is to promote all agricultural-related sectors through research and technological development (Agricultural Research Council [ARC], 2007).

Researchers in agricultural research continue to strive for excellence in their pursuit of scientific solutions aimed at improving people's quality of life (Moephuli, 2008). However, they also face many challenges, such as the fact that the recruitment and retention of skilled scientists has become increasingly difficult for research institutes. There is also evidence of a decline in the number of applicants to research posts, leading in some cases to an inability to appoint scientists (ARC, 2008). The main factors contributing to difficulties in recruiting and retaining scientists include remuneration (the agricultural institutions offer low pay levels in comparison with other science councils, universities, government departments and the private sector), competitors remaining the main contributors, a shrinking pool of scientists from which to draw, competition from other employers, poor retention policy, inadequate recognition and appreciation, lack of fit with company culture and inappropriate fit for the role (ARC, 2008).

Another challenge in agricultural research includes the presence of unforeseen crisis situations such as attempting to modernise some of the laboratories and equipment so that new crops and animals and new techniques can be researched (ARC, 2005). In order to achieve organisational goals, teams or work groups need adequate equipment (Robbins, 2005). According to Guest (2004), advances in technology lead to the speeding up of the world of work. Thus, speed and flexibility of response form a vital basis for having a competitive advantage (Guest, 2004). According to a recent report by an

agricultural research institution, the allocation of funds for infrastructure renewal and equipment replacement remains highly inadequate and presents a challenge for the relevant workers (ARC, 2013). This lack of adequate equipment could place high levels of physical and psychological demands on the workers, which may potentially predispose them to strain and consequently affect their performance on the job.

However, to date no research studies have investigated these job demands and resources experienced by workers in the agricultural sector in South Africa. Research studies have mostly focused on stress and to date the research population has been mostly farmers (Deshpande & Shah, 2007). This finding is indicative of the importance of investigating job demands and resources in this sector as the negative effects of demands and lack of resources have clearly been demonstrated in the stress literature and have serious implications for the employees' well-being as well as that of the organisation.

Measuring job demands and resources

South African studies have reported results in support of the Job Demands Resources model (Bakker & Demerouti, 2007; Demerouti *et al.*, 2001; Schaufeli & Bakker 2004). These results suggest that different work characteristics can be grouped into two categories, corresponding to the theoretical categories of job demands and job resources, in different organisations. Studies by Fourie (2003), Jackson, Rothmann and Van de Vijver (2006), Koekemoer and Mostert (2006), Rothmann and Jordan (2006), Rothmann *et al.* (2006), Rothmann and Jorgensen (2007), and Barkhuizen and Rothmann (2008) all yielded two-factor structures, suggesting that job demands and job resources are characteristics of work environments.

However, Rothmann *et al.* (2006) state that more research is needed in order to develop a valid measure that could be used in a wide variety of contexts. This research needs to focus specifically on job demands and resources in different occupations and organisations in South Africa and is necessary in order to allow for comparisons between different occupations and organisations (Rothmann *et al.*, 2006). Jackson and Rothmann (2005) developed the Job Demands and Resources Scale (JDRS) for educators. The scale consists of seven reliable factors, namely Organisational support, Insecurity, Reward, Overload, Growth opportunities, Control and Relationship with colleagues (Jackson & Rothmann, 2005). Hill, Mostert and De Bruin (2012) adapted the instrument for use with police members in the North West and found it to be reliable.

The following definitions of the factors provided by Jackson and Rothmann (2005) were adopted for this study:

1. *Organisational support* is defined as the employee's relationship with their supervisor, receiving information on their work, communication and participation in decisions about the nature of their work.
2. *Insecurity* refers to a person's uncertainty about the future.

3. *Reward* refers to whether the employee can live comfortably on their pay, whether the employee thinks they are paid enough for the work and whether the job offers opportunities for the employee to progress financially.
4. *Overload* refers to physical, mental and emotional demands, time pressure, pace and amount of work.
5. *Growth opportunities* refers to having access to opportunities for personal growth and development, including learning on the job.
6. *Control* implies having opportunities for independent thought and action, taking part in planning activities, freedom in carrying out work and making a significant contribution to the organisation.
7. *Relationship with colleagues* refers to availability of colleagues to help, contact possibilities with colleagues, whether the employee can count on colleagues and whether the employee gets on well with colleagues.

Other South African studies have obtained similar results to those reported by Jackson and Rothmann (2005). These studies provide support for the following constructs: Organisational support (Barkhuizen & Rothmann, 2008; Hill *et al.*, 2012; Phale, 2008; Rothmann & Jordan, 2006; Rothmann *et al.*, 2006; Rothmann & Jorgensen, 2007), Job insecurity (Barkhuizen & Rothmann, 2008; Bosch, Ribeiro & Becker, 2012; Hill *et al.*, 2012; Rothmann *et al.*, 2006), Reward (Hill *et al.*, 2012; Jackson & Rothmann, 2005), Overload (Barkhuizen & Rothmann, 2008; Bosch *et al.*, 2012; Hill *et al.*, 2012; Phale, 2008; Rothmann *et al.*, 2006), Growth opportunities (Barkhuizen & Rothmann, 2008; Jackson & Rothmann, 2005; Phale, 2008; Ribeiro, Bosch & Becker, 2013; Rothmann & Jordan, 2006; Rothmann *et al.*, 2006; Rothman & Jorgensen, 2007) and Control (Jackson & Rothmann, 2005).

In order to determine the nature of the job demands and resources experienced in the agricultural organisation, the JDRS was adapted specifically for the agricultural sector. Subsequently, the following hypotheses were formulated regarding the adapted JDRS (AJDRS):

- **Hypothesis 1a:** The AJDRS is a valid instrument for use in a sample of agricultural workers in South Africa.
- **Hypothesis 1b:** The AJDRS is a reliable instrument for use amongst a sample of agricultural workers in South Africa.

Job demands, job resources and demographic variables

Agricultural workers are not a homogeneous group of employees. It would therefore be inappropriate to examine the job demands and resources of the employees in an agricultural organisation without taking cognisance of their demographic differences. Vokic and Bogdanic (2007) have drawn attention to the fact that the stress process is not a simple phenomenon, but rather a complex process that results from the interaction of various variables.

Previous researchers have examined the differences between various demographic groups in terms of how they perceive

their job-related occupational stressors and resources. Variables that have been studied include: (1) gender (e.g. Antoniou, Polychroni & Vlachakis, 2006; Bonke, Deding & Lausten, 2009; Fotinatos-Ventouratos & Cooper, 2005; Sverke, Hellgren, Näswall, Chirumbolo, De Witte & Goslinga, 2004; Vakola & Nikolaou, 2005; Van Zyl, 2005), (2) age (e.g. Antoniou *et al.*, 2006; Buitendach, 2004; Buitendach, Oosthuizen & Van Wyk, 2005; Marinaccio *et al.*, 2013; Rannona, 2003; Vakola & Nikolaou, 2005), (3) race, nationality and ethnic background (e.g. Bosch *et al.*, 2012; Buitendach *et al.*, 2005; Pienaar & Rothmann, 2006; Lu, Cooper, Kao & Zhou, 2003; Ribeiro *et al.*, 2013), (4) hierarchical level or rank (e.g. Barkhuizen, 2005; Coetzer & Rothmann, 2006; Naudé & Rothmann, 2003; Pienaar & Rothmann, 2006; Ribeiro *et al.*, 2013; Winefield *et al.*, 2003; Winter, Taylor & Sarros, 2000), (5) educational level (e.g. Barkhuizen & Rothmann, 2008; Buitendach, 2004; Buitendach *et al.*, 2005; Marinaccio *et al.*, 2013; Näswall & De Witte, 2003; Vakola & Nikolaou, 2005), (6) marital status (e.g. Bosch *et al.*, 2012; Marinaccio *et al.*, 2013; Ribeiro *et al.*, 2013) and (7) number of years in a position (e.g. Buitendach *et al.*, 2005; Winefield *et al.*, 2003).

With regard to gender, researchers have found that men and women working in the same job level differ significantly in their perception of work stressors and resources. Antoniou *et al.* (2006) and Fotinatos-Ventouratos and Cooper (2005) found that female employees experienced higher levels of occupational stress than their male counterparts. There have been conflicting findings concerning the perceived job insecurity of men and women. Van Vuuren (1990) distinguishes between affective insecurity, which refers to the employee's subjective interpretation of a situation, and cognitive insecurity, which refers to uncertainty about the future. Sverke *et al.* (2004) found that women experienced higher levels of job insecurity than men. In addition, a stronger correlation was identified between the resultant stress due to insecurity and its adverse effects for men than for women. Sverke, Hellgren, Näswall and Chirumbolo, De Witte and Goslinga (2001) attribute this to the fact that men are likely to experience more strain in relation to job insecurity because they traditionally bear the burden of supporting their families financially. However, Buitendach *et al.* (2005) and Van Zyl (2005) found no difference in the insecurity levels of women and men. Women tend to report greater job satisfaction with regard to job resources such as pay and career opportunities than men (Bonke, Deding & Lausten, 2009; Clark, 1997), possibly considering the intrinsic characteristics of the job and work-life balance as higher priority than pay and career opportunities (Bender, Donohue & Heywood, 2005; Clark, 1997). Additionally, job resources such as control and peer support were more prevalent amongst men than amongst women (Marinaccio *et al.*, 2013).

In relation to age, De Witte (1999) found that employees between the ages of 30 and 50 years are more likely to experience strain at the likelihood of job loss than younger and older employees. This may be due to the fact that younger employees have fewer financial obligations and better chances of finding alternative employment than their

older colleagues. In relation to older employees, it is possible that employees over the age of 50 are already preparing for retirement and are therefore less concerned with job security. However, research by Rannona (2003), Buitendach (2004) and Buitendach *et al.* (2005) found that older employees do experience high levels of job insecurity, frequently related to the fact that they are often the first victims of downsizing in any organisation. Concerning the prevalence of job resources amongst different age groups, Marinaccio *et al.* (2013) found that older employees (> 50 years) experienced higher levels of job control than the younger employees (< 30 years).

Pienaar and Rothmann (2006) found that race had an impact on the experience of occupational stress. In their study on the South African Police Service (SAPS), race impacted significantly on the experience of occupational stress, with white and Indian employees experiencing stress more intensely than their black and mixed-race counterparts. In their study of the mining industry, Buitendach *et al.* (2005) found evidence of differences in the job insecurity of white and black employees, with white employees experiencing higher levels of cognitive job insecurity than their black colleagues. These authors speculated that the differing levels may be due to the implementation of the *Employment Equity Act* (No. 55 of 1998), which created more employment opportunities for black employees than for their white and mixed-race counterparts. These findings differ from those reported by Manski and Straub (2000) and Elbert (2002), who found that fear of possible job loss was higher for black persons than white persons. According to Jacobson (1991) these conflicting findings may be due to the fact that although insecurity is a perceptual phenomenon (which varies between employees working in the same organisation, because of the different ways in which people perceive things due to circumstantial factors and personal traits), employees do not exist in isolation, and so an employee's understanding of a situation will be shared by other employees in an organisation.

With regard to work overload Bosch *et al.* (2012) found significant differences in the work overload experiences of female chartered accountants in relation to race, with white participants feeling the most overload, followed by Asian, black, mixed race and Indian participants. However, in terms of reward and growth opportunities, female white chartered accountants reported higher levels of financial advancement and career growth opportunities than black female chartered accountants (Ribeiro *et al.*, 2013). This may be due to the fact that white qualified chartered accountants previously experienced advantages from exposure to client and job experience (Ribeiro *et al.*, 2013). These previous experiences have primed them to exploit growth and development opportunities and consequently these employees rate their current and future earning potential in their organisation higher than their black counterparts. However, these black employees may well be more highly paid as a result of motivational packages aimed at retaining them in the organisation (Ribeiro *et al.*, 2013).

In terms of job resources, Ribeiro *et al.* (2013) found differences between the white and black research participants in terms of reward and growth opportunities, with white participants reporting higher levels of financial advancement and career growth opportunities than black participants. This perception may be due to the fact that white participants previously experienced advantages from exposure to client and job experience, preparing them to utilise growth and development opportunities and causing them to rate their current and future earning potential in their organisation higher than their black counterparts, although in reality black employees may well be more highly paid as a result of motivational packages aimed at retaining them in the organisation (Ribeiro *et al.*, 2013).

Barkhuizen (2005) and Winter *et al.* (2000) investigated the effects of rank on employees' perceived strain. They found that rank impacted significantly on job demands. In the study by Winefield *et al.* (2003) it was found that academics differed in terms of the level of job demands associated with rank, with associate professors experiencing higher levels of job demands than junior lecturers and lecturers. In addition, the study found that working hours for associate professors and professors increased in relation to occupational level (Winefield *et al.*, 2003). Similarly, Pienaar and Rothmann (2006) found that rank impacted significantly on the experience of occupational stress in the police. Constables experienced lower degrees of stress in relation to job demands and a lack of support than other police members. Constables also experienced stress less often because they were not exposed to the demands and lack of support to the same degree and duration as other police members (Pienaar & Rothmann, 2006). Other studies have found that, as people's age, experience and rank within their organisation increase, they tend to take on more responsibility and as a result experience an increase in job demands (Osipow, Doty & Spokane, 1985). This is in keeping with the findings reported by Sager (1990), who suggested that the particular extra job responsibilities of managers in comparison to those of salespeople should be considered stress factors.

According to Roskies and Louis-Guerin (1990), managers might react more negatively than their employees to the threat of job loss, because they are more likely to feel guilt, self-doubt and despair when they experience career setbacks. With regard to growth opportunities, trainee chartered accountants reported lower levels of opportunity for growth than qualified chartered accountants (Ribeiro *et al.*, 2013). In explaining this finding Ribeiro *et al.* (2013) suggest that trainees function in apprentice roles and are therefore likely to be overcome by feelings of lack of confidence in their ability to grow, possibly as a result of the amount of work they have to complete. In addition, trainees have limited opportunities for promotion whilst in training and only qualified chartered accountants are able to attain senior management positions. Coetzer and Rothmann (2006) found that, when compared with professional and managerial staff, clerical staff scored significantly higher on stressors

associated with resources and communication, work relationships, control, overload and job characteristics. Naudé and Rothmann (2003) also found that emergency workers and management reported higher levels of job demands than medical specialists and support services.

Differences have been found recently in terms of job resources and rank or job position: employees in manager or high seniority positions tend to score lower on job resources such as job control, positive work relationships and supervisory support, whilst scoring high on growth opportunities and role clarity (Marinaccio *et al.*, 2013; Ribeiro *et al.*, 2013).

In relation to the connection between education and workers' perception of stress, Dua (1994) reported that academics with a 5-year to 7-year degree experienced higher levels of job demands than their colleagues with lower qualifications. These results suggest that level of education is related to the level of perceived job demands. However, this finding was not supported in a study by Barkhuizen and Rothmann (2008). According to Näswall and De Witte (2003), educational level plays a vital role in an employee's perception of job insecurity as it may determine the employee's chance of finding alternative employment. Employees with higher levels of education are considered better equipped with the necessary expertise needed for employment. Buitendach *et al.* (2005) also found level of education could impact perception of job insecurity, with employees with lower than Grade 12 certificates showing higher levels of affective job insecurity than those with at least a degree. However, employees with a degree experienced higher levels of cognitive job insecurity. This result was confirmed in a study conducted by Buitendach (2004). These results may be due to the fact that highly educated employees may struggle to find alternative employment due to being overqualified or expecting high levels of remuneration (Buitendach *et al.*, 2005). Lastly, in terms of job resources and education, Marinaccio *et al.* (2013) found that employees with a post-school education tend to have more positive perceptions and scores on job control than those with only a school qualification. The reason for this could be adduced to the fact that whilst their rank increases, workers are more likely to attain higher levels of autonomy (Marinaccio *et al.*, 2013).

Marital status has also been found to be significantly related to perceived occupational stress levels. Married people, possibly because of their work-home conflict, experience higher levels of stress than single people (Vokic & Bogdanic, 2007). This was confirmed in a research study conducted by Bosch *et al.* (2012), who found significant differences in the work overload levels of employees based on marital status. In this study, female accountants who were either married or in a relationship experienced more work overload than their single colleagues. Ribeiro *et al.* (2013) found that qualified chartered accountants who were in a relationship reported greater satisfaction with their remuneration than what was reported by their single colleagues. This may be due to the fact that individuals in a relationship share

costs with their partners (Ribeiro *et al.*, 2013). In addition, chartered accountants in relationships reported higher levels of growth opportunities than those reported by their single colleagues. According to Ribeiro *et al.* (2013), this could be attributed to the fact that the employees in a relationship 'are more comfortable and feel more able to access growth opportunities' (p. 24). Marinaccio *et al.* (2013) also found that married employees perceived higher levels of job autonomy and role ambiguity than unmarried counterparts, ascribing the results to the closer societal integration and acceptance of married individuals over unmarried individuals.

Researchers have also identified number of years spent in a workplace as an important variable in relation to employees' perceptions of stress. This is because new employees first have to understand the organisational structures and ethics, then understand the organisational expectations in relation to performance and then find a balance between various workplace demands (Sorcinelli, 1994). Based on the age of employees Osipow *et al.* (1985) conclude that younger academics are less likely to cope with occupational stressors than their older counterparts. However, older academics tend to have more responsibilities and frequently report increasing pressure and work overload (Winefield *et al.*, 2003). However, a study by Buitendach *et al.* (2005) found no evidence for differences in insecurity based on tenure amongst employees in the mining industry. With regard to job resources, Marinaccio *et al.* (2013) found that employees with more than 5 years in their current job reported more negative perceptions of relationships, peer and managerial support.

Based on the aforementioned, the following hypothesis is presented:

- **Hypothesis 2:** There are significant differences in the perceived job demands and resources of employees in an agricultural organisation based on differences in demographic variables.

Method

Research approach

For the purposes of the adaptation phase of the measuring instrument, a quantitative methodological design was used. In this approach, the researcher is interested in the development of new methods (such as questionnaires, scales and tests) of data collection (Mouton, 2001). In order to test the research hypotheses, an explorative research design was used. The exploratory research approach was deemed relevant to this study because it allowed for the generation of insight into the reliability and validity of the adapted measuring instrument (see Durrheim, 2007). It also allowed for the identification of prevalent job demands and resources as well as the investigation of differences in the perceived job demands and resources of different demographic groups of workers in an agricultural organisation.

Measures

Research participants

A survey design, specifically a cross-sectional design, in which a sample is drawn from the target population at a particular time (Shaughnessy, Zechmeister & Zechmeister, 2006), was used to achieve the research objectives. The sample consisted of employees from a South African agricultural organisation based in various locations across South Africa. Participation was voluntary. Employees from all departments, job groups and educational levels were included. The biographical characteristics of the participants are presented in Table 1.

Table 1 illustrates that an almost equal number of men (49.9%) and women (49.0%) participated in the survey. More than half of the participants (55.8%) were African and 52.4% were married. Most of the participants' first language was an African language (53.8%), whilst 37.2% indicated Afrikaans as their first language. A total of 62.3% participants were between the ages of 31 and 50 and 19.4% had a master's degree. The majority of the sample ($n = 356$) were employed as research assistants, research technicians or researchers and had been in their current position as well as in the organisation for mostly between 1 and 5 years. Missing cases were present due to incomplete biographical questionnaires.

Measuring instrument

The JDRS (Jackson & Rothmann, 2005) was adapted for use in this study and was used to measure the job demands and resources of employees in an organisation within the agricultural sector. The JDRS was originally developed to measure the job demands and resources of educators (Jackson & Rothmann, 2005). The scale consists of 48 items measuring pace and amount of work, mental load, emotional load, variety in work opportunities to learn, independence in work, relationship with colleagues, relationship with immediate supervisor, ambiguities about work, information,

TABLE 1: Biographical information of participants ($N = 443$).

Item	Category	<i>f</i>	%
Gender	Male	221	49.9
	Female	217	49.0
	Missing cases	5	1.1
Race	African	247	55.8
	Mixed race	19	4.3
	Indian	3	7.0
	White	170	38.4
	Missing cases	4	0.9
Marital status	Single	124	28.0
	Engaged	18	4.1
	Married	232	52.4
	Living together	16	3.6
	Separated/Divorced	24	5.4
	Widow/Widower	16	3.6
	Other	5	1.1
	Missing cases	8	1.8

Table 1 continues →

TABLE 1 (Continues...): Biographical information of participants ($N = 443$).

Item	Category	<i>f</i>	%
Language	Afrikaans	165	37.2
	English	21	4.7
	isiNdebele	5	1.1
	isiXhosa	6	1.4
	isiZulu	26	5.9
	Sepedi	64	14.4
	Sesotho	59	13.3
	Setswana	38	8.6
	siSwati	14	3.2
	Tshivenda	18	4.1
	Xitsonga	8	1.8
Other	14	3.2	
Missing cases	5	1.1	
Age	20–25	28	6.3
	26–30	53	12.0
	31–35	73	16.5
	36–40	60	13.5
	41–45	72	16.3
	46–50	71	16.0
	51–55	37	8.4
	55+	44	9.9
	Missing cases	5	1.1
Education	Grade 9–11	59	13.3
	Grade 12	60	13.5
	Certificate/Diploma	70	15.8
	Bachelor's degree	44	9.9
	Honours degree	42	9.5
	Master's degree	86	19.4
	PhD	51	11.5
	Other	24	5.4
	Missing cases	7	1.6
Position	Research assistant	124	28.0
	Research technician	122	27.5
	Researcher	110	24.8
	Programme manager/ Specialist scientist	17	3.8
	Support staff	62	14.0
	Missing cases	8	1.8
Years in position	1–5	195	44.0
	6–10	79	17.8
	11–15	48	10.8
	16–20	37	8.4
	21–25	33	7.4
	26–30	35	7.9
	30+	12	2.7
	Missing cases	4	0.9
	Years in organisation	1–5	152
6–10		75	16.9
11–15		49	11.1
16–20		51	11.5
21–25		51	11.5
26–30		39	8.8
30+		22	5.0
Missing cases	4	0.9	

f, frequency.

participation, contact possibilities, remuneration and career possibilities. Jackson and Rothmann (2005) found that the dimensions of the JDRS consisted of seven reliable factors, namely Organisational support ($\alpha = 0.88$), Growth opportunities ($\alpha = 0.80$), Overload ($\alpha = 0.75$), job Insecurity ($\alpha = 0.90$), Relationship with colleagues ($\alpha = 0.76$), Control ($\alpha = 0.71$) and Rewards ($\alpha = 0.78$).

Adaptation of the JDRS: In adapting the JDRS for the purposes of the current study, the word 'children' was consistently replaced by the word 'clients' because the organisation deals with clients and not children, as is the case of educational settings. In addition, the words 'education department' were replaced by 'organisation/institute/division' and 'school' was replaced by 'organisation/institute'. Seven original JDRS items were rephrased to better suit the sample environment. An additional 12 items were added in order to access more information concerning job demands and resources within the agricultural sector. The final instrument consisted of 60 items and the questions were rated on a seven-point scale ranging from 1 (never) to 7 (always).

Research procedure

A South African agricultural organisation was approached and asked to participate in the study. Once the researcher received written permission from the director of human resources of the organisation to conduct the research, the research procedure commenced. The research procedure consisted of two phases: (1) adaptation of the JDRS and (2) data collection.

In order to adapt Jackson and Rothmann's (2005) JDRS, interviews were conducted with employees in the organisation. The goal of these interviews was to obtain information concerning the job characteristics of employees within the organisation. This information was used to adapt the JDRS items and to write additional, context-relevant items to add to the JDRS.

Following the adaptation of the JDRS a letter requesting participation in the survey was emailed to the employees within the organisation. The letter explained the objective of the survey, which was to investigate work-related well-being in the agricultural sector, with specific reference to levels of wellness and the ways in which employees personally evaluate different aspects of their work and work environment.

The data was collected by means of convenience sampling. Convenience sampling involves selecting participants primarily on the basis of their willingness and availability to participate in the research (Fink, 2009). Paper-and-pencil questionnaires were distributed to 511 participants who indicated their willingness to participate in this project. The participants were given a 6-week period to complete the questionnaires. At the end of this period the questionnaires were collected by the researcher. A total of 472 questionnaires were collected, resulting in a 92% response rate. However,

29 of the 472 questionnaires collected were either not properly completed or were incomplete. Subsequently, 443 questionnaires were used for statistical analysis.

Analysis

The statistical analysis was carried out with the Statistical Package for the Social Scientist (SPSS; 2011). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) were used to determine the distribution pattern of the data. To ensure that the data were normally distributed, a cut-off point of 2.00 was set for skewness (Finch & West, 1997) and 4.00 for kurtosis (Field, 2009). A skewed variable is a variable whose mean is not in the centre, whilst a kurtosed variable indicates the presence of clustering of scores (Tabachnick & Fidell, 2001). Tabachnick and Fidell (2001, p. 73) state that it is necessary to examine the skewness and kurtosis of scores before analysis as 'solutions from analysis are usually degraded if the variables are not normally distributed'.

Exploratory factor analysis was conducted to determine the construct validity of the AJDRS. Firstly, a simple principal component analysis was conducted on the items of the AJDRS and the eigenvalues and scree plot were studied to determine the number of factors to extract. Kaiser (1960) recommends extracting factors with eigenvalues higher than 1.00. Additionally, the scree plot can also be used to determine the number of factors. Cattell (1966) advises that the point of inflection of the scree plot be considered. Secondly, a maximum likelihood analysis with a direct oblimin rotation was conducted and the pattern matrix was inspected to analyse the possible factor solutions. The following criteria were considered in deciding which factors to retain: (1) as a rule of thumb, item loadings had to be more than 0.32; (2) an item was not allowed to load on more than one factor as this was considered to indicate that the item either tapped more than one factor (poor item) or that there was an overlap of factors or components; (3) a factor needed to have at least three substantive item loadings and (4) the retained factor needed to make theoretical sense (Field, 2009; Tabachnick & Fidell, 2001).

The reliability of the obtained factors was investigated using the Cronbach's alpha coefficient. Nunnally and Bernstein (1994) recommend a guideline of 0.70 as an acceptable cut-off point. The obtained factors were consequently used as input in a second-order factor analysis. Varimax rotation was used in extracting the factors because the factors were not correlated ($r < 0.30$).

Multivariate analysis of variance (MANOVA) was used to determine differences between demographic groups with regard to job demands and resources. The demographic variables included were gender, race, marital status, language, age, education, unit, position, years in organisation and years in position. MANOVA is the multivariate equivalent of analysis of variance (ANOVA) methods, and is used in instances where there is more than one dependent

variable and where the dependent variables cannot simply be combined (see Pallant, 2010). It is also used to ascertain whether changes in the independent variables have a significant effect on the dependent variables. According to Pallant (2010), when conducting a MANOVA preliminary assumption, testing should be conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance and multicollinearity. MANOVA is at its best when these assumptions are met and also when there is a substantial correlation between the dependent variables (Kerlinger & Lee, 2000). Wilks's lambda was used to test the likelihood of the data under the assumption of equal population mean vectors for all groups, against the likelihood under the assumption that the population mean vectors are similar to those of the sample mean vectors for the different groups. When an effect was significant in MANOVA, one-way analysis of variance was used to discover which dependent variables had been impacted.

The Bonferroni adjustment was used to prevent inflated type 1 error, which is the possibility of finding a significant difference when there is actually none (Pallant, 2010). According to Pallant (2010, p. 295), 'a Bonferroni adjustment in its simplest form, involves dividing your original alpha level of .05 by the number of analysis that you intend to do'. Therefore, because there were eight dependent variables in this study, the level of significance was set at 0.006. The Games-Howell procedure was used to determine whether there were any statistical differences between the groups. This procedure was chosen because sample sizes were different (Field, 2009). Although the *p* value demonstrates whether an effect actually exists, it does not disclose the size of the effect; therefore, it is imperative to report both the statistical significance and the substantive significance (effect size) (Sullivan & Feinn, 2012). According to Cohen (1988), when determining statistical significance the following guidelines should apply: a value between 0.10 and 0.50 indicates a small effect, a value between 0.50 and 0.80 indicates a medium effect and a value above 0.80 indicates a large effect. In terms of the current study, a cut-off point of 0.50 (medium effect) was set for the practical significance of the differences between group means. According to Kirk (1996), statistical significance determines whether research results are attributable to chance or sampling variability, whilst practical significance determines whether the results can be used within real life. Due to this reasoning, only results that are both statistically and practically significant will be reported.

Ethical considerations

Ethical aspects attended to included obtaining written permission from the organisation as well as from the individual participants. Participation in the study was voluntary and participants were assured of confidentiality. The objectives of the study were explained to the participants at their place of work and each questionnaire and consent form was accompanied by a letter explaining the rationale

of the study and indicating the participant's voluntary participation in the research.

Results

In order to examine the distribution pattern of the scores, descriptive statistics (means, standard deviation, skewness and kurtosis) were used to explore the data on the initial 60 items of the AJDRS (see Table 2).

TABLE 2: Descriptive statistics of the initial 60 adapted Job Demands and Resources Scale items (*N* = 443).

Item	M	SD	Skewness	Kurtosis
Item 1	4.99	1.52	-0.52	-0.09
Item 2	4.79	1.49	-0.48	-0.01
Item 3	4.84	1.49	-0.19	-0.57
Item 4	5.59	1.26	-0.82	0.63
Item 5	4.38	1.65	-0.26	-0.42
Item 6	2.65	1.66	0.85	-0.05
Item 7	4.83	1.49	-0.35	-0.27
Item 8	5.63	1.34	-0.99	0.90
Item 9	5.52	1.49	-0.99	0.56
Item 10	3.53	1.58	0.17	-0.53
Item 11	3.21	1.75	0.45	-0.55
Item 12	3.11	1.49	0.37	-0.33
Item 13	4.24	1.79	-0.27	-0.77
Item 14	4.15	1.69	-0.19	-0.60
Item 15	4.80	1.75	-0.60	-0.48
Item 16	6.20	1.19	-1.95	4.26
Item 17	5.09	1.51	-0.56	-0.20
Item 18	4.64	1.86	-0.39	-0.88
Item 19	5.67	1.43	-1.13	0.88
Item 20	6.14	1.14	-1.70	3.38
Item 21	5.46	1.42	-0.83	0.18
Item 22	5.46	1.43	-1.04	0.99
Item 23	5.77	1.40	-1.29	1.44
Item 24	5.36	1.58	-0.90	0.18
Item 25	5.27	1.46	-0.56	-0.16
Item 26	5.62	1.36	-0.86	0.40
Item 27	6.00	1.16	-1.78	4.39
Item 28	5.75	1.41	-1.35	1.69
Item 29	6.05	1.13	-1.42	2.40
Item 30	5.49	1.55	-0.99	0.57
Item 31	6.07	1.20	-1.81	4.14
Item 32	5.93	1.26	-1.48	2.32
Item 33	5.05	1.70	-0.78	-0.15
Item 34	5.35	1.39	-0.72	0.33
Item 35	5.32	1.55	-0.85	0.15
Item 36	4.92	1.77	-0.55	-0.59
Item 37	4.59	1.64	-0.24	-0.49
Item 38	4.09	1.72	0.04	-0.77
Item 39	5.04	1.66	-0.60	-0.41
Item 40	5.52	1.63	-1.08	0.45
Item 41	5.04	1.69	-0.67	-0.31
Item 42	3.11	1.86	0.59	-0.66
Item 43	5.74	1.34	-1.02	0.70
Item 44	5.79	1.31	-1.08	0.83
Item 45	5.08	1.41	-0.46	0.13
Item 46	5.43	1.40	-0.79	0.43
Item 47	4.62	1.99	-0.36	-1.03
Item 48	4.77	2.05	-0.50	-1.03
Item 49	4.48	1.97	-0.27	-1.07
Item 50	4.51	1.94	-0.27	-1.01

Table 2 continues on the next page →

TABLE 2 (Continues...): Descriptive statistics of the initial 60 adapted Job Demands and Resources Scale items ($N = 443$).

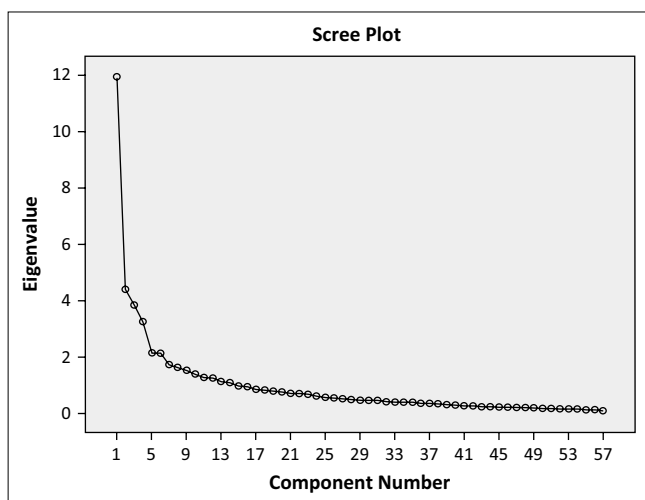
Item	M	SD	Skewness	Kurtosis
Item 51	3.05	1.74	0.42	-0.72
Item 52	3.06	1.70	0.45	-0.59
Item 53	2.84	1.75	0.64	-0.51
Item 54	2.78	1.73	0.79	-0.19
Item 55	4.50	1.80	-0.35	-0.66
Item 56	4.85	1.62	-0.40	-0.39
Item 57	2.89	1.80	0.79	-0.22
Item 58	4.75	1.63	-0.38	-0.49
Item 59	4.84	1.60	-0.40	-0.38
Item 60	4.56	1.75	-0.33	-0.68

Bold indicates the items that displayed kurtosis exceeding 4.00.
M, mean; SD, standard deviation.

The results indicated that three items (16, 27 and 31) displayed kurtosis exceeding 4.00. This suggested that these items deviated from the normal distribution and indicated the presence of clustering of scores. These items were therefore removed from further analysis. The remainder of the items presented data that was fairly normally distributed.

A principal component analysis was conducted on the remaining 57 items to determine the number of factors that could be extracted. An initial analysis of the Eigen values (larger than 1) suggested that 14 factors could be extracted, explaining 68% of the variance. However, the scree plot (see Figure 1) suggested that only seven factors (explaining 52% of the variance) should be extracted.

A maximum likelihood factor analysis with a direct oblimin rotation was then conducted on the proposed 14-factor solution. After investigating various factor solutions, a decision was taken to retain eight factors based on the criteria set out in the statistical analysis section of this article. Five items did not load on any of the factors (e.g. 'Do you have enough time to complete your work?') and three items had double loadings (e.g. 'Does your job give you the opportunity to be promoted?'). In addition, item 42 ('Do you have direct influence on your institute's/organisation's decisions?') was also removed as it lowered the Cronbach's alpha of the factor

**FIGURE 1:** Scree plot of the adapted Job Demands and Resources Scale items.

and did not match the rest of the items on the scale. These items were all excluded from further analysis. The results of the factor loadings and communalities of the retained items are presented in Table 3.

TABLE 3: Factor loadings and communality of items ($N = 443$).

Factor	Item	F	h^2
Organisational Support	Do you feel appreciated by your supervisor?	0.74	0.68
	Does your direct supervisor inform you on how well you are doing your work?	0.72	0.73
	Can you discuss work problems with your direct supervisor?	0.71	0.68
	Do you receive sufficient information on the results of your work?	0.68	0.72
	Can you count on your supervisor when you come across difficulties in your work?	0.67	0.68
	Do you know exactly what your direct supervisor thinks of your performance?	0.66	0.62
	Do you get on well with your supervisor?	0.60	0.65
	Do you receive sufficient information on the purpose of your work?	0.58	0.71
	Are you kept adequately up to date about important issues in your organisation/institute/division?	0.64	0.66
	Is it clear whom you should address within the organisation/institute for specific problems?	0.49	0.59
	Can you participate in decisions about the nature of your work?	0.36	0.57
	Do you know exactly for what you are responsible and what not?	0.42	0.60
Is the organisation's/institute's decision-making process clear to you?	0.33	0.72	
Job Insecurity	Do you need to be more secure that you will keep your current job next year?	0.95	0.83
	Do you need to be more secure that you will keep the same function level next year?	0.84	0.76
	Do you need to be more secure that you will still be working in one year?	0.83	0.78
	Do you need to be more secure that you will be working on a funded project after the current one ends?	0.62	0.52
Financial Rewards	Do you think that you are paid enough for the work that you do?	0.89	0.74
	Can you live comfortably on your pay?	0.88	0.76
	Do you think your organisation pays good salaries?	0.87	0.73
Work Overload	Does your job offer you the possibility to progress financially?	0.66	0.58
	Does your work put much demand on you mentally?	0.62	0.54
	Do you have to be attentive to many things at the same time?	0.58	0.46
	Do you work under time pressure?	0.57	0.43
	Do you have to remember many things in your work?	0.54	0.55
	Does your work put you in emotionally upsetting situations?	0.52	0.47
	Are you confronted in your work with many things that affect you personally?	0.51	0.47
	Does your work put much demand on you physically?	0.48	0.46
	Do you have to put in extra hours beyond your working time?	0.48	0.40
	Do you have contact with difficult clients in your work?	0.44	0.47
	Do you have too much work to do?	0.44	0.42
Do you have to give continuous attention to your work?	0.43	0.51	
Work-related Resources	Is/Are the equipment/implements you use in your work in good working condition?	0.94	0.71
	Do you have all the equipment/implements you need to accomplish your work?	0.78	0.67
	Do you have modern equipment/implements to do your work?	0.67	0.65

Table 3 continues on the next page →

TABLE 3 (Continues): Factor loadings and communality of items ($N = 443$).

Factor	Item	F	h^2
Growth opportunities	Does your organisation/institute give you opportunities to follow training courses/workshops/conferences?	0.84	0.66
	Does your work offer you opportunities to learn on the job?	0.68	0.63
	Does your work offer you opportunities for personal growth and development?	0.42	0.58
Control	Does your job offer you opportunities for independent thought and action?	0.75	0.67
	Do you take part in the planning of your work activities?	0.74	0.70
	Can you participate in decisions about when a piece of work must be completed?	0.70	0.61
	Do you have freedom in carrying out your work activities?	0.63	0.62
	Do you think you are doing important work people can benefit from?	0.53	0.54
	Does your work contribute significantly to the growth of your institute/organisation?	0.35	0.45
Relationship with colleagues	Do you have enough contact with colleagues during working hours?	0.68	0.54
	Can you have a chat with colleagues during working hours?	0.60	0.48
	Do you talk with your colleagues regarding work-related matters?	0.49	0.62
	Do you have contact with colleagues as part of your work?	0.41	0.61

F , F -value.

The remaining 50 items represented the eight extracted factors well. These items were labelled Organisational support (13 items), job Insecurity (four items), financial Rewards (four items), work Overload (11 items), work-related resources (three items), Growth opportunities (three items), Control, (six items) and Relationship with colleagues (four items). The factor loadings for the eight AJDRS factors ranged between 0.33 and 0.95, with communalities ranging between average (0.42) and high (0.83).

The descriptive statistics, reliabilities and Pearson's product moment correlation coefficients of the obtained factors are presented in Table 4.

Table 4 shows that all the factors obtained from the AJDRS were reliable when using Nunnally and Bernstein's (1994) guideline of α values above 0.70, ranging between 0.77 and 0.92. The results also indicated that organisational support was practically and significantly related to work-related resources, growth opportunities, relationship with colleagues (medium effect) and control (large effect). Financial rewards was practically and significantly related to work-related

resources and growth opportunities (medium effect). Work-related Resources correlated practically and significantly with growth opportunities (medium effect). Growth opportunities were practically and significantly related to control (medium effect). Finally, control was practically and significantly related to relationship with colleagues (medium effect). All the reported correlations were statistically significant at the p values over 0.010 level (two-tailed).

Next, the factors were subjected to a second-order factor analysis. Principal component analysis showed that two factors, which accounted for 50% of variance, could be extracted. Oblimin rotation showed that the two factors were not related ($r = 0.08$) and varimax rotation was therefore used to extract the factors.

Table 5 shows that five factors (Organisational support, financial Rewards, work-related Resources, Growth opportunities and Control) loaded on the first factor, which was labelled job Resources. Two factors (job Insecurity and work overload) loaded on the second factor, which was labelled job demands. The eighth factor, relationship with colleagues, loaded substantially on both job resources and job demands. Hypothesis 1b is therefore accepted.

To test Hypothesis 2, MANOVA was then used to determine differences between demographic groups with regard to job demands and job resources. Firstly, preliminary assumption checking was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices and multicollinearity. No serious violations were noted with regard to the above criteria. The demographic groups included were gender, race, marital status, language, age, education, position, years in organisation and years in position. The results of the MANOVA analysis are presented in Table 6.

An analysis of Wilks's lambda (see Table 6) showed statistically significant differences in education ($F = 1.48$; $p = 0.012$) and position ($F = 1.60$; $p = 0.019$). However, when the results for the dependent variables were examined separately using a Bonferroni adjusted level of 0.006, none of the dependent variables for education recorded a significance value less than the cut-off value. The p values for Organisational support ($p = 0.028$) and Growth opportunities ($p = 0.039$) exceeded the adjusted level of 0.006. This suggests

TABLE 4: Descriptive statistics, reliabilities and Pearson's correlations of the factors.

Factor	Mean	SD	α	1	2	3	4	5	6	7
1. Organisational support	68.15	14.33	0.92	1.00	-	-	-	-	-	-
2. Job insecurity	18.37	6.85	0.87	0.03	1.00	-	-	-	-	-
3. Financial rewards	11.73	6.04	0.89	0.23*	-0.02	1.00	-	-	-	-
4. Work overload	48.91	10.05	0.80	0.03	0.13*	0.03	1.00	-	-	-
5. Work-related Resources	14.15	4.35	0.84	0.46**	0.10*	0.35**	0.02	1.00	-	-
6. Growth opportunities	14.00	4.41	0.78	0.49**	0.04	0.31**	0.09	0.36**	1.00	-
7. Control	33.86	6.19	0.83	0.58**	0.04	0.17*	0.16*	0.27*	0.47**	1.00
8. Relationship with Colleagues	22.04	4.19	0.77	0.39**	0.17*	0.12*	0.15*	0.28*	0.25*	0.41**

*, correlation is significant at the 0.01 level (two-tailed).

^a, correlation is practically significant $r > 0.30$ (medium effect).

^b, correlation is practically significant $r > 0.50$ (large effect).

TABLE 5: Second-order factor loadings of the obtained adapted Job Demands and Resources Scale dimensions.

Factors	Job resources	Job demands
Organisational support	0.80	-
Job insecurity	-	0.68
Financial Rewards	0.54	-
Work Overload	-	0.65
Work-related Resources	0.69	-
Growth opportunities	0.75	-
Control	0.70	-
Relationship with colleagues	0.51	0.48

TABLE 6: Multivariate analysis of variance – differences in job demands and job resources of demographic groups.

Variable	Value	F	df	p	Partial eta-squared
Gender	0.94	1.10	8.00	0.361	0.03
Race	0.93	1.05	24.00	0.393	0.03
Marital status	0.85	0.12	48.00	0.268	0.03
Language	0.74	1.19	88.00	0.119	0.04
Age	0.81	1.28	56.00	0.079	0.03
Education	0.78	1.48	56.00	0.013	0.04
Position	0.86	1.60	32.00	0.019	0.04
Years in position	0.88	0.92	48.00	0.622	0.02
Years in organisation	0.85	1.15	48.00	0.225	0.03

F, F-value; df, degrees of freedom.

that no significant difference exists with regard to the educational level of the workers. However, when the dependent variables for position were examined, the *p* value for job resources was below the adjusted level ($p = 0.002$). This implies that there was a significant difference with regard to the position of the employees.

Lastly, an ANOVA was performed to further investigate the relationship between the dependent variable (job resources) with regard to the position of the employees (see Table 7).

A one-way between-groups ANOVA was conducted to explore the impact of position on the perceived job resources as measured by the AJDRS. Participants were divided into five groups according to their position in the organisation (research assistants, research technicians, researchers, programme managers or specialist scientists and support staff). There was a statistically significant difference at the *p* less than 0.05 level in resources scores for the groups based on position [$F(4.429) = 4.7$; $p = 0.001$]. However, despite the fact that the results were statistically significant the actual difference in mean scores between the groups was relatively small. The effect size, which was calculated using eta-squared, was 0.04. Post-hoc comparison using Games-Howell indicated that the mean score for research technicians ($M = 13.85$; $SD = 4.13$) was significantly different from that of research assistants ($M = 15.03$; $SD = 5.14$) and support staff ($M = 15.29$; $SD = 3.46$).

TABLE 7: Analysis of variance – differences in resources in relation to position.

Item	Research assistant	Research technician	Researcher	Programme manager or Specialist scientist	Support staff	<i>p</i>	Partial eta-squared
Job Resources	15.03	13.03	13.85	14.18	15.29	0.001	0.04

*, The mean difference is significant at $p < 0.05$.

Discussion

Outline of results

This study aimed to investigate the validity and reliability of the AJDRS as well as to identify the job demands and resources that are prevalent amongst employees in an agricultural organisation. Additionally, the possible existence of differences related to various demographics was also investigated.

With regard to the first objective of the study, the results indicated that an eight-factor solution fitted the data best, explaining 54.58% of total variance. The eight factors were labelled Organisational support (F1), job Insecurity (F2), financial Rewards (F3), Overload (F4), physical Resources (equipment) (F5), Growth opportunities (F6), Control (F7) and Relationship with colleagues (F8).

The main difference between this study and Jackson and Rothmann's (2005) study was the identification of an additional factor in this study, which was labelled Physical Resources (equipment). Although this factor was not identified in Jackson and Rothmann's initial study using a sample of educators, it has been identified in various subsequent studies, including studies by Rothmann and Malan (2007, 2011), which made use of samples of hospital pharmacists. The presence of a factor relating to physical resources might be due to the fact that the majority of the participants in the present study (85.3%) were employed as research staff. In order to effectively discharge their duties, these categories of employees require specific equipment (such as planting, harvesting and storage implements and facilities) that needs to be both modern and functional (ARC, 2009). This finding clearly confirms that each organisation has its unique job demands and resources as pointed out by Rothmann *et al.* (2006).

A second-order factor analysis was carried out using the eight observed factors and resulted in a two-factor structure. The first factor was labelled Job Resources (organisational support, financial rewards, physical resources, growth opportunities and control), whilst the second factor was labelled job demands (overload and job insecurity). These findings are in accordance with findings reported by research on the Job Demands-Resources model (Bakker & Demerouti, 2007; Demerouti *et al.*, 2001; Schaufeli & Bakker 2004) as well as with the results of other South African studies (Barkhuizen & Rothmann, 2008; Fourie, 2003; Jackson *et al.*, 2006; Koekemoer & Mostert, 2006; Rothmann & Jordan, 2006; Rothmann *et al.*, 2006; Rothmann & Jorgensen, 2007). These results indicate that the AJDRS is a valid instrument for use in a sample of agricultural workers in South Africa, confirming Hypothesis 1a.

In the current study, relationship with colleagues loaded on both the job demands and job resources factors. This dual finding is supported by the literature. Literature (see Demerouti *et al.*, 2001; Schaufeli & Bakker, 2004) suggests that support from a colleague, especially within a team climate (such as the one in the agricultural organisation under investigation), could be instrumental in an employee achieving work goals. In this case support from colleagues would be viewed as a job resource. However, relationship with colleagues has also been identified as an interpersonal stressor (Basson & Van der Merwe, 1994), which could place demands on the employee. It appears that in the current study the participants perceived relationship with colleagues to be both a job resource and a job demand. This could mean that whilst relationship with colleagues could provide a participant with the necessary support in the working environment (job resource), the maintenance of good collegial relationships could place unnecessary demands on a participant.

The internal consistency of the AJDRS was assessed using the Cronbach's alpha coefficient test for reliability. The items of each of the obtained eight factors were analysed for reliability. In previous research by Jackson and Rothmann (2005), the JDRS showed good internal consistency for all the subscales. The results of the reliability tests for the current study suggest that the AJDRS is also a reliable instrument, confirming Hypothesis 1b.

Next, the differences within groups based on various demographic variables were examined. MANOVA was used to determine these differences with regard to job demands and resources. The demographic groups included were gender, race, marital status, language, age, education, position, years in organisation and years in position.

The results from the study provide partial support for Hypothesis 2, which was to examine differences in the perceived job demands and resources. No significant differences were found in the perceived job demands and resources of the employees based on gender, race, marital status, language, age, education, position, years in position or years in organisation. Although it initially seemed that there was significant difference in perceived organisational support based on education, no statistically significant difference was observed when the results for the dependent variables were examined separately using a Bonferroni adjusted level of 0.006. This result indicates that all the employees perceived organisational support in the same way. The mean score of the employees with regard to organisational support showed that the employees often experience organisational support. The organisation under investigation communicates with its employees through a centralised email system and strives to ensure that employees are aware of all developments in the organisation as well as in the various institutes. Employees are also given written job descriptions, thus ensuring that all employees are aware of their responsibilities. Finally, the management

of the organisation places a premium on good employee relations and provides a good environment to bring out the best potential of all its employees.

The results of the MANOVA showed a significant difference in the perceived Physical Resources (equipment) of research technicians, research assistants and support staff, with research technicians perceiving lower levels of Physical Resources than research assistants and support staff. This may be due to the fact that support staff generally have the resources they need to work with (e.g. computer, printer, fax machines) and research assistants generally perform jobs that do not require sophisticated equipment. In contrast, research technicians require sophisticated equipment which may not be readily available or in good working condition. In terms of resources, the organisation faces challenges in relation to modernising some of the laboratories and equipment in order to effectively research new crops and animals as well as new techniques.

Practical implications

Firstly, work characteristics within the agricultural sector can be measured reliably and in a valid manner using the AJDRS. Also, physical resources (i.e. equipment) are deemed to be very important within the agricultural sector not only because literature (see ARC 2005) indicates the need for agricultural organisations to keep abreast with modernisation of equipment but also considering the significant differences in the mean score between groups (i.e. research technicians on the one hand and research assistants as well as support staff on the other hand) found in this current research. The necessity of appropriate physical resources should therefore be taken into account when developing interventions aiming to improve the perceived job demands and resources in the organisation.

Limitations

The major limitation of this study is that it made use of a cross-sectional survey design for data collection. The disadvantage of this type of design is that it does not allow the researcher to examine how variables manifest on different occasions. The results were also obtained only from self-report questionnaires and this increases the probability of contamination of reported relationships.

Recommendations

It is recommended that future research studies further examine the reliability and validity of the AJDRS in other agricultural organisations in South Africa. It is also recommended that research be conducted on the construct equivalence of the AJDRS, as this could not be undertaken in the present study because of the limitations in terms of the demographic makeup of the participants. Furthermore, it is recommended that the AJDRS be used in research studies with other samples of agricultural organisations outside of South Africa in order to provide a point of reference for

comparison of the job demands and resources of agricultural organisations worldwide.

In addition, based on the fact that the items in the relationship with colleagues subscale loaded on both job demands and job resources, it is recommended that this factor be refined in future studies. These studies should examine the relationship between job demands and resources and other well-being variables such as burnout and work engagement. Refinement of the relationship with colleagues subscale could involve rephrasing the items to better reflect the individual employee's experience of relationship with colleagues as either a demand or a resource. Future research studies should also involve a diary study of the job demands and resources of employees within a South African agricultural organisation in order to establish how workers' experiences of job demands and job resources vary over time. It is also recommended that the findings of this research study be utilised by agricultural organisations and managers in relation to job design.

Conclusion

The Job Demands-Resources model suggests that two vital processes at work are caused by job demands and resources, which is of relevance in the industrial psychology profession especially: (1) jobs that are poorly designed (i.e. high demands including overload) could deplete mental and physical resources, which could ultimately result in exhaustion of energy and ill health in the workplace and (2) jobs that have high job resources could reduce the experience of job demands and enhance goal achievement. The results of this study should therefore be used to assist managers in agricultural organisations in ensuring that employees in every category have sufficient resources to cope with the job demands of their positions so as to ensure that all employees are engaged in their work.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

D.N.A. (North-West University) was the lead author, wrote up the article and was responsible for data collection and data analysis. C.H. (University of Johannesburg) was the associate postgraduate supervisor of the lead author and provided data analysis and editorial input. L.I.J. (North-West University) is the postgraduate supervisor of the lead author and gave editorial input.

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Should HIV and AIDS workplace programmes still be advocated in the automotive industry?

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Dates:

Received: 25 Nov. 2013

Accepted: 21 Oct. 2014

Published: 26 Mar. 2015

How to cite this article:

Steenkamp, L., Von der
Marwitz, J., Baasner-Weihs,
F., & Pietersen, J. (2015).
Should HIV and AIDS
workplace programmes
still be advocated in the
automotive industry? *SA
Journal of Human Resource
Management/SA Tydskrif vir
Menslikehulpbronbestuur*,
13(1) Art. #609, 10 pages.
[http://dx.doi.org/10.4102/
sajhrm.v13i1.609](http://dx.doi.org/10.4102/sajhrm.v13i1.609)

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Orientation: In light of the human immunodeficiency virus (HIV) pandemic, and in order to improve competitiveness in the South African private sector, many structures have implemented subsidised workplace programmes.

Research purpose: The aim of this study was to collect baseline data regarding the knowledge, attitudes, practices and belief (KAPB) of employees in the automotive industry in relation to HIV and AIDS, in order to assess the need for HIV and AIDS workplace programmes.

Motivation for the study: Given the abundance of HIV and AIDS information, the question is whether these workplace programmes' efforts are still relevant.

Research design, approach and method: A quantitative descriptive study design was used using a self-administered questionnaire covering questions about KAPB with regard to HIV and AIDS. The data collection took place in seven automotive supplier companies in South Africa ($n = 733$) who were going to implement HIV and AIDS workplace programmes with the support of the Automotive Industry Development Centre in the Eastern Cape.

Main findings: High-risk behaviour, as indicated by sexual relations with more than one partner in the last 12 months, occurred in between 12% (management) and 42% (cleaners) of employees. All risk behaviour indicators showed significant differences ($p < 0.05$) between management and administrative staff on the one hand and technicians, operators and cleaners on the other. Despite being aware of an HIV policy, more than 50% of employees indicated that they would not be willing to disclose their status.

Practical/managerial implications: As HIV and AIDS risk behaviour and stigma remain a problem, HIV infection with associated health problems may threaten productivity in the automotive industry if no measures are taken to address the impact on employees and the company.

Contribution: This study strongly supports the conclusion that KAPB studies can still provide important information to tailor HIV workplace programmes according to employee needs.

Introduction

The automotive industry employs a large workforce in the Eastern Cape province of South Africa where the high incidence and prevalence of HIV, especially in the age group 18–49 (Health Systems Trust, 2013) remains a threat to employees' health. After years of HIV prevention campaigns, industry often assumes that employees are familiar with HIV and AIDS, have developed favourable attitudes and consequently have improved their risk behaviour. However, this may not be the case and there is a paucity of recent data concerning HIV and AIDS within the workplace in South Africa. The aim of this study was to determine whether there is a need to improve knowledge, attitudes, beliefs and practices as part of HIV and AIDS workplace programmes, specifically within the automotive industry.

Despite global, national and regional efforts to prevent new HIV infections and to lower the number of AIDS-related deaths (UNAIDS, 2009), the pandemic continues to threaten employee health as well as organisations' competitiveness and profits (United Nations Department of Economic and Social Affairs/Population Division, 2009). For instance, Van Zyl and Lubisi (2009) describe a rising trend in the incidence of HIV and AIDS in the manufacturing sector of the South African economy, with a consequent negative impact on skill levels, productivity, labour costs and production costs. This trend is despite the fact that many larger companies are more aware of the threat of this pandemic and commit resources towards managing HIV and AIDS in the workplace through appropriate programmes (Global Business Coalition [GBC] & International Finance Corporation [IFC], 2010). However, such efforts seem to focus and report more on the

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cost and impact of HIV and AIDS treatment programmes for employees (Setswe, 2009) than on HIV prevention programmes. Yet, according to the *Employment Equity Act* (Act No. 55 of 1998, Department of Labour, 2000), HIV and AIDS workplace programmes are one of the most effective ways of reducing the impact of HIV and AIDS in the workplace. The Automotive Industry Development Centre – Eastern Cape (AIDC EC) is in the process of marketing and implementing subsidised HIV and AIDS workplace programmes within the manufacturing sector of the automotive industry. Targeting mainly small and medium supplier companies, the proposed programme, supported by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), places a strong focus on HIV prevention.

In 2009 the component manufacturing industry reported having 61 000 employees in South Africa (Johannesburg Motor Show, 2013). According to the Eastern Cape Development Corporation (ECDC, 2013), the automotive sector in the Eastern Cape accounts for more than 40 000 formal jobs, 10 000 of which are at original equipment manufacturers (OEMs) and 30 000 at the 1500 supplier companies. Since the seven OEMs operating in South Africa as well as up to 100 major component manufacturers are located in the Eastern Cape, this province, with an estimated HIV prevalence of 12.2% (Shisana *et al.*, 2014), is of strategic importance as a location to the industry. More recent moves to initiate HIV and AIDS workplace programmes need to be considered against the background of existing interventions. In an assessment amongst 74 automotive companies in South Africa, more than half (52%) of the surveyed organisations have implemented holistic workplace wellness programmes (WWP) irrespective of organisation size. The results also indicated that support exists for HIV and AIDS to be incorporated into WWP rather than addressing it separately (Meyer-Weitz, Weihs & Baasner-Weihs, 2012). The question is whether all the efforts to address HIV and AIDS in this industry are necessary and relevant in a country with an apparent widespread awareness regarding HIV risk and risk behaviour.

Companies that have conducted a knowledge, attitude, practices and belief (KAPB) survey amongst their workforce have found it to be a very useful practice for the development, monitoring and evaluation of HIV programmes (Price Waterhouse Coopers, 2013; Rukambe, 2010). KAPB studies may provide important baseline information on whether HIV risk behaviour and associated stigma are prevalent amongst employees in the automotive industry and assist with the development of relevant HIV and AIDS workplace programmes. However, older research by South African Business Coalition on HIV and AIDS (SABCOHA) and Bureau for Economic Research (BER) (2003) has shown that only 14% of companies surveyed have conducted research in relation to the impact of HIV and AIDS on their labour force and that most of those were larger companies.

A more recent survey by the AIDC EC (2009) indicated that 72% of automotive component manufacturing companies

surveyed have implemented an HIV and AIDS workplace policy. The majority of companies who managed to translate HIV and AIDS policies into HIV and AIDS workplace programmes had large staff turnovers, whilst smaller companies lacked the budget to implement similar programmes. More than 50% of companies with HIV and AIDS workplace programmes did not monitor the efficacy of these programmes. This supports the finding that although most work organisations in South Africa recognise the existence and impact of HIV and AIDS, they do not consider that they are affected (International NGO Training and Research Centre [INTRAC], 2008). Many organisations mistakenly assume that employees know about HIV and AIDS, including prevention methods, and that this knowledge is translated into practice in their private lives. However, literature indicates that this might not always be the case (INTRAC, 2008); thus, awareness campaigns in the workplace can contribute towards improving HIV risk behaviour (Chimbetete & Gwandure, 2011). An HIV and AIDS workplace programme typically includes an HIV and AIDS awareness campaign focusing on HIV prevention, voluntary testing, counselling, care and support for HIV-infected employees, protection of employees from stigma and monitoring and evaluation of the programme. HIV and AIDS workplace programmes, in the context of the present research, do not refer to management of the infection with appropriate antiretroviral therapy.

The objectives of this study were to determine employees' knowledge about the transmission and visibility of symptoms, the prevention and treatment of HIV and AIDS, awareness of workplace policies, employees' sexual attitudes and practices and the relationships between job-specific skill levels and risk behaviour, as well as HIV-associated stigma. By reaching these objectives, a contribution will be made to an identified research need into the relevance of KAPB surveys in the context of HIV in the workplace in the South African automotive industry. The data obtained will indicate whether sexual risk behaviour is a concern amongst different skill levels in this sector and assist programme managers to develop and target appropriate HIV workplace programmes to address risk behaviour and stigma.

Literature review

HIV and AIDS in the South African workplace

The HIV and AIDS epidemic continues to target the most productive workforce, namely those between 15 and 49 years of age (International Labour Organisation, 2009). The International Labour Office (ILO, 2006) estimated in 2005 that 3.6 million South African labour force participants between the ages of 15 and 65 were HIV-positive. Colvin, Connolly and Madurai (2007) describe an HIV prevalence of 10.9% between 1999 and 2005 from data collected from 22 workplace surveys amongst more than 21 000 employees in South Africa. Although HIV prevalence decreased from 2005 to 2007 (Department of Health, 2008), South Africa still has one of the highest workforce HIV and AIDS statistics

in the world, with a huge impact on businesses in hard-hit regions (SABCOHA, 2014, p. 4).

One may assume that the HIV prevalence is higher in the unskilled labour force than skilled categories, but the relationship between HIV prevalence and skill level remains inconclusive. Whilst the HIV prevalence in some studies has been higher in unskilled or semi-skilled labour than in highly skilled labour categories (Colvin, Connolly & Madurai, 2007; Quattek, 2000; Shisana & Simbayi, 2002; Thurlow, Gow & George, 2009), earlier studies confirmed a constant HIV risk across all skill levels (Acott, 2000). As HIV and AIDS can affect all skill levels in companies, it may affect organisational efficiency (Fraser, Grant, Mwanza & Naidoo, 2002) as well as profitability (Lisk, 2002).

Daimler Chrysler established that the money saved by preventing a new infection in its South African workforce ranged from \$25 000 to \$280 000, depending on the skill level (Neilson, 2005). Smaller companies seem to be less concerned about the cost or impact of HIV and AIDS for the company, because they have less capacity to respond to the threat (Rosen, Feeley, Connelly & Simon, 2007). It is vital that companies understand the value of HIV prevention, by comparing the cost of HIV workplace programmes with the cost of increased absenteeism, staff turnover, recruitment and training costs, medical care, insurance, retirement funds and funeral costs (George, Surgey & Gow, 2014).

International and national trends to address the effect of HIV and AIDS

International funding from the United States of America assisted in 2004 with the launch of the President's Emergency Plan for AIDS Relief (PEPFAR), which enabled the start of the antiretroviral therapy programme in South Africa. PEPFAR announced that the funding would be halved over 5 years to 2017, which would cause the majority of staff paid by PEPFAR to return to the government sector (Health Systems Trust, 2013).

Increases in government spending were observed between 2009 and 2012 owing to the new early treatment threshold of a CD4 count of 350 cells/ μ L to qualify for antiretroviral therapy (National Treasury, 2013). It is important to realise that the majority of funding is channelled into the antiretroviral drug programme, which includes prevention of mother-to-child transmission and therefore has very little effect on prevention programmes in the workplace.

Over the years, many companies have been slow to recognise the threats to profits posed by HIV and AIDS. It is, however, the company's responsibility to adopt a healthy well-defined commitment to protect and support their employees and the workplace is an ideal place in which to disseminate prevention messages (SABCOHA, 2012). Multi-sectoral responses are mandatory to effectively address the impact of HIV and AIDS. Currently, most HIV workplace programmes refer to a range of company-based interventions including an HIV policy, HIV counselling and testing (HCT) and the

referral for treatment to local community clinics if necessary (Department of Labour, 2000).

Risk factors and stigma

To optimally explain HIV and AIDS stigma and potential intervention strategies, the Link and Phelan's model (Link & Phelan, 1995) may be explored to provide insight into the processes that cause health inequalities amongst members of groups that may be stigmatised. Stigma, also defined as labelling, stereotyping, status loss and discrimination (Link & Phelan, 2001), may be linked to discrimination at an individual level (unequal treatment) or at a structural level (loss of opportunities). Other social forces such as poverty, sexism and racism, may create overlapping and reinforcing stigmatised conditions, thus limiting access to treatment, care and support. Standardised sets of stigma measures, or indicators, would enable tracking of stigma burden over a period of time (Van Brakel, 2006). Measurable indicators could also be useful to detect if programmes or policies are inadvertently exacerbating HIV stigma in the workplace. At the moment, indicators to monitor stigma, developed by the United Nations, are available and are used mainly for research purposes. These indicators measure the socio-cognitive aspects of HIV and AIDS stigma, for example the respondents' willingness to interact with persons living with HIV and AIDS (PLWHA), the extent of blame, consideration of blame, as well as perceptions related to the partners, friends, family and community in general, and how they would react if they knew that they were infected with HIV (Mahajan *et al.*, 2008). Little research has systematically measured the HIV and AIDS stigma at the structural and institution levels. Whilst the HIV and AIDS stigma is considered a major facilitator of the epidemic, as well as self-stigmatisation (Hatzenbuehler, Phelan & Link, 2013), very few studies have demonstrated an association of stigma and increased risk behaviour. Stigma, testing and treatment is documented as a barrier to uptake in HIV testing and treatment services in numerous settings including South Africa (Dlamini *et al.*, 2009), where individuals who were not tested for HIV exhibited significantly greater stigmatising attitudes toward PLWHA.

Recent surveys reveal that there is an association between training intervention and HIV and AIDS risk reduction, with improved attitudes toward condom use (Becker, 2010; Chimbetete & Gwandure, 2011, p. 16) and improved sexual risk cognition (Becker, 2010; Chimbetete & Gwandure, 2011; East, Jackson, Peters & O'Brien, 2010). More importantly, most studies indicate that these HIV training programmes are strongly associated with a reduction in HIV-associated stigma and improved willingness to disclose HIV status (Chimbetete & Gwandure, 2011; Gilbert & Walker, 2010).

Knowledge, attitudes, practices and beliefs relating to HIV and AIDS

The AIDS risk reduction model is concerned with people's efforts to change sexual risk behaviours related to HIV infection. There are three stages in the model, the first being

recognition and labelling of certain sexual behaviours as high risk for contracting HIV. In this knowledge phase, people use information to reduce their risky sexual behaviours. The second stage involves making a commitment to female participants to reduce high-risk activities, for example by using a condom. The third phase is the development of coping skills to sustain empowerment by engaging with development interventions (Noar, 2007). This stage is broken down into three main strategies, namely continuously obtaining correct information, developing social coping mechanisms and acting on solutions to difficult situations like negotiating safer sex (Catania, Kegeles & Coates, 1990).

KAPB surveys may contribute in measuring the information coping mechanisms and actions by identifying needs, problems and barriers in programme delivery, as well as solutions for improving quality and accessibility of services (Global Business Coalition on HIV/AIDS, tuberculosis and malaria). The data collected enable programme managers to set workplace programme priorities, to estimate resources required for various activities, to select the most effective communication channels and messages, to establish baseline levels and to measure change that results from interventions and allow for advocacy. To serve as an effective monitoring instrument, questionnaires for KAPB surveys have to be carefully designed in order to use the same questionnaire over several years.

The implementation of KAPB studies focusing on employees is increasing, even though in the past such studies only focused on students, professionals and the public (Rukambe, 2010). According to Mahajan, Colvin, Rudatsikira and Ettl (2007), monitoring and evaluation remain a challenge and further research on workplace programmes resulting in the development of monitoring and evaluation strategies in respect of HIV and AIDS workplace policies is urgently required. Research to determine gaps in knowledge or barriers to change attitude and behaviour is vital to develop appropriate workplace programmes, particularly in smaller companies. The implementation of appropriate HIV workplace programmes may play a greater role in HIV prevention of employees, with obvious economic benefit to companies.

Associated research can serve as an important entry to improve the understanding of the economic and social impact of the epidemic as well as providing a sound basis for supportive services. Literature has shown that in most African countries, employees still felt discriminated against when HIV status was disclosed (Maughan-Brown, 2010; Sprague, Simon & Sprague, 2011).

In the context of the abovementioned information, it is necessary to determine whether HIV risk behaviour and HIV-associated stigma are concerns that companies need to address. The following research questions are thus posed: Is HIV risk behaviour a concern in smaller automotive companies? Are there differences between behaviour and attitudes amongst the different skill levels? Is HIV-associated

stigma still present in companies, given the fact that the majority of South African companies have adopted an HIV policy?

For this study, the researchers hypothesised that HIV risk behaviour and associated stigma are still challenges that need to be addressed in the automotive industry and that these challenges may be associated with certain skill levels. The hypothesis that information from KAPB studies can contribute to the content of HIV workplace programmes was also investigated.

Method

Research approach

A quantitative descriptive study design was followed by conducting a KAPB survey. KAPB surveys can identify knowledge gaps, cultural beliefs or behavioural patterns that may facilitate understanding and action, as well as pose problems or create barriers for HIV prevention (World Health Organization, 2008).

Research participants and sampling

The data collection took place in seven automotive companies in South Africa that will be implementing HIV and AIDS workplace programmes with the support of the AIDC EC. The population was composed of a convenience sample ($n = 733$) of all employees across all skill levels employed at the respective companies at the time of the survey.

Measuring instruments

A questionnaire was amended from a standardised KAPB survey dealing with HIV and AIDS and previously used for assessment by the AIDC EC. The attitude and belief sections were amended from 'yes' and 'no' answers to a four-point Likert scale ranging from 'strongly disagree' to 'strongly agree', in order to change the questions to be less threatening. All questions were in English. The questionnaire was divided into seven sections: Section A: Biographical Data, Section B: Healthy Lifestyle/Behaviour, Section C: Knowledge and attitudes, Section D: Knowledge of HIV and AIDS Workplace Programmes and Policies, Section E: Access to HIV Counselling and Testing Services, Section F: Care and Support and Section G: Stigma and Disclosure. Sections A to D and G are included in this article. The questionnaire was assessed by an expert panel prior to the research taking place. Before data analysis continued, internal consistency as verified by Cronbach's alpha values was determined. Results showed 0.67 for Section B: Healthy Lifestyle/Behaviour, 0.74 for Section C: Knowledge and attitudes and 0.71 for Section G: Stigma and Disclosure. All these values are acceptable for descriptive research.

Procedures

The questionnaire was distributed by staff from AIDC EC to the whole population at the seven participating companies. To ensure high participation rate and to address possible concerns of employees with regard to the confidentiality

of the research, the companies' management and HIV and AIDS coordinators briefed all employees during work-related meetings about the planned research. In addition, each employee received a letter explaining the purpose of the research and emphasising that participation was voluntary and that all questionnaires would be anonymous and confidential. The self-administered questionnaires were handed out to all employees. Employees were requested to hand in the questionnaire within a week. A sealed box was provided for this purpose. In all seven companies, 38% of employees chose to voluntarily participate in the study (ranging from 26% to 60%).

Statistical analysis

The data was analysed using MS Excel 2010 and SPSS (version 21). Frequencies and percentages were used to present categorical data. Subgroups were compared using cross-tabulation using the Pearson chi-square test to test for statistical significant differences and Cramer's V as effect size measure to indicate practical significance. Internal consistency was verified with Cronbach's alpha.

Results

The sample had a mean age of 36.4 years with a standard deviation of 9.2 (only 670 reported their age), with 68% ($n = 484$) being female. Findings indicated that 7% of the sample were in management positions and only approximately 4% were working as technicians (Table 1).

TABLE 1: Description of sample according to skill level.

Job category	Number	%	% with college or university qualification
Management	49	7.0	82
Technician	31	4.4	65
Artisan	40	5.7	42
Operator	392	55.8	19
Administrative	50	7.1	56
Cleaner	30	4.3	4
Other	111	15.8	29

$n = 733$.

TABLE 2: Percentage high-risk behaviour in various skills level categories.

Job category	Management ($n = 49$)	Technician ($n = 31$)	Artisan ($n = 40$)	Operator ($n = 392$)	Administrative ($n = 50$)	Cleaner ($n = 50$)	Other ($n = 11$)	Pearson χ^2	p -value	Cramer's V
> 1 partner in last 12 months	12	37	13	31	12	42	28	21.97	0.001*	0.18 (small)
Casual sex outside relationship	12	23	8	26	6	41	27	24.08	0.0005*	0.19 (small)
Sex whilst under influence of alcohol	22	37	40	41	17	39	34	16.06	0.01*	0.15 (small)
Condom use if sex outside relationship	25	15	29	10	20	10	19	18.46	0.1	0.16

$n = 733$.

TABLE 3: Percentage employees with poor knowledge about HIV transmission in various skills level categories.

Job category	Management ($n = 49$)	Technician ($n = 31$)	Artisan ($n = 40$)	Operator ($n = 392$)	Administrative ($n = 50$)	Cleaner ($n = 50$)	Other ($n = 11$)	Pearson χ^2	p -value	Cramer's V
Men who have sex with men cannot get HIV	14	23	20	24	18	33	24	5.06	0.53	0.08
Women who have sex with women cannot get HIV	16	39	50	44	24	40	37	22.07	0.001*	0.17 (small)
Someone with HIV has signs telling you that he or she has HIV	27	26	53	46	32	70	40	24.32	0.0005*	0.18 (small)
People with HIV immediately become very ill and cannot work	6	16	25	19	16	30	13	11.93	0.06	0.13
Consistent condom use will protect one from getting HIV	22	6	30	25	22	16	27	7.92	0.24	0.11

$n = 733$.

Knowledge, attitude, practices and beliefs outcomes: Risk behaviour

High-risk behaviour as indicated by sexual relations with more than one partner in the last 12 months still took place in 12% (management) and 42% (cleaners) of employees. Similar results for casual sex outside their stable relationship and sex under the influence of alcohol have been demonstrated (Table 2), with all three risk behaviour indicators showing significant differences ($p < 0.05$) between management and administrative staff on the one hand and technicians, operators and cleaners on the other hand. All these differences, however, were of small practical importance (Cramer's V).

Knowledge, attitude, practices and beliefs outcomes: Knowledge

Inconsistent or poor knowledge about some of the knowledge questions was displayed by up to 70% of some of the job categories (Table 3). More than 45% of operators, artisans and cleaners indicated that someone with HIV has signs that will tell you if that person is HIV-positive; these differences were statistically significant [$\chi^2(6, n = 670) = 24.32, p < 0.001$], but only of small practical importance. However, most employees ($n = 558; 76.1%$) across all categories, were aware that consistent condom use is protective against HIV transmission. In this group, 28.1% ($n = 154$) still displayed high-risk behaviour (multiple sexual partners) with almost 30% of them indicating inconsistent or no condom use either with casual partners or their regular partner. A positive outcome was that 73% ($n = 111$) of those with high-risk behaviour had already undergone an HIV test, indicating some form of risk perception in this group.

Knowledge, attitude, practices and beliefs outcomes: Attitude

Although fewer than 30% of employees reported negative attitudes about condom use (Table 4), significantly more

TABLE 4: Attitude of employees about HIV and AIDS prevention behaviour amongst various skills level categories.

Job category	Management (n = 49)	Technician (n = 31)	Artisan (n = 40)	Operator (n = 392)	Administrative (n = 50)	Cleaner (n = 50)	Other (n = 11)	Pearson chi ²	p-value	Cramer's V
Condoms take away sexual pleasure	24	35	26	34	21	33	36	3.56	0.73	0.07
I do not use condoms for religious reasons	6	6	4	15	7	22	14	7.81	0.25	0.12
I do not use condoms – I trust my sexual partner(s)	46	21	41	27	47	19	38	15.67	0.01*	0.16 (small)
My partner refuses to allow us to use condoms	9	9	28	23	19	37	16	11.56	0.07	0.14
Condoms are either too big or small	6	10	22	27	8	27	24	13.83	0.03*	0.16 (small)
It is important that my partner be tested for HIV	73	87	85	93	86	86	75	22.88	0.0008*	0.18 (small)
If I was HIV+ I would use condoms	94	97	93	95	96	97	95	1.25	0.97	0.04
My risky behaviour has changed because of HIV	29	39	43	52	22	59	46	56.03	0.00*	0.2 (mod)
I will get treatment if I or my partner gets HIV	96	100	95	97	100	100	98	4.96	0.54	0.08

n = 733.

TABLE 5: Beliefs of and stigma amongst employees about HIV and AIDS amongst various skills level categories.

Job category	Management (n = 49)	Technician (n = 31)	Artisan (n = 40)	Operator (n = 392)	Administrative (n = 50)	Cleaner (n = 50)	Other (n = 11)	Pearson chi ²	p-value	Cramer's V
HIV is a punishment	15	23	13	18	4	41	18	31.03	0.001*	0.15 (small)
HIV is a chronic manageable preventable disease	85	87	65	73	80	70	82	19.22	0.08	0.11
People with HIV are like any of us and need support	92	90	95	96	100	97	97	12.15	0.43	0.09
If you are circumcised you will not get HIV	4	10	5	8	6	14	4	19.04	0.09	0.11
If I was HIV+ people would ignore my good points	19	13	8	31	25	27	27	27.87	0.06	0.11
If I was HIV+ I would keep it secret	13	23	15	28	20	27	23	28.09	0.06	0.11
Most people believe that a person with HIV is dirty	10	20	15	35	25	34	22	39.87	0.002*	0.13 (small)
People would not want me around their children if I was HIV+	10	6	15	25	13	30	16	36.82	0.005*	0.13 (small)

n = 733.

TABLE 6: Knowledge amongst employees about HIV and AIDS workplace programmes amongst various skills level categories.

Job category	Management (n = 49)	Technician (n = 31)	Artisan (n = 40)	Operator (n = 392)	Administrative (n = 50)	Cleaner (n = 50)	Other (n = 11)	Pearson chi ²	p-value	Cramer's V
Awareness about company HIV policy	83	70	80	75	61	61	69	11.01	0.08	0.13
Initiatives exist to create awareness about HIV policy	83	87	90	81	75	50	75	21.57	0.001*	0.18 (small)
A person's HIV status should be confidential	85	90	82	88	96	59	90	26.51	0.0001*	0.19 (small)
If I were HIV+ I would tell my manager	54	43	55	49	59	43	46	4.31	0.63	0.08
Company supports people who are HIV+	87	67	70	73	92	58	73	16.20	0.01*	0.15 (small)
Companies' management uses survey results such as these to the benefit of the company	72	68	68	61	72	36	59	13.55	0.04*	0.15 (small)
Wellness programmes assist people with HIV to live longer and continue working	83	76	84	81	96	78	82	7.78	0.25	0.1

n = 733.

management, administrative staff and artisans [$c2(6, n = 670) = 15.67, p < 0.05$] reported that they did not use condoms because they trusted their partner. More than 70% of employees across all categories indicated that they felt it was important for their partner to get tested. More than 90% indicated that they would use condoms if infected with HIV. Significantly more cleaners, operators and artisans [$c2(6, n = 670) = 56.03, p < 0.0001$] indicated that their risk behaviour had changed as a result of HIV. This outcome had moderate practical importance. Significantly more women than men [$c2(1, n = 670) = 5.97, p < 0.05$] thought that condom use decreases sexual pleasure, that condoms break and are not reliable [$c2(1, n = 670) = 9.46, p < 0.005$] and that condom size is inadequate [$c2(1, n = 670) = 11.23, p < 0.001$]. Younger age groups (18–24 years) displayed significantly more misconceptions about condom use than older age groups; once again, it was of small practical importance.

Knowledge, attitude, practices and beliefs outcomes: Beliefs and stigma

Significantly [$c2(6, n = 670) = 31.03, p < 0.01$] more cleaners than other job categories indicated that HIV was a punishment and findings from all stigma-related statements (Table 5) indicated that the job categories that included cleaners and artisans still struggled against stigma in HIV significantly more than the other categories.

Significantly more employees [$c2(1, n = 670) = 17.80, p < 0.0001$] who agreed with the statement that 'they will work hard to keep their HIV status secret' indicated that colleagues avoided HIV-positive people and thus still felt that stigma plays an important role. A similar trend was observed for willingness amongst employees to tell their manager about their HIV status. Although the majority of employees across all skill levels were aware of the HIV policy in their company (Table 6), significantly fewer [$c2(1, n = 670) = 21.57, p < 0.0005$]

in the unskilled labour force indicated that they were aware of the policy. Despite the high percentage of employees who indicated that they were aware of the HIV policy, and agreed that the company would support people who are HIV-positive, only approximately 50% (Table 6) indicated that they would be willing to disclose their status if they were HIV-positive. A smaller proportion of employees who were aware of HIV and AIDS policies indicated that they believed that employees who were HIV-positive might lose their jobs.

Discussion

The first aspect that needs to be considered when discussing the results is that the automotive industry is one of the largest manufacturing sectors in South Africa, as it contributes at least 6% to the gross domestic product (GDP), accounts for almost 12% of the country's manufacturing exports, and employed approximately 30 000 employees in 2013 (National Association of Automobile Manufacturers of South Africa [NAAMSA], 2013). This industry is concentrated in only three regions, highlighting the importance of external economies and customer proximity to the supply chain. The second most important region after Gauteng is the Eastern Cape, covering Port Elizabeth and Uitenhage. This region is home to about 30% of the national automotive components industry. The South African government has identified the automotive industry as a key growth sector (AIEC, 2014). Whilst certain subsectors are very labour-intensive, the bulk of the motor vehicle, parts and accessories sectors is relatively capital-intensive. Furthermore, the skill requirements of the sector are quite high. Only 50.3% of total employment in the sector is semi-skilled or unskilled, whilst 31.4% of the workforce belongs in high-level skills (AIDC EC, 2009).

The second aspect is the high HIV prevalence amongst the South African working population. Although recent data suggest that the prevalence rates are stabilising, the high morbidity and mortality rates increase the financial burden of HIV and AIDS, which is an important cost factor to the industry. In light of the above, the aim of this study was to determine the knowledge, attitudes, behaviour and practices of employees in small and medium enterprises in the automotive industry in relation to HIV and AIDS, especially in relation to different skill levels within these companies.

Findings from this study indicate that there are still considerable gaps in knowledge levels amongst the investigated workforce, and that high-risk behaviour is still taking place, especially in the semi-skilled and unskilled workforce. Even amongst those employees with adequate knowledge about HIV transmission, risk behaviour as indicated by inconsistent condom use and multiple sexual partners exceeded 30%. Despite this, the risk awareness seems high, with 73% of those with high-risk behaviour indicating that they had already undergone an HIV test.

This indicates that firstly, high knowledge levels do not seem to be sufficient to create behaviour change. This has been

supported by literature in the past. Increasing knowledge about HIV and AIDS supports sustaining of risk reduction (Joint United Nations Programme on AIDS [UNAIDS], 2003) but on an individual level HIV and AIDS interventions are only successful if context-specific information and skills are provided (UNAIDS, 1999, p. 17). Secondly, the high testing rates amongst employees with high-risk behaviour seem to indicate that employees are aware of their risk, but do not have the relevant approaches, skills or motivation to reduce their risk. It would be important to find out exactly what keeps study participants from reducing their risk of HIV transmission. Education programmes that participants of this study might have been exposed to do not seem to have addressed their specific needs or provided them with the relevant skills or approaches necessary for them to be able to reduce the risk of HIV transmission. This is reinforced by the attitudes of employees towards condoms, which indicate that the message of condoms as the most important risk reduction strategy, next to abstinence and faithfulness, does not seem to have been adopted by a relevant number of participants in this study.

It is worrying that misconceptions and negative attitudes towards condoms are more prevalent amongst females and younger employees. This may indicate that they need to be targeted as separate groups. Innovative approaches may have to be developed to address the needs of these specific target groups. The possibility of making use of mobile applications or messages within the workplace programme, especially targeting the younger generation, should be investigated.

Although a large number of employees with high-risk behaviour might be aware of their risk, data also suggest that a larger proportion of the skilled and semi-skilled workforce do not use condoms because they trust their partners. Individuals' knowledge of HIV transmission and accurate assessment of their own risk seem to be two of the key factors in adoption of safer sexual practices (UNAIDS, 2001). The relationship between perception of risk and sexual behaviour is, however, complex and a wide range of variables seem to be responsible, such as number of sexual partners, knowledge of sexual partners' past sexual behaviour, fear of AIDS, shame associated with having AIDS, community perception of AIDS risk, knowing someone with AIDS, discussing AIDS at home, closeness of parent-child relationships and religious affiliation (Prohaska, Albrecht, Levy, Sugrue & Kim, 1990).

Interventions in the workplace might therefore have to focus on creating an environment where employees can reflect on their actual risks. The often-discussed problem of using condoms as a sign of mistrust (Varga, 1997) might have to be addressed, including encouraging HIV testing for married and regular partners. With HIV prevalence being high in South Africa, it is important to encourage condom use in all types of sexual relationships, including consensual and legal unions, since both married and unmarried individuals engage in risky sexual behaviours,

like multiple partners and unprotected sex with nonregular partners, as the collected data suggest.

Earlier research in the manufacturing sector in South Africa indicates that HIV prevalence rates may differ across different skill categories, with different effects on the labour force at different skill levels (Arndt & Lewis, 2000). This is confirmed by results from several studies (BER, 2001; Quattek, 2000; Shisana & Simbayi, 2002) indicating HIV prevalence rates of 26% – 33% for unskilled and semi-skilled labour compared to 11% – 17% in highly skilled groups. Although HIV status was not measured in this study, it is evident from the risk behaviour that all skill levels may be at risk of HIV transmission. It is therefore important to urgently incorporate the results of this study into workplace programmes, investigate changing the delivery systems of current risk reduction messages and their language, or targeting the unskilled groups on a more regular basis to address the unique needs that may be present.

Findings from this study also indicate that stigma still plays a major role in non-disclosure of HIV status amongst large proportions of employees, especially the unskilled labour force. Although employees seem to accept that a workplace policy is in place, and that HIV-positive employees should be supported, that knowledge does not translate into trusting their employer with their status. As stigma is documented as a barrier to uptake in HIV testing and treatment services in numerous settings in South Africa (Dlamini *et al.*, 2009), the need for interventions to reduce the stigma in the workplace is evident. Literature recognises the link between training intervention, HIV and AIDS risk reduction and improved attitudes towards condom use (Becker, 2010; Chimbetete & Gwandure, 2011, p. 16) and improved sexual risk cognition (Becker, 2010; Chimbetete & Gwandure, 2011; East, Jackson, Peters & O'Brien, 2010). More importantly, most studies indicate that HIV training programmes are strongly associated with a reduction in HIV-associated stigma and improved willingness to disclose HIV status (Chimbetete & Gwandure, 2011; Gilbert & Walker, 2010). Results from this study should be used as motivation to obtain buy-in from management to more strongly support implementation of HIV workplace programmes in the automotive industry.

Practical implications

According to a review by Mahajan *et al.* (2007) a 'wide variation in workplace policies and programmes is currently in place in southern Africa' and it is difficult to assess the effectiveness of workplace interventions at firm level. Current HIV and AIDS workplace programmes in organisations may include the institution of an HIV and AIDS policy, HIV counselling and testing and HIV prevention strategies including provision of condoms and antiretroviral therapy. However, in the companies that participated in this study, HIV and AIDS policies were developed but no specific workplace programmes are yet in place that would aim to implement for example, effective HIV prevention strategies, provision of regular access to HIV testing, provision of treatment and care

or monitored referral systems. It is evident that despite HIV fatigue becoming more and more of a reality according to the Higher Education HIV and AIDS Programme (HEAIDS, 2010), employees across all skill levels could benefit from HIV workplace programmes to improve HIV risk behaviour and reduce stigma.

The results suggest that companies should invest in HIV prevention activities to positively influence risk behaviour, further reduce stigma and hopefully reduce future costs of HIV to the workplace, although there is no means by which to predict the effectiveness of such an investment (George *et al.*, 2014). Still, the need for intervention seems evident as the majority of the workforce is particularly vulnerable, being in the age group most susceptible to HIV infection. The results of this study also suggest that more targeted interventions need to be developed specifically focusing on the risk behaviour of employees of the different age groups, both genders and different cultural and educational backgrounds. Standardised interventions that do not take these differences into account might just add to the widespread AIDS fatigue. The use of standardised KAPB studies may provide important information to companies' management in this regard and the data they provide should be carefully analysed to inform the design of interventions and to trigger the development of target-specific interventions. The data collection is furthermore an important prerequisite to measure the changes in HIV risk behaviour and more importantly the prevalence of HIV-associated stigma, which may negatively impact on employee morale. Caution is necessary to interpret results as there may be cultural, linguistic and socio-economic aspects different to those of the research team that is implementing the KAPB studies. It is important to also obtain an adequate understanding of the context in which public health programmes are implemented, before implementing and interpreting KAPB studies. The authors strongly believe that KAPB studies can add value and provide relevant information to change attitudes, beliefs and stigma within the automotive industry. All automotive companies that participated in this study had HIV policies in place but no functioning workplace programmes. More than 30% of employees were unaware of existing policies, with large numbers still believing that they would lose their job if their HIV status was known to the employer. A multiple-method design, including focus group discussions together with the survey questionnaire, may be more accurate to understand the logic of participants. However, as more scientific evidence is needed to prove the effectiveness and efficiency of interventions, the data collected in this study will hopefully serve as baseline information to measure the success of such interventions in future studies. However, to change perceptions, active participation from management will be paramount in order to improve the legitimacy of these programmes.

Limitations

HIV status has not been determined in this study and therefore no associations could be determined between HIV prevalence and HIV-associated stigma.

Respondents in studies dealing with sensitive topics and in the context of corporate environments might believe that the information will be used against them. Respondents might have given normative or socially appropriate answers based on what they think they should answer. The survey approach limits the responses of the respondent to selecting from a handful of predetermined responses and does not allow the respondent to give an answer that is not predetermined by the researcher. Because participation is voluntary, people in some cases chose to not answer some questions, which resulted in an unevenness in the response rate to different questions.

Conclusion

HIV risk behaviour is still a concern in smaller automotive companies and needs to be addressed as part of HIV workplace programmes. Although differences in risk behaviour and attitudes towards condom use have been established amongst the different skill levels, risk behaviour is still present at management level and workplace programmes should thus be aimed at all skill levels. HIV-associated stigma is still present in automotive companies despite the fact that all the South African companies that participated in this survey have adopted an HIV policy. KAPB studies may still be relevant to assess knowledge and attitudes about practices in general in the automotive industry, but it is important to carefully analyse the data and to contextualise the results to develop interventions that are tailored to the target group. Using KAPB surveys to monitor the effectiveness of interventions might fill a gap where insufficient evidence seems to exist about the success of such interventions not only to change employees' risk behaviour and to reduce stigma, but to also positively influence the profitability of the automotive industry. Without a proven economic benefit, company managers may continue to be reluctant in giving the necessary buy-in for HIV and AIDS workplace programmes.

Acknowledgements

This work was conducted in 2011 and 2012 during a project run by the AIDC EC and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, a technical development agency owned by the German government. Many thanks to the AIDC EC and GIZ. Many thanks also to the participating companies for permission to publish these findings.

Competing interests

The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

Authors' contributions

L.S. (Nelson Mandela Metropolitan University) was responsible for the data interpretation and drafting of the article. J.v.d.M. (Nelson Mandela Metropolitan University)

was responsible for the study proposal and subsequently the study rationale in the article. J.P. (Nelson Mandela Metropolitan University) was involved in the statistical analysis and result section, whilst F.B-W. (Nelson Mandela Metropolitan University), who was originally working at GIZ during data collection, contributed to a huge extent to the discussion section.

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The scientific building blocks for business coaching: A literature review

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Dates:

Received: 06 Aug. 2014

Accepted: 23 Jan. 2015

Published: 26 Mar. 2015

How to cite this article:

Schutte, F., & Steyn, R. (2015). The scientific building blocks for business coaching: A literature review. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1) Art. #657, 11 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.657>

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Orientation: Business coaching is a relatively new approach to leadership development. It is also slowly growing as an academic discipline with only a small number of active researchers and a dearth of published literature reviews.

Research purpose: This article is an investigation into the current level of development of the body of knowledge related to business coaching by means of a systematic literature review.

Motivation of the study: Previous literature reviews summarised the available published articles. In order to contribute to establishing business coaching as an independent academic discipline, the building blocks for science in the phenomenon under investigation have to be scientifically not only summarised, but also synthesised and explored to ground this new discipline as an academic field of research.

Research design, approach and method: A methodological framework has been developed to analyse the information. The data were synthesised according to the following building blocks for science: concepts, definitions, typologies, models, theories and paradigms.

Main findings: A total of 84 articles were accessed by the specified search strategy and 36 were analysed according to inclusive and exclusive criteria. Although coaching has not been sufficiently developed as an academic discipline, it is possible to develop a comprehensive definition of coaching, as well as to identify the main models and theories that apply to this field.

Practical/managerial implications: This literature review has synthesised and summarised the available data in such a way that it will contribute to the conceptualisation and foundation of business coaching as an academic discipline.

Contribution: The building blocks for business coaching as a relatively new and emerging science within the field of business leadership have been defined. This will contribute to the articulation of concepts within this discipline by future researchers and practitioners.

Introduction

Key focus of the study

For many years almost every article published on business coaching started with the same sentence, namely that business coaching is a newcomer to the world of business and an emerging industry that still needs some time to develop (Clegg Rhodes, Kornberger & Stilin, 2005; King & Eaton, 1999). Although it is a growing industry (Shelley, 2008), the academic research on the topic is still in its infancy and there is a need for empirical work in this field (Beets & Goodman, 2012). Coaching appears not yet to be an academic discipline standing on its own (April & April, 2007). Evidence of this is the fact that the conceptual and operational identity of coaching is also still unclear (Cilliers, 2005).

It is important to note that there is not an absence of knowledge on coaching, only that this knowledge is in its nature more practical because it describes the way in which coaching practitioners operate in their specific industries. This makes the knowledge more context specific. Therefore literature on coaching is mainly found in popular journals and magazines (Cilliers, 2005), including popular books on this matter (see Upton, 2006 and B. Anderson, 2007, as examples).

Coaching is also addressed as part of management and leadership training together with themes such as mentoring in some Master of Business Administration courses (April & April, 2007). Empirical research on coaching, however, is according to Passmore and Gibbes (2007) mostly done by students and researchers at postgraduate level. The results of this research have

remained largely unpublished (Passmore & Gibbes, 2007). There has more recently been a shift in the themes of articles, away from describing practices, to asking questions about the effectiveness of coaching (Bowles, Cunningham, De La Rosa & Picano, 2007).

The present study aims, firstly, to explore the literature regarding the way in which literature reviews have to be done. The results of this investigation will then, in the second instance, be used as a lens to investigate the published articles in the field of business coaching. This will result in the compilation of a comprehensive updated literature review that can form a basis for future academic research on the subject of business coaching.

Background to the study

In order to assess the level of knowledge on coaching, it is important to stipulate to what extent it contains the elements included in a comprehensive body of scientific knowledge. Mouton (1996) provides a simple scheme of elements of a scientific body of knowledge. At the most basic level scientific knowledge is made up of concepts. Concepts act as the carriers of meaning. When associated concepts are combined and sentences formed, one arrives at statements or propositions. When related statements are combined, more complex conceptual frameworks such as typologies, models, theories and eventually broad theoretical paradigms and research traditions are created (Mouton, 1996).

Information should only be added to the body of knowledge once it is accepted by the scientific community (Mouton, 1996). The community will only do so once the information (theory or hypothesis) has been submitted for evaluation by relevant experts. Only when they have scrutinised and accepted the information as a plausible claim will they endorse and disseminate it, namely publish it (Babbie & Mouton, 2012). Academic knowledge is thus mostly disseminated through peer-reviewed academic journals.

Research purpose

Some efforts have been made to explore the body of knowledge captured in the literature and several literature reviews in the domain of coaching have already been published. One of the earliest literature reviews on business coaching was done by Kilburg (1996). He concludes that there is a dearth of empirical research on the actual work of practitioners in the field and that most of the available literature is devoted to managers exerting themselves to add coaching to their roles to empower subordinates. He found only two researched studies that could form a scientific basis for what is called business coaching (Kilburg, 1996). Kampa-Kokesch and Anderson (2001) published a comprehensive literature review on executive coaching. These authors conclude that the extant literature provides some basis for understanding definitions, purposes, processes, methodologies, clients and service providers, but that surprisingly little empirical research has been done on the efficacy of executive coaching.

In 2005, Joo reviewed a total of 78 articles on coaching, of which only 11 were research articles published in academic journals. The rest were published in non-academic magazines. The most important conclusion Joo (2005) draws from the empirical articles is that business coaching has become increasingly popular despite limited empirical evidence about its impact. The problem is thus not the practice per se, but the lack of research and theory to advance the field. Joo, in his reporting on business coaching, categorises the articles according to research methodology, definitions and the purpose of the articles.

The last comprehensive literature review on business coaching was done by Passmore and Gibbes (2007). They built upon the work of Kampa-Kokesch and Anderson (2001). They focused mainly on executive coaching as a discipline. Their primary finding was that there is a general shortage of empirical research on business coaching. They concluded that more research to understand the impact of coaching on performance needs to be done. They also recommended that research that describes the nature of the coaching intervention must get more attention.

The present literature review on business coaching is thus not conducted in a vacuum, but aims to close the gap since the last comprehensive literature review was done by Passmore and Gibbes (2007). The aim of this article is to report on the present level of knowledge on coaching by means of the scheme provided by Mouton (1996), taking into account the existing literature reviews and other research articles published since the work of Passmore and Gibbes.

Trends from the research literature

The first part of this article is a literature review on how literature reviews are done. The result of this investigation will then be used in the second part of the article to conduct a literature review on the available literature on business coaching.

Systematic literature reviews have become widely accepted during the past 20 years (Kable, Pich & Maslin-Prothero 2012). The purpose of a literature review is to objectively report on the current knowledge on a topic, based on a summary of previously published research (Green, Johnson & Adams, 2006). It is a rigorous and highly valued approach to evaluating literature on specific topics. The literature review is also an essential step in the research process and is included in all empirical and review articles (Wu, Aylward, Roberts & Evans, 2012). A literature review presents a broad perspective on a topic and also describes its history. In addition, it traces development in a specific area (Green *et al.*, 2006) and enables researchers to position their own investigations. Through the identification of relevant concepts and issues, as well as methods of enquiry, researchers can use diverse frameworks for the analysis of their own work (V. Anderson, 2009).

The objective for conducting a literature review is to enable a researcher to write a synthesis of the available literature,

to discover similarities between different research outputs, to examine differences in the results of the researchers and to identify emerging issues, themes and topics (Kable *et al.*, 2012). De Vos, Strydom, Fouché and Delpont (2013) provide a structure for presenting a literature review. They tapped into the seminal work of Babbie and Mouton (2012) and Kerlinger and Lee (2000). De Vos *et al.* present the building blocks of science under three headings, namely concepts, statements and conceptual frameworks.

Concepts

Concepts are the most basic building blocks of a body of knowledge. Concepts may be defined as symbolic constructs (Mouton, 1996) by means of which people classify or categorise reality. Terms, words or notions must be available for those aspects of the world that constitute the subject matter of a given scientific discipline. The specific things of which a science tries to make sense are its concepts (De Vos *et al.*, 2013). They are also the most basic building blocks of communication in science. According to Babbie and Mouton (2012), the process of reaching an agreement during a scientific conversation is called conceptualisation and the result or agreement reached is called a concept. Concepts are the primary analytical instruments by means of which one comes to grips with reality. By doing a literature review, a researcher works with the sources from which concepts can be discovered or key concepts generated (Terre Blanche, Durrheim & Painter, 2009). Concepts then lead to statements and statements to theory building.

Statements

Once concepts have been formalised, they can be combined into statements, which constitute the next level of the building blocks of knowledge. Statements include definitions, hypotheses and propositions (De Vos *et al.*, 2013), as well as statements of truth (Babbie & Mouton, 2012).

Definitions are words or constructs that describe other words or constructs (De Vos *et al.*, 2013). According to Mouton (1996), definitions are neither true nor false. Some are just more useful than others. They are used to facilitate communication and argumentation in the sense that they make it possible to say something more easily and clearly than would otherwise be possible (De Vos *et al.*, 2013). The function of a definition is to demarcate the meaning of a word in terms of its sense and reference (Mouton, 1996). The best definitions are those that lead to clear conceptualisations and valid measurements of the phenomena under investigation (Winter, 2000).

A hypothesis is an educated guess (Terre Blanche *et al.*, 2009) or a tentative explanation for an observation, a phenomenon or a scientific problem that can be tested by further investigation, made on the basis of limited evidence (Babbie & Mouton, 2012). According to De Vos *et al.* (2013), a hypothesis contains two or more variables that are measurable, or potentially measurable, and that specify how the variables are related. Hypotheses are normally formulated to solve problems in quantitative research.

A proposition is a statement or a sentence that contains demonstrable and testable claims (Mouton, 1996), a judgement or an opinion about the world. Propositions must be tested against reality before they can be accepted as a valid theory or as part of a valid theory (De Vos *et al.*, 2013). Propositions normally form part of a qualitative research project.

Truth statements make epistemic or knowledge claims. Epistemic is derived from the Greek word for truthful knowledge (Babbie & Mouton, 2012). Statements are accepted as the truth by the scientific community when they are good approximations of reality and when they provide accurate and reliable representations of phenomena (Babbie & Mouton, 2012). Truth statements may follow after testing hypotheses or investigating propositions.

Conceptual frameworks

Conceptual frameworks are the integration of scientific statements into a scientific structure (De Vos *et al.*, 2013), which is the next level of the building blocks of scientific knowledge. Hierarchically conceptual frameworks are classified as typologies, models, theories and paradigms. A typology typically fulfils a classifying or categorising function and a model exposes the relationships between concepts, whereas a theory explicates the driving force that explains the relationship between concepts (De Vos *et al.*, 2013). A paradigm provides the broader field in which the conceptual framework functions.

A typology is defined by Mouton (1996) as a conceptual framework in which phenomena are classified in terms of characteristics that they have in common with other phenomena. The different types that comprise the typology should, as far as possible, be mutually exclusive (De Vos *et al.*, 2013). The construction of a typology, according to Mouton, sometimes constitutes the first step in a process that will ultimately culminate in the systematic collection of data. It thus serves as a frame of reference for observation and data collection. It often also provides the most appropriate device for understanding the data (Babbie & Mouton, 2012).

According to Mouton (1996), a model is like a scientific metaphor. It consists of words that form a description of a social phenomenon, which abstracts the main features of the phenomenon, without an attempt to explain or predict anything (De Vos *et al.*, 2013). Through a study of a specific phenomenon, the researcher reveals certain similarities or relationships and systemises these as a model of that phenomenon (Mouton, 1996). The model is then a framework in which the phenomenon functions. The purpose of models is not to include all features of the system being modelled but only those necessary for research purposes (De Vos *et al.*, 2013).

A theory is an instrument that is aimed at explaining phenomena and events (De Vos *et al.*, 2013). It is based on observable facts and can be proved wrong at any

time (Higgs & Smith, 2006). A theory explains by way of casual models or stories, or by postulating a set of casual mechanisms that account for phenomena (Mouton, 1996). Theories vary in scope from very specific explanations (descriptive theories) to fairly large-scale general theories (grand theories) (Dryer, 2006).

The concepts, statements and conceptual framework operate within a larger framework which is called a paradigm. A paradigm in the social sciences can be described as a way of viewing one's own research material and placing it within a broader framework (De Vos *et al.*, 2013). A paradigm can also be described as a system of understanding (Terre Blanche *et al.*, 2009) or a pattern containing a set of legitimate assumptions and a design for collecting and interpreting data (De Vos *et al.*, 2013).

In the literature review, the structure provided by De Vos *et al.* (2013) is employed because it provides convenient scaffolding for organising knowledge about a specific topic, in this case about business coaching.

The potential value-add of the study

This study aims to explore and systemise the existing theory in the body of knowledge within business coaching according to the building block for science as described by Mouton (1996). In order to do that, a comprehensive literature review will be conducted.

The value added by this study will be to assist future researchers to have access to the most recent synthesised concepts, definitions, typologies, models, theories and paradigms functioning in the field of business coaching as an academic discipline.

Research design

Research approach

The researchers conducted a systematic review of the literature. By doing this the researchers gained access to the key scientific contributions relevant to the subject (Tranfield, Denyer & Smart, 2003). The researchers used extensive literature searches of published studies. By using transparent and reproducible procedures, systematic reviews improve the quality and outcome of review processes.

Review processes generally consist of data collection, analysis and synthesis. This study followed the pattern in order to explore the available data to compile the literature review that will be presented below.

Research method

The research methodology is directly linked to the aim of this article, namely to provide a systematic and qualitative review of published academic literature on business coaching. Systematic reviews are designed to reduce bias (White & Schmidt, 2005). The methodology specifically developed

for systematic literature reviews aims to minimise the effect of the selection of sources, assessment of publications and type of data collected (Nightingale, 2009). The review is qualitative because it does not combine the results of the reviewed studies statistically. It includes a summary and critique of the findings from systematic methods through the processes by which the individual studies are integrated (Green *et al.*, 2006).

Sampling

Sampling is the selection of research material from an entire body of data (Babbie & Mouton, 2012). The selected sample must be representative in order for a researcher to draw valid and accurate conclusions (Terre Blanche *et al.*, 2009). Researchers must ensure that the sample is large enough to allow them to make inferences about the entire body of available data. In this case, all the articles that could be found through the specified search engines of the University of South Africa (UNISA) library have been selected. No sampling was done and the whole population was considered.

Data collection methods

The structure described by Kable *et al.* (2012) is used as an outline for this literature review. Some reviews of articles have already been published (see Joo, 2005; Kampa-Kokesch & Anderson, 2001; Kilburg, 1996; Passmore & Gibbes, 2007); these are acknowledged in the background section of this article. The most recent comprehensive literature review on executive coaching appeared in 2007 and was conducted by Passmore and Gibbes. The main aim of the search was to find articles that presented literature reviews on business coaching. Broad bouquets of Ebsco Host and Emerald Insight, databases consisting of 54 individual search engines, including Business Source Complete and Eric, were used as they have a very broad reach. This was complemented by a Google and Google Scholar search to identify other articles, relevant documents and published reports from conferences or seminar programmes. Nightingale (2009) suggests that this addition was necessary to improve the sensitivity of the search. The search was limited to an electronic search of English language articles published during the past 20 years. Attention was given to the inclusion and exclusion criteria for the search. Inclusion and exclusion criteria should ideally be established in the protocol development stage and should inform the development of a checklist for deciding which studies to include and which to exclude (White & Schmidt, 2005). Only information or data that are accepted by the scientific community should be included in building the body of knowledge (Babbie & Mouton, 2012) and as such only published peer-reviewed articles were considered. Articles of which the full text was not available were excluded, as were articles written in an informal style and promotional articles. When the search captured articles in non-academic publications such as magazines, they were also excluded.

Three key terms were used to search the databases, with a focus on the titles of documents. The searched terms

were *coaching*, *business coaching* and *executive coaching*. The search was conducted in late May 2014. Each of the articles retrieved was assessed for relevance by reading the abstract and, where necessary, the entire paper. The inclusion and exclusion criteria were used to exclude papers that are not relevant to this review. Articles that met the criteria were selected and documented and duplicates were excluded. The results of the search were reported as the number of articles that met the inclusion criteria, as well as the number of cases remaining after the introduction of the exclusion criteria. The quality of the articles was not appraised again. All articles in peer-reviewed journals were included, based on the fact that they had been peer reviewed. Once included in a journal, the articles were deemed sufficient. The articles found during the search are presented chronologically in Appendix 1.

The 12 steps outlined by Kable *et al.* (2012) were followed in collecting the data. Once the articles had been selected and recorded, they were scrutinised for information relevant to the body of knowledge, as advocated by De Vos *et al.* (2013).

Data analysis

The analytical tools function as the lens through which to interrogate the available literature. These tools can be developed before or during engagement with the literature (Terre Blanche *et al.*, 2009). In this study the tools were developed beforehand and are presented below:

- **Concepts:** Concepts were identified as the words that appeared in the keyword list of the selected articles. When articles did not have a keyword list, no concepts were identified.
- **Statements:** Only statements that included the word 'definition' or phrases such as 'the phenomenon is described as ...' were included as definitions of the concept. No effort was made to integrate information to construct definitions, as this would introduce bias. The analysis of the articles revealed that no other statements, such as hypotheses, propositions or truth statements were found in more than two articles. The information presented was thus insufficient to warrant in-depth analysis and, as such, definitions were the only focus of further investigation.
- **Typologies:** Typologies in the text were recognised when they were presented as lists or strings of characteristics associated with the phenomena. The test that was used to identify a typology was to ask if a particular list or string represented the characteristics of the phenomena or if it described types of the phenomena. This is equivalent to the manner in which Babbie and Mouton (2012) describe typologies. If the list or string of statements did not meet these criteria, it was not classified as a typology.
- **Models:** Models were identified as pieces of text that express the relationship between variables. The focus in models was expressed as relationships, with no reference to the forces driving such a relationship.
- **Theories:** Theories were identified as pieces of text that explain the relationship between variables, but in which,

in addition to models, reference is made to the reasons behind relationships.

- **Paradigms:** These refer to the broader framework in which the research was positioned. Paradigms were deduced from the general tone of the articles.

Strategies employed to ensure quality data

According to Babbie and Mouton (2012), reliability refers to the likelihood that a given measurement procedure will deliver the same description of a phenomenon if the measurement is repeated. Validity refers to the extent to which a specific measurement provides data that relates to commonly accepted meanings of a particular concept. In the case of this research project, repeatability was assured by stipulating exactly how the data was collected (see Kable *et al.*, 2012). The validity and trustworthiness was established by means of appropriate sampling of the articles in the field and reading the articles using an appropriate framework (see De Vos *et al.*, 2013).

Reporting

In reporting the findings a qualitative reporting style will be followed. The findings will be presented in an essay style under different headings and in paragraphs. An appendix with a list of the articles investigated is attached. The articles are numbered. In the result section the findings will be recorded by referring to the article number.

Findings

The search delivered 84 articles, of which 42 were peer reviewed. Of the 42, six were promotional articles, leaving the researcher with 36 articles that were suitable for investigation (see Appendix 1).

Finding pertaining to concepts

In the systematic review, the specified analytical tool found only two concepts associated with coaching and executive coaching, namely management development and leadership development. Fifteen of the 36 articles included a list of keywords. The most common keywords were coaching ($N = 12$; see articles 7, 10, 15, 18, 19, 22, 23, 26, 31, 33, 40 and 41) and leadership development ($N = 6$; see articles 7, 13, 18, 20, 31 and 35). The third most popular keyword was executive coaching ($N = 5$; see articles 13, 15, 24, 35 and 41), followed by management development ($N = 4$; see articles 13, 18, 35 and 41). The other keywords were not mentioned more than three times.

Other keywords included in the different articles were business improvement, business benefits, facilitation, organisational change, organisational development, executive management, executive training, evaluation, planning, business benefits, leadership, team learning, workplace learning, performance and characteristics of coaching, coaching psychology, coaching relationship, business coaching and mentoring.

Findings pertaining to definitions

The following 14 statements met the criteria to be included as definitions:

- Article 1: Executive coaching is defined as a helpful relationship. This relationship is formed between a client and a consultant. The client has managerial authority and responsibility in an organisation. The consultant uses a wide variety of behavioural techniques and methods to help the client achieve a mutually identified set of goals. The aim is for the client to improve their professional performance and personal satisfaction and, consequently, to improve the effectiveness of the client's organisation within a formally defined coaching agreement.
- Article 9: Coaching is defined as a form of consultation. It is a formal, ongoing relationship between an individual or team and a consultant. The consultant in this relationship has in-depth knowledge of various psychological paradigms and perspectives regarding behavioural change and organisational functioning. The consultant then provides learning opportunities for the development of self-esteem and self-awareness, as well as increased quality communication with colleagues, peers and subordinates. The consultation techniques give direct behaviourally based feedback and interpretations about the employee's impact on others. The business or organisation will benefit because the behavioural change in the individual or team will lead to enhanced performance.
- Article 13: Coaching is defined as a process of a one-on-one relationship between a professional coach and a coachee for the purpose of enhancing the coachee's behavioural change through self-awareness and learning, and which ultimately contributes to the success of the individual and of the organisation.
- Article 16: Coaching is defined as a natural conversation that follows a predictable process and leads to superior performance, commitment to sustained improvement and positive relationships.
- Article 18: Coaching is an approach to leadership development.
- Article 22: Coaching is the focus of building performance and enhancing well-being in non-clinical populations.
- Article 26: Coaching is defined as the coach's participation in the development and learning process of the person in focus. It is a form of conversation.
- Article 29: Coaching is defined as partnering with clients in a thought-provoking and creative process that inspires them to maximise their personal and professional potential.
- Article 31: Coaching has been defined as a teaching technique for imparting facts and methods for accomplishing a task.
- Article 33: Electronic coaching can be defined as coaching delivered via an electronic medium such as an intranet.
- Article 35: Executive coaching is defined as the teaching of skills in the context of a personal relationship with a learner and the provision of feedback on the executive's interpersonal relations and skills.

- Article 39: Executive coaching is defined as formal, collaborative relationships between clients and consultants to improve their work performance and personal satisfaction, and thereby to improve organisational effectiveness.
- Article 41: Coaching is defined as a one-on-one relationship between a professional coach and an executive (coachee).
- Article 42: Coaching is the practice of support to leaders who drive organisational goals.

Although these definitions address a wide range of interpretations of what coaching entails, some communality is evident. These will be presented in the discussion part of this article.

Findings pertaining to typologies

None of the articles provided a typology of coaching that met the criteria set out in the analytical tools section of this article.

Findings pertaining to models

From the six articles reporting on models of coaching, six different and distinct models of coaching were identified.

A very early model was found in article 1. It suggests that an effective coaching model would feature the following steps:

- Developing an intervention agreement.
- Building a coaching relationship.
- Creating and managing expectations of coaching success.
- Providing an experience of behavioural mastery or cognitive control over the problems and issues.
- Evaluating and attributing coaching success or failure.

Article 14 suggests that coaching benefits optimally from a pyramid model as a workable model for coaching. This model has four key factors as its foundation, namely the skills of the coach, the personal attributes of the coach, the coaching process and the coaching environment. The next stage of the model suggests that, when the foundation is in place, the coachee is empowered to realise the level of inner personal benefits, namely clarity and focus, confidence and motivation. After this the coachee is mentally ready to produce the outer personal benefits, namely enhanced skills, knowledge and understanding, and improved behaviour. The coachee will then be equipped and empowered to achieve the pinnacle of the pyramid, namely business results.

In 2006 the four-category model appeared (see article 15). This model defines the approach in terms of the goals of the coaching assignment, the scope of work and the type of business scenarios involved. Each of the four approaches in this model brings with it recommended methods and interventions, qualifications and styles of providers and specific objectives regarding the diverse needs of executives and leadership teams.

Article 25 places considerable emphasis on goal-setting and attainment as introduced by the Goal Attainment Scaling

(GAS) model as a tool to be used in coaching research and practice. The model presented in article 18 is called the competency-based coaching model. It has the same elements as the model in article 40. The only difference is that article 18's model adds training, job knowledge and strengths and weakness analysis as extra steps. The model in article 40 suggests that the coaching model contains the following:

- Goal orientation: individual and team-based.
- A strong emphasis on self-reflection and goal-setting.
- The building capacity to work relationally, socially and organisationally. It also focuses on situation or context and the 'here and now'.
- Time limits: contracted relationship for a fixed time.
- Issues of power and influence that are addressed and negotiated as part of the relational process.

From the aforementioned it seems as if the model provided by Leedham (2005) in article 14 is the most prominent because it includes most of the concepts introduced by the other models.

Findings pertaining to theories

In sum, 14 articles referred directly to theories.

According to article 35, coaching operates within the broader theory of psychotherapy because the concept of 'working alliance' has its roots in psychotherapy. Because of the client-therapist relationship and the therapeutic intervention, article 1 also places coaching within the broader theory of psychotherapy. Article 2 and article 27 argue that the outcome of coaching must be sustained behavioural change and because that is the focus of an experienced psychologist, the theory in which coaching operates must be that of psychotherapy.

Article 31 places coaching within the leader-member exchange theory (LMX). LMX posits that leaders develop different types of exchange relationships with their subordinates and that the quality of these relationships influences leaders' and subordinates' attitude and behaviours. The social exchange theories maintain that there is a perceived obligation on the part of subordinates to reciprocate high-quality relationships and that these relationships are developed over time through a series of exchanges.

Article 8 and article 41 argue that coaching falls within the parameters of cognitive-behavioural psychology theory and approach because it deals with coping-skills therapies. Article 19 and article 29 link up with coping skills and connect coaching with emotional intelligence, problem-solving therapies and cognitive-restructuring therapies and theories, whilst article 15 positions it within the clinical psychological theory. Article 22 and article 23 use positive psychology and coaching psychology as theories because they focus on building performance and enhancing well-being in non-clinical populations.

Article 18 and article 20 identify the theory in which coaching operates as the developmental counselling theory within the broader framework of executive or supervisory development in human resource development. Article 26 links up with the developmental theory and posits coaching within the aesthetic learning theory because it is a cognitive process. Article 21 also supports the cognitive theory, but adds goal-setting theory and action theory. Article 33 goes one step further and claims that this learning process can take place via a virtual process through the Internet as e-coaching.

It appears that the psychotherapy theory ($N = 4$; see articles 1, 2, 27 and 35) and the developmental theory ($N = 3$; see articles 18, 20 and 26) are the theories most often referred to in the field of coaching.

Findings pertaining to paradigms

The available literature is mainly divided between two paradigms in which coaching functions. Nine articles (Articles 4, 7, 13, 14, 17, 26, 27, 36 and 37) position coaching in the paradigm of management development and more specifically, within human resource development. Some researchers position it within the psychological paradigm. The following eight articles are examples of this: articles 21, 22, 23, 25, 27, 32, 34 and 39.

Discussion

Outline of findings

In total 84 articles were located by the search strategy and 36 were analysed according to the inclusion and exclusion criteria described above. All 36 articles were published in the last 18 years. Fourteen articles were published in the last 6 years. These articles were published in a diverse range of accredited academic journals all over the world. Most articles were published in the *International Coaching Psychology Review*, followed by *Journal for Industrial and Commercial Training* and *Consulting Psychology Journal*. No other journal has more than two hits. The result of this search emphasises the notion that only a limited body of research on coaching is available.

With regard to concepts, it must be noted that practitioners of coaching as a profession and academic researchers are still experimenting on arranging concepts into sentences to form statements that can become theories to investigate. Based on their review of current literature and practice, Bond and Seneque (2013) hope that coaching will be conceptualised as a useful tool for managers. Managers must assess what approach might be most suitable to their organisation and personal needs to facilitate sustained change. Coaching struggles conceptually to find its place somewhere between therapy, training, development, mentoring, counselling and interventions (Cilliers, 2005). The approaches to coaching vary in a range from executive coaching (Kilburg, 1996), corporate coaching, business coaching and personal coaching to life coaching, with many variations and permutations in

between, such as speciality, niche and group coaching (Bond & Seneque, 2013). Averweg (2010) has added concepts such as virtual coaching and e-coaching to the debate.

Early definitions of coaching found in literature between 1987 and 1992 place a key emphasis on the contribution that coaching can make to improve individual and organisational performance by equipping people with tools, knowledge and opportunities. Definitions constructed between 2001 and 2006 tend to define coaching more as a process and draw a stronger link between coaching, learning, development (articles 3 and 28) and assisting teams and individuals to reach their full potential. Coaching has more recently been defined by some researchers as a personal or organisational intervention (article 2) that builds upon strengths (article 7) and strengthens underdeveloped skills (article 25), and as a systematic activity that seeks to foreground complexity, pluralist perspectives, unpredictability and contextual factors. Article 34 describes coaching as the search for achieving a balance between stability as one of the major contributions that it can make to management interventions.

When one looks at the repetition of keywords in definitions, the following findings have come to light: the words that are repeated in the definitions are 'relationship' ($N = 7$; articles 1, 9, 13, 16, 35, 39 and 41), 'effectiveness' ($N = 7$; articles 1, 9, 13, 16, 22, 29 and 39), 'learning' ($N = 5$; articles 9, 13, 26, 31 and 35), 'behavioural change' ($N = 3$; articles 1, 9 and 13) and 'goal-setting' ($N = 2$; articles 1 and 42).

A comprehensive definition of business coaching, given the aforementioned would thus contain at least these words and could be formulated as follows: Business coaching is a one-on-one relationship with the purpose to change behaviour through learning to improve organisational effectiveness by setting goals to achieve the desired results.

Authors on coaching are silent about typologies. Only one (article 40) of the 36 articles identifies five 'meta' categories. These are management approaches or typologies used in the context of transformational change. The five meta types of management approaches that the article identifies are managing, consulting, mentoring, facilitating and coaching. As a phenomenon, coaching as a type is placed next to these other types of management approaches that are used for transformational change in organisations.

No single model on coaching seems to be dominant. Different models ($N = 6$; see articles 1, 14, 15, 18, 25 and 40) were introduced to be followed during the coaching process. The common denominators in these models are goal-setting, self-reflection, behavioural change, situational analysis, timeframe and relational processes.

In 17 of the 36 articles on coaching, theories are presented in which the researchers place the coaching practice or process. Twelve of these articles place the theories within psychological theories and five are positioned within human resources developmental theories. The two human

resource developmental theories that were identified are the executive developmental theory and the learning theory. In the domain of psychology, the theories varied from clinical and positive to cognitive-behavioural discourse and psychotherapy.

Two paradigms were identified in which coaching functions, namely human resource development ($N = 9$; articles 4, 7, 13, 14, 17, 26, 27, 36 and 37) and the psychology paradigm ($N = 8$; articles 21, 22, 23, 25, 27, 32, 34 and 39). Article 9 makes the assumption that coaching is customarily studied from behaviourist and humanist paradigms in psychology. Article 14 explicitly states that coaching operates within the positivistic and phenomenological paradigm but does not give any reasons for the statement.

Practical implications

The building blocks for business coaching as a relatively new and emerging science within the field of business leadership have been defined. This will contribute to the articulation of concepts within this discipline by future researchers and practitioners.

Limitation and recommendations

Because business coaching is still a newcomer to the world of business, the academic research on the topic is also still in its infancy. Business coaching as such is not an established concept yet. Concepts such as coaching, business coaching, executive coaching, management coaching and even life coaching are used as synonyms. This made it difficult in searching for data on the specific topic of business coaching and can thus be considered a limitation for this study.

It is recommended that research must be stimulated to continue in this field to add data to the body of knowledge.

Conclusion

This article attempts to contribute to the research on business coaching in more than one way. The literature review proves that the concerns of Cilliers (2005) are valid because the available research is very limited. It also shows that there is a dearth of active researchers and academics currently working in this field. Although the academic data is limited, a number of concepts, models, theories, typologies and paradigms could be identified and may contribute to the systemisation of the body of knowledge.

This article summarises the available data in a way that no previous literature review has done before by using the structure discussed in the methodology section. The model of Kable *et al.* (2012) has proved to be a systematic method through which the literature review could be structured to eliminate bias and to access a proper sample, and the structure provided by De Vos *et al.* (2011) has been shown to be useful to organise, integrate and synthesise the data collected.

- The key concepts associated with coaching are leadership development and executive coaching.
- An inclusive definition of executive coaching reads as follows: Business coaching is a one-on-one relationship with the purpose to change behaviour through learning to improve organisational effectiveness by setting goals to achieve the desired results.
- The most prevalent model of executive coaching is that of Leedham (2005) and it includes the following elements: the skills of the coach, analysis of the situation, improved behaviour and the achievement of business results.
- The most prevalent theory on executive coaching is one that suggests a relationship between psychotherapy and human resource development.
- Two paradigms dominate executive coaching, namely the psychological and human resource developmental paradigms.

Although business coaching is constantly described as a newcomer to the world of business and an academic discipline that is not yet independent, this literature review has proved that in the gap since the last comprehensive literature review has been published, a constant flow of new peer-reviewed articles have been published. This is a tendency that must be encouraged.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships which may have inappropriately influenced them in writing this article.

Authors' contributions

F.S. (University of South Africa) was responsible for the collection and integration of the data whilst R.S. (University of South Africa) made conceptual contributions to the design and presentation of the research.

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Appendix starts on the next page →

Appendix 1

TABLE A1: Chronological list of articles selected for the research.

Article reference number	Author	Year published	Title of article	Journal
1	Kilburg, R.R.	1996	Toward a conceptual understanding and definition of executive coaching	<i>Consulting Psychology Journal: Practice and Research</i>
2	Brotman, L.E., Liberi, W.P., & Wasylshyn, K.M.	1998	Executive coaching: The need for standards of competence	<i>Consulting Psychology Journal: Practice and Research</i>
5	Kampa-Kokesch, S., & Anderson, M.Z.	2001	Executive coaching: A comprehensive review of the literature	<i>Consulting Psychology Journal: Practice and Research</i>
7	Dovey, K.	2002	Leadership development in a South African health service	<i>International Journal of Public Sector Management</i>
8	Ducharme, M.J.	2004	The cognitive-behavioral approach to executive coaching	<i>Consulting Psychology Journal: Practice and Research</i>
9	Cilliers, F.V.N.	2005	Executive coaching experiences: A systems psychodynamic perspective	<i>SA Journal of Industrial Psychology</i>
10	Clegg, S.R., Rhodes, C., Kornberger, M., & Stilin R.	2005	Business coaching: Challenges for an emerging industry	<i>Industrial and Commercial Training</i>
11	Feldman, D.C., & Lankau, M.J.	2005	Executive coaching: A review and agenda for future research	<i>Journal of Management</i>
13	Joo, B.	2005	Executive coaching: A conceptual framework from an integrative review of practice and research	<i>Human Resource Development Review</i>
14	Leedham, M.	2005	The coaching scorecard: A holistic approach to evaluating the benefits of business coaching	<i>International Journal of Evidence Based Coaching and Mentoring</i>
15	Berman, W.H., & Bradt, G.	2006	Executive coaching and consulting: "Different strokes for different folks"	<i>Professional Psychology: Research and Practice</i>
16	Blackman, A.	2006	<i>Factors that contribute to the effectiveness of business coaching: The coachees perspective</i>	<i>Business Review Cambridge</i>
17	April, K.A., & April, A.R.	2007	Growing leaders in emergent markets: Leadership enhancement in the new South Africa	<i>Journal of Management Education</i>
18	Bowles, S., Cunningham, C.J.L., De La Rosa, G.M., & Picano, J.	2007	Coaching leaders in middle and executive management: Goals, performance, buy-in	<i>Leadership and Organization Development Journal</i>
19	Cox, E., & Bachkirova, T.	2007	Coaching with emotion: How coaches deal with difficult emotional situations	<i>International Coaching Psychology Review</i>
20	Feggetter, A.J.W.	2007	A preliminary evaluation of executive coaching: Does executive coaching work for candidates on a high potential development scheme?	<i>International Coaching Psychology Review</i>
21	Frese, M., Krauss, S.I., Keith, N., Escher, S., Grabarkiewicz, R., Luneng, S.T., Heers, C., Unger, J., & Friedrich, C.	2007	Business owners' action planning and its relationship to business success in three African countries	<i>Journal of Applied Psychology</i>
22	Govindji, R., & Linley, P.A.	2007	Strengths use, self-concordance and well-being: Implications for strengths coaching and coaching psychologists	<i>International Coaching Psychology Review</i>
23	Gyllensten, K., & Palmer, S.	2007	The coaching relationship: An interpretative phenomenological analysis	<i>International Coaching Psychology Review</i>
24	Passmore, J., & Gibbes, C.	2007	The state of executive coaching research: What does the current literature tell us and what's next for coaching research?	<i>International Coaching Psychology Review</i>
25	Spence, G.B.	2007	GAS powered coaching: Goal Attainment Scaling and its use in coaching research and practice	<i>International Coaching Psychology Review</i>
26	Stelter, R.	2007	Coaching: A process of personal and social meaning making	<i>International Coaching Psychology Review</i>
27	Laske, O.	2007	Contributions of evidence-based developmental coaching to coaching psychology and practice	<i>International Coaching Psychology Review</i>
29	Shelly, M.	2008	Coaching in construction	<i>Magazine of the South African Institution of Civil Engineering</i>
31	Onyemah, V.	2009	The effects of coaching on salespeople's attitudes and behaviors: A contingency approach	<i>European Journal of Marketing</i>
32	Maritz, J.E., Poggenpoel, M., & Myburgh, C.P.H.	2009	Core competencies necessary for a managerial psycho-educational training programme for business team coaches: original research	<i>SA Journal of Human Resource Management</i>
33	Averweg, U.R.	2010	Enabling role of an intranet to augment e-coaching	<i>Industrial and Commercial Training, International Digest</i>
34	Norton, J.	2010	Interview with Jonathan Passmore	<i>Human Resource Management International Digest</i>
35	Baron, L., Morin, L., & Morin, D.	2011	Executive coaching: The effect of working alliance discrepancy on the development of coachees self-efficacy	<i>Journal of Management Development</i>
36	Mayer, C., & Louw, L.	2011	Managerial challenges in South Africa.	<i>European Business Review</i>

TABLE A1 continues on the next page →

TABLE A1 (Continues...): Chronological list of articles selected for the research.

Article reference number	Author	Year published	Title of article	Journal
37	Beets, K., & Goodman, S.	2012	Evaluating a training programme for executive coaches	<i>Journal of Human Resource Management</i>
38	Lewis-Duarte, M., & Bligh, M.C.	2012	Agents of "influence": Exploring the usage, timing, and outcomes of executive coaching tactics	<i>Leadership and Organization Development Journal</i>
39	Motsoaledi, L., & Cilliers, F.	2012	Executive coaching in diversity from the systems psychodynamic perspective	<i>SA Journal for Industrial Psychology</i>
40	Bond, C., & Seneque, M.	2013	Conceptualizing coaching as an approach to management and organizational development	<i>Journal of Management Development</i>
41	Bozer, G., Sarros, J.C., & Santora, J.C.	2013	The role of coachee characteristics in executive coaching for effective sustainability	<i>Journal of Management Development</i>
42	Maltbia, T.E., Marsick, V.J., & Ghosh, R.	2014	Executive and organizational coaching: A review of insights drawn from literature to inform HRD Practice	<i>Advances in Developing Human Resources</i>

Graduate unemployment in South Africa: Perspectives from the banking sector

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Dates:

Received: 23 July 2014
Accepted: 17 Dec. 2014
Published: 16 Apr. 2015

How to cite this article:

Oluwajodu, F., Blaauw, D., Greyling, L., & Kleynhans, E.P.J. (2015). Graduate unemployment in South Africa: Perspectives from the banking sector. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1) Art. #656, 9 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.656>

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Orientation: South Africa is experiencing growth in its graduate labour force, but graduate unemployment is rising with the overall unemployment rate. Graduate unemployment is problematic, because it wastes scarce human capital, which is detrimental to the economy in the long run.

Research purpose: This study explores the perceived causes of graduate unemployment from the perspective of the South African banking sector.

Motivation for the study: Researchers have conducted various studies on graduate unemployment in South Africa and across the globe, but few studies have been conducted on the causes of graduate unemployment. There appear to be some gaps in the literature; therefore, other problems and solutions to graduate unemployment have to be explored.

Research approach, design and method: The researchers followed a survey design. Questionnaires and face-to-face interviews were used as research instruments to identify the perceived causes of graduate unemployment in the banking sector of South Africa. Research participants were unemployed graduates, recently employed graduates and graduate recruitment managers in the banking sector.

Main findings: The study shows that several factors are perceived to be the causes of graduate unemployment in the South African banking sector. These include: skills, institution attended by graduate and differences in expectations from employers and graduates.

Practical/managerial application: The findings have implications for educational institutions and companies that are encouraged to consider possible solutions to resolving the causes of graduate unemployment.

Contribution/value-add: This study is one of the first papers to investigate the causes of graduate unemployment in the South African banking sector. It provides a rich platform for further studies and replication in other sectors, especially within the African context.

Introduction

Unemployment is a socio-economic challenge, with economic costs and many other challenges. It reduces economic welfare, reduces output and erodes human capital. These costs make unemployment a high priority in countries such as South Africa.

The South African economy has been experiencing rising unemployment over many years. In 2011, the unemployment rate was at 24.2% and in 2013 it had increased to 25.2% (Statistics South Africa, 2014). At the same time, there was a structural change observed in labour demand trends shifting towards high-skilled workers (Bhorat & Jacobs, 2010). This structural change has led to the conclusion that the unemployment problem in South Africa is structural, in the sense that the poorly educated workers, who constitute the vast majority of the labour supply, cannot find employment due to insufficient demand for low-skilled resources (Pauw, Bhorat & Goga, 2006).

The youth faces even higher rates of unemployment when compared to older members of the labour force all around the world. Since the global financial crisis this is even more pronounced (Levinsohn, Rankin, Roberts & Schöer, 2014). In the case of South Africa, this phenomenon is particularly acute.

Young South Africans, who are defined as those within the age group of 15–34 years (Department of Basic Education [DBE], 2011), have, however, become better educated over the last decade. This trend can be observed in the increasing enrolment rate at tertiary educational institutions. According to Broekhuizen and Van der Berg (2013), 57.9% of the labour force has completed

their education at a tertiary level. This implies that the size of the graduate labour force is increasing in accordance with the structural change in demand for high-skilled workers (Daniel, 2007).

However, unemployment amongst young South Africans is still very high and is increasing. It furthermore displays significant differences across racial lines (Levinsohn *et al.*, 2014). Levinsohn *et al.* (2014) further indicate that in the second quarter of 2012, the broad unemployment rate for those between 20 and 24 years of age was higher than 60%. In the case of Africans in this category the figure is even higher (almost two-thirds). This rate increased by more than ten percentage points between 2008 and 2012. This is in stark contrast with the less than 20% in the white racial category for the same age group. Given the increasing level of both youth unemployment and graduate unemployment in particular, the current study investigates unemployment amongst graduates in the South African banking sector.

The rationale for studying unemployed graduates

Despite the growth in the graduate labour force, graduate unemployment in South Africa appears to be rising together with the overall unemployment rate. Although graduate unemployment only accounts for 5.9% of the changes in overall unemployment from 1996 to 2012, the actual unemployment rate for this education group has increased from 5.4% during 1995 to 7% in 2012 (Broekhuizen & Van der Berg, 2013).

Although the absolute size is small, this increase shows that graduate unemployment has increased over time. It is important to improve the understanding of the reason for this phenomenon. In addition to the statistics highlighted, graduate unemployment is also an important area of study because theory suggests that the South African economy experiences severe skills shortages, whilst the economy is unable to generate sufficient job opportunities for graduates. This seems to contradict studies suggesting that the higher a participant's education level, the higher the probability of finding employment (Oosthuizen, 2005). It is therefore important to identify the necessary requirements for graduates to become employed.

In this study, a graduate is defined with reference to degree holders, including postgraduate degrees. Unemployed graduates will be denoted as recently graduated youths (16–35 years) without employment.

Studying graduate unemployment is important as the ages 20–24 are the ages when the trajectory of labour market involvement and outcome are shaped (Levinsohn *et al.*, 2014). Obtaining initial work experience is a key objective of young graduates in this age category. Failing to do so may lead to undesirable outcomes which may be irreversible in many cases. Banerjee, Galiani, Levinsohn, McLaren and Woolard (2008) suggest that previous work experience is correlated with whether one has a job currently or not. Therefore,

finding a first job is fundamental for people's lifetime work trajectory (Levinsohn *et al.*, 2014).

Graduate unemployment is also an important area of study because unemployment amongst graduates is potentially damaging to the economy. The South African government is aware of this problem and has used different policies in an attempt to address this problem. One of the strategies that were designed to solve the problem of graduate unemployment is known as the Joint Initiative for Priority Skills Acquisition (JIPSA). Its strategy proposes the implementation of special training programmes, bringing back retirees or expatriates to work in South Africa and attracting new immigrants (Pauw *et al.*, 2006).

This strategy has been able to provide some solution to the problem of graduate unemployment. It has, however, not been able to decrease graduate unemployment, because there are more graduates searching for jobs (Pauw *et al.*, 2006).

Various researchers have conducted studies on this kind of unemployment. Naong (2011), for example, analysed the reason why graduates struggle to find employment and found that most graduates struggle to find employment because they have chosen the wrong field of study and because of other weaknesses in the South African educational system. He proposed the promotion of an entrepreneurial culture in schools to solve the problem.

Sha (2006) studied graduate unemployment amongst graduates with degrees in computer science in Malaysia. Conclusions on reasons for graduate unemployment were based on the perspectives of both graduates and employers. The results revealed that graduates are of the opinion that employers are to be blamed for their being unemployed, whilst employers perceive the attitude of computer science graduates towards work as negative. This makes employers reluctant to hire new graduates.

Although these and other studies have been able to analyse the graduate unemployment situation in South Africa and elsewhere, there appear to be some gaps in the literature. Most of the solutions to graduate unemployment are centred on education, whilst education is not the only cause of graduate unemployment in South Africa (Lie, 2007). As a result, other problems and solutions to graduate unemployment need to be explored. Not many studies have been conducted recently on graduate unemployment in South Africa, keeping researchers and policymakers uninformed. This study on graduate unemployment will also explore other possible causes of graduate unemployment and its solution.

In order to contribute to the body of literature on graduate unemployment, the objective of the study is to investigate the labour market for graduates in South Africa with a focus on the banking sector. The focus is on the banking sector because it is one of the largest employers of labour with various higher qualifications and skills in South Africa. Standard Bank, for example, has 52 000 employees. The banking sector

is also considered amongst the top contributors to long-run economic growth (BANKSETA, 2011).

The study will explore the supply side of the labour market, which consists of unemployed graduates and recently employed graduates, as well as the demand side, represented by employers in the banking sector. This research intends to study the basic aspects that are often overlooked or overstated when addressing graduate unemployment.

Literature review on graduate unemployment

Various explanations are provided for the causes of graduate unemployment. Some ascribe it to the lack of employment that is caused by a lack of employability, type of qualification obtained as well as field of study, quality of secondary school education, quality of tertiary education, high expectations, job search and work experience.

Various authors have offered definitions for employability. Weligamage (2009) and Sha (2006) agree, however, that employability relates to the skills and attributes needed to gain employment and progress in an industry.

A survey conducted on graduates by Griesel and Parker (2009) highlighted four main categories of skills and attributes that employees look out for when recruiting graduates. Basic skills, intellectual ability, workplace skills, applied knowledge and interactive skills were regarded as most important.

South African graduates are often unsuccessful in the recruitment phase, because they lack some of the required skills. Pauw *et al.* (2006) argue that many of these students who lack the required skills come from historically black institutions where they did not develop these skills or acquire work experience. As a result, graduates become disadvantaged because the skills they learned are not required in the working environment.

Lie (2007) argues that graduates should not be entirely blamed for the unemployment condition. Graduates, employers, government and universities are all involved. Graduates are more academically oriented and lack awareness of the latest developments and applicable skills. Graduates generally believe that their education and skills are sufficient and universities consider their graduates to be well prepared for the workplace. At the same time, employers perceive graduates to lack the vital skills for employment. Such perspectives must be addressed to enhance the employability of graduates.

The quality of secondary education was also highlighted as another reason for graduate unemployment. According to Mlatsheni (2005), fewer students who matriculated passed with exemption and students are regarded as *functionally illiterate*. This means that an average Grade 12 student who has just matriculated does not possess adequate writing, mathematical and communication skills to perform at

university level because the quality of secondary school education is low. As students are not prepared to enter and succeed in further higher learning, high dropout rates are experienced (Pauw *et al.*, 2006).

Differences in the quality of tertiary institution also lead to graduate unemployment. These institutions can be grouped into historically white institutions (HWIs) and historically black institutions (HBIs). Graduates from HWIs have much better employment prospects than those from HBIs. HWIs graduates are absorbed into the labour market faster after obtaining degrees (Bhorat & Visser, 2010).

Another reason why HWIs graduates are more employable than those from HBIs relates to the fact that HBIs enrol students in fields of study with low employment prospects. Employers are biased towards employing students who have graduated from certain universities because of their perception of the universities' educational standards and culture. Generally, employers have the perception that 'HBIs are much poorer in ensuring success in the labour market for their client base than HWIs' (Bhorat & Visser, 2010, p. 5).

Graduate unemployment may also be due to graduates' unrealistically high expectations. They usually assume that their qualifications must ensure high salaries and managerial positions immediately (L.M. Luan, personal interview, 24 October 2012). Sirat and Shuib (2012) found that many graduates expect to be paid high salaries, but have a bad attitude towards work. They do not understand the importance of the process of gaining work experience over time. With such expectations, no graduate would wish to start at a low level. Consequently, they select jobs and prefer to remain unemployed until they get their dream employment (Pauw *et al.*, 2006). From the employer's perspective, they view graduates as new entrants with a degree, but lacking the required soft skills and experience to work effectively in the workplace (L.M. Luan, personal interview, 24 October 2012). Employers, therefore, pay less and train the graduates according to the needs and demands of the workplace. High expectations amongst graduates will therefore increase graduate unemployment if the graduates' perceptions persist.

Another reason for high graduate unemployment relates to job search activities. Moleke (2010, p. 93) defines job search as a 'normal occurrence which work seekers use as a form of investment to enhance their position in the labour market'. Job search is therefore seen as an activity that requires time and effort to achieve a goal, which in this case is a job. For graduates, the process of searching for a job takes longer, because graduates are seen as new entrants without working experience. They therefore need to go through job advertisements, complete application forms, write psychometric tests in some cases, attend interviews and write a formal assessment before a permanent offer is made (L.M. Luan, personal interview, 24 October 2012). Moleke confirms this. He found that over half of the unemployed graduates had been searching for employment for more

than a year and that African graduates search longer, some having searched for more than 2 years (L.M. Luan, personal interview, 24 October 2012). Exploring the possible reasons for this observation is an important research agenda going forward.

Method

This section describes the research method followed in this study.

Research participants

The population from which the sample was drawn was divided into two groups, namely: the graduate group (the unemployed graduates and recently employed graduates) and the human resource (HR) group (graduate recruitment managers). Graduate recruitment managers were selected for the HR group because they play a significant role in recruiting, managing and training graduates. They were selected from the four biggest banks in South Africa, namely ABSA, Nedbank, First National Bank and Standard Bank of South Africa. These four banks were chosen because they are the largest employers of graduates in the banking sector. Each bank annually employs between 100 and 200 graduates (L. Ntuli, personal communication, 28 October 2012). Graduates with diverse qualifications are employed, ranging from engineering, mathematics, history, economics and finance. These four banks were therefore ideal areas of investigation for possible causes of graduate unemployment in the South African banking sector. For the second group, the graduate recruitment managers, the study made use of the purposeful sampling method. The purposeful sampling method was selected based on the fact that, due to their key position in the recruitment cycle, the graduate recruitment managers will assist in providing information that is important to the study (Greener, 2008).

The unemployed graduates were selected from the South African Graduate Development Association (SAGDA) database. SAGDA's database was used because it contains information such as the names of graduates, age, gender, qualification, major subjects, location of an individual and institution. Their database also has 2405 records of unemployed graduates (Z. Ngewu, personal communication, 28 October 2012). All this information assisted in the compilation of an unbiased sample of unemployed graduates and postgraduates with diverse qualifications. A sample size of 400 unemployed graduates and 400 recently employed graduates (total sample of 800) was envisaged for the research. This study used a stratified random sampling method for the first group, the graduates, to determine the sample units, because the total population is divided into groups that differ along selected characteristics such as academic qualifications and types of institutions. The sampling was done by separating each graduate group into qualifications offered by universities and selecting a simple random sample from each group. According to previous

conversations with graduate recruitment managers (R. Tshidi, personal interview, 10 September 2012), 50% of graduates employed by the banks have Bachelor of Commerce (BCom) qualifications, 40% of graduates have Bachelor of Science (BSc) degrees, whilst 10% of the graduates employed by the banks have Bachelor of Arts (BA) qualifications.

Based on the percentages of recruitment by qualification, 50% of the sample in the graduate group (unemployed and recently employed graduates) were BCom graduates, 40% of the graduate group were BSc graduates and 10% of the graduate group were BA graduates. The authors of this study acknowledge that different qualifications have various subjects and in order to account for the subjects, this study randomly selected students with different subjects in each qualification group. For example, students with a major in economics, marketing or finance will be randomly selected from the BCom group. Because their qualifications theoretically enable them to be employed in various sectors, the respondents' endeavour to be employed in the banking sector as well was specifically tested by including a question in the survey instrument to verify that the person did apply at one or more of the banks included in this study.

Recently employed graduates were selected from the particular banks. They were selected because they have passed through the process of applying for a job as a graduate and were able to assist in identifying possible requirements to gain employment as a graduate and to prepare for the workplace.

Research approach

For this investigation, the researchers applied a survey-based approach. The survey was based on questionnaires distributed to employed candidates who had recently graduated and unemployed graduates, as well as face-to-face interviews conducted with graduate recruitment managers of the banks. The intention was to gain an understanding of the perceived causes of graduate unemployment in the banking sector.

Research instruments

This research utilised survey questionnaires that varied according to the groups. Closed and open-ended online and manual questionnaires were designed for the graduate group, unemployed and recently employed graduates, whilst open-ended and face-to-face interview questionnaires were used for the HR manager group. The questions were drawn from the literature on the causes of graduate unemployment and an understanding of the banking sector.

The survey questionnaire used in the case of unemployed graduates consisted of five separate sections. The first was designed to collect demographic data for cross-sectional analysis. Next followed questions relating to the choice of university and degrees, followed by two sections on the

application and job search process and the final section considered the causes of graduate unemployment.

The survey questionnaire used in the case of recently employed graduates was designed in the same way, except for the sections focusing on the transition to the workplace and their expectation versus reality. The questionnaire also consisted of five separate sections, starting with demographic and educational sections designed in the same way as described above. In addition, candidates were asked about the number of job offers received and the time period from application to offer. Section D asked candidates about their experience from study to employment, whether the skills that they had acquired during their period of study were adequate and whether their employers had the same views about their skills. The last section compared the expectations of graduates before they were employed to their experience in the workplace.

The graduate manager survey questionnaire was unstructured. The questions formulated in this questionnaire considered the company's intention to hire graduates and the importance of recruitment strategies, such as the graduate recruitment programme annually designed for graduates. The next questions focused on the selection process when hiring graduates as well as the post-selection process. This covers what happens after graduates are hired, the cost involved after graduates are hired, the skills level of the graduate before and after the graduate has been hired, the retention rates of graduates and the incentives offered to retain graduates.

Data collection procedure

For the unemployed and recently employed graduates, an online survey questionnaire was created with the help of an online research website known as Question Pro. The link to the survey was customised and posted on the SAGDA website (SAGDA, 2012). An online survey was chosen because it is easily accessible. For those who did not have access to the Internet, the survey was manually printed and distributed to a list of graduates, which was made available by SAGDA.

The HR managers were also approached to administer the survey during the training of graduates, when they felt it would be most convenient. For the graduate recruitment managers, questions were sent via email and contact details were collected during a South African Graduate Recruitment Association's (SAGRA) conference. Meetings were booked in order to conduct face-to-face interviews.

Data sorting process

From the original 800 completed surveys, 170 were scrapped due to incompleteness and cases where the unemployed subsequently obtained employment. The survey on the graduate recruitment managers was easier to conduct, as the survey was interview based. In total, the remaining sample comprised 300 unemployed graduates, 330 recently

employed graduates and four graduate recruitment managers.

Data analysis

The responses to each of the survey questions for the unemployed graduates and recently employed graduates were compiled in a comparative table to understand the common views, the disagreements of the graduates and the perceived changes in graduate unemployment.

Content analysis, which is a form of analysis that focuses on actual content and information (Stemler, 2001), was used to analyse the results derived from the graduate recruitment managers. Results were in the form of written responses and notes from the interviews. Each question in the interview was analysed in comparison to the responses from the four banks. After a within-group comparison the results of both groups (i.e. graduates and recruitment managers) were compared. Areas of disagreements and common interests between the groups were analysed to understand the dynamics of the graduate labour market. The results were then used to offer tentative policy recommendations about a possible solution to the causes of graduate unemployment.

Results

Graduate group: Unemployed and recently employed graduates (supply side)

Demographic characteristics

Even though the survey was sent to both men and women, there was a slightly higher response rate from men. Approximately half of the unemployed graduate respondents were in the age bracket 21 to 24. Based on age, the assumption could be made that many people graduate in the age bracket 21 to 24, but are unemployed. Of the recently employed graduates, 36% fell between the ages of 25 and 30. Based on these findings, another assumption is that more graduates between the ages of 25 and 30 gain employment in the banking sector. These assumptions are in line with Altbeker and Storme's (2013) findings that younger graduates are more likely to be unemployed than older graduates, because employers are more reluctant to hire younger graduates.

The view that there seems to be a change in graduate unemployment in the banking sector in terms of race is confirmed in Table 1. The banking sector now hires more black graduates, indicating a directional hiring change from hiring white graduates to hiring other races (Altbeker & Storme, 2013). Taking the opposing view, Moleke (2010) argues that racial discrimination might be a cause of graduate unemployment as there are still more white graduates in the banking sector than there are black graduates. The findings of the current study did not support this. The modern economy, especially the banking sector, now hires any race as long as the graduate possesses the required skills and knowledge. The following statistics provide examples of this trend. In 2013, Africans' share in junior management positions in one of the big four banks in

TABLE 1: Race distribution of sample (%).

Race group	Unemployed graduates	Recently employed graduates
Black	40	45
White	16	10
Mixed race	32	27
Indian or Asian	12	18
Total	100	100

Source: Own compilation from survey data, SAGDA database (South African Graduate Development Association [SAGDA], [2012]. *SAGDA database*. Retrieved September 12, 2012, from <http://www.sagda.org.co.za>)

TABLE 2: Educational level of respondents (%).

Highest educational qualification	Unemployed graduates	Recently employed graduates
Undergraduate degree	65.75	62
Honours degree	22	32
Postgraduate diploma	9.25	4
Master's degree	3	2
Total	100	100

Source: Own compilation from survey data, SAGDA database (South African Graduate Development Association [SAGDA], [2012]. *SAGDA database*. Retrieved September 12, 2012, from <http://www.sagda.org.co.za>)

South Africa rose to 72% from 68% in 2011 (Barclays Africa Group Limited, 2013); 80% of all new appointments are also from this group. As a result of higher demand for Africans in the banking industry turnover of African staff is slightly higher than the company's average as well (Barclays Africa Group Limited, 2013).

Choice of university and degree

The highest concentration of respondents in the unemployed graduate group came from the University of Fort Hare, followed by the University of Zululand, University of the Free State (UFS) and University of Limpopo. Graduate recruitment managers regard these universities as *access universities* that do not carry out regular career exhibitions or any form of graduate recruitment (L.M. Luan, personal interview, 24 October 2012). On the other hand, most of the recently employed graduates studied at the University of Johannesburg (UJ), University of Cape Town (UCT), University of the Witwatersrand (Wits) and University of South Africa. According to employers, these universities are visited regularly in terms of career awareness programmes, counselling and recruitment, because of their reputation of high educational standards, facilities and equipment. It then becomes easier for graduates from the *non-access universities* to gain employment and develop their careers.

The majority of the graduate group respondents were undergraduates and honours degree graduates, whilst very few possess master's degrees, as indicated in Table 2. Educational qualification alone is not the most important criterion for gaining employment, since the majority of the recently employed graduates are undergraduate degree holders. The sample of recently employed graduates showed that 32% have honours degrees, offering candidates a better chance to gain employment. It seems that a degree is not enough to gain employment. There are possibly other factors that qualify a graduate in the banking sector for employment.

TABLE 3: Perceived skills acquired (%).

What do you feel you have to offer potential employers in terms of skills gained during your period of study?	Unemployed graduates	Recently employed graduates
Communication skills	17.9	9.35
Computer literacy skills	13.23	13.23
Presentation skills	7.39	7.39
Technical skills	9.34	17.9
Numeracy or quantitative literacy	6.23	6.23
Understanding of economics and business realities	7.39	7.39
Research skills	12.45	6.23
Leadership skills, problem-solving skills	6.23	12.45
Ability to plan and execute tasks independently	6.61	6.61
Flexibility	8.56	8.56
Creativity and innovation	4.67	4.67
Total	100	100

Source: Own compilation from survey data, SAGDA database (South African Graduate Development Association [SAGDA], [2012]. *SAGDA database*. Retrieved September 12, 2012, from <http://www.sagda.org.co.za>)

Results show that most of the recently employed graduates have part-time, internship and voluntary work experience, which gave them an advantage. This may provide another explanation for the observation from the data, which shows more employability from age 25 onwards when additional work experience is more likely. This is therefore not merely a case of workplaces who do not want to appoint younger candidates.

Skills amongst graduates

The kinds of skills perceived to be acquired by both groups during their period of study are illustrated in Table 3. The majority of recently employed graduates felt that they had acquired communication, research and computer literacy skills during their period of study. The majority of the unemployed graduates felt that they had acquired the same set of skills as the recently employed graduates, and yet they are still unemployed. It is important to note that most of the skills ticked by the graduates during the survey were based on their feelings of the kind of skills they possess and not based on employers' perceptions. Therefore, graduates can be confident about their perceived set of skills, but this may be in contrast to the reality of the employers' experience.

Expectations versus reality

Most of the unemployed graduates and recently employed graduates expected to earn a salary within the salary bracket of R275 000–R300 000, as indicated in Table 4. This salary range does not differ from what the banks are currently paying graduates. The interviews with the graduate recruitment managers confirms that graduates are paid between R250 000 and R320 000 annually. Unemployed graduates' salary expectations are therefore not different from what employers offer, and Sirat and Shuib's (2012) argument about salary expectations could be questioned. Higher salary expectations, as suggested by Sirat and Shuib, do not necessarily hinder graduates from gaining employment in the case of the banking sector, as they desire what the industry offers.

TABLE 4: Annual salary expectations.

Annual salary expectations (Rand)	Unemployed graduates (%)	Recently employed graduates (%)
150 000–175 000	6	4
175 001–200 000	7	9
200 001–225 000	6	15
225 001–250 000	21.18	8
250 001–275 000	16.65	14
275 001–300 000	29.17	21
More than 300 000	14	29
Total	100	100

Source: Own compilation from survey data, SAGDA database (South African Graduate Development Association [SAGDA], [2012]. *SAGDA database*. Retrieved September 12, 2012, from <http://www.sagda.org.co.za>)

Human resource group (demand side)

The survey revealed that all banks have the same intention to hire graduates, which relates to a successful supply of suitable candidates and the development of special skills to suit the needs of the company. The fact that graduates are recruited every year emphasises that banks are willing to employ graduates. Banks' intentions to hire graduates are also illustrated by their development graduate programmes that enable the recruitment of new graduates every year.

The survey results indicated that banks mainly visit UCT, UJ, the University of Pretoria, Wits and the University of KwaZulu-Natal during their graduate selection and recruitment process. These universities are regarded as the top universities in South Africa, with sound reputations and high quality of education. Most important is that the banks had employed a number of graduates from these universities in the past and they were excellent performers.

Another important factor that determines which universities should be visited or which graduates should be recruited is cost. It was found that banks spend a large amount of money on career exhibitions and career awareness programmes to entice graduates every year. The cost of hiring a graduate involves career exhibitions at universities, which cost R180 000 plus the training cost of hiring a graduate, which is between R300 000 and R650 000 per graduate when training is outsourced to a third party. In addition to the training cost, a graduate's salary ranges between R250 000 and R320 000 and the salary scales annually increase by 6.9%. These costs restrict the number of graduates employed every year and the number of universities visited.

The research concluded that banks prefer to employ slightly older graduates rather than younger graduates. Younger graduates are assumed to be too inexperienced and immature for the challenges of the working world (Biavaschi *et al.*, 2013) and special recruitment and training programmes are expensive. This may again be linked to the notion that the somewhat older graduate may have acquired additional skills beyond ones linked to the degree itself.

It was also found that a graduate's qualification is regarded as an entry point of consideration, but it is not a guarantee for employment as a graduate needs more than academic

training to function effectively. During the recruitment process, employers search for required skills and if it is sensed that a graduate lacks these required skills, the graduate will be declined. It can be deduced that graduates who rely exclusively on their qualifications tend to remain unemployed.

Discussion

The purpose of this study was to investigate possible causes of graduate unemployment in the banking sector through surveys of graduates and human resource managers.

It was found that slightly older graduates are more likely to be employed in the banking sector than younger graduates. Employers regard older graduates as more mature and experienced. It is therefore concluded that age might be a cause of graduate unemployment in the banking sector. The researchers do, however, consider the sample size as being insufficient to generalise in the affirmative.

In terms of race, South Africa is producing more black graduates every year and their unemployment rates are declining, compared to past years where more white graduates than black graduates were hired. This confirms L.M. Luan's (personal interview, 24 October 2012) findings. In other words, there has been a directional change in hiring white graduates to hiring other races. There has also been a move towards equality, as the focus has shifted to the required skills and knowledge that graduates possess.

The results suggest that the kind of institution that a graduate attends and the perception of employers about those institutions leads to higher levels of graduate unemployment amongst graduates from access universities. With the exception of the UFS, these are all HBIs. Graduates from the so-called non-access universities are preferred to those from HBIs because of employers' perceptions about these universities and the fact that they do not engage with employers to understand the right skills needed to be successful. When cost is taken into consideration, employers would rather spend their resources on candidates from non-access universities, as the cost involved in recruiting is expensive and it will only make sense to invest these large costs in candidates with the adequate skills.

The information provided by HR managers raises the question of endogeneity in terms of industry perceptions of top-class universities and the choice of where career exhibitions are held. The question is whether the existing perception of where top universities are located determines where career exhibitions are held. The exhibitions foster good relationships with those institutions, but at the same time this practice marginalises other institutions and thereby perpetuates the existing perceptions of them not producing good candidates. The cost factor and the fact that the universities with whom good relationships exist fulfil the demand for graduates may put candidates from other universities at a disadvantage. One way of overcoming this is

for good graduates from other institutions to pursue postgraduate studies in the bigger centres where the perceived good quality institutions are situated. This may in itself reinforce the notion of these institutions providing top candidates. This aspect also requires further research and decomposition of the origin of postgraduate students at these preferred institutions.

The results have shown that educational qualification alone is not the only criterion for gaining employment in the banking sector. Advanced qualifications do, however, make candidates more likely to be employed. The survey shows that employers demand work experience, skills and certain qualifications based on their particular needs. This in itself can be a problem as the industry then does not contribute towards the building of experience.

In terms of labour demand, as the economy changes organisations change their business requirements, and changes in business requirements lead to changes in the qualifications and skills needed to suit the needs of the organisation. A graduate without a qualification or skill that is needed by the organisation will therefore remain unemployed and will have to wait until their qualification is in demand. It can be concluded that changes in business requirements will lead to changes in the demand for labour (in this case graduates) in banking.

The issue of skills was also identified as a possible cause of graduate unemployment in the banking sector. The survey showed that employers require certain skills such as leadership skills, soft skills, management skills and cultural fit. A graduate without these skills might therefore not be employed. The results also suggest that employers do not regard university-based skills as sufficient. University-based skills might be too academic or not job related. They must therefore be supplemented with other skills.

Finally, it can also be deduced that although differences in expectations from employers and graduates could be a reason for graduate unemployment, higher salary expectations do not necessarily hinder graduates from gaining employment, as they usually aim for what the sector is offering. The economy is driven towards graduates who place value on their skills and what they have to offer; therefore, higher salary expectations might not necessarily be the cause of graduate unemployment.

The authors realise the danger of generalisation from a sample of 630 respondents and believe that this study should be repeated continuously to obtain a more comprehensive understanding of graduate unemployment in the banking sector over time. However, the study draws on actual primary data and therefore adds valuable perspectives on the perceptions of graduate unemployment in the banking sector.

The results of this study have several implications for universities, managers and policymakers. Most important is the realisation that graduate unemployment is detrimental to

the economy in the long run. This study suggests a number of recommendations to reduce graduate unemployment.

In the first place, it is recommended that the skills shortage be addressed by organisations and educational institutions working together towards the implementation of appropriate programmes that would provide graduates with the necessary skills that are required in practice. Professional bodies have a role to play here. They usually interact with universities and play a role in the accreditation of programmes. The appropriate body in the banking industry can play an important role in this regard. Given that graduates are drawn from different degree groups, this envisaged engagement around skill requirement needs to be particularly structured.

Organisations and educational institutions can also work together to provide career guidance to graduates to ensure a selection of employable choices of subjects and courses. Working together can also assist in improving the quality of the so-called 'soft skills' that are also needed for graduates to successfully contribute to the productivity of organisations. These skills include team work skills, ethics in business interpersonal relationships, public speaking, meeting conduct and even time management skills. Government can help by providing graduate recruitment subsidies to improve the options of finding employment for young graduates.

The work done by SAGDA is potentially of significance here. SAGDA was hired by the Department of Trade and Industry (DTI) to implement and monitor their Unemployed Graduate Work Experience Placement programme. The programme aims to enhance graduates' employability by placing them in internship programmes. The programme assists graduates to gain relevant work experience through a 12-month internship programme in private sector companies. The DTI sources internship placements for unemployed graduates from companies that are receiving incentives from the DTI as well as those that are interested in the programme (DTI, 2014). The programme's vision is to provide relevant work experience to at least 1200 unemployed graduates over three intakes in the next 2 years from 2014 onwards. National Skills Fund within the Department of Higher Education and Training has approved funding to the value of R71 million over a 2-year period for monthly stipends of placed graduates, which will be managed by the DTI (DTI, 2014).

Conclusion

In final conclusion, the broader problem of graduate unemployment cannot be separated from the macro-economic picture of persistent long-run unemployment in South Africa. Unemployment in general also impacts graduates, although those leaving school early are even more adversely affected. Unless the National Development Plan's roadmap to reduce unemployment in South Africa is successfully implemented and yields sufficient results, unemployment in general and graduate unemployment, as a subset thereof, will exhibit the same persistency as is the case at the moment. The broader problem of graduate unemployment can only be solved

in the long run if the overall problems in South Africa's schooling and educational system receive the attention they deserve. This will require the vision and will of dedicated leadership on a political and social level. Only then will the mass of unemployed graduates be replaced with a workforce that productively contributes to the South African society everyone desires.

Acknowledgements

The authors are grateful for the valuable comments and suggestions received from anonymous reviewers from the journal. All mistakes and omissions remain our own.

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

F.O. (University of Johannesburg) did most of the literature study and processing of the survey data and recording of the primary findings. D.B. (North-West University) formulated the original concept and assisted with the interpretation as well as the writing up of the results. L.G. (University of Johannesburg) assisted in the interpretation of the results and improvements on the first draft of the written work, whilst E.P.J.K. (North-West University) assisted with the final interpretation of the findings, the drafting of the final manuscript and technical processing and publication.

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Assessing cultural intelligence, personality and identity amongst young white Afrikaans-speaking students: A preliminary study

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Dates:

Received: 29 Apr. 2014
Accepted: 12 Feb. 2015
Published: 30 Apr. 2015

How to cite this article:

Nel, N., Nel, J.A.,
Adams, B.G., & De Beer,
L.T. (2015). Assessing
cultural intelligence,
personality and identity
amongst young white
Afrikaans-speaking students:
A preliminary study. *SA
Journal of Human Resource
Management/SA Tydskrif vir
Menslikehulpbronbestuur*,
13(1), Art. #643, 12 pages.
[http://dx.doi.org/10.4102/
sajhrm.v13i1.643](http://dx.doi.org/10.4102/sajhrm.v13i1.643)

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Orientation: Cultural intelligence (CQ) is a relatively new construct to academia that has recently gained increasing attention. Its relevance in a multicultural context like South Africa is apparent since cultural interaction between different ethnic groups is unavoidable.

Research purpose: The objective of this research is to determine the relationship between personality, identity and CQ amongst young Afrikaans-speaking South Africans.

Research approach, design and method: A quantitative research design was used in this study. This study was cross-sectional in nature. For the purpose of this study, a sample of young South African university students ($N = 252$) was used. The personal identity subscale from the Erickson Psychosocial Stage Inventory, the Multi-Ethnic Identity Measure, the Religious Identity Short Scale, the South African Personality Inventory questionnaire and the Four Factor Model of Cultural Intelligence Scale were applied as the measuring instruments.

Main findings: Religious identity and ethnic identity have a relationship with cognitive CQ. Soft-heartedness and conscientiousness have a relationship with behavioural CQ. Also, soft-heartedness, facilitating, extroversion and religious identity have a relationship with motivational CQ.

Practical/managerial implications: Organisations within South Africa will gain a better understanding of CQ and the benefits of having a culturally intelligent workforce as a strengths-based approach. Culturally intelligent employees will be able to adjust to working with co-workers from another culture, not feel threatened when interacting with co-workers and clients and be able to transfer knowledge from one culture to another, which will aid the organisation in completing overseas assignments, cross-cultural decision-making, leadership in multicultural environments and managing international careers.

Contribution/value-add: CQ is a relatively new concept and empirical research on positive subjects is still very limited. Research on personality, identity and CQ within the South African context is still very limited. Therefore, this study will contribute to literature on positive psychology and cultural intelligence.

Introduction

South Africa as a complex and diverse society is comprised of individuals representing at least 14 different ethnocultural groups and 11 official languages (StatsSA, 2014). This cultural diversity impacts almost every aspect of daily life for South Africans. Relationships and interactions with colleagues, friends and even strangers are perceptibly with individuals from different cultures backgrounds (Ang & Van Dyne, 2008; Booysen & Nkomo, 2014). Individuals are defining themselves constantly by drawing from and interacting in various settings and situations, namely family, work, friends, religious groups and leisure activities (Adams & Crafford, 2012). Therefore, these cross-cultural interactions require individuals who may have different expectations and assumptions about how to approach cultures other than their own and how to make decisions based on their own cultural backgrounds (Maznevski & DiStefano, 2000; Nkomo & Kriek, 2011).

As diversity is one of South Africa's greatest assets, the failure to adjust to and understand similarities and differences across cultures often results in inappropriate language and behaviour. This may come across as insensitivity to individuals from different groups and may negatively impact relationship building across different cultures (Naughton, 2010). Such a diverse society poses various challenges and threats to individuals who are not aware of the information in embedded cues in cultures different from their own (Thomas & Inkson, 2003). The result is that individuals are divided into two opposing camps: firstly, those who welcome the new challenges

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and strive to master the new social field and, secondly, those who resist the change and stick to their established values (Booyesen & Nkomo, 2014).

Of the more than 52 million people who inhabit South Africa, over five million are young South Africans (StatsSA, 2014). The 2014 mid-year population estimates by population group indicate that 86% of youth is African, 12% mixed race, 2.08% Indian or Asian and 5.94% white (Kaus, 2014; StatsSA, 2014). The diversity that South African youth are faced with in society is reflected at many South African universities (Kaus, 2014; StatsSA, 2014). According to Makalela and McCabe (2013), Afrikaans-speaking students are still in the majority over non-Afrikaans language speakers in South African universities, even after 20 years of democracy. Makalela and McCabe mention that language policies pertaining to diversity at universities are still in their early years and will take a while to rectify. Young Afrikaans-speaking South Africans must overcome various barriers (selective perception, social categorisation, stereotyping, attribution, identity developing; Dolby, 2001; Thomas & Inkson, 2003), realistic threats (the fear of harm or a decline in one's quality of life) and symbolic threats (the fear that one's cultural group or its place in society is threatened; Harrison & Peacock, 2010) when they perform in a diverse context. Since diversity is a reality in South Africa, it therefore becomes pertinent to aid students to function effectively in a diverse society (Bikson & Law, 1994).

In this microcosm, representative of the society in which universities exist, interpretation of cultural information is often in accordance with an individual's own preconceived framework (Ng & Early, 2006). It serves as the foundation of an individual's cultural intelligence (CQ) and forms the basis for comprehending and decoding the behaviour of oneself and others (Thomas *et al.*, 2008). Research indicates that certain abilities and attributes allow some individuals to be more effective during cross-cultural communications and allow them to become more aware of misunderstandings and miscommunications (Ang & Van Dyne, 2008). It is argued that successful cross-cultural relationships are developed by individuals who are more culturally intelligent (Ang & Van Dyne, 2008).

Thus, CQ is an individual's ability to adapt, detect, understand, reason and act on cultural cues appropriately across cultural contexts (Ng & Early, 2006; Van Dyne *et al.*, 2012). The question, however, is what aspects of a person makes them more prone to exhibit CQ? Theoretically, it is evident that a set of diverse individual differences could relate to CQ (Ang *et al.*, 2006; Ang & Van Dyne, 2008). According to Ang and Van Dyne (2008), individual differences could be distinguished between trait-like and state-like constructs. Trait-like constructs can be defined as individual differences not specific to a certain situation or task and stable over time, for example personality characteristics (Chen, Gully, Whiteman & Kilcullen, 2000). In comparison, state-like constructs are individual differences specific to a certain situation or task and tend to be compliant over time, for

example anxiety (Chen *et al.*, 2000). Furthermore, Early and Ang (2003) conceptualise personality characteristics and identity as antecedents or causal agents of CQ. Identity is a main force when structuring political, social and national relations (Negus, 2002). It serves as a mean of internalising cultural meanings and identities to make sense of the world and to locate ourselves within it (Dolby, 2001). Identity surrounds us, influencing the way one maps out realities, possibilities and relations with others (Dolby, 2001). It is valuable for oneself and others to be aware of one's own CQ. Having CQ can assist in cross-cultural interactions, creating opportunities for young Afrikaans-speaking South Africans students to develop skills and competencies needed to function effectively in a diverse society (Mahembe & Engelbrecht, 2014).

Research purpose and objectives

From the above it is evident that CQ can assist in cross-cultural interactions, creating opportunities for young Afrikaans-speaking South African students to develop skills and competencies needed to function effectively in a diverse society (Hurtado, Dey, Gurin & Gurin, 2003). Furthermore, an individual being culturally intelligent increases the prospective for successful interactions and relationship building when interacting with individuals from cultural groups other than their own, which enhances intellectual and personal development and promotes more openness to diversity (Ang & Van Dyne, 2008; Early & Ang 2003). Studies on the factors that determine the cultural intelligence of youths are relatively sparse; hence, the present study intends to fill this gap by studying the relationship between personality, identity dimensions and CQ.

The general objective of this research is to determine the relationship between identity dimensions, personality and cultural intelligence. More specifically, we are interested in how different identity dimensions (personal, ethnic and religious; Adams, Van de Vijver & De Bruin, 2012) as well as personality factors (as identified by the South African Personality Inventory; Nel *et al.*, 2012) is associated with CQ.

Identity is defined as a personality construct relating to an individual's understanding of who they are, having personal values and goals and knowing what they want to achieve in life (Shaffer, 2010). Personality refers to an individual's organised patterns of thought, feelings and behaviour (Meyer, Moore & Viljoen, 2008).

Since the concept of CQ is relatively new, also in the South African context, limited empirical research on the concept is available; this scarcity and the diverse composition of South Africans in a culturally, ethnicity and religious diverse environment fuelled the current study. We would argue that the new knowledge pertaining to the relationship between personality, identity and CQ in South Africa will contribute to the broader field of positive psychology by providing answers on how South Africans can function effectively,

adapt and learn skills across cultural settings (Sheldon & King, 2001). Also, CQ will contribute to positive psychology to urge a more open perspective towards the ability to function across cultures by successfully applying developed adaptations and learned skills.

We continue this section by introducing CQ and discussing its relationship with personality and identity.

Literature review

Cultural intelligence outwardly

CQ is defined as the natural ability of an individual to interpret and understand behaviour, emotions and motivations of individuals from cultures different from their own (Early & Mosakowski, 2004). It is the ability to function, adapt and manage effectively in a diverse cultural setting (Ang *et al.*, 2006). It considers not only an individual's ability to interact with others, but also their knowledge of themselves, their own culture and other cultures, as well as relations and perception skills associated with cross-cultural interaction (Thomas *et al.*, 2008). CQ is grounded in the traditional stream of multiple intelligence, which is included in different perspectives of intelligence and comprises four main dimensions: cognitive CQ, motivational CQ, behavioural CQ and metacognitive CQ (Sternberg & Detterman, 1986).

Dimension 1, *cognitive CQ*, is an individual's knowledge of the norms, conventions and practices in different cultures, acquired from educational and personal experiences (Koh *et al.*, 2009). It includes knowledge of legal, political, economic and social systems of different cultures and basic principles of cultural values (Hofstede, 2001). Thus, those with high cognitive CQ are individuals who recognise the similarities and differences across cultures. This enables them to interact with individuals who are culturally different and assists them in making informed cultural judgments and decisions (Ward, Fischer, Lam & Hall, 2009).

Dimension 2, *motivational CQ*, is an individual's ability to direct attention and energy towards learning about and functioning and adapting in new intercultural situations and surroundings (Ang *et al.*, 2006; Koh *et al.*, 2009). Those with high motivational CQ are high in intercultural self-efficacy and intrinsic motivation to engage in cross-cultural experiences and master their nuances because of high levels of confidence and interests in experiencing novel cultural settings (Early & Ang, 2003).

Dimension 3, *behavioural CQ*, is an individual's ability to demonstrate suitable verbal and non-verbal actions during intercultural interactions (Koh *et al.*, 2009). Furthermore, those with high levels of behavioural CQ possess a broad and flexible range of behaviours and are able to demonstrate suitable behaviours based on the specifics of the situation (Koh *et al.*, 2009). Those with high behavioural CQ will be able to culturally adapt to and fit in certain situations and be able to vary their behaviour (Ang *et al.*, 2006).

Dimension 4, *metacognitive CQ*, is an individual's entire cultural consciousness and awareness during intercultural interactions (Koh, Joseph & Ang, 2009). The metacognitive factor of CQ focuses on higher order cognitive processes. It involves the ability to plan, monitor and revise mental models of cultural norms. Those with high levels of metacognitive CQ will continuously engage in active thinking about people and situations when cultural backgrounds differ. These individuals will be critical about their own habits, assumptions and culturally bound thinking. They will also assess and adjust their mental map, which allows them to increase their probability for understanding individuals from other cultural groups and to reflect on the knowledge and preconceptions of that individual (Van Dyne, Ang & Koh, 2009).

Regarding measurement of CQ, the Cultural Intelligence Scale (CQS) was developed by reviewing existing intelligence and intercultural competency literature (Koh *et al.*, 2009) and conducting interviews with eight executives with broad global experience (Ang *et al.*, 2006). Undergraduates in Singapore were used for the initial factor structure validity, retaining the best 20 items with the strongest psychometrical properties (Koh *et al.*, 2009; Van Dyne *et al.*, 2009). Furthermore, cross-validation of the CQS demonstrated a strong relationship between the items and each subscale, supporting internal consistency with reliabilities greater than 0.70 (Mahembe & Engelbrecht, 2014; Van Dyne *et al.*, 2009). In addition, the CQS provided results that supported that CQ could be generalised across time and countries, thus providing support for item intercept invariance and invariance in factor loadings and factor covariance (Ang *et al.*, 2006).

Other research has correlated the basic personality traits of the Big Five factor model with an individual's CQ (Ryder, Alden & Paulhus, 2000). In accordance with these findings, Clancy and Dollinger (1993) report a relationship between identity and the five factors of personality. In the sections that follow, we discuss the various dimensions of identity (personal and social) and personality and their respective relationships with CQ. The premise of our argument is that there is a relationship between identity, personality and CQ, with identity and personality expected to act as antecedents or casual agents of CQ (Early & Ang, 2003).

Personality: General definition and relation with Cultural intelligence

Preceding research has identified individual-level factors, like personality, as predictors of cross-cultural adjustment (Caligiuri, 2000). Personality can be defined as the organisation of physical, psychological and spiritual characteristics of an individual which direct their behaviour in interaction within the context in which the individual finds themselves (Meyer, Moore & Viljoen, 2008). Identity represents the individualism of an individual's life which produces different behaviours across different social settings (McFerran, Aquino & Duffy, 2010).

Working with individuals who are culturally different might be difficult for some individuals, because of misunderstandings influencing the value of effective cross-cultural interactions (Lievens, Harris, Van Keer & Bisqueret, 2003). For this reason, it is important to understand why some individuals are more effective than others in dealing with culturally diverse situations. Personality may also be considered an important contributor to understanding cross-cultural effectiveness and hence CQ, as individuals would be able to create new mental maps of other peoples' personality and cultural background to assist individuals to react suitably to them (Thomas, 2006).

Previous research has indicated that the Big Five strongly predict behaviour across time, contexts and cultures. The Big Five Model consists of the five trait domains, as defined by Goldberg's (1990) taxonomy: extraversion (or surgency), agreeableness, conscientiousness, neuroticism (vs emotional stability), and openness to experience (or intellect and culture; Simms, 2006). Caligiuri (2000) emphasises the use of the Big Five taxonomy in classifying personality traits, due to the representation being a universal adaptive mechanism, allowing individuals to deal with and meet the demands of physical, social and cultural environments. The Big Five serve as adaptive mechanisms that influence individuals to behave in certain ways to accomplish goals, given particular situations (Buss, 1991). Thus, individuals with certain personality traits suited for a given social environment will adapt more effectively than those who do not have the appropriate traits or personality characteristics for that same role (Ang, Van Dyne & Koh, 2006).

Research done by Ang *et al.* (2006) showed that certain personality traits were associated with CQ. Individuals who are high on the conscientiousness domain value and devote time and thought to planning, order, innovative problem-solving and are methodical during cross-cultural situations; thus, conscientiousness related positively to metacognitive CQ (Ang *et al.*, 2006). High Agreeableness relates positively to behavioural CQ, indicating that individuals who are agreeable are easy-going in their social behaviours and more flexible in their verbal and non-verbal behaviours in a cultural intelligent manner during cross-cultural interactions.

Highly extroverted individuals have high levels of cognitive CQ, motivational CQ and behavioural CQ. These individuals tend to be self-confident and sociably seek to interact in different cultural settings as they learn about the different cultures in the process and are not restrained to exhibit flexible behaviour (Ang *et al.*, 2006). In addition, extroverted individuals will be more likely able to deal with unfamiliar cross-cultural interactions than introverts. Openness to experience (including curiosity, broad-mindedness and imagination) related to all four factors of CQ. Individuals who are open to change will be more willing to experience and enjoy new and unfamiliar situations and environments (Pulakos, Arad, Donovan & Plamondon, 2000).

Thomas and Inkson (2003) state that inquisitiveness (openness) provides individuals with opportunities to develop CQ through interacting across different cultural settings as they tend to be curious to investigate and pursue different knowledge. In addition, Thomas and Inkson indicate that the possession of hardiness as a personality characteristic to cope with stress, recover from shock and perceive stressful events, is supportive of the attainment of CQ. Interacting with people from different cultures involves ambiguity, tension and emotion. Thus it is valuable to develop hardiness to develop CQ.

The South African Personality Inventory (SAPI) will be used to measure the construct of personality (Nel *et al.*, 2012; Valchev *et al.*, 2013). The theoretical objective of SAPI was to add insights to the general concept of the universality and cultural specificity of personality (Van de Vijver, Meiring, Rothmann, De Bruin & Foxcroft, 2006). Furthermore, the practical objective was to develop a psychometrical instrument that complies with the present legislation in South Africa (Van de Vijver *et al.*, 2006). Everyday conceptualisation of personalities founded within the South African context in all the official language groups were used to develop the SAPI (Meiring, 2005). Furthermore, SAPI aimed to assess the construct equivalence, reliability, validity and bias of the personality questionnaire for all 11 official languages in South Africa. The purpose was to determine the degree of applicability of the personality structure founded in Western studies and in the diverse South African groups. SAPI was expected to find unique personality factors (Meiring, 2005).

The present study will focus on the following SAPI constructs, as these may be best associated with CQ: conscientiousness, extraversion, openness, soft-heartedness, relationship harmony, intellect, integrity and facilitating. Conscientiousness is the achievement of goals through immense effort or inner drive, behaviour influenced by certain social standards, attitudes and practices and precision and thoroughness in a neat and tidy manner or in a habitual sequence (Nel *et al.*, 2012). Extraversion is described as the act, state or habit of being mainly concerned with, and obtaining satisfaction from, what is outside the self, having the power or right to give orders or make decisions, being open to share or speak with other people, being energetic and optimistic and having the tendency or character to be sociable or to associate with one's fellows (Nel *et al.*, 2012).

Soft-heartedness represents the quality of being pleasant and kind and concerned with the welfare of others, having appreciation and gratitude towards others, taking other individuals' needs and feeling into consideration and having humanity and compassion towards others (Nel *et al.*, 2012). Relationship harmony represents characteristics and behaviour such as believing in maintaining good relationships, by being forgiving, calm, tolerant, understanding and cooperative (Nel *et al.*, 2012). Openness is described as 'being receptive to new and different ideas or things or to the opinions of others; it refers to a person who is

open or receptive to others or ideas and a person who wants to learn new things' (Nel *et al.*, 2012).

Intellect is described as the ability to think and obtain knowledge, having a natural ability or aptitude, being knowledgeable, socially skilful and attentive of external and internal things and having insight into the emotions and internal conflict of other individuals (Nel *et al.*, 2012). Integrity is described as an individual's moral consciousness, characterised by truthfulness, devotion and trustworthiness (Nel *et al.*, 2012). Facilitating is described as the ability to direct and lead people according to one's own experiences, through example and advice, and proactively encouraging people through one's own behaviour (Nel *et al.*, 2012).

Identity: General definition and relation with Cultural intelligence

Identity is how the individual defines themselves (Adams *et al.*, 2012). It encompasses those personal and social aspects that enable the individual to make sense of their world and to locate themselves in it (Dolby, 2001). Identity can be defined as the bridging conception between the individual agency, choice and the creation of self, on the one hand, and history, culture and social roles on the other (Watson, 2008). Furthermore, identities are cognitive aspects of an individual and are internalised role expectations attached to social relationships (Stryker, 2007). Accordingly, it is the result of a dynamic, conscious and continuous struggle for an individual to develop an answer to the question of 'who am I?' caused by the need to be a part of something greater than themselves (Kreiner, Hollensbe & Sheep, 2006; Sveningsson & Alvesson, 2003).

Cultural studies mainly focus on social and political issues of identity in South Africa, because of intensified feelings of cohesion and ethnic identity separating South African society (Swartz, 2008). It is thus important to understand the identities of each ethnocultural group (Mattes, 2004). Research has shown that identity has an important influence on how individuals map their realities, possibilities and relationships with others, yet this has not been discussed in psychological terms or on an individual level (Dolby, 2001; Swartz, 2008). Identity is distinguished by two dimensions: personal identity and social identities.

Personal identity can be defined as the 'me' component of the self-concept. It stems from Erikson's (1968) seminal work on the developmental trajectory of individuals into adulthood and reflects the interpersonal differentiation that derives from intra-individualistic characteristics, for example traits, beliefs and skills (Onorato & Turner, 2004). Thus, it is the individual's own conception of who and what they are, focusing on the multiple qualities in which the individuals is unique and different from other individuals (Garcia-Prieto, Bellard & Schneider, 2003).

Social identity, which stems from Social Identity Theory (SIT; Tajfel & Turner, 1986) and Self-Categorization Theory (SCT; Turner, 1999), refers to an individual's group

membership. This is their knowledge that they belong to a social group (Hitlin, 2003; Hogg & Abrams, 1993; Onorato & Turner, 2004). Social identity emphasises commonality and cohesion with a significant social group, for example 'I am a South African' (Garcia-Prieto *et al.*, 2003). It is extremely dynamic and can vary in terms both type and content as a function of inter-group relations and other immediate contextual factors; having a particular social identity means being in harmony with a particular group, defined by members who are similar to you, and behaving in a manner that is congruent with the group's values and perspectives (Stets & Burke, 2000). Culture as a social aspect of identity may encompass both ethnicity and religion and plays an important role in shaping an individual's sense and identity and influencing an individual's behaviour and the way they act (Ryder *et al.*, 2000).

Personal and social identity influences an individual's behavioural choices as identity is negotiated between intra-individual aspects and the social context (Garcia-Prieto *et al.*, 2003; Verkuyten, 2005). Research done by Thomas and Inkson (2003) indicates that a well-developed self-concept and understanding of an individual's own belief system motivates behaviour. Individuals with an honest and clear understanding of themselves are not threatened by views and behaviours of individuals that differ from their own; furthermore, they are better able to understand and explain their own social experiences (Markus & Sentis, 1982). Hence, these thoughts about oneself influences behaviours towards and interactions with others.

We would argue that an individual with a coherent sense of identity would be more culturally intelligent. A clear sense of identity is characterised in some part by the ability to handle the outcomes of negative cross-cultural interactions (Chen, Lin & Sawangpattanakul, 2011). If an individual's identity is not well developed it presents a potential obstacle and threat during cross-cultural interactions, which influences an overall CQ and day-to-day cross-cultural interactions (Imai & Gelfand, 2010). CQ thus provides an innovative framework for understanding an individual's social and personal identity (Early & Ang, 2003).

The present study

Empirical studies and literature confirmed the capability of CQ to predict behavioural outcomes such as cultural adaptation, cultural judgement, decision-making and successful completion of overseas assignments (Ang *et al.*, 2006). Previous research primarily focused on personality factors (the Big Five personality dimensions) and not identity, leading to the hypothesis that personality characteristics (trait-like individual differences) are predictors of CQ (state-like individual differences) (Ang *et al.*, 2006; Early & Ang, 2003). Thoughts about oneself influence behaviour and interactions with others (Early & Ang, 2003). Also, literature suggests that personality characteristics are significant predictors for success in cross-cultural settings; for this reason, the importance of personality correlating with CQ

is emphasised. Identity and personality form the basis and anchor the individuals during cross-cultural interactions (Early & Ang, 2003). Thus, high CQ is associated with identity and personality since understanding new cultures may involve the discarding of pre-existing conceptualisations about cross-cultural interactions.

This study will thus emphasise the importance of a young Afrikaans-speaking South Africans' identity and personality characteristics in forming an individuals' general levels of CQ.

Research design

Research approach

The study was a quantitative study. According to Struwig and Stead (2007), research that is quantitative in nature is a form of conclusive research involving large representative samples and data collection procedures that are comparatively structured. A cross-sectional survey was used to collect the data and to achieve the research objectives. During a cross-sectional design several groups of people are examined at one point in a time (Salkind, 2009). The advantage of using this approach for the study was that it was less expensive and time consuming.

Research method

Research participants

For the purpose of this study, a sample of young South African university students ($N=252$) were used. The sampling methods were convenience and quota sampling. According to Struwig and Stead (2007), a convenience sample is chosen based on its availability and with quota sampling the respondents are selected according to their characteristics. The participants were young white, Afrikaans-speaking South African students from a university based in North West. In this study, the majority of participants were female (63.90%) and 19 years of age (51.60%). Almost all of the participants were Christian (90.10%). Furthermore, the majority of participants were students in their first year (72.20%) and had a good English reading ability (61.90%).

Measuring instruments

Biographical questionnaire: A biographical questionnaire was used to measure age, gender, religion, English reading ability and level of education.

Cultural intelligence: CQ was measured with the 20-item, self-reported Four Factor Model of Cultural Intelligence Scale developed and validated by Ang *et al.* (2006). The scale included four items for metacognitive CQ, six for cognitive CQ, five for motivational CQ and five for behavioural CQ. Sample items included 'I am conscious of the cultural knowledge I apply to cross cultural interaction' for metacognitive CQ, 'I know the rules for expressing non-verbal behaviors in other cultures' for cognitive CQ, 'I enjoy interacting with people from different cultures' for motivational CQ and 'I change my verbal behaviour when

a cross-cultural interactions requires it' for behavioural CQ. Respondents were asked to use a seven-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree) to indicate the extent to which each item described them. Cronbach's alphas in the present study showed high reliability ($\alpha = 0.92$) overall, along with high reliability for the four dimensional subscales: metacognitive CQ ($\alpha = 0.90$), cognitive CQ ($\alpha = 0.91$), motivational CQ ($\alpha = 0.89$) and behavioural CQ ($\alpha = 0.90$) (Imai & Gelfand, 2010). A recent South African preliminary validation study by Mahembe and Engelbrecht (2014) amongst young adult South Africans found the following alpha coefficients: metacognitive CQ ($\alpha = 0.79$), cognitive CQ ($\alpha = 0.81$), motivational CQ ($\alpha = 0.83$) and behavioural CQ ($\alpha = 0.84$).

Personality measure: Personality was measured by items from the SAPI scale (Hill *et al.*, 2013). We selected 99 items from the pool to represent the nine clusters: soft-heartedness (21 items), relationship harmony (14 items), Openness (9 items), extroversion (13 items), emotional stability (14 items), integrity (9 items), intellect (6 items), facilitating (3 items) and conscientiousness (11 items). Respondents were asked to use a seven-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree) to indicate the extent to which each item described their personalities. The scale has the following reliability (Cronbach's alpha) values: soft-heartedness ($\alpha = 0.85$), relationship harmony ($\alpha = 0.86$), openness ($\alpha = 0.83$), extroversion ($\alpha = 0.78$), emotional stability ($\alpha = 0.82$), integrity ($\alpha = 0.86$), intellect ($\alpha = 0.76$), facilitating ($\alpha = 0.81$) and conscientiousness ($\alpha = 0.85$). All the clusters of the SAPI were included in a shortened version. Included items did well in the pilot and validation study (Hill *et al.*, 2013).

Identity: Personal and social identity were measured by three scales.

Personal identity was measured with the 12-item subscale of the Erikson Psycho Social Inventory (EPSI) developed by Rosenthal, Gurney and Moore (1981). This measure was adapted and validated for the South African context by Adams *et al.* (in process). A sample item is 'I change my opinion of myself a lot'. Respondents were asked to use a five-point Likert-type scale ranging from 1 (not applicable to me) to 5 (always applicable to me) to indicate the extent to how they feel about themselves. The scale has a reliability (Cronbach's alpha) value of 0.71.

The Religious Identity Short Scale (RISS) was used by Adams *et al.* (in process) in an international study on adolescents' identity and well-being. It is a unidimensional scale with six items rated on a five-point Likert scale ranging from 1 (not applicable to me) to 5 (always applicable to me). The six items measure how individuals may feel about their religious views. Items include 'I perceive myself as a member of my religious community' and 'My religious beliefs will remain stable'. The scale has a reliability (Cronbach's alpha) value of between 0.77 and 0.91 (Adams *et al.*, in process).

The Multi-Ethnic Identity Measure (MEIM) was used to measure ethnic identity exploration and belonging (Phinney, 1992). The measure consisted of 12 items. A sample item is 'I have spent time trying to find out more about my ethnic group, such as its history, traditions and customs'. Respondents were asked to use a four-point Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree) to indicate the extent to which they would describe their feelings about their ethnic group. The scale has a reliability (Cronbach's alpha) value of between 0.81 and 0.89 across ethnic groups (Phinney, 1992).

Research procedure and ethical considerations

Booklets, containing all the questionnaires, were compiled after permission was gained from the Ethical Committee from a tertiary institution based in North West and ethical clearance was given. The time required to complete the questionnaire was about 90 minutes. The participants completed the questionnaire during class and were given two hours to complete the questionnaires. Participants were reminded of completion a week before the questionnaires were collected, after which the data collection process ended and the data analysis was performed. Participation in the study was voluntary and the confidentiality and anonymity of participants were emphasised. The participants were informed about the purpose and aim of the study.

Statistical analysis

The statistical analysis was carried out using IBM SPSS (Pallant, 2013) and Mplus 7.11 (Muthén & Muthén, 2013). SPSS was used to calculate descriptive statistics (means and standard deviations) and Cronbach's alpha coefficients were used to determine the reliability of the constructs that were measured.

Further analysis was conducted with Mplus. Regrettably, normal structural equation modelling methods were not possible due to the number of parameters that had to be

estimated in comparison to the sample size. Therefore, the factors were created with sum scores from the items to lessen the number of parameters; ultimately, multiple regression methods was the only viable option. All of the regressions were specified in the same analysis (multiple regression) and the maximum-likelihood estimator (robust version) was chosen for the analysis. This specific estimator is advantageous as it is robust against the possibility of non-normality in the data and presents more accurate standard errors.

Product-moment correlation coefficients were used to specify the relationships between the variables and regression analysis to determine which dimensions of personality and identity predicted CQ. Effect sizes were used to determine the practical significance of the results. Cut-off points of 0.30 (medium effect) and 0.50 (large effect) were set for the practical significance of the correlation coefficients (Cohen, 1988).

Results

The results section consists of five tables encompassing the statistical outcomes from the collected data, followed by a short report. Table 1 includes the descriptive statistics and Cronbach's alpha coefficients. Table 2 presents the correlations between variables. Tables 3–6 show the results of the regression analysis with personality and identity as independent variables and CQ as the dependent variable.

The assessment of Table 1 shows that acceptable Cronbach's alpha coefficients were obtained, ranging from 0.63 to 0.91. Eight scales, namely emotional stability, extraversion, facilitating, integrity, intellect, openness, relationship harmony and personal identity, showed an alpha coefficient lower than the guideline cut-off of 0.70 (Nunnally & Bernstein, 1994). However, according to Black and Porter (1996), an alpha coefficient of 0.60 and higher should still be considered adequate in research where relatively new concepts are studied, as is the case in this study. The scores

TABLE 1: Descriptive statistics and Cronbach's alpha coefficients of the measuring instruments.

Variable	Mean	Standard deviation	Skewness	Kurtosis	Cronbach's alpha
Cognitive CQ	3.96	1.27	-0.01	-0.38	0.84
Metacognitive CQ	4.69	1.12	-0.01	0.03	0.88
Motivational CQ	4.56	1.15	-0.22	-0.23	0.82
Behavioural CQ	4.06	1.31	-0.03	-0.30	0.91
Conscientiousness	5.64	0.96	-0.79	0.47	0.72
Emotional stability	4.67	0.63	0.31	0.19	0.69
Extraversion	5.36	1.06	-0.72	0.49	0.67
Facilitating	5.42	0.82	-0.43	0.23	0.68
Integrity	5.03	0.63	-0.62	2.11	0.67
Intellect	5.47	0.81	-0.59	0.57	0.63
Openness	5.52	0.94	-0.74	0.61	0.63
Relationship harmony	3.80	1.25	0.04	-0.44	0.68
Soft-heartedness	2.95	1.48	0.66	-0.41	0.79
Personal identity	4.17	0.67	-0.89	0.90	0.67
Ethnic identity	3.14	0.55	-0.56	0.67	0.85
Religious identity	3.92	0.75	-0.66	0.55	0.80

CQ, Cultural intelligence.

TABLE 2: Correlation coefficients between cultural intelligence, personality and identity.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Cognitive CQ	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Metacognitive CQ	0.42†	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Motivational CQ	0.48†	0.54‡	1.00	-	-	-	-	-	-	-	-	-	-	-	-
4. Behavioural CQ	0.52‡	0.55‡	0.58‡	1.00	-	-	-	-	-	-	-	-	-	-	-
5. Conscientiousness	1.13	0.33†	0.25	0.31†	1.00	-	-	-	-	-	-	-	-	-	-
6. Emotional stability	0.28	1.30†	0.26	0.34†	0.35†	1.00	-	-	-	-	-	-	-	-	-
7. Extroversion	0.24	0.31†	1.21	0.31†	0.51†	0.57†	1.00	-	-	-	-	-	-	-	-
8. Facilitating	0.13	0.40†	0.30†	0.26	0.45†	0.39†	0.49†	1.00	-	-	-	-	-	-	-
9. Integrity	0.15	0.22	0.16	0.20	0.38†	0.47†	0.57†	0.38†	1.00	-	-	-	-	-	-
10. Intellect	0.18	0.47†	0.34†	0.33†	0.66‡	0.40†	0.60‡	0.61†	0.40†	1.00	-	-	-	-	-
11. Openness	0.19	0.42†	0.31†	0.32†	0.67‡	0.40†	0.63†	0.64†	0.46†	0.82†	1.00	-	-	-	-
12. Relationship harmony	0.29	0.25	0.27	0.34†	0.17	0.58†	0.56†	0.33†	0.40†	0.42†	0.40†	1.00	-	-	-
13. Soft-heartedness	0.29	0.17	0.23	0.35†	-0.01	0.56†	0.42†	0.08‡	0.30†	0.16	0.11	0.79†	1.00	-	-
14. Personal identity	-0.11	0.10	0.03	0.01	0.45†	-0.23	0.10	0.20	0.01	0.40†	0.39†	-0.19	0.38†	1.00	-
15. Ethnic identity	-0.06	0.06	-0.01	0.09	0.35†	0.18	0.22	0.29	0.18	0.28	0.40†	0.06	0.03	0.30†	1.00
16. Religious identity	0.16	0.23	0.07	0.20	0.27	0.22	0.26	0.30†	0.26	0.29	0.38†	0.12	0.01	0.14	0.32†

CQ, Cultural intelligence.

†, Correlation is significant at the 0.01 level.

‡, Correlation is practically significant $r \geq 0.30$ (medium effect).

on the SAPI, CQS, EPSI and MEIM questionnaires are normally distributed.

As can be seen in Table 2, cognitive CQ correlates practically and statistically significantly with metacognitive CQ (medium effect; $r = 0.42$), motivational CQ (medium effect; $r = 0.48$) and behavioural CQ (large effect; $r = 0.52$). Metacognitive CQ correlates practically and statistically significantly with motivational CQ (large effect; $r = 0.54$), behavioural CQ (large effect; $r = 0.55$), conscientiousness (medium effect; $r = 0.33$), emotional stability (medium effect; $r = 0.30$), extroversion (medium effect; $r = 0.31$), facilitating (medium effect; $r = 0.40$), intellect (medium effect; $r = 0.47$) and openness (medium effect; $r = 0.42$). Motivational CQ correlates practically and significantly with behavioural CQ (large effect; $r = 0.58$) and correlates practically and statistically significantly with facilitating (medium effect; $r = 0.30$), intellect (medium effect; $r = 0.34$) and openness (medium effect; $r = 0.31$). Behavioural CQ correlates practically and statistically significantly with conscientiousness (medium effect; $r = 0.31$), emotional stability (medium effect; $r = 0.34$), extroversion (medium effect; $r = 0.31$), intellect (medium effect; $r = 0.33$), openness (medium effect; $r = 0.32$), relationship harmony (medium effect; $r = 0.34$) and soft-heartedness (medium effect; $r = 0.35$).

The following tables include the results of the regression analysis.

Table 3 summarises the regression analysis with personality and identity as predictors of cognitive CQ. More specifically, religious identity ($\beta = -0.17$; $p \leq 0.05$) and ethnic identity ($\beta = 0.15$; $p \leq 0.05$) predict cognitive CQ.

Table 4 summarises the regression analysis with personality and identity as predictors of metacognitive CQ. More specifically, intellect ($\beta = 0.29$; $p \leq 0.05$), facilitating ($\beta = 0.19$; $p \leq 0.05$) and ethnic identity ($\beta = 0.11$; $p \leq 0.05$) predict metacognitive CQ.

TABLE 3: Multiple regression analysis with cognitive cultural intelligence as dependent variable.

Model	Standardised beta	Standard error	p-value
Conscientious	0.08	0.09	0.404
Emotional stability	0.08	0.10	0.436
Extroversion	0.02	0.10	0.857
Facilitating	-0.02	0.13	0.881
Integrity	-0.05	0.06	0.380
Intellect	0.00	0.12	1.996
Openness	0.06	0.16	0.312
Relationship harmony	-0.01	0.11	0.942
Soft-heartedness	0.22	0.14	0.126
Personal identity:	-0.07	0.08	0.347
Ethnic identity	0.15†	0.07	0.048
Religious identity	-0.17†	0.06	0.003

†, Significant result.

TABLE 4: Multiple regression analysis with metacognitive cultural intelligence as dependent variable.

Model	Beta	Standard error	p-value
Conscientious	0.06	0.09	0.469
Emotional stability	0.07	0.09	0.401
Extroversion	-0.08	0.09	0.395
Facilitating	0.19†	0.08	0.018
Integrity	-0.03	0.07	0.632
Intellect	0.29†	0.10	0.003
Openness	0.13	0.12	0.285
Relationship harmony	-0.14	0.12	0.245
Soft-heartedness	0.19	0.11	0.078
Personal identity	-0.03	0.07	0.732
Ethnic identity	0.11	0.06	0.062
Religious identity	-0.15†	0.06	0.016

†, Significant result.

Table 5 summarises the regression analysis with personality and identity as predictors of motivational CQ. More specifically, soft-heartedness ($\beta = 0.29$; $p \leq 0.05$), facilitating ($\beta = 0.18$; $p \leq 0.05$) extroversion ($\beta = -0.18$; $p \leq 0.05$) and religious identity ($\beta = -0.16$; $p \leq 0.05$) predict motivational CQ.

Table 6 summarises the regression analysis with personality and identity as predictors of behavioural CQ. More

TABLE 5: Multiple regression analysis with motivational cultural intelligence as dependent variable.

Model	Beta	Standard error	p-value
Conscientious	0.11	0.10	0.269
Emotional stability	0.06	0.09	0.535
Extraversion	-0.18	0.09	0.051
Facilitating	0.18†	0.09	0.039
Integrity	-0.04	0.07	0.592
Intellect	0.13	0.12	0.280
Openness	0.20	0.13	0.115
Relationship harmony	-0.08	0.11	0.455
Soft-heartedness	0.29†	0.11	0.007
Personal identity	0.00	0.08	0.961
Ethnic identity	-0.02	0.08	0.843
Religious identity	-0.16†	0.07	0.019

†, Significant result.

TABLE 6: Multiple regression analysis with behavioural cultural intelligence as dependent variable.

Model	Beta	Standard error	p-value
Conscientious	0.23†	0.08	0.004
Emotional stability	0.04	0.09	0.651
Extraversion	-0.05	0.09	0.550
Facilitating	0.08	0.08	0.312
Integrity	-0.07	0.08	0.357
Intellect	0.04	0.11	0.701
Openness	0.11	0.12	0.387
Relationship harmony	-0.09	0.10	0.394
Soft-heartedness	0.41†	0.11	0.000
Personal identity	-0.01	0.08	0.913
Ethnic identity	0.13	0.07	0.060
Religious identity	-0.07	0.06	0.266

†, Significant result.

specifically, soft-heartedness ($\beta = 0.41$; $p \leq 0.05$) and conscientiousness ($\beta = 0.23$; $p \leq 0.05$) predict behavioural CQ.

Discussion

Outline of results

The results will be discussed and further evaluated in this section. First of all, the relationships between the constructs will be discussed and evaluated. The discussion will then be followed by evaluating the personality and identity aspects that predict CQ outcomes.

The specific objective was to determine the relationship between aspects of CQ and aspects of personality and identity amongst Afrikaans-speaking South African youth. It is evident that metacognitive CQ is related practically and statistically significantly to conscientiousness, emotional stability, extraversion, facilitating, intellect and openness. Some of these findings are consistent with Ang *et al.* (2006). Individuals will find it easier to be culturally intelligent if they value planning and order, possess effective emotional skills and creativity, are encouraging and open towards others and eager to learn new things. Thus, Afrikaans-speaking South African youth with these personality characteristics have the ability to develop higher levels of metacognitive CQ.

Motivational CQ related practically and statistically significantly with facilitating, intellect and openness. Individuals

who tend to guide and encourage others, have high levels of social intellect and skilfulness and are open to change will be more likely to be able to direct their energy towards cultural differences. Thus, Afrikaans-speaking South African youth with these personality characteristics have the ability to develop higher levels of motivational CQ. Behavioural CQ correlated practically and statistically significantly with conscientiousness, emotional stability, extraversion, intellect, relationship harmony and soft-heartedness. Individuals who value order and planning, together with a strong ego and emotional sensitivity, a tendency to be open, social intellect and skilfulness, approachability and interpersonal relatedness and demonstrate empathy and gratitude will be able to demonstrate suitable verbal and non-verbal actions during cross-cultural interactions and settings. Thus, Afrikaans-speaking South African youth with these personality characteristics have the ability to develop higher levels of behavioural CQ (Ang *et al.*, 2006).

Cognitive CQ and behavioural CQ were not statistically significant related to openness in this study. This finding is in contrast to that of Ng and Early (2006) and implies that openness is a critical personality trait and relevant to the diverse environment. Also, the relationships between openness and relationship harmony (0.82) and soft-heartedness and relationship harmony (0.79) are high, thus indicating that the SAPI-questionnaire items might measure the same construct.

In addition, the results in general supported the theoretically based predictions and demonstrated that CQ is associated with personality and identity as the second specific objective. Those Afrikaans-speaking South African youths with a well-developed ethnic identity have knowledge of norms, practices and conventions of their own cultural settings, thus building a foundation for decision-making and performance across cultural settings. Ethnic identity was thus positively related to cognitive CQ. This is in line with research done by Early and Ang (2003). Regarding the negative aspect of cognitive CQ, the regression analysis showed that religious identity contributes strongly negatively to cognitive CQ. Thus, individuals with no religious identity will not be able to interact with people from culturally different environments due to their lack of a formed basic framework of cultural values.

Furthermore, intellect, facilitating and ethnic identity were positive predictors of metacognitive CQ. This makes sense because a person with high levels of intellect tends to be more willing to learn new things and to pursue new knowledge, increasing the accuracy of their understanding (Ang *et al.*, 2006; Thomas & Inkson, 2003). Additionally, someone who has high levels of facilitating has the ability to guide, motivate and encourage other individuals to realise their potential. This is a critical component of metacognitive CQ because it promotes active thinking about people and situations when their cultural backgrounds differ.

Soft-heartedness, facilitating, extroversion and religious identity were positive predictors for motivational CQ. This is consistent with research done by Ang *et al.* (2006), which indicated that highly extroverted individuals will be more self-confident and will sociably seek interactions in different intercultural settings. Furthermore, an understanding of an individual's own belief system will motivate behaviour influencing the ideal outcomes and ways of behaving (Fiske & Taylor, 1984; Thomas & Inkson, 2003). Also, individuals with high levels of soft-heartedness and facilitating are usually concerned with the welfare of their peers and the broader community, as well as with guiding, motivating and encouraging other individuals. This makes sense, because these individuals will function more effectively in cross-cultural situations through sociocultural adaptation and social empathy (Ward *et al.*, 2009).

Furthermore, soft-heartedness and conscientiousness were positive predictors of behavioural CQ. An individual with high levels of soft-heartedness and conscientiousness has the ability to demonstrate concern for others and to be sensitive towards others, as well as the ability to comply with the social norm (Koh *et al.*, 2009). This is a critical component of behavioural CQ because it allows an individual to demonstrate suitable behaviour based on the specific intercultural situation. Thus, in our diverse culture having these personality traits will allow individuals to demonstrate appropriate verbal and non-verbal actions during cross-cultural interactions and situations, in other words will show ubuntu (Nel *et al.*, 2012).

The present findings failed to support Ang *et al.*'s (2006) findings that openness to experience (including curiosity, broad-mindedness and imagination) predicts all four factors of CQ. An individual with high levels of openness tends to be more willing to learn and experience new things. Also, extroversion did not predict cognitive CQ and behavioural CQ. Ang *et al.* state that extroverted individuals tend to seek interactions in different cultural settings and are not restrained in exhibiting flexible behaviour. The explanation for this inconsistency might be that that openness to change and an extroverted personalities within a diverse South Africa are to some extent unknown for our society. Thus, on the one hand is the Afrikaans-speaking South African youth who welcome new challenges and master the diversity of the new social field and on the other those who resist change and hold on to their fixed values (Vestergaard, 2001). Another unanticipated result was personal identity (self-concept) not predicting all four factors of CQ. This is inconsistent with Markus and Sentis (1982), who argue that an individual with a clear understanding of themselves would not be threatened by intercultural situations. However this could be supported with the notion that Afrikaans-speaking South African youths are faced with difficulty in forming their identities (Dolby, 2001; Thomas & Inkson, 2003).

Practical implications

Research has been done on CQ and various external behavioural outcomes; however, the present findings open

a new window to the investigation of personality, identity and CQ within the South African context. Although CQ has been proven to be important, literature has highlighted it as an underexplored research issue. For that reason, this study makes a contribution to accumulating literature on positive psychology and CQ. Students within South Africa will gain a better understanding of CQ and the benefits of having CQ in a diverse context will attribute to a better strengths-based approach. Culturally intelligent students will enable the university to create a cross-cultural inclusive environment in which students can adjust to working with students from other cultures, transfer knowledge of one culture to another, complete assignments successfully, not feel threatened when interacting with members from other cultural groups, improve cross-cultural decision-making, exhibit leadership in multicultural environments and improve working relationships in their future careers.

Research on CQ is still new in South Africa. A recent study by Mahembe and Engelbrecht (2014) explored the construct validity amongst a South African sample, whilst previous research focused more on managers and leadership behaviour with CQ (De Vos, 2012; Du Plessis, 2011). The concept of CQ is unique in South Africa since the country has various indigenous cultural groups that are obligated to work together in a multicultural environment. Therefore, it is important to build on theory for this concept in the South African context, especially in cross-cultural studies. Each cultural group is unique in terms of their history, social standing and educational scope in South Africa. To explore the phenomena adequately in South Africa, an emic-etic approach (Goldberg, 1990) will suffice in order to tap deeper into what CQ entails in a multicultural South Africa. Furthermore, the inclusion of personality and identity in this study means that it provides valued findings in terms of individual differences and the effect thereof on a person's CQ.

Limitations and recommendations

The study described in this article had several limitations. Firstly, the participants in the study consisted only of young Afrikaans-speaking South Africans from a higher education institution. More research is needed into identity, personality and CQ from other language and cultural groups in South Africa as well as from different universities. Secondly, the sample size was considered relatively small ($N = 252$), which had an impact on statistical power. Additionally, we would not advise generalisation to other populations from the current study. Lastly, some of the Cronbach's alpha coefficients of the SAPI questionnaire did not meet the requirement of Nunnally and Bernstein (1994) that the alpha value be above 0.70. However, because this is an exploratory study, alpha coefficients of 0.60 or higher are deemed acceptable (Black & Porter, 1996).

The current study only focused on young Afrikaans-speaking South Africans from a higher education institution; additional studies should be carried out in other South

African universities, as well as other language groups. The results obtained in such studies could then be compared with those obtained in the present study, promoting an in-depth investigation of CQ across cultures in South Africa. Future studies should also use larger samples to increase the confidence that study findings would be consistent across other similar groups.

Conclusion

The current study provided insights into the relationship between specific aspects of personality, identity and CQ. The four dimensions of CQ were practically and statistically significantly related to each one of the CQ dimensions, consistent with the results of Ang *et al.* (2006). In fact, an individual with metacognition, cognition (mental intelligence), motivational and behavioural intelligence will be able to interact across various cultural settings and situations. It was also evident that various personality aspects predicted most aspects of CQ, religious identity was found to be the most profound predictor of CQ elements, whilst ethnic identity did predict some elements of CQ. With personality it was not surprising when reviewing the results since similar findings were found in a previous study by Ang *et al.* (2006). However, a unique finding from this study was the inclusion of identity with CQ. Religious and ethnic identity (as social identity elements; Landman, 2013) predicted some of the aspects of CQ. It seems that social identity is an important aspect amongst the Afrikaans youth and it influences the way they conduct themselves in multicultural settings.

Acknowledgements

The SAPI project aims to develop an indigenous personality measure for all 11 official languages in South Africa. Participants are B.A. (University of Johannesburg and Tilburg University, the Netherlands), C.H. (University of Johannesburg), L.J. (North-West University), D.M. (University of Pretoria), J.A.N. (North-West University), I.R. (North-West University), V.V. (University of Pretoria), and F.v.d.V. (North-West University, Tilburg University, the Netherlands, and University of Queensland, Australia).

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

N.N. (North-West University) was the first author and this publication originated from her master's dissertation. J.A.N. (North-West University) acted as the first author's supervisor and gave important direction and conceptual inputs. B.G.A. (Tilburg University) provided input, guidance and reviews during the write-up. L.T.d.B. (North-West University) acted as corresponding author, performed the statistical analysis and also wrote that section of the article.

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Management competencies required in the transition from a technician to a supervisor

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Dates:

Received: 05 May 2014
Accepted: 10 Feb. 2015
Published: 18 May 2015

How to cite this article:

Mahlangu (Kubheka), S.R.,
& Govender, C. (2015).
Management competencies
required in the transition
from a technician to a
supervisor. *SA Journal
of Human Resource
Management/SA Tydskrif vir
Menslikehulpbronbestuur*,
13(1), Art. #644, 8 pages.
[http://dx.doi.org/10.4102/
sajhrm.v13i1.644](http://dx.doi.org/10.4102/sajhrm.v13i1.644)

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Orientation: Technicians are frequently promoted to supervisory positions based on their technical abilities, with scant attention focused on developing management competencies. This oversight often poses significant challenges. The effective transition from technician to supervisor is important in any organisation.

Research objective: The primary objective is to identify and verify the competencies that are required for a technician and a supervisory position; the secondary objective is to identify the gap that must be filled with relevant training interventions to enable technicians to make an effective transition to a supervisory position.

Motivation for this study: The identification of the management competencies required for a technician who makes a career change to a supervisor position.

Research method: The sequential mixed method approach was used to enable the two-phase data collection process: phase one was the quantitative phase and phase two was the qualitative phase.

Main findings: The overall findings confirm that there are indeed management competencies that technicians require training and development on before being promoted to a supervisory position.

Implication: Organisations need to identify the key competencies for a technician and a supervisor and implement development or training interventions that are essential to successfully transition an employee from the level of a technician to the level of a supervisor.

Contribution: Organisations need to implement essential development or training interventions focused on developing management competencies and put in place support interventions such as coaching, job shadowing, mentoring and networking.

Introduction

For organisations to achieve a competitive advantage over their competitors, they need to build on the skills and knowledge of their current employees (Gratton, 2000; Ito & Brotheridge, 2005). Organisations need to create a pool of skilled, competent technicians and supervisors who are able to deliver on required and projected products and services (Mahapatro, 2010). The identification of the competencies that are required for a technician and for a supervisor is of importance to any organisation. According to Woodruffe (2003), competencies are fundamental distinguishable characteristics that an individual uses to perform a specific job or output successfully.

A notable challenge that contemporary organisations face is the management function of transitioning a technician from a subject matter expert to a supervisor (Badawy, 1995; Barley, 1996; Hood, 1990). The challenge often is occasioned by the role differences; a technician largely uses hands-on experience and logical reasoning competencies, whilst a supervisor requires management, leading, planning, directing, and people skills (Hilgert & Leonard, 2008; Hodgetts, 2007; Mintzberg, 2009; Rue & Byars, 2004).

Unfortunately, most technicians lack the required management competencies that are required for a supervisory position. Therefore, the skills differences that exist between a technician and a supervisor are not being addressed in the workplace. In view of these findings, it seems important to identify, verify and make recommendations on the development of management competencies that are required when transitioning technicians to supervisory positions.

Trends from the literature

Key competencies essential for a technician

According to the Engineering Council of South Africa (ECSA, 2003), technical competencies refer to the knowledge, skills and techniques that are required to effectively operate, test, inspect, construct, install, repair and maintain relevant allocated work areas as per the prescribed standards, legislations, regulation guidelines and code of practice. Technical competencies are the knowledge, skills and behaviours that are required to perform a specific task (Reio & Sutton, 2006). Technical competencies focus on the application of relevant technical knowledge and skills as per the predefined standards and guidelines in order to effectively perform the required tasks (Becker, 2009; Technician Council, 2011; United States Office of Performance Management, 1999).

Review of the Analyzer Technician Competency Model (Analyzer Technician Opportunities Project, 2009) and the United States Office of Performance Management (1999) provides six competency themes that are critical for the technician position. These competency themes can be grouped as follows:

- Theme 1: Maintenance, operation, transmission and distribution of activities per allocated area.
- Theme 2: Technical operations, principles, functionality and techniques.
- Theme 3: Investigation, inspection and modification of allocated systems.
- Theme 4: Quality control.
- Theme 5: Safety knowledge and compliance.
- Theme 6: People skills.

Each of the competency themes was further broken down into actual activities. In addition to the identified themes and actual activities, the National Academy of Engineering (2005) states the importance of sub-competencies, which are mathematics, technical qualifications and experience in the technical field. These sub-competencies are required in the technical field. Theoretical analysis of the technical documents and the energy utility industry's job profiles of the technicians indicates that matric (Grade 12), 2 years' technical experience and mathematics at NQF Level 4 are sub-competencies that are required for a technician position.

Key competencies essential for a supervisor

Greer and Plunkett (2000) state that a supervisor's role includes providing subordinates with instructions and relevant training to enable them to perform their roles effectively. A supervisor is a person who has the discretion and authority to coordinate, direct, and oversee daily work activities of individuals and teams. Supervisors need to ensure that the teams' operational plans are formulated and monitored (De Beer & Rossouw, 2005); therefore, central to management or supervising others are the four functions of management, namely planning, organising, leading and

TABLE 1: Mechanisms for easing the transition to management.

Number	Mechanisms
1	Identify managerial potential
2	Employ better selection methods
3	Make the dual ladder work
4	Provide appropriate support, orientation and coaching
5	Reward managers for subordinates' development
6	Provide training in the functions and skills of management
7	Provide opportunities for management internships

Source: Adapted from Badawy, M. (1995). *Developing managerial skills in engineers and scientists: Succeeding as a technical manager*. (2nd edn.). New York, NY: John Wiley & Sons

controlling, and the five skills in addition to technical skills, namely dealing with people, information-sharing, decision-making and problem-solving (De Beer & Rossouw, 2005; Hilgert & Leonard, 2008; Hood, 1990; Howard, 2003; Mintzberg, 2009; Rue & Byars, 2004; Seethamraju & Agrawal, 1999; Yulk, 2008).

In addition, the literature review and the theoretical analysis of the technical documents and the industry-wide job profiles of the energy utility industries provide additional skills that are required for a supervisory position. Those skills include interpersonal relations, leadership behaviour, administration, budgeting and knowledge of human resources (HR) processes and systems.

Transition from a position of technician to supervisor

Transition refers to a career progression from one lower-level position to another higher-level position, a shift from the technical workforce to the managerial role to increase economic and professional standing (Ebberwein, Krieshok, Ulven & Prosser, 2004; Louis, 1980; Osipow & Fitzgerald, 1996; Roberts & Biddle, 1994). Hall (2002) and Howard (2003) argue that transition is a process of changing jobs or professions.

The transition from a technician position to a supervisory position needs to be managed. Many companies often make the mistake of selecting the best-performing technical employee for promotion to a supervisory or management level without providing them with any supervisory or managerial training, believing that they will make good supervisors or managers (Badawy, 1995; Lewis, 2009; Roberts & Biddle, 1994; Thamhain, 1991). Transition should not be a single event, but should occur over a period of time (Badawy, 1995; Handschin, 2007; Newstrom, 2007). According to Charan, Drotter and Noel (2001), transition from a technician to a supervisor involves recognising the required competencies essential for effectiveness at different performance levels. Badawy (1995, p. 54) identifies the seven mechanisms for easing the transition to management, as shown in Table 1.

Challenges organisations face in transitioning a technician a supervisor

Handschin (2007) evaluates the challenges of promoting a technician to supervise or manage a department. According to Handschin, the nature of the challenges that

organisations often face with technicians who are promoted to a supervisory position is the fear of disengaging from the technical field. Technicians are confident in working with tools and equipment and therefore they often find it difficult to delegate these tasks to their teams. They may remain fixed in their specialist positions as technical experts (Badawy, 1995; Ebberwein *et al.*, 2004; Hood, 1990; Kadushin & Harkness, 2002).

This is supported by Charan *et al.* (2001) who argue that organisations need to put in place mechanisms to deal with the vague sense of letting go of the current role and adding on the new role. This transition stage needs to be handled swiftly and efficiently to avoid slips, unnecessary stress, low morale and substandard performance (Hood, 1990; Howard, 2003).

Katz (2003) argues that interpersonal skills, which include open communication and trust-building, are critical for a technician who makes a transition to a supervisory position in order to delegate work effectively and to interact with teams in an open and transparent manner. The transition stage, if not handled correctly, may result in stressful effects for the new supervisor in trying to execute the job effectively (Aucoin, 2002; Badawy, 1995; Freedman, 1998; Handschin, 2007; Hood, 1990; Kadushin & Harkness, 2002).

Method

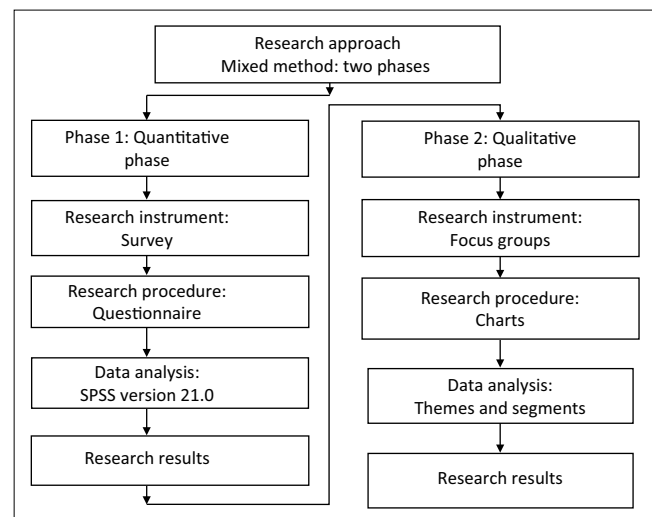
A sequential mixed method approach was used. The rationale for using both the quantitative and qualitative approaches was to ensure reliability and validity of research results (Bernardi, Kleim & Von der Lippe, 2007; Creswell & Plano, 2011). Jogulu and Pansiri (2011) argue that the use of qualitative and quantitative approaches is useful in ascertaining the epistemological coherence of data gathered. The researchers found that the topic was not well researched, there was limited data available on the subject, rich data was needed and therefore the sequential mixed method approach was appropriate.

The quantitative approach was applied first to identify the competencies required for a technician and a supervisor and the qualitative approach was applied later to validate the list of competencies, assign a degree of importance and recommend any further development or training interventions that are essential to successfully transition an employee from the level of a technician to the level of a supervisor.

The research approach was applied as depicted in the Figure 1.

Phase 1: Quantitative approach

Quantitative research is defined as a research methodology that focuses on the discovery of an in-depth, deeper meaning (Rubin & Babbie, 2005). According to Teddlie and Tashakkori (2009), quantitative research refers to the interpretation of



Source: Prepared by researchers (2012)

FIGURE 1: Research approach.

data to obtain numerical results. It enables the researchers to employ numerical assessment and analysis of data to the research questions (Zikmund, Babin, Carr & Griffin, 2013). The quantitative phase was executed to identify the competencies required for a technician position and a supervisor position. In the quantitative phase, a survey was developed, based on the data gathered during the literature review.

Sample size

A sample size of 250 participants was randomly selected from (with acquired management approval) the population of Eskom technicians, supervisors and HR administrators from the Mpumalanga, Gauteng and Limpopo provinces who had a majority of technicians who were promoted to the supervisory position. The HR administrators were invited to participate in this study because they play a supporting role in advising the technicians and supervisors regarding HR-related enquiries.

Ethical considerations

Confidentiality was maintained throughout this study, as all participants were anonymous during data-capturing. The purpose of this study was clearly communicated to all participants prior to their engagement in this study. Permission to conduct the study, to utilise the organisation job profiles as the basis for the study and to publish the results with the organisation acknowledged was granted by Eskom management. Information on the time allowed for the completion of the questionnaire and instructions on how to complete the questionnaire were communicated to all participants. Furthermore, participants were informed that their participation in this study was voluntary, that all data gathered will be used for research purposes only and that the results of this study will be made available upon request.

Research instrument

A questionnaire was constructed by the researchers using the data gathered in the literature review. The questionnaire

focuses on three specific parts: the first part focuses on biographical data, which addresses information on job title, division, department, age profile, gender profile, highest qualification, experience in the technical field and experience in the supervisory field. The questionnaire was structured in a closed-ended rank order scale.

The second part of the questionnaire focuses on technician competencies and addresses the maintenance, technical operation, investigation, inspection and modification of allocated systems, quality control, safety knowledge and mathematics, whilst the third part focuses on supervisory competencies and addresses interpersonal relations, leadership behaviour, planning, leading, controlling, organising, administration and budgeting, HR business processes and mathematics. A five-point Likert (1932) rating scale, with ratings of 1 (strongly disagree), 2 (disagree), 3 (unsure), 4 (agree), and 5 (strongly agree) was used for the second and third parts of the questionnaire.

Research procedure

The questionnaire was distributed to 250 participants. Besides the 100% response rate of the original sample, 16 additional questionnaires were copied and completed. The researchers were unable to distinguish between the original and additional questionnaires. Consequently, the analysis was conducted on a total of 266 completed questionnaires.

Data analysis

Data was analysed by Statkon (University of Johannesburg statistical division), using the Statistical Package for the Social Sciences (SPSS version 21.0). Descriptive statistics were used to analyse data. The competencies were ranked based on the mean and standard deviation scores such that a higher central tendency indicated a stronger preference for the inclusion of such a competency. Competencies that received a rating of 4 and 5 were included and those that received a rating of 3 and below were excluded. The Cronbach's alpha test of reliability achieved scores over 0.90 for all variables measured with exception of the 'qualification' variable, which had a Cronbach's alpha score of 0.861. This was due to the fact that some of the participants were uncomfortable with mathematics as a required competency for a technician position.

Results

Out of the 266 valid questionnaires analysed, the frequency responses received from the Eskom divisions are as follows: distribution division 40.2%, transmission division 36.8%, generation division 18.8% and corporate division 4.1%. The departmental spread was recorded as follows: maintenance 37.9%, engineering 28.4%, operating 20.8%, HR 3.8% and 9.1% did not indicate their department. The age profile of the participants ranged as follows: 45.9% 40–49 years, 28.2% 30–39 years, 16.9% 50–59 years and 9% 29 years and younger.

The gender profile of participants was predominately male at 68.9% with 31.1% female. The most prevalent of

qualifications were National Diploma at 32.1% followed by National Certificates at 28.3%. A postgraduate diploma was held by 19.2% of participants and 7.5% held a bachelor's degree. The most frequent range of experience in the technical field was 6–10 years (35.8%), followed by 10–15 years (16.2%); range of experience at the supervisory level was 3–6 years (30.1%) and 0–3 years (28.2%).

According to the findings, the following competencies are deemed to be significant for all supervisors, especially those that were promoted from the position of technician. The mean scores are provided for each competency with standard deviation scores in brackets: leadership 3.39 (0.636), planning 3.34 (0.578), leading 3.39 (0.586), controlling 3.31 (0.627), organising 3.32 (0.639), administration 3.28 (0.615), budgeting 3.07 (0.684), safety knowledge 3.37 (0.631), HR systems and processes 3.26 (0.642), training and development 3.19 (0.623) and qualification and experience 2.94 (0.650).

Phase 2: Qualitative approach

Qualitative research is aimed at understanding the meaning, experience and perception that people attach to their everyday lives (De Vos, 2002). Qualitative research is a non-statistical approach that elicits participants' accounts of meaning and experience (Creswell, 2009; Willis, 2007). According to Cooper and Schindler (2012), qualitative research attempts to understand how and why a phenomenon happened. For the purpose of this study, qualitative research using focus groups was conducted immediately after the quantitative survey results were analysed.

Sample size

The focus group participants were selected randomly from a total of 150 managers with a breakdown as follows: 60 supervisors, 60 line managers, 15 HR development (HRD) managers and 15 HR managers. All managers were directly affected by the future transitioning of technicians into supervisory positions. To ensure that the groups were small enough to give everyone the opportunity to express an opinion and diverse enough to encourage participation, participants were split randomly into four groups of 50, 50, 25 and 25. In each of the four focus groups, participants were further split into three or four groups to facilitate discussion, debate and agreement amongst 8 to 15 participants. Ideally, the focus groups should have been smaller to allow for rigorous discussion and debate; however, for the purpose of this study, the sample size fortunately allowed the groups to achieve the desired outcome.

Research instrument

The competencies that were identified in the quantitative phase were consolidated into two charts listing the key competencies of a technician's position and the key competencies of a supervisor's position. Participants of the focus groups were requested to agree with and accept each competency, then rank the degree of importance of each competency and recommend any further competency that

may have been omitted. Finally, participants were requested to recommend the development or training interventions that would be essential to successfully transition an employee from the level of a technician to the level of a supervisor.

Research procedure

Participants in the focus group sessions were issued with the two charts generated from the quantitative survey findings listing the competencies of a technician and of a supervisor. Participants were also provided with flipcharts to record their discussion points. After discussions, participants were requested to agree, accept and validate each competency. Thereafter they had to prioritise and order each competency into those that were most important to those that were least important. A ranking scale of 1–5 was used, ranging from 'strongly disagree' to 'strongly agree'.

Data analysis

The data gathered from the focus group discussions were moderated to check if all groups had accomplished the tasks as requested. The charts were checked to identify if all stated competencies for both technician and supervisor were accepted. The degree of importance rankings were tallied to check if participants agreed on the priority assigned to each competency. Rankings of 4 ('agree') and 5 ('strongly agree') were interpreted as significant for the purpose of this phase of the study. The flipcharts were scanned for common additional competencies that groups included besides those stipulated on the charts provided as well as for the training intervention topics recommended for technicians transitioning into supervisory positions.

Results

The majority of the competencies that were listed on the technician and supervisory competencies charts obtained a degree of agreement score of between 4 and 5. Competencies of the supervisor were ranked as follows:

- Most important competencies (ranking of 5): interpersonal relations, leadership behaviour, organising ability, budgeting, safety knowledge, relevant qualification and experience.
- Less important competencies (ranking of 4): planning, leading, controlling, administration, training and development.

The focus group concluded that the competencies for the technician's position are aimed at improving the technical skills and knowledge, whilst the supervisory competencies are aimed at improving the management of individuals and teams and ensuring effective planning, organising, leading and controlling of the day-to-day operations.

In addition to the listed competencies of supervisors, the focus group participants added these competencies as highly necessary for junior management staff: conflict management, time management and managing meetings. For effective training and development interventions for technicians

transitioning into supervisory positions, focus group participants recommended these skills be included: coaching, mentoring, talent management and networking skills.

Discussion

The competencies identified for the technician position and the supervisor position as per the literature review were accepted by participants in the quantitative survey and further validated by participants in the qualitative focus groups. The work of a technician involves the day-to-day operation and maintenance of various types of equipment (Barley & Bechky, 1994). A technician is someone who has acquired specialised training and experience and who is skilled to utilise the technical instruments, techniques, equipment and procedures to solve technical problems (ECSA, 2003). Research participants agree that a technician uses a wide variety of systems, tools and equipment in analysing, scanning and investigating system networks and plant performance. Ideally, technicians should use their tools and equipment safely with minimal danger and damage to self, client and others.

A low rating of mathematics as a required competency for a technician indicates that many research participants are unsure of the importance of this competency for a technical position. Mathematics as a competency required for a supervisory position recorded a favourable frequency score of 62.9%. The technical specification documents emphasised the importance of mathematics for a technician position, as technicians are expected to understand how to read drawings, calculate required amounts of specifications for the repairing of machines and maintain project schedules. This is supported by ECSA (2003), which states that the knowledge and understanding of mathematics for a technician's position provides technicians with a skill to perform fault-finding, designs and routine checks adequately.

Mathematics seems to be a contested requirement, which could be due to perceptions about its difficulty and the potential barriers to entry into a supervisory position for technicians who do not have high levels of mathematical proficiency. The organisation should launch an investigation into the current and required level of mathematical proficiency for a technician and thereafter promote mathematical skills via training interventions as well as policy documents.

Supervisors have more demands placed on them than technicians, as they have to ensure that they oversee the work of their teams. The survey results reveal a common acceptance of the definition of the role of the supervisor, especially the responsibility for team, departmental and organisational performance. The focus groups agreed that supervisors are expected to ensure that their team performance contributes to organisational success.

The findings of the survey confirm that supervisors have to create a balance between getting work done and building relationships within their teams. This is in support of Boone

and Kurtz's (2011) argument that supervisors need to communicate clearly what is needed and establish a culture of customer-centricity, which has employee satisfaction at the centre of business performance. In addition, the results from the qualitative focus group sessions indicated that supervisors are expected to apply technical competencies, plan for the required resources for the execution of daily tasks, supervise their team and assess their team's performance.

Of the 11 supervisory competencies identified in this study, the leadership and leading competencies achieved the highest mean scores and were ranked as most important by focus group participants. Safety knowledge was highly significant with the second highest mean score and a focus group ranking of 5. Planning was the third placed competency identified as essential for supervisors, closely followed by interpersonal skills and organising ability. These findings reveal that the key competencies that are required for a supervisory position include planning, organising, directing, controlling and monitoring of daily activities of their teams.

These findings are in line with the literature where various authors have argued that there are four functions that are central to management or supervising of other employees: planning, organising, leading and controlling (De Beer & Rossouw, 2005; Hilgert & Leonard, 2008; Hood, 1990; Howard, 2003; Mintzberg, 2009; Rue & Byars, 2004; Seethamraju & Agrawal, 1999; Yulk, 2008). Four additional skills that are critical for a supervisor position are dealing with people, information-sharing, decision-making and problem-solving.

From the findings it is evident that transitioning from a technician to a supervisor involves recognising the required competencies essential for effectiveness at different performance levels (Charan *et al.*, 2001). According to Aucoin (2002), for the technician to make the transition to a supervisor position, there are three critical skills required, namely technical, administrative and personnel or HR skills. Supervisors need to lead their teams and create a balance between getting the work done and building relationships. The focus groups agreed that leadership behaviour and interpersonal skills are critical for the supervisory position. Supervisors set a foundation for effective operations, workplace relationships and quality standards for all employees in the workplace.

The competency gaps between a technical position and a supervisory position were measured as a shift in competencies from a technical position to a supervisory position (Roberts & Biddle, 1994). This shift is referred to as a transition. The literature trends reveal that when technicians make a transition into a management position, they often experience challenges, especially when managing teams (Hood, 1990). For example, the transition from an engineer (which is a technical field) to a manager is a difficult experience (Howard, 2003). The difficult experience of making the shift from technician to supervisor is a challenge that organisations can

handle effectively through the implementation of necessary development and coaching interventions.

Organisations need to acknowledge that a transition should not be seen as a single process of just promoting a technician to a supervisory position and expecting that the same success that was achieved at the technician level will be achieved at a supervisory level. The transition should be viewed as a process (Hill, 2003; Hood, 1990; Newstrom, 2007). The transition process should be a swift and efficient process that is carefully executed to avoid slip-ups, unnecessary stress, low morale and substandard performance. Moreover, it is critical that the technicians who make a career transition to a supervisory position have the required skills and competencies to properly manage their team activities (Hood, 1990). Where there is a gap in the skills required to make the shift, organisations should implement necessary training interventions.

Training and development were confirmed in both the quantitative and qualitative phase as significant requirements for the transition from a technician to a supervisor. Training and development should aim to provide the necessary skills and competencies for the required position. The triangulation of the results of this study reveal that, as identified in the literature review, the survey and focus group participants agree that the competencies for technicians and supervisors differ and that technicians should be groomed to acquire and master the additional competencies required by supervisors.

Implications of the findings

The management competencies that are required to transition a technician to a supervisor have three important implications for the employees, managers and clients of the organisation. Firstly, the literature review may guide the organisation to identify the key competencies that are essential for a technician and a supervisor. The list of competencies for each position could be used as a tool for recruiting, engaging, retaining and addressing the gaps in the required key competencies for each position. Furthermore, the list of competencies could be an effective tool for transitioning a technician to a supervisory position.

Secondly, the findings reveal that the competencies for supervisors are shared by technicians; however, additional competencies are required in a supervisory position. More demands are placed on supervisors than on technicians (Hilgert & Leonard, 2008; Hodgetts, 2007; Mintzberg, 2009). Supervisors need to create a balance between getting work done and building relationships within their teams (Badawy, 1995; Hilgert & Leonard, 2008; Yulk, 2008). According to the focus group findings, supervisory positions are often complex: in addition to allocating and supervising the work of individuals and teams, there is the added responsibility of managing conflict amongst team members, managing time spent by teams on tasks and attending and managing meetings, which could sometimes last an entire workday.

Thirdly, the findings of this study confirm that organisations should implement development or training interventions that are essential to successfully transition an employee from the level of a technician to the level of a supervisor. The results reveal that such a transition should not be treated as a one-off event, but as a process that takes time; hence, it should be seen as progressing through five overlapping stages that occur over several months or even years (Badawy, 1995; Newstrom, 2007). Therefore, organisations need to build effective training and development interventions and design supporting structures to ensure the smooth transition of technicians into supervisory positions.

The proposed development solutions or interventions to enhance management competencies that are required in the transition from a technician to a supervisory position may be used to guide HRD professionals in supporting the development of a learning environment in which there is sharing of knowledge and skills. Organisations should implement processes to identify and support the potential challenges that are faced by the technicians who make the transition into supervisory positions.

Limitations of the study

The study was conducted in one organisation within the energy sector; hence, generalisation of the results into other organisations is limited.

The competencies used in the questionnaires could not always be substantiated by the literature as there was a scarcity of literature on the competencies required for a technician and a supervisor, especially those within an electricity generation organisation. However, the competencies identified in this study will fulfil the purpose for which it was intended, especially for the organisation under study. It is hoped that this study will form a theoretical framework for further studies on the subject of supervisory and management competencies as required by junior staff seeking promotion opportunities.

Recommendations for future research

As a recommendation, further research should be conducted on a variety of organisations in the energy sector to verify the competencies described in this paper as well as to allow for generalisation of the results.

Further research is required for a broader population including different types of industries that employ technicians and supervisors. A future study could investigate the more complex designs involving inferential statistics to determine which competencies have the highest prediction value on the effective execution of work when a technician is promoted to a supervisory position.

Conclusion

The main objective of this study was to establish the management competencies that are required for a technician

to make the transition into a supervisory position. This study also provided a comprehensive view on the management competencies that are required for a technician to make a smooth transition to a supervisory position. The response rate and the interest in the content of this research confirm the importance of this subject within the studied organisation.

To achieve these in-depth research findings, this study applied a sequential mixed methods research approach. The quantitative phase utilised the survey questionnaire to identify and verify the competencies identified during the literature review. The results from the quantitative phase were used as input to the qualitative phase of this study. The qualitative phase utilised focus group discussions to validate the identified competencies, assign a degree of importance and identify additional competencies for technicians transitioning into supervisors.

Research participants recommended that training or development interventions are imperative to successfully transition employees from a technician to a supervisory position. The overall findings confirm that when technicians are promoted to a supervisory position, the additional competencies for supervisors are not considered and technicians are not provided with the essential training that is critical for the supervisory position.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

S.R.M. (University of Johannesburg) performed the research and wrote the article. C.G. (University of Johannesburg) was a supervisor.

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Occupational health and safety considerations for women employed in core mining positions

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Dates:

Received: 18 June 2014

Accepted: 13 Feb. 2015

Published: 02 June 2015

How to cite this article:

Botha, D., & Cronjé, F. (2015). Occupational health and safety considerations for women employed in core mining positions. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #652, 12 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.652>

Note:

This research formed part of Dr Botha's PhD thesis at the North-West University.

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Orientation: Despite various liberalisation and feminisation processes with regard to gender and sex roles, traditionalistic typologies, especially in terms of occupational roles, are seemingly very reluctant to disappear from relevant theoretical discourses, as well as in practice. One of the main issues remains the terrain of physical work. Although women all over the world have been involved in mining activities for centuries, the mining industry has not been an obvious career choice for women. In South Africa, new mining legislation aims to rectify previous inequalities and disadvantages in the mining sector and specifically provides for the inclusion of women in core mining activities. Although well intended, women's involvement in the core business of mining also exposes them to the various hazards related to mine work.

Research purpose: This research determined perceptions regarding the health and safety of women working in core mining positions.

Motivation for the study: Currently there is a paucity of published data regarding health and safety challenges pertaining to women employed in the core business of mining.

Method: Quantitative and qualitative research paradigms were used (mixed method research design). Quantitative data were collected by means of a structured questionnaire. Qualitative data were collected by means of individual interviews and group interviews.

Main findings: From the literature review and the empirical findings it is evident that various factors (physical work capacity, anthropometry and body composition, personal protective equipment, treatment during pregnancy and security measures) need to be considered to ensure the health and safety of women employed in core mining positions.

Practical/managerial implications: It is evident from the research that exceptional attention should be given to the promotion of the health and safety of women working in the core business of mines to sustain their involvement in the mining sector.

Contribution: Practical recommendations are made to address health and safety concerns of women employed in core mining activities. These can be implemented and used by various stakeholders in the mining sector.

Introduction and problem statement

Although women all over the world have been involved in mining activities for centuries, mining has been considered a very masculine industry due to its heavily male-dominated workforce as well as the physicality of mine work. The heavily manual character of mine work together with the dirt and risk associated with mine work makes the male miner the typical labourer (Lahiri-Dutt & Macintyre, 2006, p. 4). In addition, the mining industry has not been an obvious career choice and preferred place of employment for women.

In South Africa, the *Mineral and Petroleum Resources Development Act* (No. 28 of RSA, 2002) (MPRDA) and the accompanied Broad-based Socio-economic Empowerment Charter for the South African Mining Industry (RSA, 2004) aim to rectify previous inequalities and disadvantages in the mining sector and specifically provide for the inclusion of women in core mining activities. 'Women employed in core mining activities' implies that women should hold positions equivalent to those of men, in other words, fill positions in mining that include, amongst other activities, mining, metallurgy, engineering and geology (Harmony Gold Mining Company, 2008, p. 32). They are also required to do the manual labour associated with mining (Burtenshaw, 2005). According to research conducted by the MSA Group, specialist consultants to the mining industry, approximately 11% of the South African mining industry's workforce, which includes non-core services, is represented by women (Hancock, 2014). Eftimie, Heller and Strongman (2009, p. 9) postulate that it is worldwide extremely rare to find any extractive industry companies with higher than 10% female employment, with many having less than 5%.

Although well intended, the establishment of gender equality in the male-dominant mining sector remains one of the biggest equity challenges in the country and numerous problems (such as shift work, sexual harassment, acceptance by male co-workers, physical constraints, challenges related to infrastructure facilities and pregnancy) accompany the deployment of women in core mining activities (Badenhorst, 2009; Fourie, 2009; Managing Transformation Solutions, 2011; Women in Mining Canada, 2010). Furthermore, due to women's involvement in the core business of mining, they are also exposed to the various hazards related to mine work. In addition, women face greater risks to their safety because most supportive infrastructure, such as personal protective equipment (PPE), as well as mining machinery, tools and equipment, is not designed to be used by women (Hermanus, 2007, p. 532). The safe placement of women prior to and during pregnancy remains a further challenge to mining companies (Badenhorst, 2009, p. 60).

The problem under investigation can be outlined as follows: on the one hand, mining companies are obliged to meet the requirements of the South African Mining Charter by employing 10% women in core mining positions and run the risk of losing their mining licences to operate if they do not adhere to the requirements. On the other hand, the deployment of women in the core business of mining is accompanied by various challenges, not only for management, but also for male co-workers and the women themselves. Furthermore, work in the mining sector is categorised as high-risk work and is associated with difficult working conditions; mining is one of the most physically demanding occupations (Schutte, 2011, p. 11). Therefore, it is of utmost importance that all measures be taken to ensure that the health and safety of the female mine worker are not compromised.

Against this background and problem statement, the research question to be addressed was: do mining companies in South Africa take all relevant measures (such as safeguards, protective clothing and protection during night shift and pregnancy) to ensure the health and safety of female mine workers?

Purpose

The purpose of the article is to, *firstly*, highlight health and safety challenges for women employed in core mining positions as identified in the literature, *secondly*, determine perceptions regarding the health and safety of women employed in the core business of mining according to the empirical research and, *thirdly*, provide recommendations that could be implemented and used by various stakeholders in the mining industry to overcome some of these challenges.

Literature review

Work in the mining sector is categorised as high-risk work and falls into the category of perceived hazardous occupations. 'Mining involves hard physical labour under

conditions of extreme discomfort, deafening noise, intense heat and humidity and cramped space' (Zungu, 2011, p. 8).

The *South African Mine Health and Safety Act* (No. 29 of RSA, 1996b) (MHSA) enforces and promotes the health and safety of persons at work in the mining sector (p. 1). The MHSA (RSA, 1996b) was updated by the *Mine Health and Safety Amendment Act* (1997). The Act introduced the concepts of risk assessment and occupational health and safety management to the mining industry. Great emphasis has been placed on the reduction of mining-related deaths, injuries and diseases. Another amendment to the MHSA followed in 2008 and aimed to review and strengthen enforcement provisions, to reinforce offences and penalties and to effect certain amendments necessary to ensure consistency with other laws, particularly the MPRDA (RSA, 2002). Furthermore, the International Labour Organization's Safety and Health in Mines Convention C176 of 1995 was ratified by South Africa on 09 June 2009. It recognises the desirability of preventing any fatalities, injuries or ill health affecting workers or members of the public or damage to the environment arising from mining operations (Zungu, 2012, p. 7). The MHSA was reviewed in 2011 and 2012. In October 2013, Cabinet approved the publication of the Draft Amendment Bill of the MHSA (2013), in the Government Gazette, for public comment (SAnews, 2013). The Bill seeks to amend the MHSA (RSA, 1996b). It aims to improve the health and safety of mine employees and seeks to maintain a healthy and safe mine environment with a positive impact on environmental sustainability and resilience (SAnews, 2013).

Despite the improved efforts from the South African government, and specifically the Department of Mineral Resources, (DMR), to promote health and safety in the mining industry, the safety track record in the South African mining industry continues to be a matter of great concern to the DMR. The loss of life owing to accidents is still a concern, especially in the gold and platinum sectors (Vermeulen, 2014). According to South African Mineral Resources Minister Ngoake Ramathlodi (Vermeulen, 2014), rockfall, transport and fire-related accidents are still the major causes of death in the sector. The minister also noted that the number of occupational diseases including silicosis, noise-induced hearing loss and pulmonary tuberculosis (TB) was still excessively high. After India and China, South Africa has the third highest number of TB cases (Vermeulen, 2014). Furthermore, the DMR continues to be concerned about the health and safety of female workers in the mining industry, especially the inhumane treatment of female miners by fellow workers in some of the underground workplaces (Vermeulen, 2014).

From the above it is evident that mine health and safety challenges are still serious issues in the South African mining sector and, if left unattended, could have serious social and economic implications. Moreover, the introduction of women into the core business of mining poses new health and safety challenges to the industry. The section below

highlights specific health and safety challenges pertaining to women working in core mining positions.

Physical constraints

Due to the physicality of mine work, many jobs require a high degree of physical strength and endurance. Some of the work tasks are difficult to perform due to the physical differences that exist between women and men (Wynn, 2001, p. 33). The gender-related differences listed below should be considered (Van Aardt, Bendeman, Christie, Gazi & Schutte, 2008, p. 22).

Physical work capacity: Women experience significantly more physiological strain than men when performing mining tasks (Schutte, Edwards & Milanzi, 2012, p. 3). The aerobic capacity (physical work capacity) of women is typically 15% – 30% below the values of their male counterparts (Schutte *et al.*, 2012, p. 3). Aerobic capacity refers to the maximal oxygen uptake that provides a quantitative measure of a person's ability to sustain high-intensity physical work for longer than 5 minutes (Ashworth, Molapo, Molefe, Schutte & Zitha, 2004, p. 34). This means that women work closer to their aerobic capacity than men and are therefore more likely to become fatigued. Fatigue is operationally defined as the 'reduced muscular ability to continue an existing effort' (Ashworth *et al.*, 2004, p. 34). High levels of fatigue can cause reduced performance and productivity in the workplace and increase the risk of accidents and injuries occurring (Schutte, 2010, p. 54).

Mine work also requires manual handling of equipment and tools. These equipment and tools are designed to accommodate the size and strength of men (Zungu, 2011). Manual tasks can often be related to back injuries and musculoskeletal disorders in workers (Badenhorst, 2009, p. 63). In general, the manual material-handling capabilities of women are substantially lower than those of men. These differences may be attributed primarily to differences in muscle strength (Ashworth *et al.*, 2004, p. 34). Women only have 55% of men's upper-body strength and 72% of their lower-body or leg strength (Van Aardt *et al.*, 2008, p. 22). On average, a woman's lifting strength is 60% – 70% of that of a man (Ashworth *et al.*, 2004, p. 34).

Heat tolerance: Women working on mines, and in particular underground, are also exposed to extreme heat. Singer (2002, p. 1) states that the underground environment can be defined as dark and damp, and with an increase in temperature relative to an increase in depth. In South African mines, work environments with a wet-bulb temperature higher than 27.4 °C are considered hot and necessitate the introduction of practices to safeguard miners (Schutte, 2009). According to Ashworth *et al.* (2004, p. 35), all employees who work under 'conditions conducive to heat stroke' should be screened for gross or permanent heat intolerance by means of the standard heat tolerance screening test procedure. Heat tolerance screening is done to assess whether an individual can withstand high temperatures whilst doing physically demanding work, with the aim of protecting individuals

against the negative consequences of heat exposure, such as heat stroke and heat-related diseases (Benya, 2009, p. 56).

Van Aardt *et al.* (2008, p. 22) postulate that under conditions of high ambient temperature, thermoregulation in women is less efficient than in men. This is also confirmed by the findings of Schutte (as cited in Van Aardt *et al.*, 2008, p. 22), which indicate that female mine workers are less tolerant to heat than their male counterparts.

High occupational heat loads can lead to the following problems, amongst others: impaired work capacity, errors of judgement with obvious implications for safety, lethargy and fatigue and complications such as heat stress, which can lead to heat stroke, which is often fatal (Schutte, 2009, p. 1). The following personal risk factors, amongst others, may reduce an individual's tolerance for heat stress: age, obesity, state of hydration, use of medication and drugs, gender and acclimatisation state (Zungu, 2011). Furthermore, gynaecological conditions and pregnancy could also affect the way in which women handle heat stress (Zungu, 2011).

Anthropometry and body composition: According to Van Aardt *et al.* (2008, p. 22), differences exist in the anthropometry and body composition of men and women. The average man is heavier and has a greater lean body mass than the average woman. Furthermore, women tend to have more body fat and less lean mass than their male counterparts. Therefore, women will have lower maximum oxygen uptake values to transport the same body mass.

The design of mining equipment and tools used during mining does not always take into account the anthropometry of the user population (Van Aardt *et al.*, 2008, p. 22). Much of the mining equipment used in South African mines is designed to fit men (Badenhorst, 2009, p. 62). When mines started to recruit women, mining equipment was still only suitable for men, but both women and men had to share such equipment. Body dimensions are an important concept that should be taken into consideration with the design of mining equipment as well as its efficient operation (Campbell, 2007). Women face great risks to their safety when using work equipment, machinery and tools designed for men, and this may contribute to women's work accident risks (Badenhorst, 2009, p. 63; Hermanus, 2007, p. 532; Van Aardt *et al.*, 2008, p. 23).

According to Badenhorst (2009, p. 59), a female employee can do any job that she is qualified to do, provided that she meets the requirements of the specific job. Furthermore, an employee should not be employed in a job or conduct tasks for which they are not medically fit or if they do not have the required physical and functional capabilities. Emphasis should be placed on worker selection, paying attention to the ergonomic fit of equipment, work tools and tasks to the worker's physique (Van Aardt *et al.*, 2008, p. 23). A programme should be established to ensure that minimum medical requirements are met by employees, which include health risk assessment or a health risk

TABLE 1: Distribution and response count per mine.

Mine commodity	Management		Female employees working in core mining activities		Male employees working in core mining activities		Total distribution count	Total response count
	Distribution count	Response count	Distribution count	Response count	Distribution count	Response count		
Copper mine	30	17	60	34	60	17	150	68
Phosphate mine	30	12	50	21	50	17	130	50
Platinum mine	40	0	180 (15 × 12 shafts)	22	180 (15 × 12 shafts)	16	400	38
Total participants	100	29	290	77	290	50	680	156

profile for each occupation and the establishment of medical standards for each of these occupations based on the risk profiles (Badenhorst, 2009, p. 70). Furthermore, a test battery to conduct and measure these abilities should be established (Badenhorst, 2009, p. 70).

Pregnancy challenges

Pregnancy and breastfeeding are two of the major challenges mining companies have to deal with when incorporating women into the mining workforce. Pregnant employees are strongly protected under South African legislation. The Constitution of South Africa (RSA, 1996a), Section 9(3), and the *Employment Equity Act* (EEA, RSA, 1998), Section 6, explicitly prohibit unfair discrimination against anyone or any employee on the grounds of pregnancy. Furthermore, the *Basic Conditions of Employment Act* (BCEA, RSA, 1997) forbids employers to require a pregnant employee or an employee who is nursing her child to perform work that is hazardous to her health or the health of her child. It also obliges employers to offer her suitable, alternative employment if the employee is required to perform night work or if her work poses a danger to her health or safety or that of her child. In addition, the Code of Good Practice on the Protection of Employees during Pregnancy and after the Birth of a Child (Israelstam, 2012) aims at protecting pregnant and post-pregnant employees.

If a woman falls pregnant, the onus rests on her to inform management of her pregnancy in order to immediately enable them to accommodate her in a safe position (Van Aardt *et al.*, 2008, p. 23). Most women can continue working during pregnancy; however, the nature of the job and the risks associated with the job will determine for how long she will be able to perform the specific requirements of the job. Exposure to physical, chemical, ergonomic and biological hazards must be considered potentially dangerous to the health of pregnant women (Badenhorst, 2009, p. 69). Risk assessment is fundamental to the safe placement of female employees during pregnancy (Badenhorst, 2009, p. 60).

Personal protective equipment challenges

Because the mining industry was historically viewed as a 'man's world', PPE was designed with men in mind. The design of most of the PPE used at South African mines is based on the anthropometry of male populations from Germany, France and the USA (Van Aardt *et al.*, 2008, p. 23). On average, women's feet are shorter and narrower than men's, their bodies are shorter in length, their shoulders are narrower and their hips are usually wider (Zungu,

2011). The lack of correctly fitting PPE can affect the way women are protected as well as the way in which they are able to perform their jobs. Ill-fitting PPE restricts the ability of employees to move easily and exposes them to environmental hazards associated with mining. As women differ from men in terms of size and shape, their PPE should be adjusted and developed to ensure a proper fit, comfort and protection (Badenhorst, 2009, p. 62).

From the literature review it is clear that various factors need to be considered to ensure the health and safety of women working in the core business of mines. Consequently, the empirical findings of the research are presented.

Method

Research approach

A mixed method research design was followed by applying a quantitative and qualitative research approach.

Measures

Research participants

The research setting was limited to the following three mines: a copper mine (underground), a phosphate mine (open-cast) and a platinum mine (underground). The mines were selected on an availability basis (convenience sampling). Convenience sampling refers to sampling by obtaining people or units that are conveniently available (Zikmund, Babin, Carr & Griffin, 2010, p. 396).

For the purpose of quantitative research, the study population consisted of management as well as male and female employees working in core mining activities of the three mines. Convenience sampling was used to select the participants. In total, 156 responses were received: 68 from the copper mine, 50 from the phosphate mine and 38 from the platinum mine (see Table 1).

Purposive or judgemental sampling was used to select participants for the qualitative research. Purposive sampling is a type of non-probability sampling in which the units to be observed are selected on the basis of the researcher's judgement about which ones will be the most useful or representative (Babbie & Mouton, 2011, p. 184). In total, 12 individual interviews and 19 group interviews (69 participants) were conducted. The researcher aimed to gain information from various operations; therefore, the participants selected varied from various categories of employment and mining disciplines (see Table 2).

Measuring instruments

Quantitative data were collected by means of a structured questionnaire. Qualitative data were collected by means of individual and group interviews. The interviews were conducted in English. The interviews were semi-structured, as an interview guide was utilised. Data collected by means of semi-structured and group interviews were audio and video recorded and written notes were taken.

The qualitative approach supported the quantitative approach and aimed to provide more reliable results, because the researcher could ask probing questions of the participants and by so doing avoid misunderstanding of questions and gain better insight into the phenomenon of interest, as recommended by Welman, Kruger and Mitchell (2010, p. 167). In addition, the researcher could gain a deep

understanding of the variables that have an impact on women in the mining sector.

Research procedure

The researcher formally requested permission from mine management to conduct research at three mining companies. After permission was granted, a formal appointment was scheduled with mine management to explain the nature and extent of the research. In each research setting (mines), a contact person (human resource officer targeted with women in mining) was allocated to the researcher to provide the necessary assistance and support during the research, which included the following: distributing and collecting the quantitative questionnaires, selecting appropriate participants for the individual interviews as well as group interviews, scheduling interviews and organising

TABLE 2: Individual and group interviews conducted at the mines.

Interviews	Groups	Job specification	Gender	
Copper mine				
Individual	-	Manager: Employee relations	Male	
		Employment equity coordinator	Male	
		Ventilation technician (Underground)	Female	
		Instrument technician (Underground)	Female	
		Instrument technician (Underground)	Male	
		Instrument technician (Underground)	Male	
		Development dispatch (Underground)	Female	
		Fitter and turner (Concentrator)	Female	
		Electrical superintendent (Concentrator)	Female	
		Reverb operator (Smelter)	Female	
		Electrician (Smelter)	Female	
		Superintendent internal audit (Administration)	Female	
		Medical doctor	Female	
		Chairperson (Women in Mining Forum)	Female	
		Group interviews	Group 1	Senior geologists (Underground)
Strata control officers (Underground)				
Group 2	Dump truck operators (Surface mining)		Female	
	Multi-skill operators (Surface mining)			
	Laboratory assistants (Surface mining)			
Group 3	Laboratory supervisors (Surface mining)			
	Engineers in training (Refinery)		Female	
	Operators (Refinery)			
			Nickel and dispatch superintendent (Refinery)	
Group 4	Women in Mining Forum (Meeting)		Female	
Group 5	Human resource officers		Male	
Group 6	Supervisors (Underground)		Male	
	Supervisors (Refinery)			
Phosphate mine				
Individual interviews	-	Senior manager: Production	Female	
		Production superintendent	Male	
Group interviews	Group 1	Finance manager (Male)	Female/Male	
		Procurement manager (Female)		
		Human resource manager (Female)		
		Group human capital manager (Male)		
	Group 2	Plant operators	Male	
	Group 3	Attendants flotation	Male	
		Laboratory attendants		
	Group 4	Operators operations	Female	
		Attendant sample preparer		
		Lab attendants		
		Attendants bush pumps and fitters		

Table 2 continues on the next page →

TABLE 2 (Continues...): Individual and group interviews conducted at the mines.

Interviews	Groups	Job specification	Gender
Platinum mine			
Group interviews	Shaft A	General workers (Underground)	Female
		Loco operator (Underground)	
	Shaft A	Team leader: Haulage maintenance (Underground)	Male
		Production supervisor (Underground)	
		Construction gang: Supervisor (Underground)	
		Rail maintenance (Underground)	
		General: Haulage maintenance (Underground)	
	Shaft B	Learner rock breakers (Underground)	Female
		Team workers (Underground)	
		Production clerk (Underground)	
	Shaft B	Mining clerks (Surface)	Male
		Team leaders (Underground)	
		Electrical assistants (Underground)	
	Shaft C	Haulage maintenance crew (Underground)	Female
		Loco operators (Underground)	
		Production crew (Underground)	
	Shaft D	Electrical foremen	Male
		Storemen	
	Shaft D	Diesel bay attendants	Female
		Dozer operators	
Pecker operators			
Shaft E	Service crew	Male	
	Winch operators		
	Development crew		
Shaft E	Service crew	Female	
	Cleaners (formerly employed underground but was injured, now working on surface)		
	Belt attendants		
	Rigger artisans		

underground field trips as well as visits to surface mining operations. Most of the individual interviews and group interviews were scheduled between shifts in order not to interfere with the work responsibilities of the participants. Ethical considerations, such as voluntary participation, informed consent, privacy, anonymity and confidentiality were taken into account whilst conducting the research, as recommended by Babbie and Mouton (2011, p. 520).

Data analysis

Quantitative data obtained through the questionnaires were analysed with the support and assistance of the Statistic Consultation Service of North-West University. The statistical software program SPSS 21.0 for Windows was used to analyse the data. *Firstly*, descriptive statistics are presented, differentially in terms of the three mines included in the study. Descriptive statistics were reported per statement as mean. The benchmark (ideal) in terms of responses for every statement is 4, which indicates that compliance with the specific statement is satisfactory, except for a small number of reversed statements. Ratings of 2.5 and lower were regarded as 'low' and indicate that compliance with the specific statement is none or very limited. The opposite is applicable to reversed statements. *Secondly*, a factor analysis was conducted to explore the factorial structure of the section. The following values were measured and the results are reported as part of the factor analysis: the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, the *p*-value of

Bartlett's test of sphericity, pattern matrices, communalities, Cronbach's alpha coefficients and factor means. *Thirdly*, effect sizes were measured. Because an availability sample was used, *p*-values were not relevant and differences between means were examined for practical significance with effect sizes. *Lastly*, qualitative data obtained through the semi-structured interviews and group interviews were analysed by means of conceptual (thematic) analysis. Coding choices were made according to the following eight category coding steps indicated by Palmquist (cited in Babbie & Mouton, 2011, p. 492): deciding on the level of analysis, deciding on how many concepts to code for, deciding whether to code for the existence or frequency of a concept, deciding how to distinguish between concepts, developing rules for the coding of texts, deciding what to do with the data that are irrelevant, coding the data and analysing the results.

Results

Descriptive statistics

Similar results were obtained for almost all the different indicators across all three mines (see Table 3). Almost all the indicators calculated a mean of above 2.5 across all three target groups of the three mines, indicating that compliance with these statements is satisfactory. The only negative responses were reported for the following indicator statements:

- *It is safe for women to work the night shift.* This statement calculated a mean below 2.5 for the female research

TABLE 3: Participants' perceptions regarding health and safety in the workplace.

Number	Indicator statement	Copper mine			Phosphate mine			Platinum mine	
		Male in core	Female in core	Management	Male in core	Female in core	Management	Male in core	Female in core
1	I/Women feel safe at work	2.94	3.15	3.00	3	2.9	3.08	3.13	3.09
2	It is dangerous for women to work underground in the mining company	2.29	2.12	2.00	2.15	2.47	1.71	1.81	2.09
3	It is safe for women to work the night shift	3.18	2.72	3.06	2.93	2.35	3.17	2.64	2.4
4	The safeguards (protective clothing, masks, etc.) provided by the company are adequate	3.47	2.97	3.19	3.29	2.95	3.33	2.87	2.86
5	Protective clothing that women are obliged to wear is woman-friendly, in other words, designed keeping women in mind	3.24	2.73	3.00	2.76	2.7	3.33	2.67	2.65
6	Pregnant women are provided with alternative employment where they are not exposed to hazardous or dangerous circumstances	3.35	3.25	3.38	3.00	3.00	2.92	3.2	3.09
7	Alternative employment is provided for women during early motherhood and breastfeeding	3.06	2.44	2.69	3.00	2.74	2.45	3.27	3.05
8	The mining company is actively involved in HIV/AIDS-awareness programmes	3.65	3.65	3.56	3.69	3.48	3.67	3.4	3.43
9	The mining company works to mitigate and combat HIV/AIDS in the mining industry	3.53	3.38	3.56	3.38	3.24	3.58	3.33	3.15
10	The mining company makes provision for rehabilitation in case of accidents at work	3.41	2.91	3.44	3.12	3.19	3.55	3.00	3.00

Note: Mean scores of 2.5 and lower (2.5 and above for reversed statements) were regarded as 'low' and indicate that compliance with the specific statement is none or very limited.

TABLE 4: Kaiser-Meyer-Olkin and Bartlett's test of sphericity.

Kaiser-Meyer-Olkin	Value
<i>p</i> -value of Bartlett's test of sphericity	0.650
Approximate chi-square	243.933
<i>df</i>	45
Significance	0.000

participants of the phosphate (mean = 2.35) and platinum (mean = 2.4) mines.

- *Alternative employment is provided for women during early motherhood and breastfeeding.* This statement calculated a mean below 2.5 for the female research participants of the copper mine (mean = 2.44) and the management research participants of the phosphate mine (mean = 2.4).

Factor analysis

A factor analysis was conducted on the 10 statements listed in the questionnaire. The results of the KMO and Bartlett's test of sphericity are presented in Table 4.

The KMO measured 0.650 and indicates that the sample size is still adequate for factor analysis. According to Field (2005, p. 640), factor analysis is inappropriate for values smaller than 0.5; however, values between 0.5 and 0.7 are regarded as mediocre. The *p*-value of Bartlett's test of sphericity returned a value less than 0.05, suggesting that the correlation between statements is sufficient for factor analysis (Field, 2005, p. 652). The results for the factor analysis are reported in Table 5.

Four factors (*Work environment*, *Motherhood*, *HIV/AIDS programme*, *Personal protection*) were extracted by Kaiser's criteria (Field, 2005, p. 652) to explain 67.50% of the total variance, in the section on *Health and safety in the workplace*. The statements all loaded above 0.3 on the four identified factors. The factor means were calculated to be above 2.5, which indicates a tendency to agree with the statements contained in the identified factors.

The *Work environment* factor as well as the *Motherhood* factor has a Cronbach's alpha coefficient of 0.51, which could be regarded as a relatively low reliability. This was probably caused by the low number of statements in the factors (Field, 2009, p. 675). The *HIV/AIDS programme* factor has a Cronbach's alpha coefficient of 0.79, which is above the required 0.7 and shows high reliability and internal consistency. The *Personal protection* factor has a Cronbach's alpha coefficient of 0.61, which could be regarded as an accepted reliability (Field, 2009, p. 675).

Factor correlation matrix

The Pearson correlations between the extracted factors for the section *Health and safety in the workplace* are reported in Table 6.

Factor 1 and factor 2 have a correlation coefficient smaller than 0.3, whilst factor 3 and factor 4 have a correlation coefficient greater than 0.3, indicating that there is a strong relationship between *HIV/AIDS programme* and *Personal protection*. However, Factor 1 has a small correlation with factors 2, 3 and 4. A small correlation also exists between Factor 2 and factors 3 and 4.

Comparison of the three target groups of the different mines regarding health and safety in the workplace

The descriptive statistics together with effect sizes of the different target groups regarding the section *Health and safety in the workplace* are reported in Table 7.

The effect sizes for the factors *Work environment*, *Motherhood* and *HIV/AIDS programme* indicated that the difference between the means of the different target groups is not practically significant, with the exception of the female versus male target groups of the copper mine (*Motherhood* factor) and the female versus management target groups of the phosphate mine (*HIV/AIDS programme*), for which

TABLE 5: Pattern matrix† of health and safety in the workplace.

Question statement	Factor 1: Work environment	Factor 2: Motherhood	Factor 3: HIV/AIDS programme	Factor 4: Personal protection	Communalities
It is dangerous for women to work underground in the mining company*	-0.891	-	-	-	0.759
I feel safe at work	0.389	-	-	-	0.551
The mining company makes provision for rehabilitation in case of accidents at work	0.427	-	-	-	0.623
Alternative employment is provided for women during early motherhood and breastfeeding	-	0.809	-	-	0.679
Pregnant women are provided with alternative employment where they are not exposed to hazardous or dangerous circumstances	-	0.686	-	-	0.657
The mining company is actively involved in HIV/AIDS-awareness programmes	-	-	0.935	-	0.85
The mining company works to mitigate and combat HIV/AIDS in the mining industry	-	-	0.856	-	0.725
Protective clothing that women are obliged to wear is woman-friendly, in other words, designed keeping women in mind	-	-	-	0.827	0.75
The safeguards (protective clothing, masks, etc.) provided by the company are adequate	-	-	-	0.718	0.634
It is safe for women to work the night shift	-	-	-	0.651	0.522
Cronbach's alpha	0.51	0.51	0.79	0.61	-
Factor mean	2.78	3.00	3.45	2.83	-
Factor standard deviation	0.41	0.67	0.54	0.64	-

*, Reversed statement.

TABLE 6: Factor correlation matrix.

Number	Factors: Health and safety in the workplace	1	2	3	4
1	Factor 1: Work environment	1.000	-0.025	0.173	0.200
2	Factor 2: Motherhood	-0.025	1.000	0.146	0.142
3	Factor 3: HIV/AIDS programme	0.173	0.146	1.000	0.322
4	Factor 4: Personal protection	0.200	0.142	0.322	1.000

TABLE 7: Comparison of the three target groups of the different mines regarding health and safety in the workplace.

Factor	Mine	Men		Women		Management		Effect sizes	
		Mean	SD	Mean	SD	Mean	SD	Women versus Men	Women versus Management
Factor 1: Work environment	Phosphate	2.81	0.31	2.90	0.49	2.99	0.46	-0.19	0.17
	Copper	2.88	0.44	2.72	0.30	2.81	0.30	0.37	0.31
	Platinum	2.61	0.50	2.73	0.43	-	-	-0.23	-
Factor 2: Motherhood	Phosphate	3.00	0.42	2.88	0.76	2.71	0.54	0.16	-0.22
	Copper	3.21	0.64	2.84	0.65	3.03	0.53	0.55†	0.29
	Platinum	3.22	0.73	3.05	0.74	-	-	0.23	-
Factor 3: HIV/AIDS programme	Phosphate	3.53	0.43	3.36	0.53	3.63	0.48	0.33	0.51†
	Copper	3.59	0.48	3.53	0.46	3.56	0.51	0.12	0.06
	Platinum	3.34	0.75	3.28	0.62	-	-	0.09	-
Factor 4: Personal protection	Phosphate	2.97	0.39	2.67	0.77	3.28	0.49	0.39	0.79‡
	Copper	3.29	0.51	2.79	0.59	3.08	0.54	0.84‡	0.49†
	Platinum	2.75	0.59	2.63	0.73	-	-	0.17	-

SD, Standard deviation.

†, medium effect: $d = 0.5$; ‡, large effect: $d = 0.8$.

the d -values indicate a medium effect. It could therefore be deduced that on average, the male target group of the copper mine is more in agreement with the statements contained in the *Motherhood* factor than the female target group themselves. Furthermore, the management target group of the phosphate mine is more in agreement with *HIV/AIDS programme* than the female target group themselves. A large effect is evident from the female versus male target groups of the copper mine and the female versus management target groups of the phosphate mine for the *Personal protection* factor, indicating that on average, the participants from the male and management target groups of the copper mine as well as the management target group of the phosphate mine are more in agreement with *Personal protection* than the female target group themselves.

Health and safety concerns regarding women working in core mining positions

This section presents the findings of the qualitative inquiry. Although the participants indicated that the mines take all measures to ensure a safe environment and, in general, they do feel safe at work, some concerns were raised, which are discussed next.

Physical ability

Although the female participants indicated that they have the physical ability to do their jobs well, they indicated that the work is tough and not easy to perform, especially underground. The women stated that they do not always have the physical strength, power and stamina required

for specific positions. They want to prove themselves and often neglect their bodies to do their jobs well. The following quotes provide an indication of the female participants' opinions regarding the physical ability of women employed in core mining positions and the constraints experienced:

'I don't have the steam to work at the position that I am working at.' 'I am not strong enough.' 'The job of mine is too hard.' 'We are sweating underground.' (Female general, interview, 2011)

'The loco is like a train, nè? It's hard to operate. The steering wheel and everything is hard. The brakes. And to be on it every day, yô, it is hard. When you go on period you have some pains. Your back it pains. And that thing, it vibrates. I'm on it eight hours every day'. (Female loco operator, interview, 2011)

Personal protective equipment

It is evident that some mining companies still provide overalls (shirts and trousers), shoes and gloves that are not women-friendly and are designed with men in mind. Moreover, some female participants were not satisfied with the respirators provided at one of the mines included in the study. The following responses reflect women's need for protective clothing that are designed with women in mind:

'Women, you know, have got curves and we are wearing men's clothes. Sometimes it is difficult for you to know the correct size. Because it is male size, you find when you order overalls they are too big. When you order the small it is too small.' (Female lab attendant, interview, 2011)

'I'm not satisfied with the respirator that is provided to use in the plant. It sometimes feels [as if] I cannot inhale enough oxygen.' (Female electrician, interview, 2011)

Pregnancy

From the interviews and focus group discussions it became clear that different views exist on female employees' experiences regarding treatment by management of the various mining companies during and after pregnancy (early motherhood and breastfeeding). The data also show that treatment within the same mining company differs. Some of the participants indicated that they were treated well from the moment they disclosed their pregnancies and they were employed in alternative positions that require light duty. Others indicated that they were not treated well at all and were not given light duty; they had to ask to be moved to work on the surface. The following quote expresses the opinion of a participant that was not treated well during her pregnancy:

'The mine did not accommodate me when I fell pregnant. I went through hell. There are 21 men and I'm the only woman. I used to be ordered to work where it was not even safe. There is a lot of gas and dust. While I was pregnant no one ever considered that I was. I told my supervisor and everybody knew up to the manager that I was pregnant. From the very first month I was pregnant, the first trimester is the most difficult time of pregnancy, I was ordered "to go to hell and back". That was when it was very much tough. I fainted the other day when they forced me to work and I told them that I'm not feeling great today.' (Female reverberator operator, interview, 2011)

According to the participants from the management target group of the copper and phosphate mines, women are removed from working conditions that could have an effect on their pregnancies, for example underground and areas with X-ray machines and related radioactivity. Provisions are made for female employees as per the MHSA.

Dust

Dust was indicated as a main concern amongst the participants. According to the female participants, dust affects their lungs, eyes and ears. The male participants indicated that women often get a rash from working in dusty areas and sometimes they need to take the next working day off to recover. The female participants felt that the mining company could do more to reduce dust in the work environment. They suggested that dust masks be improved and that water be used to reduce dust in dusty work environments.

Vibration

The female participants indicated that work environments entailing vibration as well as the operating of heavy vibrating equipment and machines, such as locomotives, winding engines, rubber dozers and dump trucks, are not good for women, even if they are not pregnant. It was indicated that vibrating equipment tends to affect their menstruation cycles. Furthermore, it was indicated that vibration during pregnancy could enhance miscarriages.

High risk for accidents

As indicated in the introduction, the mining industry is a high-risk work environment. Women are not used to the dangerous work environment and often get scared when accidents occur. The following quotation provides an indication of the participant's perceptions of mining as a dangerous environment:

'As women we are very scared. Maybe sometimes you think maybe the rock will fall down. ... Even the cage, just to go down. I remember the first time, I was crying. Sometimes the cage get stuck with you in the air for 20 minutes or 40 minutes. Just hanging there. Not knowing whether you are going to ... go down or go up.' (Female loco operator, interview, 2011)

Night shift

Some female participants indicated that they do not feel safe when working night shifts. Sometimes only one or two women are working with many men during night shifts. Although security services are present at the main gates, a need was voiced for more security in each section or shaft. A need was also detected to lighten up areas that are dark at night.

Discussion

Outline of the results

The quantitative responses showed mainly positive results, as on average, the participants across all three mines agreed with the statements contained in the identified four factors: the *Work environment* factor, the *Motherhood* factor, the *HIV/*

AIDS programme factor and the *Personal protection* factor. It can therefore be deduced that, on average, the participants are satisfied with the way the mining companies included in the study apply and implement health and safety measures in the workplace. However, it should be noted that the female research participants of the phosphate and platinum mines indicated concerns regarding their safety when working the night shift. This is also reinforced by the findings of the qualitative inquiry. Furthermore, the female research participants of the copper mine voiced serious concerns regarding alternative employment provided for women during early motherhood and breastfeeding. The same sentiment was also shared by the management participants of the phosphate mine. As indicated in the literature review, pregnant employees are strongly protected under South African legislation, including the Constitution of South Africa (RSA, 1996a), Section 9(3), the EEA (RSA, 1998), Section 6 and the BCEA (RSA, 1997), sections 25 and 26. In addition, the Code of Good Practice on the Protection of Employees during Pregnancy and after the Birth of a Child provides guidelines to employers on how to protect pregnant and post-pregnant employees. Employers should abide by the requirements of the mentioned legislation.

Although positive responses were obtained from the quantitative results for the *Personal protection* factor, the qualitative findings revealed deficiencies and limitations in this regard. It is evident that some mining companies still provide overalls (shirts and trousers), shoes and gloves that are not women-friendly and are designed with men in mind. Research conducted by Zungu (2012, p. 10) also revealed challenges related to the size and fitting of PPE used by female miners. The female body differs from the male body; therefore, overalls, shoes and gloves designed for men do not secure a perfect and comfortable fit, which could compromise the health and safety of the female employee, as also indicated in the literature review. The South African Mine Health and Safety Council also showed its commitment to the safety of women working in the core business of mining by conducting research on PPE issues. The main recommendations stemming from the research include the following: to set minimum standards for providing undergarments for female workers, to set minimum standards for compliance in terms of the provision of PPE for women in mining and to conduct an additional study to facilitate the design of such PPE, as the industry does not currently design PPE for women in mining (Chamber of Mines of South Africa, 2012, p. 4).

It is also evident from the qualitative findings that some women experience extreme difficulties in performing mine work that requires physical strength and stamina. This is also in line with the findings of the literature review, which suggest that gender differences exist with regard to physical work capacity, heat tolerance and anthropometry and body composition. Therefore, it is not surprising that women often experience significantly more physiological strain than men when performing strenuous physically demanding mining tasks. It is of utmost importance to only employ a woman if she is qualified to do the job, if she meets the requirements

(physical and functional capabilities) of that specific job and if she is medically fit for the job (Badenhorst, 2009, p. 59), so as not to compromise the health and safety of the female employee.

From the research it is evident that the introduction of women in the core business of mining requires commitment and devotion from management and the relevant state departments. Moreover, the health and safety of female employees require, amongst others, exceptional attention to the provision of women-friendly PPE, considerations relating to worker selection and the ergonomic fit of equipment, work tools and tasks to the worker's physique. Safety, health and wellness are the responsibility of managers; they should ensure that employees are not unnecessarily endangered and that workers are fully aware of and properly trained and prepared for unusual workplace risks (Nel *et al.*, 2011, p. 283).

Practical implications

Although the mining companies have improved their efforts to promote health and safety in the workplace, the health and safety of mine workers remain a major challenge. A holistic approach to risk management, which includes consideration of gender implications and ergonomic factors, is needed if the participation of women is to be sustained in mining.

Limitations

A limitation to the study lies in the accessibility of the mining sector as a research setting. Past research has shown that it is sometimes extremely difficult to interview employees and representatives of mining companies and to get their members to fill in questionnaires. It was not an easy task to gain access to the mining companies. Several visits and correspondence took place before permission was granted for the research. In addition, the platinum mine experienced many difficulties and labour unrest during the time the research was conducted. Because of that, several interviews with management were postponed and eventually cancelled. Despite numerous attempts from the researcher, no quantitative responses (questionnaires) were received from the management target group of the platinum mine. Furthermore, not all participants targeted for the semi-structured interviews and group interviews turned up for the meetings. Some of the participants could not stay for the duration of the interviews due to work responsibilities and emergencies. Others were drained and tired after shift work and wanted to depart for home as soon as possible to get some rest and take care of their family responsibilities before the start of their next shift. The researcher made use of existing skills, knowledge and networks (such as the study promoter, who has worked extensively in this field, and the Bench Marks Foundation) to overcome some of these problems.

Recommendations

From the literature review and the empirical findings it is evident that specific attention should be given to the

promotion of the health and safety of women working in mines. The following recommendations, informed by the literature review and empirical findings, are made to address health and safety concerns of women employed in core mining activities and to contribute to the sustainable deployment of women in the mining sector:

- It is evident that women have unique needs in terms of PPE provided. Ill-fitting PPE can affect the way women are protected as well as the way in which they are able to perform their jobs. Therefore, PPE needs to be designed and developed with women in mind to ensure a proper fit and not compromise the health and safety of female employees. Continued research on PPE issues should be conducted to reveal limitations and deficiencies. Strategies should be employed to address PPE issues.
- Mining companies should abide by the requirements of the BCEA in terms of the treatment of women during and after pregnancy. In addition, mining companies should implement the principles of the Code of Good Practice on the Protection of Employees during Pregnancy and after the Birth of a Child to protect pregnant and post-pregnant employees. Furthermore, a risk-assessment flow could be employed to ensure that pregnant and breastfeeding female employees are not exposed to significant risks in the workplace. Mining companies should also provide training and support to female employees on pregnancy-related issues, such as emphasising the need to disclose their pregnancies in order not to compromise the health and safety of the pregnant woman as well as her unborn baby.
- Mining companies should enhance their security and safety measures in order to create a safe environment for women that are working the night shift.
- Mining companies should provide training and support focusing on coping mechanisms for women working in the core business of the high-risk mining environment.
- Mining companies should only employ a woman if she is qualified to do the job, if she meets the requirements (physical and functional capabilities) of that specific job and if she is medically fit for the job.

Conclusion

The health and safety of mine workers remain a major challenge, not only for the relevant state departments but also for managers. Managers should ensure that employees are not unnecessarily endangered and that workers are fully aware of and properly trained and prepared for unusual workplace risks. Gender implications should be considered to ensure the health and safety of women employed in core mining positions and to contribute to the sustainable deployment of women in the mining sector.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

D.B. (North-West University) conducted the literature review as well as the empirical research and wrote up the article. F.C. (North-West University) acted as supervisor of the research project, assisted with the statistical analysis and reviewed the article.

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Reflections on shifts in the work identity of research team members

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Dates:

Received: 08 Sept. 2014
Accepted: 06 Mar. 2015
Published: 02 June 2015

How to cite this article:

Smith, R.A., Crafford, A., & Schurink, W.J. (2015). Reflections on shifts in the work identity of research team members. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #664, 12 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.664>

Note:

Based on the unpublished M.Phil. HRD thesis of Rina A. Smith at the Centre for Work Performance in the Department of Industrial Psychology and People Management, University of Johannesburg, 2012.

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Orientation: This study explores shifts in the work identity of individual members of a research team.

Research purpose: The aim of the study is to explore shifts in work identity experienced by individual research team members during a project wherein they were studying work identity themselves.

Motivation for the study: This study seized the opportunity to do research on the shifts in work identity experienced by researchers whilst they were studying work identity as part of the South African–Netherlands Project for Alternatives in Development. This allowed the researcher the rather novel opportunity of conducting research on researchers and resulted in the project as a whole occurring at a dual level of analysis.

Research approach, design and method: Using thematic analysis methodology in the context of qualitative field research, 10 semi-structured interviews were conducted with five participants, all of them part of the research team who were themselves involved in conducting research on work identity. The sixth member of the research team, who is also one of the authors of this article, presented data related to shifts in her own work identity in her dissertation as an auto-ethnographic account. For purposes of this article, she is referred to as Participant 6. Given the multiple research team members, each one of whom constituted an individual case, the researcher made use of a multiple case study approach whilst focusing on the intrinsic case. The holistic nature of description found in the case study involved every aspect of the lives of the research team members. Analysis was done by means of content analysis.

Main findings: In exploring the shifts in work identity experienced by individual research team members, it was discovered that finding meaning and purpose in the professional activities participants engaged in was of critical importance. Contextual realities and the way in which individuals approached the possibility of shifts also seemed to play a significant role. Both these aspects influenced the possibility of engagement with new peer groups, contacts and role models to explore various aspects of self in order to make a transition or shift. The findings lastly emphasised work identity as fluid and as entailing an element of performance. Irrespective of their life and career stage, all participants were engaged in processing possible selves.

Practical/managerial implications: This study has implications for organisations looking to improve productivity through an understanding of work identity. The broader project originated from the premise that work is central to building individual identity and is influenced by job and individual characteristics. It is proposed that these factors could influence work performance and, accordingly, impact on organisational performance.

Theoretical contribution: An application for shifts in work identity is done by positioning such shifts in a framework proposed by Ibarra. The study confirms that the proposed framework is suitable for application to shifts in work identity.

Introduction

Reflections on shifts in the work identity of research team members

This particular study formed part of a research project that was done under the auspices of the South African–Netherlands Project for Alternatives in Development (SANPAD) in conjunction with the Centre for Work Performance at the University of Johannesburg and the Vrije Universiteit, Amsterdam.

All SANPAD participants had to research predetermined topics and had to work within the parameters of the main research question of the broader project, namely: How does an individual's work identity evolve, establish and stabilise considering the effects of different contextual factors as well as different strategies and tactics? (SANPAD, 2006).

The SANPAD project involved a four-phase approach. Phase 1 involved planning, conceptualising and operationalising aspects of the project as well as recruitment of students and capacity workshops to equip students. Phase 2 involved the qualitative phase of the project, which included planning workshops between students and study leaders as well as a field trip to the manufacturing company in preparation for the interviews that followed. All students participated in conducting in-depth interviews at the manufacturing company. Preliminary results were reported at a workshop at the Vrije Universiteit, Amsterdam, and at the Society for Industrial and Organisational Psychology Conference (SIOPSA) of 2008. Phase 3 involved the quantitative phase of the project by the two PhD students applying results gathered at the manufacturing company to conduct a survey at a telecommunications company. Phase 4 involved the dissemination of results by means of publications and seminars: the European Association of Work and Organizational Psychology Conference (EAWOP) 2009, which was hosted in Spain, and SIOPSA presentations during 2009 and 2013 in South Africa.

Purpose of the study

The purpose of the study, which was concluded in 2011, was to explore shifts in work identity experienced by individual research team members during the SANPAD project wherein they studied work identity themselves. This article focuses on aspects within the scope of the SANPAD project plan (SANPAD, 2006) and does not introduce new discussions on the larger debate on positive organisational psychology or positive organisational studies.

Literature review

Work identity changes in varying degrees, sometimes marginally, in an unhurried and almost unnoticed fashion (Ibarra, 2004). At other times, a need for change in work identity may be a matter of urgency, leading to radical and even abrupt changes. This defines the particular fluid feature of identity, creating the possibility of shifts in work identity (Ibarra, 2004).

Defining work identity

The SANPAD project team defined work identity as a multi-identity, multifaceted and multilayered construction of the self that shapes the roles in which individuals are involved in the employment context (Lloyd, Roodt & Odendaal, 2011).

According to Ibarra (2004), work identity consists of finding identification in one's work domain, in other words in what one does, with whom one engages and how one negotiates the dynamics of change.

The following definition of work identity summarises the essence of the concept:

Work identity involves the creation, positioning and identification of oneself within a work context, through determining preferred activities and identifying communities of practice that are

relevant to engagement. Work identity is dynamic and fluid, and requires continuous personal scrutiny to determine aspects in make-up that need to be developed to make an impact on a particular work milieu. (Agostino, 2004; Buche, 2006; Du Gay, 1996; Gini, 1998; Ibarra, 2004; Kirpal, 2004; Lloyd *et al.*, 2011; Sveningsson & Alvesson, 2003; Walsh & Gordon, 2008)

Contemplating a guiding framework

Ibarra (2004) provides a useful framework for understanding work identity that focuses on the process of career transitions. A career transition involves a complete change in career and thus a fundamental change in work identity. A shift in work identity, however, involves the negotiation of work identity within a current sphere or profession, ranging from slight changes in perspectives to exploring various types of work.

Ibarra (2004) identifies three important aspects when considering work identity and associated shifts.

Aspect 1: Work identity involves our daily tasks

Ibarra (2004, p. 18) refers to 'what we do, the professional activities that engage us' and to strategies and tactics that are employed to enable us to survive and reach the desired potential. Chalofsky (2010) highlights the importance of 'the work itself' and refers to the fulfilment of one's purpose through engaging in activities, often for the greater part of one's waking hours. This includes the mastery of work performance, searching for learning, gaining independence and being empowered.

Fox (1994, p. 1) supports this view and further states that 'work touches life itself'. Fox (1994) also focuses on the how, and emphasises that attitude determines how professional activities are approached. Henry David Thoreau said: 'dwell as near as possible to the channel in which your life flows' (Hakim, 2007, p. 125).

Aspect 2: The social and relational component of work identity

Consistent with the basic assumption that identity is relational, Ibarra (2004, p. 18) refers to 'the company we keep, our working relationships and the professional groups to which we belong'. Hakim emphasises the importance of collaboration with others and states that 'working with others is the core of this notion', using the migratory behaviour of wild geese as an apt example (Hakim, 1994, p. 100).

The importance of the social dimension is mentioned by Swann, Johnson and Bosson (2009), who state that a sense of 'connectedness' through the establishment and maintenance of social connections is an important function of work. Wheatley (2006, p. 68) refers to the term 'ownership' as: 'the emotional investment of employees in their work'. Chalofsky (2010, p. 142) terms ownership as 'social capital', which refers to the 'connections among individuals, social networks and groupings, within the norms of reciprocity and trustworthiness'. According to Chalofsky (2010, p. 143), organisations are in fact by their very nature 'social institutions'.

Identity depends on social encounters amongst individuals within a specific social, cultural and ethnic context and purpose. Religion, status, gender, language and other considerations become relevant and serve to determine position in a community (Abma, 1996; Creed & Scully, 2000; Erikson, 1968; Goffman, 1961; Ibarra, 2004; McAdams, 2003; McAdams, Josselson & Lieblich, 2006; Rainer, 1997; Smith & Sparkes, 2008; Van der Ross, 2010).

Relational identity implies that a society determines whether a story of a life is worth telling. If the story (or life) does not resonate with society, identity is not regarded as significant. Stories live or die 'according to a society's implicit understanding of what counts as a tellable story, a tellable life' (McAdams, 2003; see also Beech, 2008; Erikson, 1968; Illeris, 2003, 2004).

Aspect 3: Work identity involves exploring alternative paths

Ibarra (2004) contends that at times in our working lives, we choose to explore alternative paths. This is often triggered by a defining moment and is made possible by the idea of an individual choosing from a range of 'possible selves' in redefining and re-inventing work identity.

Part of the process of redefining ourselves involves making use of the notion of identity as a story. Stories have self-making value as the revisiting and retelling of stories and the negotiation of roles attain congruence or 'fit' in with continually changing circumstances (Ashforth, 2001; Baressi, 2006; Berger, 1963; Bruner, 2003; Fivush & Buckner, 2003; Ibarra, 2004; Ibarra & Lineback, 2005; Jones Thomas & Schwarzbaum, 2011; McAdams, 2003; Raggatt, 2006; Svenningsson & Alvesson, 2003).

Chalofsky (2010) supports this notion with Maslow's (1971, as cited by Chalofsky, 2010) well-known idea of self-actualisation. He mentions Maslow's research of individuals who transcended self-actualisation and became 'devoted to a task, vocation or calling transcending the dichotomies of work and play' that allowed the expansion of their capabilities of self to 'virtually unlimited potential'. Hakim (2007, p. 19) adds that 'to create your future, you need to become an explorer with the mission of determining what you know and what you don't' (Also see Bridges, 1994, 1997).

Having explored the concept of work identity, the next section will provide some insight with regard to the research design and approach with the focus on the research question: reflections on shifts in work identity of research team members.

Method

Research approach

The research was conducted from a social constructionist perspective and entailed a process of co-constructing identity narratives between participants and the researcher (see Crotty, 1998; Grbich, 2007). The aim was to focus on

context-specific factors that influenced the work identity of individual research team members and the meaning attached was shared by the stories told (Flick, 2009; Smith & Sparkes, 2008).

Research strategy

Multiple case studies were used, with the focus on the intrinsic case (Yin, 2003). This required an evaluation of each case in terms of its own particular background in order to develop what was perceived to be 'the case's own issues, contexts and interpretations, its thick description' (Stake, 2005, p. 450; also see O'Reilly, 2009).

The purpose of a case study is to analyse the context and the process to illuminate theoretical issues (Hartley, 2006; also see Denscombe, 2003).

The research strategy involved the development of themes from the multiple case studies.

Research design

Research setting

As mentioned previously, the research setting of the study was the SANPAD project team. The focus of this study was the four master's degree students (including the researcher) and two PhD students. During two sessions, two interviews were conducted with each student totalling 10 interviews. The researcher reported shifts in her own work identity by means of an auto-ethnographic account.

Entrée and establishing the researcher's role

In accordance with the above the researcher of this study formed part of the research team and was also responsible for recording the 'history' and 'lifespan' of the project. Involvement in all endeavours of the research team ensured positive engagement.

Sampling

The initial idea was to include both the students and their study leaders in the study. One PhD student withdrew from the project. Given the scope of the topic, the volume of data gathered exceeded the requirements for a master's degree study. Owing to the detailed analysis required by the case study design, a smaller sample was selected by the project manager and the two study leaders of the researcher. This sample included only the six students who had completed their degrees.

Data-collection method

The topic required an approach that valued detailed descriptions about the setting, context, frame of reference of each participant, explorations of their lived experience and the meaning they attached to their experiences (Marshall & Rossman, 2006, p. 114; also see Babbie & Mouton, 2001). Shifts in work identity may be subtle and only involve slight changes in perspectives; however, shifts may be more profound and result in exploring various types of work and

actual career changes. The brief of the researcher was to report on shifts in the work identity of the participants whilst they were studying work identity themselves.

Interviews and integrating participant observation, given the involvement of the researcher in all the endeavours of the research team, were used to collect data. Semi-structured interviews with team members were conducted on two occasions. An interview protocol was used to assist in focusing attention. The first round of interviews involved exploratory discussions relating to personal identity matters, contextual factors and work identity experiences. A second set of interviews were conducted approximately 12 months later to confirm shifts that may have occurred, emerging themes, to investigate unexplored areas and to ensure trustworthiness of the research.

Shifts in work identity were determined throughout the data-gathering process by comparing initial findings with the most recent data gathered in the second interview. Interview data was utilised to craft a story for each participant: storytelling was the strategy used to present the individual case studies. The research participants' stories were embedded in the interview content and narrative analysis could be used for 'crafting a story from the events in the setting ... a way of presenting data' (Bailey, 2007, p. 162). As previously mentioned, the involvement of the researcher in all endeavours of the research team ensured building of rapport with participants and allowed an opportunity for participant observation.

Data analysis

Thematic analysis formed part of the data analysis. Bailey (2007, p. 158) proposes that 'storytelling incorporates thematic analysis', a process in which researchers meticulously and carefully need to read and reread through transcriptions and other data (Rice & Ezzy, 1999). Open coding was applied by asking particular questions relating to shifts in the data collected. Repetitive codes were identified by comparing the various interviews and by continuously revisiting the collected data. Bailey (2007, p. 127) argues that 'qualitative researchers actively create the final product that they believe adequately represents their observations and interactions'. Four themes were identified as indicated in the abstract.

Strategies to ensure quality of data

Peer debriefing and member checking actions were conducted when participants had the opportunity to review and comment on the representation and interpretation of the data gathered (Flick, 2009; Schwandt, 2007).

Reporting

Reflexivity as a process of self-discovery and personal mastery to determine how beliefs, viewpoints, perceptions and imperfections might influence the study, as well as the reporting, need to be emphasised. Reflexivity informs the reader about the point of departure of the researcher and enables us to determine 'what is known as well as how it is

known' (Etherington, 2004, p. 37). In this study the researcher made use of a variety of writing styles.

Findings

The multiple case study design implies that each participant's work identity needs to be considered contextually as a separate 'case'. The findings will be discussed in two sections: work identity case narratives and themes in work identity shifts. Table 1 provides a summary of the biographical particulars of participants and also sets the context of each of the six participants. It further includes relevant quotes indicating catalysts and realisations that influenced shifts in work identity.

Work identity case narratives

Each participant derives meaning from different things and is driven by a particular set of values (compass points) informing their reactions to events and influencing shifts in work identity. Shifts in work identity can be plotted on a continuum. On the one end of the continuum, a shift may be profound and may manifest itself in a pronounced change such as a career change or move and on the opposite side a shift may be a nuance only, a subtle alternation.

Participant 1

Participant 1 regards family and relationships as a critical part of her life and is constantly striving to attain a sense of what she describes as 'equilibrium' between her different identities. In reflecting on her own work identity, triggered by engaging with her master's study, she learned what was important to her and now has an awareness regarding work identity and the dynamics that are at play in an organisational context.

The realisation that her career in Organisation A was not providing a challenge or adequate development opportunities culminated in a shift. Her subsequent move to Organisation B made her realise that an industry can also provide a sense of identity.

Organisation B offered her the opportunity for an internship that is required for registration as an industrial psychologist. She subsequently completed her master's degree and internship which were important on her journey to become a professional industrial psychologist.

The move to Organisation B resulted in a situation where she became disenchanted with the organisational culture.

She experienced a shift from a previous positive experience (Organisation A) and had to find alternative means of identification, which in her case proved to be her work group (Organisation B). She assessed herself and her own competence in terms of that of her work group. The focus on performance enhancement was critical to remain competitive. Thus, her workgroup played an important role in defining her work identity which related to the notion of work identity as relational and multifaceted.

TABLE 1: Biographical particulars and contextualising participant stories and realisations or catalysts relating to shifts in work identity.

Participant	Biographical particulars	Realisations and catalysts	Shifts in work identity
Participant 1	<ul style="list-style-type: none"> Married Female Parent 30–40 Business solutions consultant Master's degree student 	<p>-</p> <p><i>I walked out of the funeral service, and as I was walking back to my car, I just thought to myself, I cannot die doing this job.</i></p> <p><i>That was an interesting thing, how the industry that you work in provides a sense of identity as well.</i></p> <p><i>Contrasted two organisations: 'people-centred' (A) versus 'mean-spirited' (B).</i></p> <p>Team identity or group identity can fill in the gaps.</p> <p><i>He actually said to me: 'Oh I did not know you were pregnant, I just thought you were getting fat.'</i></p>	<p>Moved from Organisation A to Organisation B.</p> <p>Found no meaning in work at Organisation A.</p> <p>Found that a particular industry can provide a sense of identity.</p> <p>Identification shifted to work group in Organisation B.</p> <p>Found that public domain impacted on private domain.</p>
Participant 2	<ul style="list-style-type: none"> Single Female 30–40 HR practitioner Master's degree student 	<p>Reached a development 'ceiling' in government sector and victimised after refusal to commit fraud. Freed from the restraints of bureaucracy: <i>'Emancipation of myself'</i>.</p> <p>Bored by only receiving a more substantial budget with no new challenges.</p> <p>Her need to engage in a more secure corporate environment facilitated her next move.</p> <p>Studies and being able to apply learning in work environment allowed strategic approach.</p>	<p>Moved to semi-state, nature conservation industry.</p> <p>Entrepreneur: Invested in computer training franchise. Emphasis on 'self' required a shift. She had to direct everything herself.</p> <p>Became HR practitioner in mining industry.</p> <p>Became a strategic player in her new organisation.</p>
Participant 3	<ul style="list-style-type: none"> Single Male 20–30 Academic Master's degree student 	<p>Gains from participation in development initiative in his department.</p> <p><i>I identify more with my profession in industrial psychology. ... I see myself as an educator.</i></p> <p>Internship experience: <i>Disillusioned by lack of transformation.</i></p> <p>Review experience: <i>It was horrible. I think that was the first time I actually questioned whether or not I should be here.</i></p>	<p>Comes to terms with his personal identity, his sense of self, exploring his relationships with colleagues and his purpose in life.</p> <p>Limited identification with his organisation, only with his profession.</p> <p>Expressed need to be a change agent: <i>'to change people's view of how they see people'</i>.</p> <p>Negative impact on his work identity, given his relationship focus, impacted upon self-esteem within his work environment. He regards his work environment currently as 'cold' and 'cut-throat'.</p>
Participant 4	<ul style="list-style-type: none"> Single Female 30–40 Academic PhD student 	<p><i>I would be too scared to say: I am a ... I would rather say: I am a ... in training.</i></p> <p><i>The development of my understanding of my role in the 'organisation', that, and all the facets. I got introduced to the facets.</i></p> <p>The election of Barack Obama, first Black American president: <i>It brought a sense of liberation in a way. ... Do not feel inferior; do not look at the fact that you are a woman. Look at your potential.</i></p> <p><i>Never put yourself down because you do not have. ... I get angry with myself.</i></p>	<p>She discovered herself and her 'possible selves' within the research community.</p> <p>A new world opened up for her owing to the work identity project. She realised her career allowed her exposure opportunities, foreign and local.</p> <p>Making peace with <i>being different</i>.</p> <p>Coming to terms with perception of self.</p>
Participant 5	<ul style="list-style-type: none"> Married Male Parent 50–60 HR business solutions PhD student 	<p><i>Dit het 'n impak definitief. Jy sien ander goed in 'n ander lig. Blootgestel aan goed wat jy nooit in jou lewe sou nie. ... A 'life-changing experience' and a 'life dream come true'.</i></p> <p>His is viewed differently by colleagues and supervisors at work.</p> <p>He has entered a new social dimension.</p>	<p>(Involvement in the work identity project broadened his horizons dramatically.)</p> <p>Being acknowledged within his professional environment did play a role and gave meaning to his study and work endeavours.</p> <p>He excels in his new role at work: as advisor, he is expected to find solutions.</p>
Participant 6	<ul style="list-style-type: none"> Married Female Mother 30–40 Police officer Master's degree student 	<p>Personal circumstances required shift to new workplace and city.</p> <p><i>I did not want to attract unnecessary attention to myself.</i></p> <p>I always thought that becoming a manager would be a natural progression in my career path. Not anymore!</p> <p><i>On 01 December 2011 I would have had 20 years' service in this organisation, and I decided that I wanted to do the next 20 years of work differently!</i></p>	<p>Affected a move to a new component within current organisation.</p> <p>'Perception of self' evaluated.</p> <p>Not an avenue she wanted to explore any longer.</p> <p>Actively planning a shift.</p>

She needed a mentor to guide her in her development and professional growth and probably in making sense of what she called a 'mean-spirited' organisation. Her shift in this regard emphasised the relational component of work identity, the necessity to engage with colleagues and communities of practice and in establishing networks of people from whom one can benefit. This notion is consistent with the Ibarra (2004, p. 18) framework, which refers to 'the company we keep, our working relationships and the professional groups to which we belong'. This is consistent with the basic assumption of identity as relational.

After joining Organisation B, Participant 1 had to acknowledge that motherhood was accompanied by compromises in terms of career opportunities and possibilities and she had to make a shift in her approach to career options. She adopted a practical approach to her circumstances, she consciously

shifted her focus and decided to adopt a philosophical view. Her strategy was to focus on aspects at work that mattered and to diminish the aspects that didn't.

Regarding motherhood, Participant 1 compiled a comprehensive list of requirements for a new environment in order to accommodate personal lifestyle realities and her value system. She realised that her role as mother added a lot of complexity to her work identity and that she could not deal with work in isolation, since other identities impacted on her work identity.

Participant 2

Participant 2 is restless and focuses on continuous professional development and growth opportunities. This is evident from her deliberate and conscious management of

her career progression. She finds meaning in her involvement in her spiritual community and draws her strength from that. Throughout the research she experienced several defining moments that acted as catalysts for her subsequent shifts.

Prior to becoming involved in the research project, Participant 2 was subjected to victimisation in her work environment. Disillusionment with the organisation and rank orientation hastened her departure. She was forced to make a mind shift from an environment in which individuals were defined by rank and position to pursue a career in an environment in which she was defined by her profession and competence in a specific area of expertise. She was no longer defined by rank or position. She stated that 'I now define myself'.

She experienced a shift in her work identity and found application value for her studies in her workplace whilst dealing with a corporate retrenchment process.

The death of her mother forced her to lead a more balanced life by working more reasonable hours and allocating time for personal activities. This indicated a shift in taking a deliberate stance on balancing personal identity versus work identity.

In time she reached her peak in the semi-state organisation and became an entrepreneur. In this process, her spiritual focus, as compass point, provided her with an anchor. Having experienced all the facets of being an entrepreneur, she proved to herself that she had become a truly independent being.

Becoming an entrepreneur was the ultimate step in a developmental process. This compelled her to move from a rigid, highly institutionalised context to an entrepreneurial context in which she was able to set her own parameters and largely define her own work identity.

Eventually Participant 2 moved back to the corporate environment owing to the realisation that she had accomplished the ultimate quest in proving her autonomy. Security and greater opportunities prompted her shift to a more secure corporate environment.

Participant 3

Participant 3 locates meaning in relationships and in building a network amongst colleagues and others.

Participant 3 enjoys opportunities to explore foreign countries and seeks exposure, personally and as a young academic. He strongly identifies with being an industrial psychologist and establishing himself in his career of choice. He has a need to add value and bring 'something back to the organisation'. Participant 3 would also like to establish himself within the research community.

In doing his internship at a large company, he became aware that they were not transforming and were not dealing with

affirmative action as they should. The lack of a diversity focus in industry inspired him to utilise his career in becoming a change agent. What he found to be lacking in the industry he wanted to address as part of his postgraduate studies in cross-cultural psychology.

Another defining moment was prompted by Participant 3's panel review, which led him to question whether he had a future in his particular field. A review by peers of his work signified a shift regarding the perception of his role and approach to his vocation, as well as his perception of his colleagues. It forced him to reflect on his career, the organisation and his alignment and associations with colleagues. Given that relationships were important to him, the review experience strongly influenced his work identity.

Participant 3 acknowledged that he did not identify with his organisation, but with his professional identity and that he considered himself to be an educator. He experienced a shift in emphasis from organisational identification to regarding himself as an 'educator'. He located his work identity in this shift.

Participant 4

Participant 4 finds meaning in being able to account well, not only for her talents, but also for her strong spiritual drive to share and to show 'dividends' in providing guidance to individuals entrusted to her. She derives strength and meaning from her spiritual beliefs that spill over in a drive to share. In her case, development is about sharing all she has learned. She experienced a shift regarding roles to be fulfilled and moved from lecturing to research.

Participant 4 was required to engage and network with foreign counterparts. Being inexperienced, she joined an initiative that equipped individuals to perform the required tasks. She is now able to identify with a profession and consciously identifies role models to emulate. Her approach was evidence of a conscious shift in her work identity and equipped her to fulfil a leadership role.

She experienced an additional shift whilst visiting other countries and coming into contact with other cultures as part of work-related endeavours. This triggered an awareness of others and a shift occurred in the way in which she not only perceived others, but also herself.

Participant 4 acknowledged an internal struggle with being different in a diverse work environment and also has perceptions regarding the image of an 'academic'. Her own perception regarding a professional image now extends to include her unique persona and appearance in her field.

Participant 5

Participant 5 finds meaning in adding value to the work and personal lives of young professionals. He functions as a committed, loyal employee of his organisation and, as an expert, acts in an advisory capacity.

In contrast with the much younger team members, Participant 5 reflects on his career and the path he has followed. He is not merely in pursuit of position, but he is an individual who finds meaning by investing time and energy, not only in a work context, but also in engaging with fellow students and researchers.

Participant 5 is excited by the opportunity to make theory practical. That he is regarded as an expert in his field at work provides meaning to him. Prior to completing his doctorate he became aware that colleagues and supervisors were viewing him in a new light, namely that of a trusted advisor. He has entered a new social dimension and experiences this as fulfilling, both in his contact with colleagues and fellow students.

Given his introverted nature, presenting at an international conference posed a challenge to Participant 5. This forced him to explore new territory by addressing the one aspect that was lacking in his armour, namely that of public speaking.

Participant 6

Whilst all participants have been faced with challenges during the project, Participant 6, the researcher in this particular study, was confronted with the reality of disliking her story of work identity.

Finding meaning in work was important to Participant 6, but her work environment did not provide this satisfaction and her personal circumstances made it undesirable to effect work-related changes. She moved to another city and was transferred within her organisation. She was disillusioned, as the new work environment did not measure up to her expectations. She experienced a profound shift in her work identity from engaging in meaningful training-related tasks to what she regarded as menial, administrative functions. This caused her work identity to shift and to become almost non-existent. She became disengaged, lacked work identification and failed to find identification with her work. She only found purpose and meaning in the context of her family and study endeavours, which guided and anchored her.

In time Participant 6 realised that she was no longer identifying with the organisation and had no wish to be part of the management establishment. She could not relate to the way organisational members were dealing with her and one another. She had to acknowledge that in the long run her work would have no meaning or significance.

Participant 6 experienced a major shift in embarking on her master's degree as this made her dissatisfaction and lack of meaning more pronounced. She was constantly confronted with other participants' stories, literature and study leaders, which resulted in immense discomfort and incongruence. Participant 6 became an example of a disintegrated individual work identity, being the result of a work life that lacked meaning and purpose.

Themes

Theme 1: Compass points guiding our journey

The ability to engage with a meaningful task on a daily basis is critical to work identity. This theme focuses on aspects that provide meaning and hope in life. The term 'compass points' relates to aspects that are central to providing direction, purpose and meaning in the lives of participants. Additionally, compass points are central in triggering shifts in work identity and the constant search for meaningful work and life. Whatever form this may take, it leads to negotiating aspects of work identity which in turn leads to shifts. Defining moments occur when life circumstances are negotiated. Defining moments can trigger a shift in work identity.

The contextual reality of the participants proved critical in this study, as this determined their individual meaning.

The search for meaning is ongoing and appears to be influenced by life and career stage. Life and career stage involves the testing and finding of a viable work identity, searching for role models to guide career development and progression or finding whether a participants may be in a position to assist others based on their own experience.

Should an individual find no meaning in their work (Participant 6), disintegration of the person's work identity may ensue. In such cases the focus on other meaningful facets, such as family, personal relationships, study endeavours and hobbies, may be vital. Constant reflection regarding meaning is essential. This will result in a balanced perspective and sound decision-making skills.

Theme 2: Navigating life circumstances

This theme refers to the contextual realities within which work identity is negotiated. Work identity is in a constant relationship with other facets of identity. 'Navigating' implies searching for the best possible route to follow.

In negotiating work identity, we are confronted with personal, social and career choices, which determine the type of demands we have to negotiate whilst working. The theme on navigating life circumstances focuses on how participants deal with demands associated with work roles, accommodating children and family, personal roles, the importance of support systems and coping strategies and compromises required in negotiating work identity.

A significant contextual factor influencing work identity is motherhood as an aspect of personal identity. Two of the participants in the study are mothers and both highlighted this contextual factor as critical in negotiating work identity. Owing to their motherhood they were willing to make compromises regarding career options and progression, opting for shifts in work identity. Additionally, attempting to balance personal and work identity required a sound support system. Life circumstances thus served as a constraining

factor in terms of possible shifts. The ability of an individual to engage in change is dependent on the perception of contextual factors.

Theme 3: Negotiating identity and identification in the workplace

This theme signifies where and with whom the individual identifies. Work identity refers to certain aspects of identification and various aspects of identification emerged. These were the job, peer groups, the organisational culture, broader identifications such as professional identity, that of 'the educator' and the entrepreneur. Where one aspect of identification was lacking, shifts were made to alternative foci of identification.

In the case of Participant 2, alternative foci of identification were a very individualistic approach, not allowing the organisation to 'claim' her.

In the case of Participant 3, alternative identification resulted in anchoring himself within his chosen profession, that of an industrial psychologist and 'an educator'.

Participant 1 located her work identity (in Organisation A) within the organisational culture, even though the work was not meaningful. In Organisation B, she struggled to identify with the culture and shifted her identification to her profession as industrial psychologist, the industry within which she worked and her work group.

Participant 4 experienced a subtle shift in work identity, initially identifying with some aspects of her roles associated with her field, but has been exposed to the many facets of her profession and has begun to identify with these facets.

As indicated, work identity is a social phenomenon. The negotiation of work identity is done in consultation with others and implies a process of collaboration.

It may well be that the implication for work identity is that participants assess themselves by making comparisons, as in the case of Participant 1 and Participant 3. A positive comparison will act as a motivator and a negative comparison may be demotivating or become an area that requires further development.

In dealing with their respective work environments, young professionals need to find strategies that work for them. In executing a shift, young professionals should be aware that they may find themselves in a new position or in a state of isolation.

Young professionals expressed the need to have access to a dynamic system of knowledge management and contact with experienced professionals who are capable of sharing and transferring competence in certain areas. Participant 1 mentioned the need for professional role models and Participant 3 and Participant 4 highlighted the positive

impact of development initiatives in their work environment in their own development of work identity. That Participant 5's guidance and support of younger colleagues has been met with a positive response is also testimony to its importance.

Theme 4: Perception of self

This particular theme focuses on the perception of self within a work context and its implications for work identity.

In the context of the study, perception of self involved a specific representation of oneself, in order to establish and maintain a particular image.

In terms of this particular theme this study involves an extension of the Ibarra (2004, p. 60) notion of 'trying on new identities' to include 'trying on new images and looks' as a performance within a workplace and the significance of that for an individual work identity.

For some participants 'perception of self' appeared to be related to own perceptions of professionalism. Personal appearance adds an additional dimension to who I am at work and what I do. This includes not only how I do what I do, but also how I look and the perception others form of me when I do what I do. An academic and a consultant may consciously adopt different identities to portray a specific image to add new dimensions to their work identity.

Personal perceptions appear to inform behavioural patterns regarding individual attempts to be assimilated into a work situation, in portraying personal perceptions of what will be an acceptable image and to be seen as being professional.

Discussion

Outline of the findings

In reflecting on the above-mentioned themes the researcher and her study leaders identified relationships amongst the themes.

Theme 1: Compass points guiding our journey

The stories of participants suggest the critical importance of finding meaning and purpose in the professional activities they are engaged in. This is consistent with the work of Chalofsky (2010), who highlights the importance of fulfilling one's purpose through the work one does. Whilst signature strengths refer to both 'character traits and values most central to who we are', the compass points in this study, seemed to resemble the 'value' or 'virtue' component of signature strengths (Ulrich & Ulrich, 2010). Where participants no longer find meaning in what they do, there is a process of dis-identification, one likened to identity malaise highlighted by Sveningsson and Alvesson (2003).

Theme 2: Navigating life circumstances

The stories of participants suggest that contextual realities play an important role in how they negotiate life and work.

These realities differ from participant to participant. Ibarra (2004) emphasises the significant role of contextual realities and the way in which individuals approach the possibility of shifts. In the case of our participants, context proved relevant in that participants had to negotiate a variety of context-specific challenges on which they based their decisions to execute shifts or not.

Ibarra (2004) makes reference to defining moments; these were experienced to a greater and lesser degree by all participants. Defining moments, catalysts and significant contextual factors contributed towards a required shift in work identity amongst the participants.

In the cases of Participant 1 and Participant 6, catalysts were experienced that suggested that a shift was required. However, when executing the shift they did not anticipate negative consequences. This suggests that Ibarra's (2004) advice, to be cautious and to explore whether personal preferences, competencies and values are aligned with those of the new organisation prior to engaging with a new work environment, is sound. Otherwise one would have to tolerate the outcome of a decision that may be ill-informed.

Work identity can never be considered in isolation, as personal life circumstances play a role in facilitating or constraining the negotiation of work identity.

Theme 3: Negotiating identity and identification in the workplace

None of the participants experienced radical career transitions. The flexibility of the work identity concept as highlighted by Ibarra (2004) was clearly evident. Individual emphasis on various facets of work identity (or identification) at various times is dependent on contextual factors. This is consistent with Ibarra (2004), as she highlights the importance of context in understanding career transitions (for our purpose shifts). The shifts are determined by the meaning and purpose various aspects of work provide (Theme 1) and are impacted by the navigation of life circumstances (Theme 2). This facet of a shift is similar to Ibarra's (2004) notion of engaging with new peer groups, contacts and role models to explore various aspects of the self in order to make a transition. It is the fluidity of work identity that enables these shifts at various times and enables people to grow and develop within their chosen work identity. With this in mind, the importance of mentorship in the development of work identity was also confirmed.

Participants 1, 2 and 4 are more or less of the same age (30–40) and are in the process of establishing themselves in their respective careers with the view of reaching their potential. All of them expressed the need for a mentor or coach. Participant 3 (25–30) and Participant 6 (30–40) are disengaged and need to craft work identities that are congruent with who they are. In contrast to the other participants, Participant 5 (50+) is at ease with himself and those around him within his work identity. This is consistent with his life and career stage in his capacity as an expert. He

is still willing to explore possible selves in order to extend his repertoire of skills.

Theme 4: Perception of self

For purposes of this study, Ibarra's (2004, p. 60) notion of 'trying on new identities' includes 'trying on new images and looks' as work identity entails an element of performance. In this study, irrespective of their life and career stage, all participants were engaged in processing possible selves. Engaging in such a process is consistent with the notion of identity and work identity as fluid and with Ibarra's (2004, p. 19) portrayal of work identity as a 'lifelong process of questioning and affirming the relationship between who we are and what we do'. Ibarra's (2004, p. 87) observation that 'our customary mind-set about who we are and what others expect undermines us in myriad subtle ways' was evident in this study. Participants 1, 4 and 6 were confronted with their own perceptions in terms of their physical appearance in a work context as opposed to how they might be viewed by others. These participants experienced tension regarding the presentation of self which undermined their sense of self prior to coming to terms with these perceptions. In this article, irrespective of their life and career stages, all participants were engaged in processing possible selves. Engaging in such a process is consistent with Ibarra's (2004, p. 19) portrayal of working identity as a 'lifelong process of questioning and affirming the relationship between who we are and what we do'.

Practical implications of the study

The study emphasised the need experienced by individuals to engage with meaningful tasks on a daily basis. Human resource (HR) professionals need to engage with employees on a continuous basis to determine what provides them with meaning. This will ensure retention of employees and result in the design of appropriate strategies towards this objective.

The study highlighted factors relating to identification within an organisation which in turn will impact on turnover intentions of employees. Employees need to feel valued and experience a sense of identification. HR professionals must engage with employees to determine how to craft strategies that enhance and optimise the value of employees.

The study contributes towards emphasising the necessity of accommodating contextual realities of employees. It highlighted that a natural phenomenon like pregnancy in the workplace needs to be addressed by employers.

An important finding is the acute need of young professionals for adequate role models. It is suggested that HR professionals implement effective mentorship programmes.

This study indicated that young professionals aspire to grow and fulfil professional requirements. Creating internship opportunities within an organisation and treating internship candidates well and in a professional manner may well be a mechanism to attract and retain talent.

A final contribution of the article lies in acknowledging the impact that a range of contextual factors can have on shifts in work identity.

The study furthermore confirms that Ibarra's (2004) framework is suitable to apply. Her approach, despite being focused on career transitions, also provides a suitable framework for considering shifts in work identity.

Limitations, recommendations and future research

A conventional research process was not followed, since the researcher only joined the research team 7 months after the study had commenced, to replace two students who had to withdraw from the project owing to personal circumstances. Being a novice researcher, despite the guidance of two study leaders, a process of trial and error in some instances prevailed.

The two study leaders were familiar with the participants. This posed its own challenges since both supervisors had insight into the dynamism of the institution and had personal perceptions regarding these participants.

An additional 10 interviews that were conducted with the more experienced study leaders and one student who withdrew from the project were not used owing to the detailed analysis required by the case study design. It would have been insightful to have included the data supplied by the older study leaders. The issues and challenges of the younger research team members predominated and influenced the nature of the themes that were generated.

The following topics may present interesting possibilities for future research directions:

- The impact of ethnicity and affirmative action within a workplace may be explored and how that relates to negotiating shifts in work identity.
- The relationship between the work identity of professional or white-collar occupations in relation to blue-collar or technical occupations.
- A survey may be conducted where the researcher provides a calendar or diary (timeline follow back), in which respondents record how often they contemplate career moves over a specified period, note triggering events and attempt to record the intensity of considering moves (Belli, Stafford & Alvin, 2009).

Conclusion

In contextualising the stories of the participants, it became evident that a story of a life is not static. Fluidity became evident in the way in which those who needed to execute a shift tended to 'hover' in a holding space for a while, until they were able to make the actual shift. In this holding space, where the person yearned for professional fulfilment, they relied on hope to keep the possibility alive.

Dealing with work identity proved to be an ongoing negotiation. The discussion attempted to provide an interpretation that would undoubtedly have changed over time as new experiences and realities intersected the pathways and journeys of the participants.

Acknowledgements

The research reported in this article is the product of a collaborative research project between the University of Johannesburg and the Vrije University, Amsterdam. Financial support from SANPAD for conducting this research is hereby acknowledged. Conclusions drawn or opinions expressed in this article are those of the authors and do not necessarily reflect the views of SANPAD.

The first author further acknowledges Professor Gert Roodt for providing the opportunity and privilege to be part of the SANPAD project, Dr Anne Crafford and Professor Willem Schurink for exceptional guidance during the research process and Dr Adri Uys for her invaluable guidance and support in completing this article.

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

R.A.S. (University of Johannesburg) conducted the research and wrote the manuscript. A.C. (University of Johannesburg) acted as primary study leader and made substantive intellectual contributions to the study. W.J.S. (University of Johannesburg) acted a secondary study leader and made substantive intellectual contributions to the study.

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Appendix 1: Research ethics

At the commencement of this study the research team was briefed by the project manager Prof. Gert Roodt in terms of this particular research as a special building block within the broader SANPAD project. By implication, the research team members had no choice but to participate and the normal written permission process was not followed. None of the research participants voiced their opposition or concern at the time or during the interviews.

It was an advantage that the research participants conducted interviews at the manufacturing company and were conversant with the procedures involved, including the use of audio recording devices.

Transparency ensued in the course of the study and a balance had to be maintained between the needs of research participants and information required by the researcher to complete the study. Building rapport with participants most certainly aligned with the Wolcott (2005) concept of this process as one of the 'darker arts' of participant observation.

As previously mentioned, peer debriefing and member checking actions were conducted when participants had the opportunity to review and comment on the representation and interpretation of the data gathered (Flick, 2009; Schwandt, 2007).

Perceptions of employers and unemployed youth on the proposed youth employment wage subsidy incentive in South Africa: A KwaZulu-Natal study

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Dates:

Received: 26 June 2014

Accepted: 27 Feb. 2015

Published: 02 June 2015

How to cite this article:

Mtembu, V.N., & Govender, L.N. (2015). Perceptions of employers and unemployed youth on the proposed youth employment wage subsidy incentive in South Africa: A KwaZulu-Natal study. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #653, 9 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.653>

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Orientation: South Africa has high levels of unemployment and severe problem of youth unemployment. This implies that the country requires a comprehensive strategy to create more jobs for the youth. Policymaking is one of the strategies that have been introduced to encourage job creation for the youth. The youth wage subsidy is just one of the strategies proposed and this article unpacks what employers and unemployed youth say and think about this policy directive.

Research purpose: The main aim of the study was to determine the perceptions of unemployed South African youth and employers on the proposed youth wage subsidy incentive scheme.

Motivation for the study: Youth unemployment is a very important issue and the reality is that it is a concern of every government globally. South Africa is therefore not an exception as it is a country that has been experiencing high levels of youth unemployment for the last few decades. In an attempt to curb this pressing challenge of youth unemployment, a proposal to introduce a youth wage subsidy policy was made by government; (since its mention), this idea has been met with a lot of opposing opinions from those against it and applause from those who support it. This has motivated this study to probe the perceptions of the subsidy by those who will be affected by its provisions.

Method: A triangulated research approach was adopted through the administration of survey questionnaires amongst the unemployed youth and semi-structured interviews with human resource managers and specialists. A sample of unemployed youth was drawn from selected communities within KwaZulu-Natal. In addition, semi-structured interviews were conducted with human resource managers and specialists at selected organisations to determine their perceptions of the proposed scheme and any benefits or limitations they believe it might have. Non-probability sampling was used to sample 100 respondents ($N = 100$), 90% of whom were unemployed youths and 10% of whom were employers.

Main findings: The overall results indicate that more than 93% of the youth surveyed and more than 90% of employers are in support of the youth wage subsidy. In terms of how it should be structured and implemented, about 80% of respondents in the employer survey preferred the tax rebate and incentive option as most of them stated that it will be an easier process to manage and monitor. More than 50% of employers believed that it will ease the wage burden and ensure business sustainability. On the other hand, 88% of the youth surveyed believed it will increase employment for the youth. Findings furthermore reveal that 10% of employers and 28% of the youth were concerned that the subsidy has the potential to exploit older workers (i.e. those who are already in employment) and feared corruption from some employers; otherwise they are in support of its implementation.

Contribution: This is one of the areas that have not been sufficiently explored; as a result, there is not much information about it in the current body of knowledge. This study will contribute to current knowledge about a current policy initiative critical to the development of the country. This research also culminates in important recommendations and draws conclusions that could contribute to the formulation of guidelines on how the government could embrace the youth wage subsidy incentive scheme as a strategic intervention that could benefit the employers and the youth and at the same time aid in finding a solution to South Africa's youth unemployment crisis.

Introduction

South Africa has a severe problem of youth unemployment, which requires a multi-pronged strategy to raise employment and support inclusion and social cohesion (National Treasury, 2011, p. 5). High youth unemployment means that young people are not receiving the skills and

experience that are required to drive the economy forward. The high youth unemployment rate inhibits the country's economic development and poses a huge burden on the state to provide social assistance (National Treasury, 2011, p. 5).

Statistics South Africa's (2013) quarterly labour force survey reports that in the first quarter of 2013 the number of unemployed reached 4.6 million; 65.3% had been looking for work for a period of one year or longer and 59.4% of the job seekers did not have matric. The unemployment rate amongst the 15–24 year olds (52.9%) remains the highest amongst all age groups and has been on the increase. The 15–34 year olds accounted for 70.7% of the unemployed persons in the country.

The alarming statistics on high youth unemployment ignited an interest to probe and conduct a study on this issue. Hence, the main aim of this study is to determine the perceptions of employers and unemployed youth on the proposed youth employment incentive scheme aimed to address this challenge and the epidemic of high youth unemployment in South Africa. In light of the findings, the study will recommend and suggest solutions for this national problem.

In his inaugural State of the Nation Address, President Jacob Zuma stated:

The creation of decent work will be at the centre of our economic policies and will influence our investment attraction and job creation initiatives. In line with our undertakings, we have to forge ahead to promote a more inclusive economy. There is growing consensus that creating decent work, reducing inequality and defeating poverty can only happen through a new growth path founded on restructuring the South African economy to improve its performance in terms of labour absorption and rate of growth. (South African Government, 2010, n.p.)

In putting the president's words into action, to establish a new growth path that will create an environment for economic growth and decent work creation, government, under the leadership of Minister Ebrahim Patel, on 23 November 2010 released the Framework of the New Economic Growth Path, aimed at enhancing growth, employment creation and equity. The policy's principal target is to create five million jobs over the next 10 years (South African Government, 2010).

The new growth path framework document states that:

to achieve the step of creating decent work, reducing inequality and defeating poverty, change in growth and transformation of economic conditions requires hard choices and a shared determination as South Africans to see it through. The Government is committed to forging such a consensus and leading the way by Identifying areas where employment creation is possible on a large scale and developing a policy package to facilitate employment creation. (South African Government, 2010, n.p.)

One of the elements of the policy package referred to is the proposed youth wage subsidy policy, which was highlighted in the medium term budget policy statement in 2009 and

formally announced by President Zuma in the State of the Nation Address in February 2010 and whose paper for public comment was released by the National Treasury in February 2011. The youth wage subsidy was envisaged to be implemented from 01 April 2012, but due to differences in views from various stakeholders including political parties, business and labour the implementation process has been delayed to date (2013).

Literature review

Unemployment in South Africa

The definition of unemployment according to Statistics South Africa is:

when someone aged between 15 and 64 is without work in the week preceding the interview, but who looks for work and is available to take up employment or open a business. (Statistics South Africa, 2013, n.p.)

Statistics South Africa's (2013) expanded definition of unemployment on the other hand includes people who have stopped looking for work, who can be referred to as discouraged work seekers. According to the narrow definition of unemployment, in the first quarter of 2013, South Africa's official unemployment was 25.2% from 24.9% in the fourth quarter of 2012; however, in the expanded definition statistics, which include people who have stopped looking for work, the unemployment rate was 36.7% in the first quarter of 2013, the highest since 2008.

In principle, unemployment is easy to define. Persons are unemployed if they desire employment but cannot find jobs. The unemployment rate is then obtained by expressing the number of unemployed persons as a percentage of the total number of people willing and able to work, the so-called labour force (South African Reserve Bank, 2013).

Globally, a country's unemployment is defined as a number of jobless people as a percentage of the total labour force (economically active people). Persons are unemployed if they are in an economically active group, would like to be working but are unable to find work. One of the general definitions used in most academic books is the one given by Roux (2008), who defines unemployment or the unemployed as:

those people who are 15 and older (normally below 65), are currently unemployed, but are available for employment within the next 2 weeks and have taken specific steps during the last 4 weeks to find employment. (p. 56)

Roux (2008, p. 51) on the challenge of unemployment describes it as 'one of the major socio-economic problems in South Africa, unemployment implies hunger, misery and loss of self-esteem for those who are jobless'. Roux continues to describe unemployment as leading to anger and resentment towards a system that has led to people's inability to find a meaningful job. In South Africa, unemployment is particularly high. As a result, the potential for socio-economic instability is not only great, but also extremely worrying (Roux, 2008,

p. 51). The prevalence of service delivery strikes, community unrest and public violence are clear manifestations of the frustration of a jobless South African society living in poverty with no sense of hope. This then gives a strong message to government and other social and economic partners to give this issue priority attention.

Barker (2007, pp. 172–173) describes unemployment as ‘probably the most severe problem in South Africa and is conceivably the root cause of many other problems such as crime and violence’. Barker continues to explain why unemployment should be addressed by stating that:

the reason why job creation should be the highest policy priority is because unemployment has grave consequences for any country, it not only affects an individual’s dignity and self-respect and erodes his or her standard of living, but also affects society as a whole because of high crime rates and frustration leading to unrest and lawlessness. (Barker, 2007, pp. 172–173)

Causes of unemployment or types of unemployment

In academic literature, causes of unemployment are usually categorised into the following:

- Structural – overall inability of the economy to provide jobs, owing to structural imbalances sometimes even during periods of economic growth, for example as a result of skills mismatch, rapid growth of labour force and so on.
- Seasonal – due to normal and expected changes in economic activity, for example agriculture and the retail trade.
- Cyclical – demand deficient unemployment, for example during times of recession, demand for labour is low.
- Frictional – arises as result of normal labour turnover in a dynamic economy, time lags involved between re-employment of labour (Natrass, Wakeford & Muradzika, 2002, pp. 176–177).

Parsons (2009) states that:

one other reason why the unemployment rate has stayed high in South Africa is the structural impediments, as the large part of the population has been immobilised and incapacitated, a number of structural rigidities prevent them from being employed or participating in any form of income generating economic activity. (p. 18)

Parsons furthermore explains that causes of structural unemployment include:

mismatches between skills supplied and demanded, insufficient access to effective education and skills development opportunities, deterioration of skills and motivation of individual jobseekers caused by prolonged period of unemployment, insufficient opportunities for on the job training and lack of mobility as a results of exacerbated transport costs. (Parsons, 2009, p. 18)

The high rate of youth unemployment is a major problem in the country. According to the National Treasury (2011, p. 5) discussion paper, the following are some of the reasons

why youth unemployment is still a severe problem in South Africa:

- Employers look for skills and experience; they regard unskilled, inexperienced jobseekers as a risky investment.
- Education is not a substitute for skills. Schooling is not a reliable signal of capabilities and low school quality feeds into poor workplace learning capacity.
- Given the uncertainty about the potential of school leavers, employers consider entry-level wages to be too high relative to the risk of hiring inexperienced workers.

The identified need for a youth wage subsidy in South Africa

In an desperate attempt to minimise unemployment and its negative consequences many countries in the world have opted for the strategy of wage subsidies, by either subsidising the payrolls of employers who employ groups of people targeted by the subsidy or by giving tax rebates to such employers as a way of encouraging them to employ more people. In order to consider youth wage subsidies as a means to resolving the current challenge, it is important to determine what wage subsidies entail.

Wage subsidies are usually custom designed to address unemployment challenges facing a certain group of the population, which usually leads to the whole nation being affected by that challenge. This extract from the World Bank policy primer publication gives a clear summary of how wage subsidies are structured:

Wage subsidies come in different forms, pursuing different but related objectives. Subsidies can be given to employers to stimulate demand or to employees to provide incentives for re-employment. They can take the form of direct transfers, reductions in social security contributions, or income tax credits. They can be targeted to vulnerable workers or be provided across the board. They can focus on those already employed or only on new hires. Choices at all these levels determine their impact on employment and their costs. In the context of the crisis of unemployment, wage subsidies have two main functions: dampening the pace of job destruction in the formal sector, avoiding the depreciation of skills and stimulating hiring and facilitating re-employment. In the first case, the subsidies allow employers to keep workers who would otherwise fill the ranks of the unemployed or move to lower productivity jobs in the informal sector—in both cases risking losing their skills. In the second case, the focus is to increase exit rates from unemployment particularly among unemployed poor and vulnerable workers, thus reducing the destructive persistence of long term unemployment. (World Bank, 2009, p. 2)

According to Baskin (1996):

there are many different ways to design a wage subsidy policy, these include wage subsidies that are either targeted or general, targeted wage subsidies are aimed specifically at a particular region or demographic group, when targeted at a disadvantaged subset of the entire potential labour force, they are known as categorical wage subsidies, these might be designed specifically to help unskilled workers, poor families or the youth. (p. 191)

Wage subsidies often take the form of a tax credit whose downside is the decrease in financial resources, in some cases, the increased levels of employment will produce savings in social insurance programmes, such as unemployment insurance, social grants and other transfer payments which will replenish a portion of the programme's cost. (Baskin, 1996, p. 194)

The design of a wage subsidy and which group it targets is very important as it can have implications on the cost of the subsidy and its impact in minimising the challenge of unemployment and poverty. According to the World Bank (2009):

employer-based subsidies can cost less and have a larger social impact if targeted to individuals with lower pay. Their main role is to smooth the impact of a temporary downturn. While on the other hand targeted employee-based subsidies linked to other active labor market programs such as training and job counseling can be considered to improve the employability of low-income unskilled workers over the medium-term. (p. 2)

One of the first and most comprehensive studies done in South Africa on the effect of youth wage subsidies in employment was first conducted in 2011 (SBP, 2013). The study surveyed about 500 small and medium enterprises on their views on the youth wage subsidy. Findings of the study indicated that 55% of firms surveyed were in favour of the youth wage subsidy. A majority of firms employing between 10 and 40 people supported the subsidy; this was especially pronounced amongst those employing between 31 and 40 people, a group within which a great deal of business expansion appears to be taking place. Around 75% of firms employing between 31 and 40 people supported the subsidy. Support for the subsidy was highest in the manufacturing sector (SBP, 2013, p. 31).

Another study conducted in South Africa was a study undertaken by the African Micro-economic Research Unit (AMERU) at the University of Witwatersrand (Rankin & Schöer, 2011). The study tracked 4000 unemployed young people aged between 20 and 24 years and more than 600 firms, over a period of 3 years. Part of this research included testing the impact of a R5000 hiring voucher allocated to 4000 youth, which was to expire in 6 months. The youth was tasked to find work. If they found work their employers were allowed to claim R5000 from Wits University. Preliminary results showed that half the sample who received hiring vouchers was likely to find employment as compared to those who had no vouchers (Rankin & Schöer, 2011).

The main findings of the research included the following:

young people who were allocated a hiring voucher were up to 25 per cent more likely to be employed than those who were not. This effect persisted 2 years after the hiring voucher was allocated. Another finding of this study was that the majority of firms stated they would not substitute older workers for younger ones if there was a youth employment incentive, in part because older workers are more reliable and experienced. (Rankin & Schöer, 2011)

Research design

In this study, objectives and specific questions were formulated, a systematic system of finding answers was followed with the use of questionnaires distributed to unemployed youth in KwaZulu-Natal and interviews conducted with human resource managers and specialists in various companies within KwaZulu-Natal.

Research questions were the following

- What are the perceptions of employers and unemployed youth on the youth wage subsidy policy?
- Will the youth wage subsidy be supported or rejected by those affected by its provisions?
- Will the youth wage subsidy increase the chances for the youth to get long-term employment?

Research hypotheses

The research study investigated the following hypotheses:

- **Hypothesis 1:**
 - Ho: Employers and the unemployed youth will not support the youth wage subsidy scheme.
 - Ha: Employers and the unemployed youth will support the youth wage subsidy scheme.
- **Hypothesis 2:**
 - Ho: Youth wage subsidy will result in no increase in jobs for the youth.
 - Ha: Youth wage subsidy will result in increase in jobs for the youth.

Exploratory and descriptive research

A combination of exploratory and descriptive research was used. In this study perceptions and attitudes of South Africa's youth and employers towards youth wage subsidies were solicited, as a way to predetermine chances of success or failure if the proposed youth wage subsidy is implemented. Literature review confirmed that this area of study has never been comprehensively researched before. The exploratory research was conducted to deeply investigate the problem of youth unemployment and to look at possible options and alternatives that can be considered to deal with the challenge of unemployment.

Sampling

Non-probability sampling was used to sample 100 respondents, 90% of whom were unemployed youths and 10% of whom were employers. A combination of convenience, quota and snowball sampling methods was a guiding compass in the selection of relevant respondents. Convenience sampling was used as the researcher sampled only the youth who reside in the province of Kwa-Zulu Natal, which is close to the researcher. Quota sampling was applied in the sense that only a certain category of the youth was sampled: youth between the ages of 18–29 who are not employed and not studying. Snowball sampling came into play as youth members researched were allowed to give references to some of their peers who are in the same situation, who were then also included in the sample.

TABLE 1: Descriptive statistics perceptions: Youth survey.

Summary statistics	Support of youth wage subsidy	Good idea for youth employment	Against implementation of youth wage subsidy	Neither for nor against subsidy
Valid (N)	90	90	90	90
Missing (N)	0	0	0	0
Mean	4.38	4.41	2.33	2.78
Standard error	0.090	0.079	0.137	0.126
Median	5.00	5.00	2.00	3.00
Mode	5	5	1	3
Standard deviation	0.856	0.748	1.298	1.197

Data collection methods

Questionnaires

Questionnaires were distributed to respondents who in this case were the unemployed youth ($n = 90$) between the ages of 18 and 29 in KwaZulu-Natal. A questionnaire with 15 questions, which were a combination of structured, semi-structured and unstructured questions, was administered to the 90 participating youths. The type of questions was a mix of open and closed ended questions. The closed questions were in the form of a five-point Likert scale.

Semi-structured In depth interviews

Semi-structured interviews were conducted with employers ($n = 10$) from small, medium and large companies in KwaZulu-Natal. The questionnaire comprised seven questions: five open-ended questions and two closed ended.

Ethical considerations

Anonymity of responses was ensured as respondents were advised not to disclose their names, and were assured that the information will be used for academic research purposes; in that effect anonymity was therefore guaranteed. Participation was voluntary and participants were informed that they can withdraw from the study at any point if they wish to do so.

Data analysis techniques

Descriptive and inferential statistics were used to analyse the results from the quantitative data collected from the youth questionnaires. SPSS version 21 was used to statistically analyse the data collected. Thematic analysis was used to analyse the qualitative data collected from employer interviews.

Validity and reliability of results

Cronbach's alpha was used to ensure reliability and quality of results. There are a number of different reliability coefficients. Commonly used is the Cronbach's alpha. The Cronbach's alpha can range from 0 to 1. Cronbach's alpha was also calculated as part of the reliability test to assess how consistent the results were; all variables were above 0.7 in this study.

Results

The overall results indicate that 93% of the youth surveyed and more than 90% of employers are in support of the youth

wage subsidy. In terms of how it should be structured on implementation, about 80% of respondents in the employer survey preferred the tax rebate incentive option as most of them stated that it will be an easier process to manage and monitor. More than 50% of employers believed that it will ease the wage burden and ensure business sustainability. Ten percent of respondents indicated that their concern is the subsidy's potential to exploit older workers and corruption from some employers; otherwise they are in support of its implementation.

Results from youth questionnaires: Quantitative assessment

Descriptive statistics

Descriptive statistics describe a body of data. Here we discuss how to determine three things we might want to know about a dataset: points of central tendency, amount of variability, and the extent to which different variables are associated with one another. (Leedy & Ormrod, 2010, p. 265)

In this study, a five-point Likert scale was used to scale responses in the youth questionnaires.

In terms of youth perceptions, Table 1 reflects that the mean for support of wage subsidy was 4.38, which indicates that most respondents fully agreed that they are in support of the youth wage subsidy. For the question on whether it was a good idea for youth employment, the mean was 4.41, which also shows that most respondents fully agreed that it was a good idea for youth employment. On the third question, which asked whether they were against implementation, the mean was very low at 2.33, which indicates that most respondents disagreed with the statement, meaning that they agreed that it should be implemented. The mode under the variable perceptions is 5, which indicates that strongly agree was the dominant response in the four questions that were posed under the perceptions variable.

Inferential assessment

Correlation analysis was carried out to determine the relationship between different variables of the perceptions of youth and employers on the proposed youth wage subsidy. The results are shown in Table 2.

This correlation relates to hypothesis 1 and hypothesis 2 as these hypotheses look at the support of the youth wage subsidy by employers and youth and the job creation

TABLE 2: Correlations: hypothesis 1 and hypothesis 2 (Perceptions).

Hypothesis	Correlation	Support of youth wage subsidy	Good idea for youth employment
Support of youth wage subsidy	Pearson correlation	1	0.668**
	Significance (two-tailed)	-	0.000
	N	90	90
Good idea for youth employment	Pearson correlation	0.668**	1
	Significance (two-tailed)	0.000	-
	N	90	90

** , Correlation is significant at the 0.01 level (two-tailed).

TABLE 3: Chi-squared test.

Statistical test	Support of youth wage subsidy	Good idea for youth employment
Chi-squared	109.556	112.556
Asymptotic significance	0.000	0.000

potential of the youth wage subsidy. The correlation coefficient is 0.668, which indicates that there is a moderately positive relationship that exists between these two variables. This relationship indicates that those who are in support of the youth wage subsidy also to some extent believe that this will be an engine for job creation for the youth since a positive relationship means that a change in one variable influences a change in another in the same direction.

The two-tailed significance (p) value is 0.000, which is less than 0.05; because of this, we can conclude that there is a statistically significant correlation between the support of youth wage subsidy by employers and youth and the job creation potential of the youth wage subsidy.

Chi-square test-perceptions

Chi-square tests are used when a set of observed frequencies is compared with a set of theoretical (expected) frequencies (Tustin *et al.*, 2005, p. 609).

Chi-square tests were used in this study to compare frequencies in observed (empirical) data and theoretical (expected) data on a number of variables that relate to the perceptions of employers and the unemployed youth on the proposed youth wage subsidy scheme.

As reflected in Table 3, our alpha value is 0.05. If the two-sided asymptotic significance for the Pearson chi-square statistic is less than 0.05, there is a relationship between the variables based on the 95% level of confidence. As seen in Table 3, the chi-square significance value is 0.000, which is less than our cut-off value of 0.05, which shows that there is a relationship between the support of youth wage subsidy by employers and youth with the idea that it is a good strategy for creating youth employment.

At 5% ($\alpha = 0.05$), H_0 will be rejected if the p -value (asymptotic significance) is less than 0.05. Thus, H_0 is rejected in both of the variables in Table 3 and H_a is accepted. It is concluded that employers and the unemployed youth support the youth wage subsidy scheme and believe that the youth wage subsidy will result in jobs increase for the youth.

TABLE 4: Reliability test.

Variable	Cronbach's alpha	Cronbach's alpha based on standardised items	N
Perceptions	0.796	0.801	2
Benefits and limitations	0.768	0.769	2
Implementation	0.706	0.712	2

Cronbach's alpha was calculated as part of the reliability test to assess how consistent the results were (see Table 4). A value of 0.7 or higher is a very good value, which means that if the survey was carried out with a larger sample of respondents, the same results would have been arrived at; 0.7 is the reliability, which is acceptable according to Cronbach's requirements (Coakes & Steed, 2007, p. 140). In this study alpha values for all variables were above 0.7.

Results from employer questionnaire: Qualitative results

Themes that came up in the qualitative analysis were:

- Support of youth wage subsidy.
- Subsidy's potential to create jobs.
- Implementation strategy of the subsidy.

Support of wage subsidy

In the question on whether they supported or were against the youth wage subsidy, 9 out of 10 participants indicated that they were in support of the wage subsidy. Amongst the reasons given by the 90% who were in support of the subsidy were that they believed it will develop skills for youth, provide work experience, increase youth employment, reduce socio-economic problems especially crime, relieve the wage burden, develop the economy, sustain businesses and avoid retrenchments.

One of the participants in emphasising her support even went on to say:

'I believe this will be a much needed relief to South Africa's chronic challenge of high youth unemployment. Policies have come and gone, Presidents have come and gone many strategies have been devised and tried to deal with this challenge of unemployment most if not all have failed so far, why not give this one a chance as well and see.' (Human resources specialist, employer, female, 25–30 years old)

The one participant who was against the introduction of the subsidy stated that it will be poorly implemented and will eventually be a failure; in her own words as she was adamantly against it:

'Umsobomvu now NYDA [*National Youth Development Agency*] is one of the agencies which is mandated to address the challenge of youth unemployment in this country, we have seen these institutions fail, what will make this new initiative to succeed.' (Human resources specialist, employer, female, 30–40 years old)

The above statement is very important and it calls for government to be really strategic this time around if they decide to implement the wage subsidy incentive scheme.

This they can do by ensuring that perfect planning is in place, expert resources are deployed strategically and accountability is carefully and strictly adhered to. This to ensure that this will not follow in the footsteps of all other previous policies and institutions that have failed to deal with this challenge of youth unemployment in South Africa.

Subsidy's potential to create jobs

When asked the question of what they think will be the effect will be of this youth wage incentive for both the unemployed youth and employers and in job creation in the country, the responses were as follows: 50% of the participants mentioned that it will open opportunities for training and skills development for the youth as well as create much-needed employment opportunities for the young. One of the respondents put it this way:

'Companies will be encouraged to employ the youth, by doing so skills will be developed, experience gained, breadwinners will increase and poverty will decrease.' (Labour relations manager, employer, male, 30–40 years old)

Forty percent of respondents emphasised that this will be beneficial in providing work experience for our youth; one respondent articulated it in this way:

'As recruiters, in the majority of the job adverts that we publicise one of the main requirements we always want from applicants is work experience, doesn't matter how long it is, it can be 1, 2 or 10 years work experience but it is guaranteed that work experience is always the main requirement when recruiting in this country. The youth wage incentive I believe will help our youth to gain that work experience.' (Human resources manager, employer, male, 30–40 years old)

One respondent also mentioned that they believed it will minimise retrenchments as employers will now have a helping hand from government in terms of wage costs. The one respondent who is against this incentive mentioned that she foresees its failure; she thinks it will benefit only a few urban youth.

In answering the specific question on what effects the wage subsidy will have specifically have on employers, 50% of participants mentioned that it will be highly beneficial to employers as it will reduce the wage burden. One respondent put it this way:

'Payroll is the biggest cost and largest expenditure item in any company's budget; if this incentive scheme can be truly realised, it will bring some relief to the wage burden that most South African companies are faced with, especially in this era of radical unionism placing high wage demands on employers.' (Human resources manager, employer, male, 30–40 years old)

Discussion of results

Support of youth wage subsidy and its potential as a job creation strategy

In the youth questionnaire, youth perceptions revealed that the majority were strongly in support of a wage subsidy, 51%

strongly agreed that it will be a good idea for job creation and 42% agreed; 7% were not in support of the subsidy. In terms of benefits and limitations, 88% agreed that the youth wage subsidy will bring benefits in terms of increasing jobs for the youth, 13% agreed that there is the possibility of waste of money and a disturbing 28% agreed that though the subsidy could be a good idea for job creation for the youth, the possibility of corruption must not be ignored. In terms of implementation method, a total of 74% (strongly agree and agree) preferred that the subsidy be provided to employers in the form of grants whilst 40% preferred tax rebates (this includes respondents who liked both options).

In the employer survey, 90% indicated support of the wage subsidy in this study; this corresponds with Rankin and Schöer's (2011) findings in which most small business employers were in full support of the subsidy, as well as the findings from the SME Growth Index research, which also in its findings mentioned that 'around 75% of firms employing between 31 and 40 people supported the subsidy, support for the subsidy was highest in the manufacturing sector' (SBP, 2013). The high support of the subsidy by employers is indicative of what was reiterated many times in this study that the high cost of wages in South Africa stifles economic growth and increase in employment; hence, they see the youth wage subsidy as a much-needed relief in this area.

Implementation of youth wage subsidy

In the youth assessment, 62% were in full support of the subsidy's implementation with 17% against subsidy implementation, 15% undecided and 6% were strongly against implementation of the youth wage incentive. In the employer's interviews, 90% of respondents from the interviews agreed with the implementation of the subsidy and 10% were against its implementation.

Practical implications and recommendations

Various policies and strategies can be considered in an attempt to address the problem of youth unemployment. According to the National Treasury (2011, pp. 18–26), the following are some of the options that government can consider:

- Economic growth: South Africa needs growth policies that are conducive to economic growth and labour demand.
- Education: work integrated learning should be emphasised in our curriculum at all levels of our education system. This will ensure that by the time our youth graduate from tertiary level, they will be fully equipped with practical work exposure.
- Labour market policy: South Africa has one of the most progressive active labour market policies on paper; they now need to be put in action effectively.
- Training programmes: job preparation strategies such as training programmes play a vital role in economic growth of the country.
- Direct public sector employment: South Africa's took one of the right steps in the adoption of Expanded Public

Works Programmes (EPWP) to deal with the challenge of unemployment.

National Youth Development Agency programmes

The Graduate Development Programme (GDP) and Job Preparation Programme (JPP) aim to enhance the employability of jobless graduates and matriculants.

The National Youth Service assists unemployed youth to acquire skills whilst providing community services.

The following strategies need to be considered in the creation of more jobs for the youth (as adapted from National Treasury, 2011, pp. 18–26):

- **Employment incentives and subsidies:** wage or employment subsidies are incentives that aim to accelerate job creation and raise employment.
- **Entrepreneurial schemes:** entrepreneurship schemes promote skills in young people with the objective of creating and managing sustainable and efficient businesses capable of providing permanent jobs and employment growth.
- **Comprehensive approach:** finally, there are many examples of countries adopting comprehensive active labour market programmes that implement two or more of the active labour market policies outlined above.

The following are some of the other methods and strategies that South Africa needs to emphasise and intensify in the fight against youth unemployment: learner-ships, internships, apprenticeships, artisans programmes, mentorship programmes, skills training and development and expanded public works programmes.

Institutions that are mandated to fight and curb youth unemployment in South Africa

Institutions such as the National Youth Development Agency, the Small Enterprise Development Agency, Youth Council, Youth Employment Index, Youth Chamber of Commerce and Industry, skills education training authorities (SETAs) and municipalities, if they work collaboratively to come up with common and progressive strategies, can play a major role in decreasing and further curbing the high youth unemployment rate in the country.

A number of government departments such as Labour, Agriculture, Minerals and Energy, Trade and Industry and Economic Development also need to focus on this issue.

Legislative framework or prescripts and policies

South Africa has one of the best legislative frameworks that talks to the issues of youth employment and development of the country in general. The mandates from the following laws and prescripts need to be strongly put into action, enforced and monitored strictly:

- *National Youth Commission Act* (No. 19 of 1996)
- *Skills Development Act* (No. 97 of 1998)

- *Skills Development Levies Act* (No. 97 of 1998)
- Human Resource Development Strategy for South Africa (2010–2030)
- National Skills Development Strategy 3 (NSDS III)
- The 12 outcomes of government *National Skills Accord National Small Business Amendment Act* (No. 29 of 2004)
- National Development Plan
- New Growth Path (2011).

This should be done to ensure that not only does South Africa have attractive laws and prescripts on paper, but also that such prescripts are implemented for the benefit and progress of the nation at large.

Labour laws need to be relaxed as well to allow employers to comfortably do business in this country and to create much-needed employment without being threatened by rigid labour laws that are mainly skewed in favour of labour. The issue of high wage demands from labour, which makes doing business in this country unsustainable for small to medium struggling enterprises, also needs to be dealt with accordingly.

Limitations

In this area of research at present, locating and sourcing of literature posed serious challenges. Further limitations were the lack of comparative studies as South Africa is a developing country and most comparisons were done with developed countries where youth wage subsidy policies have been applied. Literature from developing countries was mainly written in languages that were difficult to understand, such as Spanish. Nevertheless, the challenges were overcome by doing a comparison of this study with other studies done in South Africa.

Conclusion

This powerful statement by Nolutshungu (2011) is very fitting to close this study: he states that:

tackling the unemployment problem may seem a daunting and insurmountable task. It is going to require statesmanship and fortitude of character as opposed to the opportunism and myopia being practiced by many of our contemporary politicians. But the task is not prohibitively difficult. Before the unemployment problem gets worse, some audacious policy measures need to be implemented, for, at the end of the day, it is only the stroke of the statutory pen that is required. (p. 157)

Acknowledgements

To God and all who made it happen through their support, thank you.

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

V.N.M. (University of KwaZulu-Natal) was the primary researcher and wrote the manuscript. L.N.G. (University of KwaZulu-Natal) was the primary researcher's supervisor.

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Assessing the psychometric properties of the revised and abbreviated self-leadership questionnaires

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Dates:

Received: 20 Aug. 2014

Accepted: 19 Mar. 2015

Published: 02 June 2015

How to cite this article:

Nel, P., & Van Zyl, E. (2015). Assessing the psychometric properties of the revised and abbreviated self-leadership questionnaires. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #661, 8 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.661>

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Orientation: Self-leadership is considered to be vital for improved performance in the South African working context. Limited research has been done on the psychometric properties of the revised and abbreviated self-leadership questionnaires on a sample of working adults.

Research purpose: The aim of this study was to assess the psychometric properties of the revised (RSLQ) and abbreviated (ASLQ) versions of the Self-Leadership Questionnaire for a sample of working adults in South Africa.

Motivation for the study: Researchers have not previously published psychometric properties of the RSLQ and ASLQ using the original conceptualisation and based on a sample from the South African working context.

Research design, approach and method: The RSLQ and ASLQ were administered to a non-probability sample of 405 working adults in South Africa. Confirmatory factor analysis was employed to estimate the goodness-of-fit associated with competing conceptualisations of both versions.

Main findings: The authors found acceptable goodness-of-fit for both the RSLQ and ASLQ. More specifically, both the composite (representing self-leadership) and calculated scores (representing subscales of self-leadership) indicated acceptable levels of reliability. However, the RSLQ is best conceptualised as consisting of a strong general factor.

Practical/managerial implications: The study found that both the RSLQ and the ASLQ have good measurement properties, indicating that these questionnaires can be applied in a variety of settings.

Contribution/value-add: Research has indicated the value of investigating the psychometric properties of the RSLQ and ASLQ for a sample of employees in the South African working context. In this study, a bifactor model provided evidence that the RSLQ consists of a strong general factor (i.e. self-leadership). The ASLQ also seems to measure a single dimension that is very reliable. Utilising the ASLQ will save time in research and also when applied in the working context.

Introduction

Orientation

According to Houghton, Dawley and DiLiello (2012), in these present times of economic uncertainty and fierce competition, many firms are shifting away from a traditional top-heavy leadership paradigm to embrace a new model of leadership that involves empowering employees at all organisational levels to greater responsibility for their own work-related behaviours and actions (Houghton *et al.*, 2012).

Ugurluoglu, Saygili, Ozer and Santas (2013) are of the opinion that, under today's conditions, the most appropriate leader is the self-leader who also leads others towards self-leadership. Self-leadership (the process of influencing oneself to perform more effectively) has attracted a significant amount of attention over the past two decades (Neck & Houghton, 2006), as is evident in the dozens of academic articles written on this issue during this period (e.g. Alves, Lovelace, Manz & Matsypura, 2006; D'Intino, Goldsby, Houghton & Neck, 2007; Dion, 2012; Dolbier, Soderstrom & Steinhardt, 2001; Hauschildt & Konradt, 2012; Ho & Nesbit, 2013; Javadi, Rezaee & Salehzadeh, 2013; Malmir & Azzizadeh, 2013; Manz & Neck, 1999; Neck & Houghton, 2006; Norris, 2008; Prussia, Anderson & Manz, 1998; Sahin, 2008; Segon, 2011; Turkoz, Mutlu, Tabak & Erdogan, 2013; Van Zyl, 2008, 2012).

Houghton *et al.* (2012) indicate that, initially, most academic articles on self-leadership focused on conceptual research. Since the publication of the Revised Self-Leadership Questionnaire

(RSLQ; Houghton & Neck, 2002), however, more empirical studies have been conducted (e.g. Sahin, 2008; Ugurluoglu *et al.*, 2013). Most of these studies were conducted in the USA, Europe and Asia, whilst only a single study by Mahembe, Engelbrecht and De Kock (2013) was conducted in South Africa. This study was applied to young adults studying full time at a South African university, not to working adults. It is, therefore, questionable whether the second-order structure that Mahembe *et al.* (2013) provided in their research would be replicable on a sample of working adults in the South African working context. Furthermore, the application of confirmatory factor analysis on the second-order factors of the RSLQ could confirm the construct validity of the RSLQ, specifically for research participants in a South African working context (Mahembe *et al.*, 2013).

Another relevant study, by Houghton *et al.* (2012), focused on the development and validation of a nine-item abbreviated version (ASLQ) of the 35-item RSLQ. The applicability of this version, however, has not been tested on a South African working population before.

Purpose

The current study focuses on the assessment of the psychometric properties of the revised (RSLQ) and abbreviated (ASLQ) versions of the Self-Leadership Questionnaire for a working population in South Africa. Self-leadership should have a wider socio-economic relevance in developing countries such as South Africa, because it is a competency that could prove critical in transformation on an individual, group, organisational and societal level (Mahembe *et al.*, 2013). Yet, not much South African-related research on self-leadership (especially regarding its measurement within the working context) has been done (Van Zyl, 2009). Furthermore, no research focusing on the applicability of the ASLQ within any South African context has been done previously. Against this background, the primary research aim of this study was to assess the psychometric properties of the RSLQ and ASLQ for a sample of working adults.

More specifically, the following will be evaluated (based on a working population in the South African context):

- The goodness-of-fit associated with the various conceptualisations of the RSLQ (35 items) using a sample of working adults.
- The degree to which the RSLQ consists of a strong general factor, using a sample of working adults.
- The goodness-of-fit associated with the various conceptualisations of the ASLQ (nine items) using a sample of working adults.

Contribution to the field

This study will contribute by closing the gap in research on the psychometric properties of the RSLQ for a sample of South African working adults. In addition, the presence of a

strong general factor has previously been investigated using a higher-order factor structure. However, the current study will employ a bifactor model, which is a more appropriate approach to determine the presence of a strong general factor. Furthermore, a need has been identified for research on the psychometric properties of the ASLQ for a similar sample (South African working adults), because the shorter version will save time when researchers want to assess self-leadership as part of a more extensive study including other variables.

Both these instruments can help to identify individuals with poor self-leadership skills in the South African working context. By doing so, support can be provided to such individuals to improve their self-influencing (self-leadership) skills which, in turn, could help them to perform more effectively.

Literature review

Self-leadership: Conceptual overview

Self-leadership is a process of behavioural and cognitive self-evaluation and self-influence by which people achieve the self-direction and self-motivation needed to shape their behaviours in positive ways in order to enhance their overall performance (Houghton *et al.*, 2012, p. 217). More specifically, self-leadership involves strategies and normative actions that will help to enhance performance (Houghton *et al.*, 2012; Ugurluoglu *et al.*, 2013). Self-leadership strategies and actions are usually divided into behaviour-focused strategies, natural reward strategies and constructive thought strategies (Norris, 2008).

Behaviour-focused self-leadership strategies pertain to self-observation, goal setting, self-reward, self-punishment and cues (Neck & Houghton, 2006). Self-observation refers to individuals' awareness of how, when and why they engage in specific behaviours (D'Intino *et al.*, 2007). According to Ugurluoglu *et al.* (2013), self-observation entails that people escalate their awareness of why and when they display certain behaviours. Such awareness could help people to overcome the display of effective but unproductive behaviour (Ugurluoglu *et al.*, 2013). With accurate information regarding current behaviour and performance levels, individuals can more successfully set effective behaviour-altering goals for themselves (Manz & Neck, 2004). Rewards set by an individual, along with self-set goals, can aid significantly in energising the efforts necessary to accomplish the goals (D'Intino *et al.*, 2007). Self-rewards could be as simple as mentally praising oneself for a job well done or something more tangible, such as treating oneself to a new outfit or a night at the movies (Houghton *et al.*, 2012). Self-punishment is an additional strategy for the self-influence of behaviour. However, habitual self-punishment and guilt have, in general, received mixed to negative support as a self-leadership strategy (Stewart, Courtright & Manz, 2011). Finally, behavioural rehearsal (cues) prior to actual performance can promote refinement, improvement and corrective adjustments for greater individual effectiveness (Stewart *et al.*, 2011).

Natural reward strategies are designed to enhance the intrinsic motivation that is vital for performance (Mahembe *et al.*, 2013). These types of strategy help individuals to build pleasant and enjoyable features into their activities so that the tasks themselves become naturally rewarding (Norris, 2008). Houghton *et al.* (2012, p. 218) add that individuals can employ natural rewards also by shifting the cognitive focus to the intrinsically rewarding aspects of the job. Focusing on building pleasant and enjoyable features in work tasks will create feelings of intrinsic motivation (D'Intino *et al.*, 2007).

Constructive thought strategies involve visualising successful performance, engaging in positive self-talk and examining individuals' beliefs and assumptions in order to align cognitions with desired behaviour (Ho & Nesbit, 2013). Through a process of identifying and altering distorted beliefs, individuals can minimise dysfunctional thinking processes and engage in more rational and effective cognitive processes (Houghton *et al.*, 2012). Positive self-talk and evaluation of existing habits and ways of thinking (for instance, I am an opportunity thinker) can enhance constructive thought patterns (Van Zyl, 2008).

Assessment of self-leadership

Manz (1993) developed a set of initial items to capture elements of both self-management and self-leadership. Self-management (Manz, 1986; Stewart *et al.*, 2011) is conceptualised as strategies for getting oneself to complete difficult but necessary tasks and is assessed by scales capturing self-observation, cueing strategies, self-goal setting, self-reward, self-punishment and practice (Stewart *et al.*, 2011). In contrast, self-leadership is conceptualised as more intrinsically motivated and includes scales like building natural rewards into work, choosing pleasant surroundings, building naturally rewarding activities into work, focusing on pleasant aspects of work and focusing on natural rewards rather than on external rewards (meaning rewards outside the work itself; Manz & Simms, 1991; Neck, 1996; Stewart *et al.*, 2011, p. 191). Mahembe *et al.* (2013) indicated that, at about the same time, Cox (1993) developed and tested a 34-item unpublished Self-Leadership Questionnaire (SLQ), with eight factors, labelled as self-problem-solving initiative, self-efficacy, teamwork, self-reward, self-goal setting, natural rewards, opportunity thought and self-observation or evaluation (Mahembe *et al.*, 2013, p. 4).

Anderson and Prussia (1997) continued to work on the Manz scale and subjected it to content validation (Stewart *et al.*, 2011). Subject matter experts placed the original 90 items into three categories: behaviour-focused strategies, natural reward strategies and constructive thought strategies (Stewart *et al.*, 2011, p. 191). Houghton *et al.* (2012) indicated that the 50-item instrument of Anderson and Prussia is a first step in developing a self-leadership scale, but it was plagued by some inherent reliability and validity problems and, therefore, required additional refinement.

Houghton and Neck (2002) developed the RSLQ by eliminating or rewriting ineffective questions from Anderson and Prussia's (1997) SLQ and adding items from Cox's (1993) instrument (Houghton *et al.*, 2012). Houghton *et al.* (2012) argue that, although the RSLQ demonstrates reasonably good reliability and validity across a number of empirical studies (Houghton, Neck & Singh, 2004; Neck & Houghton, 2006), additional research is needed to further assess the reliability and validity of the RSLQ (Houghton *et al.*, 2012, p. 222). Houghton *et al.* developed and validated a nine-item abbreviated version (ASLQ) of the 35-item RSLQ. A confirmatory factor analysis indicated that the ASLQ is a reliable and valid measure that has inherited the nomological network of associations from the original version of the RSLQ (Houghton *et al.*, 2012, p. 216).

A South African study by Mahembe *et al.* (2013) focused on a confirmatory factor analytic study of the RSLQ. The findings indicated that the RSLQ demonstrated sufficient factorial or construct validity. The second-order measurement model confirmed that the eight self-leadership factors contributed to an overall self-leadership approach (Mahembe *et al.*, 2013). Although this research indicated strong psychometric properties, the sample of young adults studying at a South African university cannot be generalised to working adults in the South African context.

No South African study to date has attempted to investigate the psychometric properties of the ASLQ. It is therefore important to also investigate the psychometric properties of the ASLQ, because using the longer version (RSLQ) could pose a challenge to researchers when self-leadership is being examined together with other variables. It may however be applied on its own when trying to identify employees with poor self-leadership skills (in the workplace). Houghton *et al.* (2012, p. 222) put it as follows: 'overall survey length can quickly become unwieldy, leading to rater fatigue, inaccuracy and missing survey data'.

Method

Research approach

In order to execute the research, the current study followed a cross-sectional design with a survey data collection technique. More specifically, the current study investigated competing measurement models representing the three different conceptualisations as suggested by the developers of the RSLQ. The three competing measurement models were: (1) a hierarchical model of self-leadership, (2) a unidimensional model and (3) a three uncorrelated factors model of self-leadership. In addition, the current study investigated a fourth competing measurement model representing a bifactor structure. This latter model will provide more direct evidence as to whether or not the RSLQ measures a strong general factor (i.e. self-leadership).

A similar approach (i.e. competing measurement models) was followed to investigate the psychometric properties associated with two conceptualisations of the ASLQ: (1) a

three uncorrelated factors model of self-leadership and (2) a unidimensional structure associated with self-leadership.

Participants

A total of 405 working adults participated in the study. Women were in the majority (72%). Most of the participants came from a designated group (71%) and were in the age group of 26–35 years (81%). Most of the respondents were married (64%). Accidental sampling was used within different organisations in the financial services sector.

Measuring process

Permission for the research was granted by the research committee of the Faculty of Economic and Management Sciences and all relevant ethical issues were cleared. The participants were briefed about the aim of the study, their right to voluntary participation and the anonymity of the information they would provide. Participants received instructions on how to complete the RSLQ. They also completed a biographical questionnaire.

Measuring instruments

Self-leadership was measured using the RSLQ, which consists of 35 items. The questionnaire covers three dimensions (behaviour-focused strategies, natural reward strategies and constructive thought pattern strategies). The three dimensions have the following subscales:

- Behaviour-focused strategies: self-goal setting (five items), self-reward (three items), self-punishment (four items), self-observation (four items) and self-cueing (two items).
- Natural reward strategies: focusing thoughts on natural rewards (five items).
- Constructive thought pattern strategies: visualising successful performance (five items), self-talk (three items) and evaluating beliefs and assumptions (four items).

The ASLQ covers three dimensions, namely behaviour awareness and volition, task motivation and constructive cognition. The three dimensions have the following subscales:

- Behaviour awareness and volition: self-goal-setting (two items) and self-observation (one item).
- Task motivation: visualising successful performance (two items) and self-reward (one item).
- Constructive cognition: evaluating beliefs and assumptions (two items) and self-talk (one item).

Participants also completed a biographical questionnaire providing information related to age group, gender, home language and marital status.

Analysis

The current study employed LISREL 8.80 (2006) to estimate the goodness-of-fit of each of the competing measurement models associated with both the RSLQ and ASLQ. A test

of multivariate normality was performed to determine whether the data violated the assumption of normality. The results suggested that the data deviated from normality with regard to skewness and kurtosis. Hence, the robust maximum likelihood method of estimation was used to estimate the various models (Brown, 2006). Several fit indices were used as well, including the Satorra-Bentler scaled chi-square, root mean square error of approximation (RMSEA), standardised root mean square residual (SRMR), comparative fit index (CFI) and the goodness-of-fit index (GFI). Values close to 0.95 for GFI and CFI are considered indicative of good model fit. Hu and Bentler (1999) suggest that values close to 0.06 are indicative of acceptable fit for RMSEA, whilst values smaller than 0.08 are acceptable for SRMR. In addition, Akaike's information criterion (AIC) is used in the comparison of competing measurement models with smaller values representing a better fit of the proposed model (Byrne, 2006).

Cronbach's alpha (α) was used to estimate the reliability of the dimensions of the constructs being investigated in the current study. Reliability estimates of 0.7 and higher are indicative of good reliability. However, estimates as low as 0.6 may be acceptable when conducting exploratory research (Hair, Black, Babin, Anderson & Tatham, 2006, pp. 137, 778).

It should be noted that, in order to facilitate direct comparison with the results obtained by developers of the RSLQ, the current study used (1) the same indicators and (2) the same conceptualisations of the three competing measurement models (hierarchical model of self-leadership, one-factor model and three uncorrelated factors model). The current study used the same instructions to create item parcels (i.e. composite scores) for eight of nine subscales. In addition, the developers used the three items with the highest factor loadings (items 26, 32, 35) for the natural reward subscale (Houghton & Neck, 2002, p. 678).

Results

Revised Self-Leadership Questionnaire

From Table 1, it is clear that the three measurement models proposed by the developers of the RSLQ show different levels of fit with regard to CFI, RMSEA and SRMR. The three uncorrelated factors model has poor fit. In contrast, both the unidimensional and higher-order factor models exhibit acceptable levels of fit when looking at CFI, RMSEA and SRMR. The bifactor model also seems to fit the data well when considering the value of CFI. Together, both the unidimensional and bifactor model results may lend support to the possibility that the RSLQ measures a general construct (i.e. self-leadership).

The developers of the RSLQ concluded that the 'behaviour focused, natural rewards, and constructive thoughts factors have a higher-order factor; namely self-leadership' (Houghton & Neck, 2002, pp. 679, 681, 685). Mahemba *et al.* (2013, p. 3) claim that the higher-order factor model

TABLE 1: Goodness-of-fit statistics for the competing measurement models (RSLQ, $n = 405$).

Goodness-of-fit statistics	Unidimensional model	Higher-order factor model	Three uncorrelated factors model	Bifactor model
Satorra-Bentler scaled chi-square	107.230	104.290	426.470	1668.250
Degrees of freedom	44.000	41.000	44.000	529.000
Comparative fit index	0.990	0.990	0.940	0.980
Root mean square error of approximation	0.060 (0.045; 0.074)	0.062 (0.047; 0.077)	0.150 (0.130; 0.160)	0.073 (0.069; 0.079)
Standardised root mean square residual	0.039	0.040	0.410	0.170
Akaike's information criterion	151.230	154.290	470.470	1870.250

could provide evidence that the RSLQ consists of a strong global or general factor. However, this model is not the only or most suitable conceptualisation in determining the presence of a strong general factor. This second-order model states that the target trait (self-leadership) is a second-order dimension that explains why the three primary dimensions (behaviour-focused strategies, natural reward strategies and constructive thought pattern strategies) are correlated. Unfortunately, there is no direct relationship between the item and the target trait (self-leadership), but the relationship between self-leadership and each item or parcel is mediated by the primary factor. Hence, it models an indirect effect. A more suitable approach to determine the presence of a strong general factor is using a bifactor model (Chen, West & Sousa, 2006; Reise, 2012; Reise, Moore & Haviland, 2010). The latter model allows researchers to determine directly the degree to which items reflect a common trait (e.g. self-leadership) and the degree to which they reflect subtraits (i.e. sub-dimensions of the RSLQ; Reise *et al.*, 2010, p. 546).

Table 2 shows that the majority of items have higher loadings on the general factor than on the group factors (i.e. dimensions of the RSLQ). This is indicative of a strong general factor (Reise *et al.*, 2010). As per the suggestion of Reise *et al.* (2010), an omega hierarchical reliability coefficient of the general factor of the bifactor model was also obtained, namely 0.90.

The reliability estimates associated with each of the three dimensions of the RLSQ are reported in Table 3. It is clear that all the dimensions have acceptable reliabilities that exceed 0.70.

Table 4 provides the reliability estimates associated with each of the eight subscales of the RSLQ. It is evident that both the self-cueing and self-goal setting subscales are the most reliable subscales of the RSLQ.

Abbreviated Self-Leadership Questionnaire

According to Table 5, the unidimensional model of the ASLQ is the better fitting model as evident from the small value of AIC. In addition, all the fit indices associated with this model (CFI, RMSEA and SRMR) are indicative of an acceptable fit. In contrast, the three uncorrelated factors model does not fit the data well.

It is clear from Table 6 that all three the dimensions associated with the ASLQ have acceptable estimates of reliability that exceed 0.70. The behaviour awareness and volition dimension seem to be the most reliable of the three.

TABLE 2: Standardised factor loadings for the bifactor model (RSLQ, $n = 405$).

Item	General factor	Behaviour-focused strategies	Natural reward strategies	Constructive thought pattern strategies
1	0.33	-	-	0.67
2	0.63	0.63	-	-
3	0.60	-	-	0.29
4	0.45	0.17	-	-
5	0.63	-	-	0.35
6	0.51	0.24	-	-
7	0.81	0.08	-	-
8	0.79	-	0.91	-
9	0.68	0.67	-	-
10	0.70	-	-	0.60
11	0.83	0.06	-	-
12	0.65	-	-	0.12
13	0.60	0.39	-	-
14	0.77	-	-	0.11
15	0.43	-0.12	-	-
16	0.48	-0.23	-	-
17	0.69	-	-0.02	-
18	0.71	0.64	-	-
19	0.72	-	-	0.54
20	0.83	0.22	-	-
21	0.32	-	-	-0.04
22	0.57	0.15	-	-
23	0.77	-	-	0.13
24	0.18	-0.57	-	-
25	0.83	-0.02	-	-
26	0.66	-	0.01	-
27	0.83	-	-	0.31
28	0.84	-0.05	-	-
29	0.85	-	-	0.15
30	0.52	-0.30	-	-
31	0.85	0.09	-	-
32	0.81	-	-0.03	-
33	0.82	-	-	0.14
34	0.83	0.36	-	-
35	0.64	-	0.00	-

TABLE 3: Reliability estimates for the three dimensions (RSLQ, $n = 405$).

Dimension	Number of items	Alpha
Behaviour-focused strategies	18	0.923
Natural reward strategies	5	0.798
Constructive thought pattern strategies	12	0.910

Discussion

Outline of the results

Psychometric properties of the Revised Self-Leadership Questionnaire

When comparing the goodness-of-fit statistics obtained in the current study with those reported by Houghton and Neck

TABLE 4: Reliability estimates for the nine subscales (RSLQ, $n = 405$).

Subscale	Number of items	Alpha
Self-goal setting	5	0.905
Self-reward	3	0.774
Self-punishment	4	0.714
Self-observation	4	0.829
Self-cueing	2	0.908
Focusing thoughts on natural rewards	5	0.798
Visualising successful performance	5	0.864
Self-talk	3	0.710
Evaluating beliefs and assumptions	4	0.865

TABLE 5: Goodness-of-fit statistics for the competing measurement models (ASLQ, $n = 405$).

Goodness-of-fit statistics	Unidimensional model	Three uncorrelated factors model
Satorra-Bentler scaled chi-square	86.950	305.800
Degrees of freedom	27.000	27.000
Comparative fit index	0.990	0.930
Root mean square error of approximation	0.074 (0.057; 0.092)	0.160 (0.140; 0.180)
Standardised root mean square residual	0.048	0.400
Akaike's information criterion	122.950	341.800

TABLE 6: Reliability estimates for the three dimensions (ASLQ, $n = 405$).

Dimension	Number of items	Alpha
Behaviour awareness and volition	3	0.852
Task motivation	3	0.707
Constructive cognition	3	0.777

(2002), the results are encouraging. Houghton and Neck found that the unidimensional model did not fit the data well. However, the current study found that the unidimensional model did fit the data well. Where the developers concluded that the higher-order factor model was the best fitting model, the current study found that both the unidimensional and higher-order models were the best fitting when using the conceptualisations suggested by the developers. Both these results may suggest that the RSLQ measures a strong general factor (i.e. self-leadership). However, only the bifactor model results would be able to support this assumption.

The reliability estimates reported by the developers are fairly similar or higher than those obtained by the current study with regard to the following six subscales: self-goal setting (0.84 vs 0.91), self-observation (0.82 vs 0.82), self-cueing (0.91 vs 0.91), focusing thoughts on natural rewards (0.74 vs 0.80), evaluating beliefs and assumptions (0.78 vs 0.87) and visualising successful performance (0.85 vs 0.86). However, the current study obtained lower reliabilities with regard to the following three remaining subscales: self-reward (0.93 vs 0.77), self-punishment (0.86 vs 0.71) and self-talk (0.92 vs 0.71).

A recent South African study reported on the psychometric properties of the RSLQ within a sample of young adults (Mahembe *et al.*, 2013). They tested a higher-order factor model consisting of the eight subscales. The results obtained by the current study seem to be fairly similar to those reported by Mahembe *et al.* (2013). Specifically, the values of CFI are

almost exactly the same for both the three uncorrelated factors model (0.99 vs 0.98) and the higher-order factor model (0.99 vs 0.98). In contrast, the values obtained in the current study are slightly higher (but still acceptable) with regard to the RMSEA in both the three-factor model (0.04 vs 0.07) and the higher-order factor model (0.04 vs 0.07).

The reliability estimates reported by Mahembe *et al.* (2013) are fairly similar or lower than those obtained by the current study with regard to the following six subscales: self-goal setting (0.84 vs 0.91), self-observation (0.82 vs 0.82), self-cueing (0.82 vs 0.91), focusing thoughts on natural rewards (0.74 vs 0.80), evaluating beliefs and assumptions (0.76 vs 0.87) and visualising successful performance (0.82 vs 0.86). However, the current study obtained lower reliabilities with regard to the following two remaining subscales: self-reward (0.90 vs 0.77) and self-talk (0.87 vs 0.71). Unfortunately, Mahembe *et al.* did not include the self-punishment subscale in their study.

In short, the psychometric properties of the RSLQ seem to suggest an instrument that is best conceptualised as measuring a single factor that is also very reliable.

Presence of a strong general factor: Although the results of the current study point to a well-fitting single factor model for self-leadership when using the RSLQ, this is not sufficient to claim that this instrument measures a strong general factor. In order to determine the presence of a strong general factor, the current study also employed a bifactor model to investigate this possibility. In contrast to the approach followed by Mahembe *et al.* (2013), the bifactor model is a more suitable conceptualisation to investigate the presence of a strong general factor. The current study indeed found evidence of a strong general factor. However, where Mahembe *et al.* tested a higher-order factor structure with the eight subscales (instead of the nine subscales available), both the developers and the current study used the three dimensions associated with the RSLQ. The current study therefore concludes that, when using the RSLQ, it is better to use a single composite score representing self-leadership. However, given the high value associated with omega hierarchical, the group factors (i.e. the dimensions of the RSLQ) do not seem to have any psychometric value. They do not contribute any additional variance already accounted for by the general factor. Hence, the use of subscores representing the dimensions associated with the RSLQ may be overly optimistic.

Psychometric properties of the Abbreviated Self-Leadership Questionnaire

The current study found that the one-factor model, associated with the ASLQ, fitted the data well. As was evident from the results reported for the RSLQ, the three uncorrelated factors model also did not seem to be a good representation of the ASLQ. In contrast, Houghton *et al.* (2012) found acceptable levels of fit associated with the three uncorrelated factors model.

The developers of the ASLQ reported a reliability estimate for the total scale (α) of 0.73 (Houghton *et al.*, 2012, p. 226). In contrast, the current study found a much higher reliability estimate ($\alpha = 0.89$). In addition, the reliability estimates associated with each of the three subscales obtained in the current study are fairly similar (task motivation = 0.71) or slightly better (constructive cognition = 0.78, behaviour awareness and volition = 0.85).

It can therefore be concluded that it is better to conceptualise the ASLQ as measuring a single factor (i.e. self-leadership). Although the sub-dimensions did exhibit acceptable estimates of reliability, it seems as if their use in future research may not add more theoretical support than what may already be gained from treating self-leadership as a single, strong general factor.

Practical implications

The authors recommend that practitioners and researchers use both the RSLQ and ASLQ as a research and development tool. When these questionnaires are applied as a research tool, they can be considered as a valid and reliable measure applicable in the South African working context.

Both the RSLQ and ASLQ can also help in the working context in identifying employees with poor self-leadership skills. In this way, the relevant development actions can be identified and implemented which, in turn, could contribute to improving the situation. Keeping in mind low productivity outputs amongst South African employees as indicated by Van Zyl (2009), improved self-leadership skills in the workplace can influence people to perform more effectively.

Applying the shorter version (ASLQ) will save time not only in research (especially when extensive research with many variables is conducted), but also when applied in the working context (especially considering that employees usually have limited time to complete questionnaires).

Limitations and recommendations

Although the current study provided some insight into the psychometric properties of self-leadership, the following suggestions are put forward in order to improve on the measurement of the self-leadership construct. Firstly, further investigation is needed into the factorial invariance of both the ASLQ and RSLQ amongst different language and racial groups in a South African context. It was not possible to validate both these measures in individual language and ethnic groups due to sample size constraints. Hence, future researchers should obtain samples with large enough groups representing the various language and ethnic groups to determine the measurement equivalence of the self-leadership construct. Secondly, there are more advanced statistical techniques, such as Rasch analysis, that should be used to supplement the results obtained in the current

study, especially with regard to unidimensionality. The Rasch model is the preferred technique to determine the unidimensionality of a construct (such as self-leadership).

Conclusion

The current study concludes that both the ASLQ and RSLQ have sound psychometric properties and can be applied within the South African working situation. When applying the longer version (RSLQ), researchers could use a composite score (representing self-leadership) as obtained from the bifactor model. The latter suggests the presence of a strong general factor. The shorter version (ASLQ), will save time when utilised in research and when applied in the work situation. In summary, the current study concludes that both the ASLQ and RSLQ are suitable for use within a South African context amongst working adults.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

P.N. (University of the Free State) was the project leader and was responsible for the method, analysis, results and discussion sections. E.v.Z. (University of the Free State) was responsible for writing the introduction and literature review. Both authors collected data for the project, wrote the abstract and contributed to the list of references.

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Authentic leadership as a source of optimism, trust in the organisation and work engagement in the public health care sector

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Dates:

Received: 07 Dec. 2014

Accepted: 07 Apr. 2015

Published: 03 June 2015

How to cite this article:

Stander, F.W., De Beer, L.T., & Stander, M.W. (2015). Authentic leadership as a source of optimism, trust in the organisation and work engagement in the public health care sector. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronnbestuur*, 13(1), Art. #675, 12 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.675>

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Orientation: The orientation of this study is towards authentic leadership (AL) and its influence on optimism, trust in the organisation and work engagement of employees in the public health care sector.

Research purpose: The objectives of this study were to determine whether the leadership style of AL could predict optimism, trust in the organisation and work engagement amongst a large sample of employees from various functions in public hospitals and clinics in Gauteng and to establish whether optimism and trust in the organisation could mediate the relationship between AL and work engagement.

Research approach, design and method: A convenience sample of 633 public health employees from various functions within 27 public hospitals and clinics in the province was used in this research. A cross-sectional research design was implemented. Structural equation modelling was utilised to investigate the Authentic Leadership Inventory (ALI), and the validity and fit of the measurement model, to position AL as a job resource within the nomological net and to test its mediating effects.

Main findings: The statistical analysis revealed that AL was a significant predictor of optimism and trust in the organisation and that optimism and trust in the organisation mediated the relationship between AL and work engagement.

Practical/managerial implications: The research results suggested that organisations in the public health care sector should encourage their managers to adopt a more authentic leadership style. This will lead to higher levels of optimism, trust in the organisation and eventually work engagement. This will greatly assist employees in the domain of public health care to manage their demanding working environment.

Contribution: This study provides evidence that the ALI can be used reliably within the South African context and specifically within the public health care sector. It further substantiates for the implementation of AL as a leadership style in the South African public health care sector, supporting work that has been done internationally in health care where AL has been associated with a number of positive outcomes. Finally, the study puts forward two practical suggestions, on both an individual and an organisational level, to facilitate a culture in which AL can be translated more effectively into an engaged workforce.

Introduction

In a significant strategic mission statement, the Department of Health (2011) in South Africa recently articulated a renewed focus on effective leadership as a vocal point of a government function that fulfils a critical role in the country's development. The Health Systems Trust (2013) describes the public health care sector as a major pillar in the country's democratic societal foundation. The provision of basic health care services is a crucial part of a prospering and flourishing society and provides one of the fundamental prerequisites for a civilisation in which equity prevails (Harrison, 2009). In South Africa, access to primary health care is a fundamental human right. This being said, the public health care sector has been plagued by a number of very pressing challenges. These include difficulty in implementing institutional policies that direct the public health care sector (Pillay, 2009), lack of and ill distribution of resources (Christian & Crisp, 2012), a national disease burden that is estimated to be four times worse than in developed countries (Department of Health, 2011) and a workforce that is continuously migrating to the private health care sector where perceived resources and working environment are considered more favourable (Ashmore, 2013).

In the National Department of Health (2013) annual report, the minister outlines that glaring differences still exist between the public and private health care sectors, specifically in access and quality of care, and states that this is convoluted by the country's disease affliction (particularly through HIV and/or AIDS and TB), child and maternal morbidity, lifestyles of certain communities and high occurrence of trauma-related incidents across the entire country and particularly in areas where private health care is not affordable to people. The burden on the South African public health care sector is significant. Of the entire population, 83% of people receive all medical care in this domain (Blecher, Kollipara, DeJager & Zulu, 2011). Because basic primary health care in the public sector is available at no charge, very little funding outside of government budget is available to amply equip the sector with resources (Sanders & Chopra, 2006). The demand for public health care services has also been immense and continues to significantly surpass supply. For example, according to the Health Systems Trust (2011), in the public health care sector, only 2.2 usable beds are available per 1000 members of the population.

This highly complex and severely pressured sector, where a lack of resources and highly overburdening demand for services have been prevalent, has clearly manifested in the form of symptoms amongst its entire workforce. George, Atujuna and Gow (2013), for example, state that employees in the public health care sector have felt totally overwhelmed by the enormity of the task facing them on a daily basis and have negatively related to the pressures delivered through a large portion of the population who are in need of quality health care but cannot afford private care. Von Holdt and Murphy (2006) comment that public health care workers in South Africa experience severe stress and have reported total exhaustion. Drastic measures are required to equip public health care workers to effectively deal with a highly challenging work environment, to uphold levels of well-being amongst these individuals and to counter the high rate of turnover of these employees who are leaving the sector due to an environment that becomes too overburdening (George, Gow & Bachoo, 2013).

The need for these measures has been recognised by the Department of Health, who have introduced the National Core Standards for Health Establishments in South Africa (Department of Health, 2011), in which it adopts 'leadership' (domain 5) very purposefully as a critical component of its overarching strategy to navigate the challenges of public health care and provide for a healthy workforce who are able to be actively engaged and effective within this environment. The drive for purposeful leadership interventions has not only been recognised by the Department of Health in South Africa, but has long been advocated in academic literature as well. For example, Gilson and Daire (2011) state that:

leadership is a necessary element of strong health systems, and so it is vital that SA nurtures and sustains leaders who can work strategically within their complex environments to develop a rights-based health system that promotes health equity. (p. 69)

Bamford, Wong and Laschinger (2013) further highlight the importance of strong leadership to build and sustain healthier work environments to deal with the demands in the health care profession. Although the concept of leadership has been widely introduced through the policy direction of the Department of Health, and literature has been published championing a stronger emphasis on leadership within public health care, very little empirical work exists that explore the value of specific leadership styles in this sector. This represents a major research gap, not only from a scientific perspective but equally so from the pragmatic view of assisting the South African national government in understanding which approaches could be effective in nurturing an engaged workforce within a work environment in public health care that is going to remain highly demanding. This article proposes the leadership style of authentic leadership (AL) as a pragmatic approach to be adopted in the public health care sector as a means of creating an engaged workforce. Laschinger, Wong and Grau (2013) state that few empirical studies link authentic leadership with work attitudes and outcomes in health care.

Literature review

Authentic leadership as a leadership style in the public health care sector

AL refers to a leadership style that includes positive leader capacities and a mature organisational leadership culture (Luthans & Avolio, 2003). This forms the basis of the concept of AL as investigated in this paper. As a concept it proposes high levels of self-awareness and positive behaviours on the side of both leader and follower (Ilies, Morgeson & Nahrgang, 2005). It is based on the construct of authenticity, which is described by Kernis (2003) as being absolutely true to one's own being in all daily interactions. The authentic leader displays behaviours of inspiring others, motivating followers, stimulating on an intellectual level and giving individualised attention to followers (Neider & Schriesheim, 2011). In this sense the authentic leader acts as a 'moral agent' who introduces transformational leadership to the organisation in which they function (Bass & Steidlmeier, 1999). AL has been proven to be a valuable approach in a number of organisational studies. For example, Peus, Wesche, Streicher, Braun and Frey (2012) found AL to be a predictor of organisational commitment, extra effort and team effectiveness in a sample of business and research organisations in Germany. In a sample of employees from telecommunications firms in China, AL was positively related to organisational citizenship and work engagement (Walumbwa, Wang, Wang, Schaubroeck & Avolio, 2010).

AL comprises four constructs (Walumbwa, Avolio, Gardner, Wernsing & Peterson, 2008). *Self-awareness* refers to the ability to make sense of one's perceived reality and understand one's strengths and weaknesses. Laschinger and Fida, (2014) postulate that authentic leaders have a stable sense of self knowledge. *Relational transparency* talks to presenting the true and core self to other people. *Balanced processing* refers to objectively analysing all sets of information about a particular

scenario before coming to a particular conclusion. *Internalised moral perspective* refers to the ability of self-regulation as to hold a firm moral position, internally inclined, that can withstand both societal and group pressures. The four AL constructs are measured through the Authentic Leadership Inventory (ALI), developed by Neider and Schriesheim (2011). The measure assesses the extent to which a group of followers perceive their leader to display the behaviours associated with the four AL constructs. It has been proven to be reliable by Neider and Schriesheim.

Although the potential value of adopting an AL approach in an organisation has been proven in a number of studies, very little empirical work has been done within South Africa and no studies have evaluated the positive effect that AL could have as a leadership style within the public health care sector in this country. This is despite international work within broader health care that has linked AL to trust and job performance amongst a sample of Canadian nurses, pharmacists and physicians (Wong & Cummings, 2009), to work engagement amongst a sample of registered nurses in the province of Ontario in Canada (Bamford *et al.*, 2013), to job satisfaction amongst a sample of UK nurses (Leigh, 2013) and to burnout, mental health and job satisfaction amongst new nurses (Laschinger & Fida, 2014). This represents an important research gap in the South African literature. It is important to investigate the application of AL within South African organisations and, more so, it could be fruitful to apply this leadership style within the domain of the public health care sector. Based on the literature and empirical work done internationally it is possible to postulate:

- **Hypothesis 1:** The ALI will be reliable for use in a South African context.
- **Hypothesis 2:** The ALI holds a four-factor structure in a sample of employees from the public health care sector.

Positioning authentic leadership as a job resource in relation to the nomological network

This article postulates that, in the context of the public health care sector in South Africa, the leadership style of AL will act as a job resource in line with the job demands-resources (JD-R) model. The JD-R model is a strongly established theory within industrial psychology. It holds that all job roles inherently comprise a set of demands and resources (Bakker, Demerouti, Taris, Schaufeli & Schreurs, 2003). Whilst demands constitute those elements of the job that require psychological, physical, social or organisational strain, job resources include capitals that assist individuals to successfully accomplish tasks and be more effective in their job role (Bakker & Demerouti, 2007). Job resources effectively mitigate against the effects of job demands and include physical, social or organisational elements of a job role that allow the role incumbent to more readily achieve desired personal and organisational outcomes (Bakker & Demerouti, 2008; Xanthopoulou, Bakker, Demerouti & Schaufeli, 2009). It is argued here that the leadership style of AL can be postulated as a job resource as it has been effectively proven to navigate various challenging organisational cultures and to be

associated with desired organisational outcomes. Examples of this include Wong and Cummings (2009), who have found the leadership style of AL predicted job performance amongst a sample of Canadian nurses, as well as Peus *et al.* (2012), who have established a correlation between AL and team effectiveness amongst German employees working in research industries.

To substantiate the case for postulating AL as a job resource, it is important to investigate its correlation with other, established job resources within the theoretical framework of the nomological net. In this article, AL is compared to the job resource of communication and relationships with colleagues. According to Van Veldhoven, Meijman, Broersen and Fortuin (2002), communication as a resource entails whether an individual has a clear understanding of how processes, decision-making and important procedures work within their organisation. Relationship with colleagues refers to whether an individual gets along with, feels comfortable with and can count on colleagues for support in their job role. Both communication and relationship with colleagues are measured through the questionnaire on experience and assessment of work, developed in the Netherlands and known by its abbreviation VBBA (Van Veldhoven, Meijman, Broersen, & Fortuin, 1997):

- **Hypothesis 3:** Authentic leadership can be postulated as a job resource in the nomological net in relation to communication and relationship with colleagues.

Authentic leadership as a predictor of positive personal and work-related outcomes

Laschinger and Fida (2014) found that AL and psychological capital (PsyCap) have an impact on personal and job-related outcomes in the nursing environment. Adopting the point of departure that AL is a job resource in relation to other established job resources in the nomological net, as outlined above, it becomes possible to postulate that this leadership style may lead to positive personal and work-related outcomes. This view is validated when considering the theoretical description, which holds that job resources assists individuals in achieving both personal and work-related goals (Xanthopoulou *et al.*, 2009). In this article, the potential of AL to predict the personal outcome of optimism, and the work-related outcome of trust in the organisation, is investigated.

Optimism is a construct that forms part of the collective term psychological capital (PsyCap) as described by Luthans and Youssef (2004). PsyCap can be described as a 'an individual's positive psychological state of development, characterised by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks, (2) making a positive attribution (optimism) about succeeding now and in the future, (3) persevering towards goals, and when necessary, redirecting paths to goals (hope) in order to succeed and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success' (Luthans, Youssef & Avolio, 2007, p. 10).

Although a fairly new concept within psychology, PsyCap has effectively been proven as a personal resource that assists individuals in attaining goals (Luthans, Avolio, Avey & Norman, 2007). Laschinger and Fida (2014) are of the opinion that PsyCap, as a personal strength may enable new graduate nurses to proactively manage stressful challenges. The PsyCap constructs have been established as valid in a South African sample by Görgens-Ekermans and Herbert (2013) through a thorough validation study conducted within the construction industry. It will hence be interesting to further scrutinise this finding by investigating the properties of these constructs within the public health care sector.

Optimism has been referred to by Luthans (2002) as comprising both positive emotion and motivation in life. It refers to an individual's ability and positive psychological developmental state towards having an ascription of being successful, now and in the future (Luthans, Avolio, Avey & Norman, 2007). A number of studies have correlated the leadership style of AL with PsyCap. For example, Clapp-Smith, Vogelgesang and Avey (2009) established correlation between AL and PsyCap in a sample of employees from the retail industry. Rego, Sousa, Marques and Cunha (2012) established that AL promoted PsyCap amongst employees from 33 different organisations in Portugal. This is because AL is 'a pattern of leader behaviour that draws upon and promotes both positive psychological capacities and a positive ethical culture, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development' (Walumbwa *et al.*, 2008, p. 94). The leadership style of AL should also aid the highly demanding public health care environment to promote levels of optimism amongst staff in a process of positive organisational behaviour, considering its value, which has been established through studies in other contexts:

- **Hypothesis 4:** Authentic leadership will promote optimism amongst employees in the public health care sector.

Following the above hypothesis, this article postulates that AL will also predict positive work-related outcomes, in particular the outcome of trust in the organisation, which is the particular focus of this study. Trust in the organisation can be described as a sense of confidence in and support towards one's employer (Gilbert & Tang, 1998). It is the conviction that an individual holds that the organisation that employs them has their best interest at heart (Gilbert & Tang, 1998). Bromiley and Cummings (1996) hold that, when employees have trust in their organisation, those employees will invest energy and effort to ensure that organisational objectives are successfully attained. Trust in the organisation has been associated with various positive outcomes. This includes work engagement (Gillis, 2003), knowledge sharing amongst team members in organisations (Ferres, Connell & Travaglione, 2005), effective leadership (Joseph & Winston, 2005) and employee performance (Paliszkievicz & Koochang, 2013). A culture of trust in the organisation is thus a highly sought-after organisational state.

It is postulated here that the leadership style of AL will foster greater trust in the organisation, within the domain of the public health care sector. Trust in the organisation, in this instance, is selected due to Luthans and Avolio's (2003) observation that AL comprises authenticity, embedded into a particular organisational culture. This is because AL constitutes authenticity and positive empowering behaviours which will render employees more able and willing to trust their employers. It supports the work of Bono and Judge (2003) who have outlined the relevance of social and personal identification as part of the leadership process towards attaining positive outcomes. The rationale for this is further supported by Avolio, Gardner, Walumbwa, Luthans and May (2004), who stipulate that AL allows a realistic social interaction between leader and follower in a culture that supports open communication and free sharing of information. This manifests in a culture of trust within the organisation, as the authentic nature of the leadership style ensures transparency and the sense that the organisation, through the extension of its leadership, has the best interests of employees in mind (Gardner, Avolio, Luthans, May & Walumbwa, 2005).

From the perspective of this article, trust in the 'organisation' is here represented as trust in the public health department, which employs the participants of this study through various hospitals and clinics. In a number of studies, AL has been proven as a leadership style that can harness trust in the organisation, particularly in the health care environment. For example, Wong and Cummings (2009) established that AL predicted trust in the organisation amongst a sample of both clinical care and non-clinical (support) staff of Canadian health care facilities. This is significant in the context of this study, where the public health care sector as a whole was considered, including both medical practitioners and support staff. In further studies, AL was proven to be a source of trust in the organisation in a large sample of Malaysian employees in the banking sector (Hassan & Ahmed, 2011) and a large sample of employees working in the financial services industry (Walumbwa, Luthans, Avey & Oke, 2009):

- **Hypothesis 5:** Authentic leadership will promote trust in the organisation in the public health care sector.

AL is further investigated in this article as being able to predict the positive work-related outcome of work engagement. Work engagement is defined by Schaufeli and Bakker (2004, p. 295) as a 'positive, fulfilling, work-related state of mind characterised by vigour, dedication, and absorption'. Of late, only vigour and dedication have been included as core dimensions of work engagement (Stander & Mostert, 2013). Vigour describes an individual's continued positive feelings towards elements of their job role, whereas dedication constitutes an individual's pride in their job (Schaufeli, Salanova, González-Romá & Bakker, 2002). Work engagement is a highly researched and well-established topic in the literature. It has been associated with such outcomes as motivation amongst employees (Sonnetag, 2003), organisational commitment (Demerouti, Bakker, De

Jonge, Janssen & Schaufeli, 2001) and increased performance (Bakker, 2011). An engaged workforce is a highly sought-after state of any organisation, as an engaged employee is fully connected to their job role and can thus fulfil such role with higher efficiency and effectiveness (Bakker, 2011).

In the public health care sector in South Africa, an engaged workforce is critical to navigate the challenges associated with a segment that is overburdened by demands and a lack of resources. It is therefore crucial to investigate means as to which work engagement can be fostered amongst both medical and support staff in this sector and AL as a leadership style is proposed here as a means of achieving this. It has been proven that AL can facilitate work engagement amongst employees. This has been established by Wang and Hsieh (2013) in a large sample of employees from manufacturing companies in Taiwan, by Walumbwa *et al.* (2010) amongst employees from the telecommunications industry in China, by Bamford *et al.*, (2013) with a group of registered nurses and by Brown (2014) amongst a sample of athletes in the United States. Based on this the following hypothesis is postulated:

- **Hypothesis 6:** Authentic leadership will promote work engagement amongst employees in the public health care sector.

Optimism and trust in the organisation as mediators in the relationship between authentic leadership and work engagement

Following the postulation that AL will predict both positive personal and work-related outcomes in the public health care sector, this article will further investigate the indirect relationship that two of the variables have on the relationship between AL and work engagement, that is, it will investigate whether favourable personal and work contexts can potentially strengthen the effect of a AL leadership style on the level of work engagement of employees in this sector.

Firstly, from a personal resource perspective, the potential mediating effects of optimism is explored in this article. It is possible to predict that optimism will mediate the relationship between AL and work engagement, because optimism forms part of the PsyCap constructs and should therefore assist employees in the public health care sector to translate the job resources available to them into favourable outcomes. This is because PsyCap, and optimism by extension, form part of an individual's personal resources and renders that person in a state of positive psychological development (Luthans, Avolio, Avey & Norman, 2007). Optimism has been proven to be a mediator between various job resources and the outcome of work engagement. Xanthopoulou *et al.* (2009) established that optimism mediated the relationship between the job resources of autonomy, coaching and team culture and work engagement, in a sample of employees from Greek restaurants. In a study by Tims, Bakker and Xanthopoulou (2011) optimism fully mediated between a transformational leadership style and work engagement in a large sample of consultants from two organisations in the Netherlands. It is

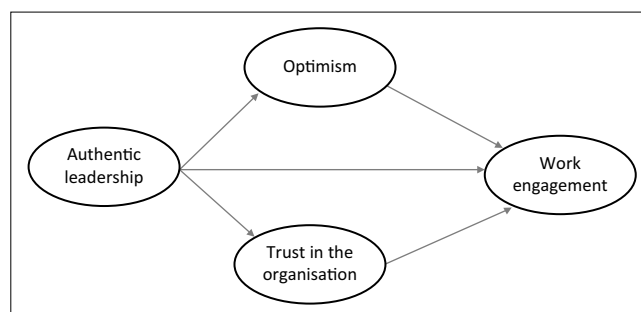


FIGURE 1: The research model.

thus possible to argue that a positive leadership style will be mediated towards work engagement by a workforce that holds high levels of optimism. This article argues that an individual who is employed in the public health care sector and holds the optimistic view that they will be successful in their endeavours, now and in the future, will be more amply equipped to translate the positive leadership style observed by them through an AL approach into a state of work engagement.

Furthering the research, it is also postulated here that favourable work-related culture of trust in the organisation will mediate between AL and work engagement. Trust in the organisation creates a culture in which employees believe their employers have their best interest at heart and they will therefore be more willing to invest a full effort to attain organisational goals, within the positive framework provided through an AL leadership style (Gilbert & Tang, 1998). Aryee, Budhwar and Chen (2002) established that trust in the organisation mediated between perceived organisational justice and job satisfaction of employees in the public sector in India. Pertaining specifically to work engagement, Acosta, Salanova and Llorens (2011) recognised a full mediating effect of trust in the organisation in the relationship between healthy organisational practices and work engagement of employees from small and medium-sized enterprises in Spain. This article will explore the possible mediating effect that trust in the organisation will have between AL and work engagement in the public health care sector in South Africa:

- **Hypothesis 7a:** Optimism will mediate the relationship between authentic leadership and work engagement
- **Hypothesis 7b:** Trust in the organisation will mediate the relationship between authentic leadership and work engagement

Figure 1 presents the research model.

Method

Research approach

To investigate this research a quantitative approach was used. Quantitative approaches are usually more structured and collect larger samples of data (Struwig & Stead, 2001). More specifically, a survey design was used to collect cross-sectional data. Cross-sectional data means that the data were collected at one point in time (Salkind, 2009).

Participants and procedure

The total sample ($N = 633$) had an average age of 42.44 years ($SD = 12.27$) and was drawn from 27 public hospitals and clinics in the province. The majority of the sample was female (79.6%). The home languages with the most participation were Sesotho ($n = 263$; 44.6%) and isiZulu ($n = 113$; 19.2%). Furthermore, participation from the English ($n = 39$), Afrikaans ($n = 42$), Setswana ($n = 43$), and isiXhosa ($n = 40$) language groups were quite similar. The majority of the sample consisted of black people ($n = 522$; 87.9%) followed by a minority of white participants ($n = 49$; 8.2%) as the second largest group. This demographic composition is representative of the South African public health sector workforce. In terms of qualifications, 156 participants (29.8%) had a higher senior certificate, 202 (38.5%) had a diploma or tertiary certificate, 122 (23.3%) had a degree and 44 (8.4%) had a postgraduate degree. With regard to function, 94 (7.41%) of the sample indicated management, 65 (12.04%) indicated specialist, 106 (19.63%) indicated administrative and 275 (50.92%) of the sample indicated other.

This research was conducted as part of a broader project with the public health department in Gauteng, aimed at studying the work-related experiences and well-being of employees in the public health care sector. The research was conducted through a gatekeeper appointed by the department, after a rigorous process of application for ethical clearance was done so as to ensure clearance from the department. The research project leader engaged the respondents through the gatekeeper and distributed the research questionnaires to respondents in pre-arranged time-slots, on site at the hospitals and clinics, in pre-arranged venues, according to department and function. The research project leader was accompanied by research assistants during the data collection process. The project leader explained the aim, nature and detail of the research to the participants, emphasising the voluntary nature of the procedure. Participants were also briefed on the confidential nature of their responses, which were to be captured only for research purposes. Participants were allowed to ask questions and the project leader was available throughout the process to answer any enquiries the respondents may have had. Although it was reasonably foreseen that the research project presented low risk, the added advantage was that the research project leader is a qualified industrial psychologist and could thus adequately attend to any discomfort participants may have experienced during the research process. Completed questionnaires were collected by the research project leader and stored for the purposes of safekeeping in a secure storeroom on a university premises. An information letter was also distributed, providing participants with the contact details of the project leader, should any queries arise.

Measuring instruments

A biographical questionnaire was used to obtain information concerning the biographical features of participants (e.g. age, gender, level of qualification and home language). The subsequent measuring instruments were administered.

Authentic leadership: AL was measured through the ALI (Neider & Schriesheim, 2011). The ALI contains 14 items. It is scored on a five-point Likert scale on which responses vary from 1 (*disagree strongly*) to 5 (*agree strongly*). Example items are 'My leader solicits feedback for improving their dealings with others' and 'My leader encourages others to voice opposing points of view'. Cronbach's alpha coefficients indicated that the scale in general is reliable ($\alpha = 0.74 - 0.85$; Neider & Schriesheim, 2011). During the briefing of the participants, it was explained that 'my leader' in this context refers to the direct line manager of the employee.

Job resources: Both the job resources of relationship with colleagues and communication were measured by the questionnaire on experience and assessment of work, the VBBA (Van Veldhoven *et al.*, 1997). The VBBA is scored on a four-point frequency rating scale, ranging from 0 (never) to 3 (always). Van Veldhoven *et al.* (2002) have found sufficient levels of internal consistency ($\alpha = 0.87$ for relationship with colleagues and $\alpha = 0.79$ for communication). Relationship with colleagues was measured through six items. An example item is 'Do you get on well with your colleagues?'. Communication was measured through four items, an example of which is the item 'In your work, do you have access to sufficient data and information?'.

Optimism: The PsyCap construct of optimism was measured through the specific optimism items on the 12-item PsyCap Questionnaire (PCQ 12; Luthans, Avolio, Avey & Norman, 2007). As part of the overall PCQ 12, optimism is measured through three items. The items of this measure are scored on a six-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). An example of an optimism item is 'I always look on the bright side of things regarding my job'. The Cronbach's alpha coefficient indicated sufficient reliability for this instrument ($\alpha = 0.93$; Norman, Avolio & Luthans, 2010).

Trust in the organisation: The dimension trust in the organisation was measured through the Workplace Trust Survey (WTS; Ferres & Travaglione, 2003). The WTS comprises nine items for its trust in the organisation dimension. Responses are logged on a seven-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). An example item is 'I think that this organisation provides a supportive environment'. Sufficient levels of internal consistency ($\alpha = 0.95$) have been reported for this measure (Ferres & Travaglione, 2003).

Work engagement: Work engagement was measured through the Utrecht Work Engagement Scale (UWES; Schaufeli *et al.*, 2002), through eight items in this particular study. Responses are recorded on a seven-point frequency scale ranging from 0 (*never*) to 6 (*daily*). Example items are 'At my work I always persevere, even when things do not go well' (dedication) and 'At my job, I feel strong and vigorous' (vigour). Alpha coefficients of the UWES have ranged from 0.68 to 0.91 (Schaufeli *et al.*, 2002). In the South African

context, Storm and Rothmann (2003) established Cronbach's alpha coefficients of 0.78 for vigour and 0.89 for dedication.

Statistical analysis

Latent variables were constructed with structural equation modelling methods in Mplus 7.2 (Muthén & Muthén, 2014). No item parcelling methods were used and each item was therefore an indicator of the latent variable specified. Moreover, due to the categorical nature of the data (i.e. Likert scale-type data), the weighted least squares (mean and variance adjusted) estimation method was implemented, as per the default option in Mplus as it is a more accurate method (Rhemtulla, Brosseau-Liard & Savalei, 2012). This is done by estimating thresholds for the response categories, as the distance between, for example, 'never' and 'seldom' is not the same as between 'seldom' and 'always' (cf. Liang & Yang, 2014). First a measurement model was specified (i.e. confirmatory factor analysis). Then, regression coefficients were added to the model to constitute the structural model. The following fit indices were considered for model fit in the measurement and structural models: comparative fit index (CFI) and Tucker-Lewis index (TLI) with acceptable values above 0.90 and the root mean square error of approximation (RMSEA), the value of which should ideally be below 0.08 (Van de Schoot, Lugtig & Hox, 2012). Furthermore, bootstrapping methods were implemented with a request for 5000 resampling draws in order to ascertain the possibility of indirect effects in the research model with confidence intervals at the 95% level of confidence (Rucker, Preacher, Tormala & Petty, 2011). Correlation coefficients were also considered with practical significance (r) being considered at 0.30 or higher for a medium effect and 0.50 or higher for a large effect (Cohen, 1988). Overall statistical significance for the research was set at the 99% level (i.e. $p \leq 0.01$).

Results

Measurement model

As the sample data was categorical in nature and the weighted least squares methodology was implemented, it was not possible to directly compare non-nested measurement models with chi-square difference testing. Additionally, it should be stated that authentic leadership as a latent variable could only be estimated as one factor; any other permutation (four-factor model or second-order factor model) resulted in model estimation error with a non-positive definite covariance matrix. Confirmatory factor analysis revealed that the overall measurement model, which included all study variables as singular latent variables in one model, was a good fit to the data: the CFI (0.95) and TLI (0.94) were both above the lower bound cut-off point of 0.90 and the RMSEA (0.06) was below the value of 0.08.

Table 1 presents the factor loadings for the latent variables.

As can be seen from Table 1 the factor loadings of all the items loaded significantly on the corresponding latent factor in the confirmatory factor analysis. The standard errors for each of

TABLE 1: Factor loadings for the latent variables.

Latent variable	Item	Standardised loading	Standard error	p -value
Authentic Leadership	AL1	0.77	0.02	0.001
	AL2	0.78	0.02	0.001
	AL3	0.76	0.02	0.001
	AL4	0.76	0.02	0.001
	AL5	0.46	0.03	0.001
	AL6	0.83	0.01	0.001
	AL7	0.79	0.02	0.001
	AL8	0.81	0.02	0.001
	AL9	0.46	0.03	0.001
	AL10	0.81	0.01	0.001
	AL11	0.73	0.02	0.001
	AL12	0.80	0.02	0.001
	AL13	0.72	0.02	0.001
	AL14	0.72	0.02	0.001
Communication	COM1	0.78	0.02	0.001
	COM2	0.89	0.02	0.001
	COM3	0.89	0.02	0.001
	COM4	0.72	0.03	0.001
Colleague relationships	COL1	0.65	0.04	0.001
	COL2	0.64	0.04	0.001
	COL3	0.72	0.03	0.001
	COL4	0.78	0.03	0.001
	COL5	0.83	0.02	0.001
	COL6	0.85	0.02	0.001
Optimism	OPT1	0.55	0.04	0.001
	OPT2	0.97	0.03	0.001
	OPT3	0.77	0.03	0.001
Trust in the organisation	TRUST1	0.76	0.02	0.001
	TRUST2	0.75	0.02	0.001
	TRUST3	0.77	0.02	0.001
	TRUST4	0.67	0.03	0.001
	TRUST5	0.81	0.02	0.001
	TRUST6	0.84	0.01	0.001
	TRUST7	0.77	0.02	0.001
	TRUST8	0.73	0.02	0.001
	TRUST9	0.70	0.02	0.001
Work engagement	ENG1	0.51	0.04	0.001
	ENG2	0.85	0.01	0.001
	ENG3	0.82	0.02	0.001
	ENG4	0.74	0.02	0.001
	ENG5	0.77	0.02	0.001
	ENG6	0.92	0.01	0.001
	ENG7	0.86	0.01	0.001
	ENG8	0.81	0.02	0.001

Note: All two-tailed p values ≤ 0.001 .

the standardised estimates were small, indicating accuracy in estimation of these values.

Table 2 presents the correlation matrix for the latent variables, including their corresponding alpha and omega reliability coefficients.

The reliability indicators of all the latent variables were acceptable according to the popular guidelines (α & $\omega \geq 0.70$). AL was positively correlated with all of the other latent variables with at least a medium practical significant effect, for example with optimism ($r = 0.45$), trust in the organisation ($r = 0.68$), and work engagement ($r = 0.42$). Optimism was practically significantly correlated to work engagement with

TABLE 2: Correlation matrix for the latent variables.

Variable name	Reliabilities		<i>r</i>					
	α	ω	1	2	3	4	5	6
Authentic Leadership	0.93	0.93	1.00	-	-	-	-	-
Colleague relationships	0.83	0.84	0.41†	1.00	-	-	-	-
Communication	0.84	0.84	0.64‡	0.33†	1.00	-	-	-
Optimism	0.74	0.75	0.45†	0.18	0.29	1.00	-	-
Trust in the organisation	0.88	0.90	0.68‡	0.28	0.44†	0.31†	1.00	-
Work engagement	0.90	0.90	0.42†	0.17	0.27	0.60‡	0.50‡	1.00

α , alpha coefficient; ω , omega coefficient; *r*, correlation coefficient.

†, medium effect; ‡, large effect.

p < 0.01

TABLE 3: Regression paths of the research model.

Regression relationships	Standardised estimate	Standard error	<i>p</i>
Authentic leadership → Optimism	0.45	0.04	0.001
Authentic leadership → Trust in the organisation	0.68	0.02	0.001
Authentic leadership → Work engagement	-0.07	0.06	0.200
Optimism → Work engagement	0.51	0.04	0.001
Trust in the organisation → Work engagement	0.39	0.05	0.001

Note: All two-tailed *p*-values ≤ 0.01.

TABLE 4: Indirect effects between authentic leadership and work engagement.

Variable	Estimate	<i>p</i>	95% confidence interval	
			Lower	Upper
Optimism	0.23	0.001	0.16	0.30
Trust in organisation	0.27	0.001	0.19	0.34

p < 0.001

a large effect ($r = 0.60$). The correlation between optimism and trust in the organisation was of medium practical significance ($r = 0.31$). Moreover, trust in the organisation and work engagement were also largely practically correlated with each other ($r = 0.50$). Finally, AL was practically significantly correlated with both relationships with colleagues ($r = 0.41$) and communication ($r = 0.64$).

Structural model: Regression results

Based on the acceptable measurement model, the structural regressions were added to the model as hypothesised from the literature. The structural model also showed acceptable fit to the data (CFI = 0.92; TLI = 0.92; RMSEA = 0.07).

Table 3 shows that the regression relationships were significant at a level of *p* less than 0.01. Authentic leadership positively predicted optimism ($\beta = 0.45$; SE = 0.04; $p = 0.001$) and trust in the organisation ($\beta = 0.68$; SE = 0.02; $p = 0.001$), but did not predict work engagement ($\beta = -0.07$; SE = 0.06; $p = 0.200$). Optimism ($\beta = 0.51$; SE = 0.04; $p = 0.001$) and trust in the organisation ($\beta = 0.39$; SE = 0.05; $p = 0.001$) in turn positively predicted work engagement.

Structural model: Indirect effects

Due to the significant regression relationships from AL to optimism and trust in the organisation, and their subsequent relationship to work engagement, both potential indirect effects were investigated. Feedback is provided in Table 4.

Results from the bootstrapping resampling implementation revealed that both indirect effects were significant: the relationship from AL to work engagement through optimism (0.23; 95% CI [0.16, 0.30]; $p \leq 0.001$) and from AL to work engagement through trust in the organisation (0.27; 95% CI [0.19, 0.34]; $p \leq 0.001$). Therefore, the sum of the indirect effects for the total model was 0.494 ($p \leq 0.001$).

Discussion

Outline of the results

The objectives of this study were to determine whether the leadership style of AL could predict optimism, trust in the organisation and work engagement amongst a large sample of employees from various functions in public hospitals and clinics in Gauteng and to establish whether optimism and trust in the organisation could mediate the relationship between AL and work engagement. This was done to generate knowledge and understanding to assist the public health care sector to harness an engaged workforce. This proves particularly relevant in the South African public health care sector, which is characterised by severely demanding working conditions and an overall lack of resources (Christian & Crisp, 2012). The practical value of this study emerges when considering the clear policy direction of the country's Department of Health, which has indicated through domain 5 of the strategic document known as the National Core Standards for Health Establishments in South Africa (Department of Health, 2011), that 'leadership' would be a key focus area on harnessing an engaged, vigorous workforce that would be able to deal effectively with the burdening environment that is public health care provision. The sector as a whole was considered and therefore both direct health care professionals and support staff were included in the investigation. The structural model under scrutiny in this paper proposed that AL would be an effective leadership style to harness both positive personal and work-related outcomes, specifically optimism, trust in the organisation and work engagement. Based on the theory outlined in the literature study, the authors proposed this structural model as a pragmatic way of dealing with pressing issues in the South African public health care sector, such as migration from employees to the private health care sector (George *et al.*, 2013), assisting the workforce in the public health care sector to more effectively deal with stress (Von Holdt & Murphy, 2006) and assisting employees in the sector

to more effectively negotiate the various demands they will clearly continue to face on a daily basis (George *et al.*, 2013).

The point of departure was to first establish whether AL as a concept could be applied reliably to a South African sample and, more specifically, to the South African public health care sector. AL is measured through the ALI, based on the four AL constructs identified by Walumbwa *et al.* (2008): known as self-awareness, relational transparency, balanced processing and internalised moral perspective. Although AL as a concept has been proven as a leadership style that could unlock great value in health care internationally, in such studies as Wong and Cummings (2009), who established AL to predict work performance amongst Canadian health care practitioners, and Leigh (2013), who found AL led to job satisfaction amongst nurses from the UK, it has largely been un-researched in South Africa; no studies have investigated its potential value and application in public health. This represented a major research gap. Through psychometric evaluation, the authors established that the ALI was reliable for use in a South African context, through both alpha and omega reliability coefficients, rendering Hypothesis 1 of this article as accurate. After this was established, the next step was investigation of the factor structure of the ALI. Based on the theoretical foundations AL presented by Walumbwa *et al.* (2008) and various psychometric studies by such authors as Neider and Schriesheim (2011), the authors postulated through Hypothesis 2 that the ALI would also hold a four-factor structure in the South African context. Competing measurement models were tested through a process of structural equation modelling and the traditional model was compared to a one-factor model for the ALI. Interestingly, the one-factor produced better model fit, disproving Hypothesis 2 and suggesting that South African participants, at least those employed in the public health care sector, perceived AL as an overarching leadership style rather than one comprising the four constructs of which the concept is traditionally constituted.

Before the structural model of the research could be investigated it was important to establish whether AL could in fact be positioned as a job resource as per the JD-R model, the theoretical foundation of this article. Stander and Mostert (2013) hold that theoretical constructs of the same proposed theoretical grouping should be compared to each other in relation with the 'nomological network'. The nomological network describes a collection of theoretically corresponding concepts and denotes the interrelationship between these constructs (Westen & Rosenthal, 2003). In this study, AL was compared to established job resources of communication and relationship with colleagues. Both these constructs have been proven as job resources in various studies and are measured through the VBBA questionnaire on experience and assessment of work, developed in the Netherlands (Van Veldhoven *et al.*, 1997). AL did prove to fit within the nomological network when compared to these resources, proving Hypothesis 3 of this article and delineating that, as a leadership style, it can contribute to the perceived job

resources public health care employees will perceive in their job role.

Hypotheses 4 through 6 were concerned with the structural model proposed in this research and investigated the predicting effect AL could have in the public health care sector, both on positive personal and work-related outcomes. Firstly, it was proposed that the AL leadership style would lead to higher levels of optimism amongst individual employees within the public health care sector. The rationale for this is found in the very essence of AL, which is a leadership style that puts forward a number of empowering behaviours that generate a positive inclination with the individual that they will be able to effectively deal with stressors and be successful (Walumbwa *et al.*, 2008). The implication of this is that AL could be utilised to promote optimism of employees in the public health care sector. It supports studies by Clapp-Smith *et al.* (2009), as well as Rego *et al.* (2012), who established that AL engendered the PsyCap constructs. It also supports the findings of Laschinger and Fida (2014) that AL and PsyCap have a positive impact on nurses' well-being. Hypothesis 5 proposed that AL would also lead to a positive work-related outcome, namely trust in the organisation. This was proven in this research. It is thus possible to argue that the organisational culture of authenticity and authentic behaviours exhibited by leaders who lead through AL will foster a greater level of trust amongst employees in the public health care sector (Bono & Judge, 2003). This implies that a culture of AL will assist the public health care sector to develop a workforce that is willing to invest real energy and effort to achieve organisational goals, despite the substantial job demands that are associated with the sector (Bromiley & Cummings, 1996).

Hypothesis 6 of this article provided an interesting perspective. Although the structural model proposed that AL would indirectly lead to work engagement through the mediating effects of both optimism and trust in the organisation, the authors were of view that a direct path between AL and work engagement would also exist in the public health care sector. This could not be conclusively proven. The authors argue that the very definition of AL must be considered here to explain this phenomenon. Luthans and Avolio (2003) delineate that AL requires both positive, authentic leadership capabilities and a positive, mature organisational culture. A possible explanation for the fact that AL was not directly promoting of work engagement is the consideration of how the public health care sector in South Africa currently looks as an environment and from a culture perspective. The Health Systems Trust (2011) describes this sector as significantly under-resourced. Von Holdt and Murphy (2006) comment that public health care employees work under severely stressful circumstances and George *et al.* (2013) describe the public health care working environment as one that is overburdening. Clearly, these descriptions are in stark contrast to the mature, positive organisational culture that constitutes a part of AL as described by Luthans and Avolio (2003). Hence, Hypotheses

7a and 7b proved quite significant in the context of this study, as it is now possible to argue that AL will not promote work engagement in the public health care sector unless employees are inherently optimistic (Hypothesis 7a) or there exists a level of trust (Hypothesis 7b) within the organisation.

When the above was scrutinised through statistical analysis, both hypotheses were effectively proven. On an individual level, an optimistic individual will be able to translate a culture of AL within their organisation more effectively into a state of being engaged at work. The optimistic individual is inclined to be in a positive psychological state, receptive for development and will thus be engaged in a working environment that is characterised by AL (Luthans, Avolio, Avey & Norman, 2007). Hypothesis 7a was thus proven. A significant indirect relationship between AL and work engagement through trust in the organisation was also proven in this research, thus rendering Hypothesis 7b as accurate. It can thus be argued that the employee who has trust in the organisation will be more receptive for the culture provided through AL and be engaged in their job role. Thus, when the employees in the public health care sector believe that their employer has their best interest at heart, they will be more engaged to effectively deal with the highly demanding environment that is public health care services provision (Avolio, Gardner, Walumbwa, Luthans & May, 2004).

Practical implications

The research reflected that the ALI can be utilised with scientific rigour and integrity in a South African sample and specifically in the South African public health care sector, a particularly under-resourced and burdensome workplace (George *et al.*, 2013). This poses well for future studies in the sector in South Africa, as AL has been associated with a large number of positive outcomes in the health care environment internationally. This research revealed that adopting a leadership style of AL will assist the public health care sector to facilitate both positive personal and work-related outcomes. In the context of this study, AL was found to predict higher levels of optimism amongst individual employees. Thus, by incorporating an approach of AL, the public health care sector could ensure individual employees will hold expectations of being successful in their endeavours in future. AL further proved to promote trust in the organisation amongst employees. When considering the above, this research suggests that efforts should be directed at promoting a culture of AL within the public health care sector and, further, interventions should be introduced that would assist the leadership fraternity of this sector to display behaviours associated with this leadership style. This will lead to both positive personal and work-related outcomes.

Interestingly, no direct path between AL and work engagement within the structural model could be conclusively proven. Only when optimism, on individual level, and trust in the organisation, on organisational level, were introduced was AL found to promote the levels of work engagement of employees in the public health care

sector. This proved an intriguing part of this work and will lay the foundation for further exploration by the authors in future studies. At this stage, however, the explanation offered for this phenomenon is the fact that, for AL to be truly effective, an authentic individual leader as well as a conducive and mature workplace culture should be in place. This will enhance positive leader behaviours that will in turn develop employees. At this stage, as reflected in the literature, the South African public health care sector is full of challenges and is not one that can be described as a positive one that will actively promote levels of work engagement amongst employees. The authors believe, however, that this environment is highly unlikely to change in the near future, simply because of the immense demand for public health care services in the country that will continue to burden employees working in this sector (Blecher *et al.*, 2011). This article therefore proposes interventions that could support quicker wins and facilitate a culture in which the clear value of AL could be more readily facilitated. In the context of this article, both optimism and trust in the organisation appeared to hold the properties that could translate AL to work engagement in the public health care sector. Hence, interventions should be introduced that promote these constructs. On an individual level, interventions that promote well-being must be considered to bolster the levels of optimism of employees. From an organisational perspective, enhanced trust in the organisation will assist in translating AL to a more engaged workforce. Possible interventions that will promote this are open communication, clearly articulating to employees in the public health care sector that their interests are important and to consider the direction in which the public health care sector is heading.

Limitations and recommendations

This study employed a cross-sectional design, which poses the potential risk of common method bias. However, Spector (2006) has proposed that this is a minor problem in research results. Chang, Van Witteloostuijn and Eden (2010) propose a number of approaches that could mitigate for common method bias, such as ensuring economic bottom line indicators are measured during empirical research (e.g. objective data such as performance and other applicable ratings) to relate to the subjective measurements via survey.

This study was also implemented across the entire public health care sector in all departments of the participating hospitals and clinics and included both clinical and non-clinical (support) staff. This was done intentionally as to gain a perspective of the overall sector. Future studies may benefit from a more focused approach, for example by studying the impact of the variables within a specific target group, such as nurses.

A comprehensive study across selected organisations in South Africa on the factor structure of the ALI can add value to leadership research. A comparative study will also be of value, in which the results of the public health care sector are compared to those of the private health care sector. This

will substantiate the suggestion made by the authors in this article that it is the very environment of public health care in South Africa that influenced the variables and relationships in this study. Finally, future studies will benefit greatly by adopting a longitudinal approach to investigate whether the relationships revealed in this paper change over time and to investigate whether changes in the environment affect the results revealed here. For example, it would be interesting to investigate whether the structural paths between AL and work engagement change in the context of a public health care sector that is better resourced than is currently the case, that is, to investigate whether a mature, conducive working environment, which is a prerequisite for AL, will yield greater value for levels of engagement.

Future research implications

This research lays the foundation for further exploration of the effect of a culture of AL within public health care in South Africa. Firstly, the research suggested a thorough investigation of the maturity of the organisational culture of public health care as a whole as an important prerequisite for AL. Following this, this research can also stimulate a renewed focus on the potential of the PsyCap constructs as a facilitator of indirect effects between job resources and favourable outcomes. This calls for (1) a further exploration of the positioning of AL as a job resource within the JD-R model, a suggestion raised by this article and (2) a view of all the PsyCap constructs and their possible contribution to further leverage a culture of AL for positive organisational outcomes.

Conclusion

This article suggests the ALI can be used with scientific integrity in the South African context and specifically in the public health care sector. The article further suggests that the leadership style of AL will promote optimism and trust in the organisation and therefore provides evidence that the public health care sector should actively encourage, promote and develop this leadership style amongst its leadership and management fraternity. Lastly, the results of this article indicate that two quick-win strategies can be adopted to create a culture in which AL can be effectively translated into an engaged workforce. These strategies include interventions that promote authentic leader behaviour and optimism on an individual level and trust in the organisation.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

F.W.S. (North-West University) was the research project leader and corresponding author. L.T.d.B (North-West University) acted as statistical specialist and co-author.

M.W.S. (North-West University) acted in the capacity of subject matter expert and co-author.

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Assessing employability capacities and career adaptability in a sample of human resource professionals

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PO Box 392, Pretoria 0003, South Africa

Dates:

Received: 15 Jan. 2015

Accepted: 14 Apr. 2015

Published: 04 June 2015

How to cite this article:

Coetzee, M., Ferreira, N., & Potgieter, I.L. (2015). Assessing employability capacities and career adaptability in a sample of human resource professionals. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #682, 9 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.682>

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Orientation: Employers have come to recognise graduates' employability capacities and their ability to adapt to new work demands as important human capital resources for sustaining a competitive business advantage.

Research purpose: The study sought (1) to ascertain whether a significant relationship exists between a set of graduate employability capacities and a set of career adaptability capacities and (2) to identify the variables that contributed the most to this relationship.

Motivation for the study: Global competitive markets and technological advances are increasingly driving the demand for graduate knowledge and skills in a wide variety of jobs. Contemporary career theory further emphasises career adaptability across the lifespan as a critical skill for career management agency. Despite the apparent importance attached to employees' employability and career adaptability, there seems to be a general lack of research investigating the association between these constructs.

Research approach, design and method: A cross-sectional, quantitative research design approach was followed. Descriptive statistics, Pearson product-moment correlations and canonical correlation analysis were performed to achieve the objective of the study. The participants ($N = 196$) were employed in professional positions in the human resource field and were predominantly early career black people and women.

Main findings: The results indicated positive multivariate relationships between the variables and showed that lifelong learning capacities and problem solving, decision-making and interactive skills contributed the most to explaining the participants' career confidence, career curiosity and career control.

Practical/managerial implications: The study suggests that developing professional graduates' employability capacities may strengthen their career adaptability. These capacities were shown to explain graduates' active engagement in career management strategies deemed important for their sustained employability in the contemporary career environment.

Contributions: The results of the study offered empirical evidence in support of theoretical views on the self-regulatory capacities underpinning individuals' career adaptability and how these are influenced by their employability capacities.

Introduction

Focus of the study

As a mechanism of social integration, employment offers individuals a strategy for participating in and sustaining themselves in society (Savickas, 2005). The societal structures in which the career is pursued are influenced by environmental factors that impact on the employability and career development of individuals (Hall, 2013; Savickas, 2013). Global competitive markets and technological advances are increasingly driving the demand for graduate knowledge and skills in a wide variety of jobs (Nel & Neale-Shutte, 2013; Tran, 2013; Wickramasinghe & Perera, 2010). Employers have come to recognise graduates' employability capacities and their ability to adapt to new work demands as important human capital resources for sustaining a competitive business advantage (Kyllonen, 2013; Sung, Ng, Loke & Ramos, 2013). Employability capacities refer to sets of portable 'soft' skills and attributes (such as, for example, people-related and team-related skills, conceptual thinking and problem solving skills, goal setting and management skills, knowledge of the business world and skills related to innovation and change and the profession and community) that are important in determining graduates' work readiness and success in the workplace (Coetzee, 2014a; Daniels & Brooker, 2014; Kyllonen, 2013; Rocha, 2012; Sung *et al.*, 2013; Tran, 2013). As enabling human capital resources, these capacities support

the career development and employability of graduates through lifelong learning endeavours (Rocha, 2012). Well-developed employability capacities help individuals to function successfully within a continuously evolving work environment and to contribute to business-crucial employer requirements over the course of their working lives (Daniels & Brooker, 2014; Tomlinson, 2010).

Background to the study

Individuals' employability has been associated with their agency in proactively managing their careers beyond those offered by the organisation (Hall, 2013; Hess, Jepsen & Dries, 2012; McArdle, Waters, Briscoe & Hall, 2007; Sullivan, 2013). Contemporary career theory therefore emphasises career adaptability across the lifespan as a critical skill for career management agency (Del Corso, 2013; Hess *et al.*, 2012). Career adaptability refers to the self-regulatory psychosocial resources individuals need to successfully manage current and anticipated career transitions and adjustments (Savickas, 2013). Notions of graduate level employment positions and linear, upward career paths are no longer realistic expectations for graduates in the 21st century work environment (Wickramasinghe & Perera, 2010). Career paths and patterns have become unpredictable and more blurred with the advent of globalisation and the mobilisation of workers across boundaries, organisations and enterprises (Hall, 2013; Hess *et al.*, 2012). In order to sustain their employability, individuals must have the capacity not only to adapt within their respective occupations to keep up with advances in technology but also to adapt between occupations and different life roles at a rate that is unprecedented compared to previous generations (Del Corso, 2013). The career is no longer seen as a lifetime commitment to one employer, but as a recurrent selling of innovative services and updated skills to a series of employers who need projects completed (Savickas, 2012). Individuals must be flexible, proactive, embrace lifelong learning, seek out new skills and think globally in order to keep up with the pace of change and comply with the requirements of employers (Del Corso, 2013).

Research purpose

In the current article, we were interested in exploring the relationship between graduate employees' employability capacities and their career adaptability. Both these constructs relate to self-regulatory capacities considered important for contemporary career management (De Guzman & Choi, 2013; Savickas, 2013; Van der Heijde, 2014). Despite the apparent importance attached to employees' employability and career adaptability, there appears to be a general lack of research investigating the association between these constructs, especially in the South African workplace context. Research by De Guzman and Choi (2013) amongst technical secondary school students showed important associations between employability skills such as communication, problem solving and teamwork skills and career adaptability. The present study extends De Guzman and Choi's research by focusing

on the employed professional graduate and by investigating a wide range of employability capacities recognised as being important for graduates' employability. Specifically, by employing canonical correlation analysis, we sought (1) to ascertain whether a significant relationship exists between a set of employability capacities and a set of career adaptability capacities and (2) to identify the variables that contributed the most to this relationship.

Literature review

Employability capacities

Employability refers to the ability to gain and maintain employment and to manage employment transitions such as transitions between organisations and transitions between jobs and roles within the same organisation to meet changing job requirements (Hillage & Pollard, 1999; Wickramasinghe & Perera, 2010). Employees are seen to be employable if they have up-to-date technical knowledge about their working domain, demonstrate openness and resilience towards contextual and workplace changes (Froehlich, Beausaert, Segers & Gerken, 2014) and if they are able to demonstrate a range of transferable generic capacities (Rocha, 2012). Research scholars highlight problem solving and decision-making, critical thinking, writing and speaking (communication skills), proficiency in English, teamwork, interpersonal skills, research skills, information literacy and ethical awareness as important generic graduate employability capacities (cf. Dhiman, 2012; Faber, López & Prescher 2012; Griesel & Parker, 2009; McNeil *et al.*, 2012; Spencer, Riddle & Knewstubb, 2012; Steur, Jansen & Hofman, 2012; Velasco, 2012). The transformative nature of graduate employability capacities assists in cultivating three overarching attitudinal stances of personal and intellectual development: scholarship, global and moral citizenship and lifelong learning (Barrie, 2004; Coetzee & Schreuder, 2011; Steur *et al.*, 2012).

Scholarship represents graduates' attitude or stance towards the production and application of new knowledge in order to conscientiously solve complex problems within organisations and society (Barrie, 2004; Steur *et al.*, 2012). Problem solving and decision-making skills, analytical thinking skills and enterprising skills generally contribute to graduates' scholarship (Barrie, 2004; Coetzee, 2014a). Employers regard the development of graduates' scholarship attributes (i.e. their problem solving, information and decision management and lateral thinking and creativity capabilities) as vital for graduate employability (Jackson & Chapman, 2011).

Global and moral citizenship refers to graduates' attitude or stance towards the world and their communities. It generally includes the ability to function effectively, efficiently and responsibly as a person in communicating and interacting with people from diverse cultures, backgrounds and authority levels, both globally and locally (Coetzee, 2014b). Ethical and responsible behaviour, presenting and applying information skills and interactive skills contribute to graduates' global and moral citizenship (Coetzee, 2014a).

Lifelong learning relates to graduates' attitude or stance towards themselves and includes goal-directed behaviour and a continuous learning orientation (Barrie, 2004; Coetzee, 2014a). Goal-directed behaviour is an important aspect of individuals' self-managed employability (Bezuidenhout, 2011). A continuous learning orientation denotes a cognitive meta-awareness and openness towards one's own learning, a willingness to proactively engage in the process of acquiring new knowledge, skills and abilities throughout one's life and career in reaction to, and in anticipation of, changing technology and business performance criteria (Coetzee, 2014a). Employability and continuous learning concerns have become an integral aspect of career success in the 21st century career environment (Hall, 2013). Research by Coetzee (2014b) shows that scholarship capacities increase self-directed behaviour whilst global and moral citizenship attributes seem to enhance sense of agency and motivation. Graduates' employability skills and attributes were also shown to be positively associated with their optimism about future career prospects (Coetzee, 2012).

Career adaptability

Career adaptability denotes a set of transactional resources comprising certain attitudes, competencies and behaviours that enable job search opportunities and facilitate the creation of alternative career improvement options, fitting oneself to preferred work contexts and participating positively in the work role (Duffy, 2010; Klehe, Zikic, Van Vianen, Koen & Buyken, 2012; Savickas, 1997, 2013; Tolentino *et al.*, 2013). The self-regulatory strengths underpinning individuals' career adaptability are seen to prepare them to cope with current and anticipated occupational changes and transitions and adjustments due to unpredictable changes in work and working conditions (Duffy, 2010; Savickas & Porfeli, 2012; Tolentino *et al.*, 2013).

Career adaptability has been described along four different dimensions or syndromes, which include *concern* ('Do I have a future?': showing concern for one's future, being engaged in planning by being aware, involved and prepared), *control* ('Who owns my future?': degree to which an individual engages and exerts control over their future through decision-making, determination and agency), *curiosity* ('What do I want to do with my future?': how individuals gather occupational information and self-knowledge as they attempt to fit themselves into the world of work) and *confidence* ('Can I do it?': the degree to which individuals feel a sense of self-efficacy to overcome obstacles as they work to implement their career goals) (Del Corso, 2013; Savickas, 2005, 2013; Savickas & Porfeli, 2012). The four domains of career adaptability are seen to relate to important vocational developmental tasks, which entail a primary adaptive goal that, when accomplished, builds a foundation for career success, future adaptability and growth (Hartung, 2013).

Career concern involves a future orientation, feeling optimistic about it and demonstrating a planful attitude

about the future (Hartung, 2013). Being concerned about one's future requires one to be aware, involved and preparatory (Savickas, 2005, 2013). Career control involves a sense of self-direction and self-regulation prompted by taking responsibility for one's future and the career decision-making tasks it involves (Hartung, 2013). Problems with career control can manifest as career indecision. Individuals with low sense of career control may tend to struggle with uncertainty and indecisiveness in today's work environment. Demonstrating personal control over one's career enables individual to better embrace uncertainty and concomitant anxieties (Del Corso, 2013).

Career curiosity leads to productive career exploration stemming from an inquisitive attitude toward the career (Hartung, 2013). Adapting to changing contexts or situations, individuals must display an inquisitive attitude and engage in exploration by experimenting, taking risks and inquiring (Savickas, 2005, 2013). Career confidence is reflected in demonstrating an efficacious attitude in solving problems and effectively navigating obstacles to constructing the future (Hartung, 2013). Career inhibition (contrary to career confidence) occurs when individuals feel they are unable to work through occupational difficulties (Savickas, 2005, 2013). Career confidence is demonstrated in how individuals deal with the myriad stressors they may encounter throughout their lifetime along the career journey, for example sudden unemployment, lack of available jobs, health problems, family struggles, unexpected workplace challenges or pressure to learn new skills (Del Corso, 2013).

Both graduate employability capacities and career adaptability are important self-regulatory psychosocial resources for individuals' continuous learning and employability (Bezuidenhout, 2011). In the present article, we assumed that the transferable skills and attributes reflected in the graduate employability capacities may help to strengthen individuals' career adaptability. High levels of career adaptability are positively associated with future job search self-efficacy, employment status, perceptions of the future work self, person-environment fit (Guan *et al.*, 2014) and career satisfaction (Zacher, 2014).

What will follow

The next section elaborates on the research design for this study, including the research approach and method. The results are then presented and the findings discussed. The article concludes with a brief outline of the most important conclusions and implications for management. Finally, the limitations of the research design are outlined and recommendations for possible future research initiatives are formulated.

Research design

Research approach

A cross-sectional, quantitative research approach was followed to collect primary data.

Method

Participants

A purposive non-probability sample ($N = 196$) of employed adults participated in the study. The participants were enrolled for further studies in the human resource management field at a distance learning higher education institution. They were employed in professional positions in the human resource field and comprised predominantly 88% black people and 73% women in the early career stage (80% < 45 years).

Measuring instruments

Graduate employability capacities were measured by means of the graduate skills and attributes scale (GSAS) developed by Coetzee (2014a). The GSAS is a multifactorial self-rating scale consisting of 64 items and eight subscales: *problem solving and decision-making skills* (eight items, e.g. 'I consider the complexities of the larger cultural, business, and economic reality when approaching a problem or situation'), *enterprising skills* (nine items, e.g. 'I find it easy to identify business opportunities for myself, my community or organisation'), *analytical thinking skills* (four items, e.g. 'I can make a rational judgment from analysing information and data'), *interactive skills* (16 items, e.g. 'I find it easy to communicate effectively with people from different cultures, backgrounds and authority levels'), *presenting and applying information skills* (five items, e.g. 'The solutions I offer make a positive difference in my personal life, community or workplace'); *ethical and responsible behaviour* (five items, e.g. 'I uphold the ethics and values of my profession, community or workplace in all I do'), *goal-directed behaviour* (10 items, e.g. 'I develop plans for specific goals and tasks') and *continuous learning orientation* (seven items, e.g. 'I make sure that I keep myself up to date on technical knowledge and new developments in my field'). A six-point Likert-type scale (1 = never true for me; 6 = always true for me) is used for subjects' responses to each of the 64 items. Exploratory and confirmatory factor analysis by Coetzee (2014a) confirmed the construct and structural validity and internal consistency reliability of the GSAS in the South African context. In terms of the present sample, the overall scale obtained a reliability coefficient of 0.97. The internal consistency reliability coefficients for the eight subscales ranged between 0.76 (ethical and responsible behaviour) and 0.91 (interactive skills).

Career adaptability was measured by means of the career adapt-abilities scale (CAAS). The CAAS (Savickas & Porfeli, 2012) is a multifactorial self-rating measure, consisting of 24 items and four subscales: *concern* (six items, for example 'Thinking about what my future will be like'), *control* (six items, for example 'Taking responsibility for actions'), *curiosity* (six items, for example 'Becoming curious about new opportunities') and *confidence* (six items, for example 'Performing tasks efficiently'). A five-point Likert-type scale (1 = not strong; 5 = strongest) is used for subjects' responses to each of the 24 items. Confirmatory factor analysis by Maree (2012) confirmed the construct and structural validity and internal consistency reliability of the CAAS in the South

African context. In terms of the present sample, the overall scale obtained a reliability coefficient of 0.94. The following Cronbach's alpha coefficients (internal consistency) for the four subscales were obtained: career concern (0.75), career control (0.72), career curiosity (0.79) and career confidence (0.80).

Procedure and ethical considerations

The survey was conducted during a school study programme that was attended by the participants. The participants were invited to voluntarily participate and signed an informed consent form. The privacy, anonymity and confidentiality of all the participants were ensured and honoured (e.g. the research responses were anonymous and only used for research purposes by the researchers). Ethical clearance and permission to conduct the research were obtained from the management of the university.

Statistical analysis

Descriptive statistics (means, standard deviations and Cronbach's alpha coefficients), Pearson's product-moment correlations (using SPSS) and canonical correlation analysis (using SAS) were performed. The practical significance (Cohen, 1992) for interpreting the Pearson's correlations (r) was as follows: r less than 0.10 for a small practical effect, r less than 0.30 for a moderate practical effect and r greater than 0.50 for a large practical effect. Multicollinearity concerns were set at r greater than 0.90 (Hair, Black, Babin & Anderson, 2010). The relative importance of the canonical loadings was assessed by applying the cut-off criteria for canonical factorial loadings (≥ 0.30). The magnitude of the overall correlational relationships between the two variates of a canonical function and the practical significance of the predictive ability of the canonical relationship were determined by considering the r^2 type effect size ($1 - 0.\lambda$; Hair *et al.*, 2010). The practical significance for interpreting the r^2 type effect size was in line with the guidelines of Cohen (1992): r^2 less than 0.01 for a small practical effect, r^2 less than 0.09 for a moderate practical effect and r^2 greater than 0.25 for a large practical effect. The graduate attributes were treated as the set of independent variables and the career adaptability variables as the set of dependent variables. The participants' age, gender and race were used as controls to explore the relationships between the research variables.

Results

Descriptive statistics and correlations

The reliability coefficients reported in Table 1 show acceptable internal consistency reliability of the two scales and the subscales. The overall scale reliability coefficient of the graduate skills and attributes scale was very high ($\alpha = 0.97$) as well as the reliability coefficient of the overall career adaptability scale ($\alpha = 0.94$). These coefficients indicated strong overall internal consistency for the two scales.

As can be seen from Table 1, the practical effect of the significant inter-correlations amongst the GSAS and CAAS

TABLE 1: Descriptive statistics, zero-order correlations and internal consistency reliability.

Variable	M	SD	α	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Age	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gender	-	-	-	-0.17**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Race	-	-	-	0.06	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Career concern	4.11	0.55	0.75	-0.19**	0.06	-0.15*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Career control	3.96	0.55	0.72	-0.21***	0.11	0.02	0.59***	-	-	-	-	-	-	-	-	-	-	-	-	-
Career curiosity	3.75	0.59	0.79	-0.11	0.07	-0.06	0.50***	0.69***	-	-	-	-	-	-	-	-	-	-	-	-
Career confidence	4.07	0.59	0.80	-0.18**	0.10	0.10	0.40***	0.59***	-	-	-	-	-	-	-	-	-	-	-	-
Career adaptability: Total	3.88	0.44	0.94	-0.14	0.06	-0.08	0.65***	0.79***	0.84***	0.77***	-	-	-	-	-	-	-	-	-	-
Problem solving and decision-making	4.43	0.68	0.83	0.001	-0.03	-0.02	0.17**	0.28***	0.44***	0.40***	0.42***	-	-	-	-	-	-	-	-	-
Enterprising skills	4.24	0.70	0.81	0.02	-0.06	-0.03	0.21**	0.35***	0.39***	0.35***	0.38***	0.73***	-	-	-	-	-	-	-	-
Analytical thinking skills	4.23	0.83	0.83	-0.06	-0.13	0.04	0.05	0.15*	0.21***	0.24***	0.19***	0.57***	0.54***	-	-	-	-	-	-	-
Interactive skills	4.67	0.64	0.91	-0.01	0.04	-0.01	0.19**	0.36***	0.38***	0.38***	0.41***	0.67***	0.65***	0.40***	-	-	-	-	-	-
Presenting and applying information skills	4.34	0.76	0.77	-0.01	-0.12	-0.07	0.23**	0.25***	0.37***	0.35***	0.34***	0.81***	0.67***	0.57***	0.64***	-	-	-	-	-
Ethical and responsible behaviour	4.84	0.74	0.76	0.05	-0.10	0.07	0.06	0.17*	0.26***	0.33***	0.32***	0.64***	0.49***	0.37***	0.50***	0.52***	-	-	-	-
Goal-directed behaviour	4.47	0.67	0.82	-0.07	0.01	-0.01	0.28***	0.39***	0.44***	0.46***	0.44***	0.75***	0.63***	0.49***	0.70***	0.75***	0.48***	-	-	-
Continuous learning	4.61	0.72	0.84	-0.06	0.03	-0.07	0.23**	0.41***	0.44***	0.42***	0.45***	0.71***	0.65***	0.46***	0.80***	0.67***	0.46***	0.78***	-	-
Graduateness: Total	4.48	0.58	0.97	-0.04	-0.01	-0.01	0.22**	0.39***	0.45***	0.47***	0.46***	0.90***	0.83***	0.65***	0.88***	0.84***	0.67***	0.86***	0.89***	-

N = 196.

M, mean; SD, standard deviation; α , Chronbach's alpha.

*, $p \leq 0.05$ – statistically significant; **, $p \leq 0.01$ – statistically significant; ***, $p \leq 0.001$ – statistically significant

TABLE 2: Results of the standardised canonical correlation analysis for the first canonical function.

Variate	Variables	Canonical coefficients	Structure coefficient (R_c)	Canonical cross-loadings (R_c)	Squared canonical loadings (R_c^2)
Graduate attributes canonical variate variables	Problem solving and decision-making skills	0.24	0.83	0.44	0.20
	Enterprising skills	0.21	0.74	0.40	0.16
	Analytical thinking skills	-0.10	0.43	0.23	0.05
	Interactive skills	0.07	0.82	0.44	0.19
	Presenting and applying information skills	-0.38	0.64	0.34	0.12
	Ethical and responsible behaviour	0.19	0.65	0.35	0.12
	Goal-directed behaviour	0.57	0.90	0.48	0.23
	Continuous learning orientation	0.26	0.90	0.48	0.23
Career adaptability canonical variate variables	Career concern	-0.18	0.43	0.23	0.05
	Career control	0.41	0.83	0.44	0.20
	Career curiosity	0.29	0.83	0.45	0.19
	Career confidence	0.56	0.90	0.49	0.24

Overall model fit measures (function 1):

Overall $R_c^2 = 0.29$; $F(p) = 2.65$ ($p < 0.0001$); $df = 32$; 514.20; Overall proportion: 0.63; Wilks's lambda (λ) = 0.569***; r^2 type effect size: $1 - 0.\lambda = 0.431$ (large practical effect).

Redundancy index (standardised variance of career adaptability explained by graduate attributes):

Proportion = 0.17; $N = 196$.

subscale variables respectively ranged between 0.40 and 0.80 (moderate to large effect; $p \leq 0.001$). With the exception of the analytical thinking skills ($r = 0.65$) and the ethical responsible behaviour ($r = 0.67$) subscales, the GSAS subscales had high correlations with the overall GSAS scale ($r \geq 0.83 \leq 0.90$). The CAAS subscales also correlated strongly with the overall CAAS scale ($r \geq 0.65 \leq 0.84$). Because of the strong zero-order correlations between the subscales and the respective overall scale, the two overall scales were not included in the canonical correlation analysis in order to address concerns of possible multicollinearity.

The significant inter-correlations between the GSAS and CAAS variables were small to moderate in practical effect ($r \geq 0.15 \leq 0.47$; $p \leq 0.05$), suggesting that multicollinearity did not pose a threat to the interpretation of the canonical correlation results. The associations between age, gender and race and the GSAS and CAAS variables were small in practical effect and regarded as negligible.

Canonical correlations

Canonical correlation analysis was used to study the multivariate relationships between the eight GSAS scores (problem solving and decision making skills, enterprising skills, analytical thinking skills, interactive skills, presenting and applying information skills, ethical and responsible behaviour, goal-directed behaviour and continuous learning orientation) and the four CAAS scores (career concern, career control, career curiosity and career confidence). The GSAS variables were treated as the set of independent variables and the CAAS variables as the set of dependent variables.

Table 2 shows that the full model was significant using Wilks's multivariate test criterion (Wilks's lambda, λ , = 0.569, function 1: $F_p = 2.65$; $p = 0.0001$). Only the first function of the model was significant and contributed 29% ($R_c^2 = 0.29$) of the overall explained variation relative to the function. The full model r^2 type effect size (yielded by $1 - 0.\lambda$) was 0.43 (large practical effect), indicating that the full model explains an adequate proportion, about 43% of the variance

shared between the two variable sets. The redundancy index results summarised in Table 2 show that the employability capacities explained 17% ($R_c^2 = 17$; moderate practical effect) of the variance in career adaptability and was able to predict 63% (large practical effect) of the proportion of variance in the individual original career adaptability variables.

Table 2 provides the canonical coefficients (weights), canonical structure coefficients (R_c), canonical cross-loadings (R_c) and squared canonical loadings (R_c^2). The four CAAS variables all loaded positively with the career adaptability canonical construct and were assumed to represent high career adaptability. Career concern ($R_c = 0.43$) showed the lowest loading in comparison with career control ($R_c = 0.83$), career curiosity ($R_c = 0.83$) and career confidence ($R_c = 0.90$).

Goal-directed behaviour ($R_c = 0.90$) and continuous learning ($R_c = 0.90$) showed the highest loading with the employability capacities canonical construct as measured by the GSAS, followed by problem solving and decision-making skills ($R_c = 0.83$) and interactive skills ($R_c = 0.82$).

Using 0.40 as the cut-off value for interpreting the results, Table 2 further shows that the employability capacities contributed positively in explaining the variance in three of the original career adaptability variables: career confidence ($R_c = 0.49$; 24%), career curiosity ($R_c = 0.45$; 20%) and career control ($R_c = 0.44$; 19%). The career adaptability variables contributed positively in explaining the variance in especially goal-directed behaviour ($R_c = 0.48$; 23%), continuous learning orientation ($R_c = 0.48$; 23%), problem solving and decision-making skills ($R_c = 0.44$; 19%), interactive skills ($R_c = 0.44$; 19%) and enterprising skills ($R_c = 0.40$; 16%).

Discussion

In this study we sought (1) to ascertain whether a significant relationship exists between a set of employability capacities and a set of career adaptability capacities and (2) to identify the variables that contributed the most to this relationship. Overall, the results showed positive associations between the

employability capacities and career adaptability constructs. The lack of association between the biographical variables of age, gender and race and the participants' employability capacities and career adaptability could be attributed to the relatively small sample size.

In line with research by De Guzman and Choi (2013), we expected positive associations between the two sets of constructs and that the problem solving and decision-making skills, interactive (team) skills and presenting and applying information (communication) skills would be strong predictors of career adaptability. Our results showed that participants with high levels of problem solving and decision-making and interactive skills were also likely to be actively engaged in career management strategies relating to career control (taking responsibility for career decision-making and goal implementation), career curiosity (gathering occupational information) and career confidence (being confident about their ability to implement career goals and solve problems). These findings contributed empirical evidence in support of the view that career adaptability seems dependent upon individuals' problem solving strategies and decision-making abilities (Del Corso & Rehfuß, 2011).

Although our results confirmed the importance of problem solving and decision-making and interactive skills in predicting individuals' level of career adaptability, our study revealed goal-directed behaviour and continuous learning as the strongest predictors of career adaptability. The findings showed that the lifelong learning capacities (goal-directed behaviour and continuous learning orientation) contributed the most to explaining higher levels of career confidence, career curiosity and career control. These three career adaptability capacities represent a sense of agency and responsibility (control), motivation and willingness (curiosity) and efficacy (confidence) to actively engage in vocational developmental tasks that will help individuals adjust proactively to unexpected needs that may arise from changes in the labour market or working conditions (Nota, Ginevra, Santili & Soresi, 2014; Savickas & Porfeli, 2012). The findings contributed valuable empirical evidence in support of Hall's (2013) view that lifelong learning has become an important career meta-capacity for sustaining employability in the contemporary career environment. Career adaptability is also seen as an important resource throughout the lifespan for sustaining employability (Savickas, 2011).

Limitations and future research directions

Several limitations need to be noted in the interpretation of the results. Firstly, canonical correlation analysis is a maximisation technique and in interpreting the results, researchers and practitioners should be aware of the possibility of overestimation due to the amplification of linear composites (Hair *et al.*, 2010). Secondly, the sample was confined to a relatively small group of human resource professionals, which limits the interpretability of the results to populations in different occupations. Testing the variables on various multicultural populations from

various occupational groups may further inform theories of career adaptability in the employability context for diverse groups of employees. Thirdly, the self-report nature of the study could have contributed to spuriously strong relationships between the variables as a result of method variance limitation. Finally, the cross-sectional nature of our study limits the nature of data obtained to a specific moment in time. Much would be gained by future longitudinal research analysing the shift in levels of employability capacities and career adaptability as the career self-concept evolves over time.

Practical implications

The study suggests that developing professional graduates' employability capacities may strengthen their career adaptability. These capacities were shown to positively explain graduates' active engagement in career management strategies deemed important for their sustained employability in the contemporary career environment. More specifically, human resource practitioners and career development practitioners should ensure that graduate professionals continue to be engaged in challenging job assignments that draw on their problem solving, decision-making and teamwork skills as part of their on-the-job career development. Workplace-based career development interventions should consider problem-based learning activities, which have been shown to promote critical thinking and problem solving skills. Such activities should facilitate individual agency in self-directed learning, personal learning needs identification, collaborative teamwork and interaction with and learning from peers, mentors and coaches as a consequence of active participation in the learning process (Gurses, Acikyildiz, Dogar & Sozbilir, 2007). Our research showed that a lifelong learning orientation and problem solving, decision making and teamwork skills were positively associated with higher levels of career adaptability, including career management strategies relating to taking responsibility for career decision-making and goal implementation, gathering occupational information and being confident about one's ability to implement career goals and solve problems. Career development interventions should generally focus on helping graduate professionals to articulate their employability capacities, including the 'transferable skills' that go beyond one occupation, in order to increase their confidence and self-efficacy in demonstrating their skills and abilities to manage their careers and employability (Del Corso, 2013).

Conclusion

Notwithstanding the limitations of the research design, the study findings contribute new insights to contemporary career theory. Our study provides empirical evidence in support of theoretical views on the self-regulatory capacities underpinning individuals' career adaptability and employability in the South African workplace context. The multivariate approach in ascertaining the relationship between the two sets of variables helped to identify key employability capacities that explain individuals' level of

career adaptability. It is trusted that the research will stimulate further research on a topic of contemporary relevance and importance for both individuals and organisations.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

M.C. (University of South Africa) conducted the literature review and data analysis and wrote up the article. N.F. (University of South Africa) and I.L.P. (University of South Africa) assisted with the data collection and critical review of the manuscript.

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The relationship between Chief Executive Officer remuneration and financial performance in South Africa between 2006 and 2012

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Dates:

Received: 06 Oct. 2014

Accepted: 12 Mar. 2015

Published: 17 June 2015

How to cite this article:

Bussin, M., & Modau, M.F. (2015). The relationship between Chief Executive Officer remuneration and financial performance in South Africa between 2006 and 2012. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #668, 18 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.668>

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Orientation: The relationship between Chief Executive Officer (CEO) remuneration and organisation performance has been a topic of close scrutiny, especially since the global financial crisis. Optimal contracting relies on the premise that effective incentives will link organisation financial performance and CEO remuneration in ways that will be in the best interests of both shareholders and CEOs.

Research purpose: The purpose of this research study was to investigate the relationship between CEO remuneration and organisation performance in South Africa between 2006 and 2012 and to determine whether the two constructs were positively correlated.

Motivation for the study: The study provides an evidenced-based understanding of the nature of the CEO pay-performance relationship in South Africa. Understanding this relationship is critical to finding a suitable model to structure executive remuneration that will protect shareholders from over-remunerating executives in times of economic appreciation, whilst protecting executives from being underpaid in times of economic depreciation.

Method: The financial results and CEO remuneration of 21 of the top 40 listed companies on the Johannesburg Stock Exchange were analysed for the period 2006–2012. The research was a quantitative, archival study. The primary statistical techniques used in the study were correlation analysis and multiple regression analysis.

Main findings: The primary finding of the current research indicates that between 2006 and 2012 organisation executives have noticeably been moving away from focusing on short-term incentives, which are categorised as performance-related elements of remuneration packages. Based on these findings, it is evident that the relationship between executive remuneration and organisational financial performance has been experiencing a decline, especially since the 2008 global financial crisis. The decline has predominantly been due to a move away from performance-related elements of remuneration contracts by CEOs, creating a disconnect between CEO remuneration and organisational performance. The findings suggest that, to a large extent, remuneration contracts for CEOs are no longer optimal for the organisation and its shareholders, but are influenced by the propensity of executives to enhance their own remuneration. There exists a link between short-term incentives received by CEOs and accounting-based organisational performance measures; on the other hand, fixed pay linked with organisational performance measures continue to be eroded as organisations' executives become more innovative as they are noticeably moving away from focusing on short-term incentives.

Practical/managerial implications: A stronger test of the pay-performance link and the power of incentive design are required in order to ensure that executives are rewarded or penalised for poor performance. The question of how executives are paid also needs to be considered.

Contribution: This research contributes to the literature on CEO remuneration by providing an evidenced-based understanding of the nature of the CEO pay-performance relationship in South Africa. Understanding this relationship is critical to finding a suitable model to structure executive remuneration that will protect shareholders from over-remunerating executives in times of economic appreciation, whilst protecting executives from being underpaid in times of economic depreciation.

Introduction

Key focus of the study

The primary challenge in the executive pay-performance relationship is finding a mutually beneficial balance between executive remuneration and organisational performance. This

challenge is compounded by the fact that there is no universally accepted understanding of the strength and significance of the relationship. In addition, the measurement of organisational performance is itself open to interpretation with a variety of conflicting indicators suggested as valid and reliable. The lack of clarity in the understanding and measurement of the constructs within the executive pay-performance relationship makes the creation of a model to structure executive remuneration difficult. A longitudinal, evidence-based understanding of the relationship between executive pay and organisational performance is necessary to determine a meaningful and optimal model of executive remuneration.

Background to the study

Chief Executive Officers (CEOs) assume the highest levels of responsibility and accountability for an organisation and its performance on behalf of the organisation's shareholders (Kaplan, 2013; Wibowo & Kleiner, 2005). These individuals are typically highly skilled, have significant leadership competencies and are viewed as a scarce resource. As a result, these executives are highly incentivised through remuneration structures to remain in the employ of the organisation and drive the performance of the organisation. In order to ensure that there is alignment between the CEO's interests and those of the shareholders it is important for shareholders to design and employ a pay-performance model that is proven to deliver this alignment.

There is a well-recognised challenge in finding a balance between remuneration that will be enticing enough to keep executives in the employ of the organisation without over-compensating them when organisation performance is not favourable (Bebchuk & Fried, 2005; Marais & Lefifi, 2013). There have been calls from governments, trade unions and civil society to curb what is perceived as exorbitant executive remuneration in light of increasing levels of relative poverty and inequality, especially in countries like South Africa (Marais & Lefifi, 2013). The 2008 global financial crisis has placed executive remuneration even more directly in the spotlight due a perceived weak pay-performance link.

According to researchers such as Shaw (2011) and Bebchuk, Cohen and Holger (2010), executive remuneration has been widely regarded as one of the key contributors to the financial crisis. This sentiment has found its way into academic literature as researchers try to understand more fully the root causes of the 2008 global financial crisis.

Much criticism has been levelled at organisations and their remuneration committees for increases in executive remuneration in the face of disappointing financial results (Lindqvist & Grunditz, 2004). The amount of legislation and regulation in dealing with executive remuneration has subsequently increased, supporting remuneration contracts that reward superior organisation performance (Morrisey, 2009).

Research purpose

In South Africa, the *Companies Act* (Act No. 71 of 2008) and King Code and Report on Governance in South Africa (King III; Institute of Directors Southern Africa, 2009) specify that there should be a positive correlation between CEO remuneration and organisation performance, and associated disclosure requirements have also increased (Institute of Directors Southern Africa, 2009). The purpose of this research is to investigate whether there is indeed a positive correlation or not between CEO remuneration and company performance, especially in the biggest companies listed on the Johannesburg Stock Exchange.

Trends from the research literature

There are empirical findings that support both a relationship between CEO pay and organisational performance, as well as little or no relationship. In seminal pieces of research, Jensen and Murphy (1999) found that the correlation was small and that shareholders came off second best. In contrast to this, Firth, Fung and Rui (2006) and Merhebi, Pattenden, Swan and Zhou (2006) found that there was a significant positive correlation between CEO pay and most measures of organisational performance. Most studies show a decline in the relationship between CEO pay and organisational performance since the global financial crisis in 2008 (Shaw, 2011; Van Blerck, 2012; Van Rooyen, Du Toit, Botha & Rothmann, 2010).

Research objectives

To facilitate an optimal contract between a CEO and shareholders, the incentives of the CEO need to be aligned with the interests of shareholders, thus creating value for both through the pay-performance relationship (O'Byrne & Gressle, 2013; Veliyath & Bishop, 1995). The purpose of this research study was to investigate the relationship between CEO remuneration and organisational performance in South Africa between 2006 and 2012, and to determine whether the two constructs were positively correlated.

The primary research objectives were as follows:

- To establish if there were any structural changes that occurred in South Africa after the 2008 global financial crisis with regard to the mix in the remuneration components received by CEOs.
- To establish the closest link (correlation) between CEO remuneration and financial performance of an organisation when considering the most commonly used financial performance measures.

The potential value-add of the study

This research contributes to the literature on CEO remuneration by providing an evidenced-based understanding of the nature of the CEO pay-performance relationship in South Africa. Understanding this relationship is critical to finding a suitable model to structure executive

remuneration that will protect shareholders from over-remunerating executives in times of economic appreciation, whilst protecting executives from being underpaid in times of economic depreciation.

Previous research asserts that performance-based elements of CEO remuneration are necessary to justify the high remuneration packages of executives. The research points to the long-term dilemma that will arise for boards of directors if they become reluctant to either reward executives for superior performance or penalise them for poor performance.

What will follow

A more detailed review of the literature follows in the next section. The research design section outlines the longitudinal, quantitative, archival research method selected and describes the sampling rationale employed. The results of the study are then presented and discussed. The article concludes with a brief discussion of the research limitations and practical implications for remuneration practitioners.

Literature review

CEO remuneration components

CEO remuneration is composed of the financial compensation and other non-financial awards received by an executive from their firm for their service to the organisation. The concept of executive remuneration includes all payments made to executive members of the board including the CEO (Bussin, 2011). These payments include all guaranteed cost-to-company (CTC), short-term and long-term incentives and other financial benefits for performance rendered (Bussin, 2011). Desirable remuneration packages are created to ensure the ability of the company to attract and retain the best possible CEOs. The most common determinants for executive pay are organisation size, organisation performance, executive-specific factors (such as age, experience, tenure, career path), organisation structure, job or position-specific factors and job complexity (Bussin, 2011).

Excessive pay can be seen as additional amounts of money that need to be paid for services and activities that were not originally planned or taken into account. Despite substantial heterogeneity in remuneration practices across different organisations, most CEO remuneration packages consist of salary, annual bonus, short-term and long-term performance incentives (Frydman & Jenter, 2010; Warr & Fay, 2001).

Ellig (2007) argues that the structure of an executive's remuneration package will follow the path where it is the easiest for the executive to earn a more favourable remuneration. Should short-term incentives (STIs) be difficult to obtain due to factors outside the control of the CEO, the structure of the remuneration would lean towards a guaranteed CTC or fixed pay (FP). The inverse is also true, that should STIs be easier to obtain, the structure of remuneration will gravitate towards higher incentive pay (Ellig, 2007).

The principal-agent theory

The principal-agent theory needs to be understood in order to gain an understanding of the executive remuneration process. Laffont and Martimort (2002) argue that the owner of an organisation needs to delegate their responsibilities to other members of the organisation. The owner therefore becomes the principal and the employee becomes the agent. Duffhues and Kabir (2008) state that listed companies are characterised by the ownership of the organisation residing with the shareholders who reflect a diverse and wide cross-section of the population, whilst control is in the hands of a few managers responsible for the management of the organisation. The principal-agent theory infers that these managers or agents do not always perform their jobs solely in the best interests of the shareholders.

Frydman and Jenter (2010) discuss the structure of executive pay as a possible method of rectifying this misalignment between the principal and the agent. Compensation committees are one of the key mechanisms that could assist in aligning the principal and the agent by reviewing CEO compensation with specific attention to goal setting and alignment with incentives. O'Reilly and Main (2010) describe this process as the board crafting an optimal pay mechanism to try and align the interests of the CEO with those of the shareholders. Thus it is clear that the CEO is the agent of the shareholders, who as a group represent the principal and that the agent's goals should be aligned with those of the organisation and the principal.

Remuneration committees

Organisations should appoint a remuneration committee or other such appropriate board committee, consisting entirely or mainly of independent non-executive directors, to make recommendations regarding executive and CEO pay. The principal-agent theory assumes it is the purpose of the board to monitor the CEO. However, O'Reilly and Main (2010) argue that this is a narrow view of the duties of a board. To minimise the costs associated with this theory, CEO compensation should be linked to both the CEO's performance and the organisation's performance to ensure an alignment between shareholders and management interests (O'Reilly & Main, 2010). Prior research showed that as the power of the CEO increased, their pay increased; however the sensitivity of their pay to performance decreased (Lin & Kuo, 2013; O'Reilly & Main, 2010).

King III (2009) discusses the remuneration committee in detail and adds that it should be the duty of the remuneration committee to assist the board in setting the various salary bands within the organisation, particularly for the remuneration packages of the senior executives. King III (2009) states that remuneration committees should keep the long-term goals of the organisation in mind when giving remuneration advice.

Optimal contracting and the managerial power approach

Bebchuk and Fried (2003) suggest that there are two contrasting views on the link between the agency problem and

the remuneration received by executives in an organisation. The optimal contracting approach, which considers executive remuneration as a remedy to the agency problem, is the more widely accepted view. Under the optimal contracting approach 'boards are assumed to design compensation schemes to provide executives with efficient incentives to maximize shareholder value' (Bebchuk & Fried, 2003, p. 1). This view is also supported by Shaw and Zhang (2010) as they assert that efficient remuneration contracts will link executive remuneration with organisational performance, whilst providing compelling incentives for executives to avoid self-serving activities and operate organisations in the shareholders' best interests.

According to Bebchuk and Fried (2003), optimal remuneration contracts could result from either effective arm's length bargaining between executives and boards of directors, or from market constraints that will encourage executives and boards of directors to adopt such contracts even in the absence of arm's length bargaining. Market constraints consider what executives will ask boards of directors to approve and what boards of directors will agree to.

In contrast to the optimal contracting approach, the managerial power approach considers remuneration received by executives not only as a potential instrument for dealing with agency problems, but also as part of the agency problem (Frydman & Jenter, 2010). According to Bebchuk, Fried and Walker (2002), remuneration contracts are not only shaped by what would be optimal, but are also influenced by executives' capability to influence their own remuneration contracts. Also, market constraints are not seen to play a significant role in preventing executives from obtaining arrangements that are more favourable to themselves.

According to the managerial power approach, board-approved executive remuneration contracts often deviate from optimal contracting arrangements. Factors that enable this deviation include: boards of directors being subjected to influence by executives, boards being sympathetic to executives or boards being incompetent in overseeing remuneration contracts (Bebchuk *et al.*, 2002). The result of managerial power is thus a situation in which executives receive rewards in excess of what would be optimal for shareholders. The excess rewards constitute rent extraction rather than the provision of efficient incentives (Bebchuk *et al.*, 2002).

In summary, there are weaknesses in the optimal contracting approach that are highlighted by the managerial power approach. Despite these weaknesses, that the CEO exerts too much power over the negotiation of the remuneration package, it is still widely believed that executive rewards can be used to align the interests of executives to those of the shareholders and thereby reduce possible agency costs (Edmans & Gabaix, 2009). In addition, even if the CEO's remuneration is efficient due to the optimal contracting approach, it does not preclude remuneration packages

from being suboptimal and, as a result, intense scrutiny by shareholders remains important.

Organisation performance measures

Organisational performance can be measured in many different ways using accounting-based measures and market-based measures (Attaway, 2000). Fatemi, Desai and Katz (2003) argue that such measures do not account for the risk incurred by the organisation's executive in their search for growth and profitability, suggesting two additional measures, namely economic value added (EVA) and market value added (MVA). According to the economic theories of remuneration, 'organisational performance should affect an executive's remuneration only to the extent that it serves as a proxy for unobservable managerial effort or productivity' (Murphy, 1985, p. 20). Although previous theories uniformly suggest a relationship between compensation and observed performance, most analyses are not in agreement with regard to the measurement of organisational performance (Canarella & Gasparyan, 2008).

In the empirical compensation literature there seems to be limited consensus on the optimal measure of company performance as researchers have measured organisational performance in many different ways (Attaway, 2000; Bacidore, Boquist, Milbourn & Thakor, 1997; Canarella & Gasparyan, 2008; Carpenter & Sanders, 2002; Eriksson & Lausten, 2000; Fatemi *et al.*, 2003; Kyriazis & Anastassis, 2007). Measures of company performance can be divided into three main categories: absolute financial performance measures (audited measures within a specific year), financial performance ratios (ratios derived from absolute performance measures) and market performance measures (performance within equity markets) (Edmans, Gabaix, Sadzik & Sannikov, 2012; Shaw, 2011).

The CEO pay-performance relationship

Since the early 2000s executive compensation levels have increased dramatically. Managerial power and optimal contracting have been offered as leading reasons for this increase (Frydman & Jenter, 2010). Optimal contracting is defined as occurring when the three types of agency costs (contracting, monitoring and misbehaviour) are balanced against one another to minimise the total cost (Harvey, 2012). It is suggested that executives have influenced remuneration committees to increase fixed pay (despite poor organisational performance over the financial crisis period) in order to compensate for the loss of short-term and long-term incentive payouts (Amzaleg, Azar, Ben-Zion & Rosenfield, 2014; Frydman & Jenter, 2010). Through managerial power, CEOs are able to influence boards and compensation committees and thus influence the structure of their remuneration packages (Doscher & Friedl, 2010).

Jensen and Murphy (1999) acknowledge that there are serious problems with executive remuneration, but they do not view excessive CEO pay as the most significant

issue. They point out that 'the relentless focus on how much CEOs are remunerated diverts public attention from the real problem – how CEOs are paid' (Jensen & Murphy, 1999, p. 64). Haynes, Thompson and Wright (2007) point out that failure to reward or punish executives for either superior or poor performance will erode the link between CEO remuneration and organisation performance and will, according to Jensen and Murphy (1999), entrench what they call 'bureaucratic remuneration systems' (p. 159). Instead, Anderson and Kleiner (2003) assert that the remuneration of organisations' top executives should be virtually dependent on organisation performance.

Although the theoretical and empirical literature on executive remuneration is fairly well developed, it is far from complete, according to Canarella and Gasparyan (2008). A large number of pay-performance studies have been carried out in most parts of the world, and these studies reflect a lack of consensus on the pay-performance relationship (Abraham, Harris & Auerbach, 2014; Bruce, Buck & Main, 2005).

The literature indicates that there is limited consensus on the optimal measure of organisational financial performance as researchers continue to assess organisational performance in many different ways (Attaway, 2000; Bacidore *et al.*, 1997; Chari, 2009; Fatemi *et al.*, 2003). Older research studies use accounting and market-based measures of organisation performance, whilst more recent studies use EVA and MVA. Some researchers, like Canarella and Gasparyan (2008), use both accounting-based and stock market-based measures to avoid potential biases inherent in using either of the two performance measures on their own.

Firth *et al.* (2006) conducted a CEO pay-performance study in China. Their study, in which they used regression analysis techniques, found that there was a positive relation between CEO remuneration and organisation performance measured in both accounting and shareholder wealth. Their study results, however, indicate that the relations were only statistically significant under certain ownership conditions. Organisations that have state bureaucratic agencies as the major shareholder did not appear to embrace performance-related pay schemes. Firth *et al.*'s regression results indicated that a change in shareholder wealth was positively associated with change in CEO remuneration and the relationship was not significant, that is, in the remuneration-performance equation, the change in shareholders' wealth slope was 0.004 for state-controlled organisations. In contrast, listed organisations with a private block-holder as the largest shareholder based CEO remuneration on changes in shareholder wealth, resulting in the remuneration-performance equation with the change in shareholders' wealth slope of 0.485.

In contrast to these and other studies which found a positive and significant relationship between CEO pay and organisation performance, Jensen and Murphy (1999) analysed the CEO remuneration of 2505 CEOs in 1400 publicly held organisations from 1974 to 1988 in the US.

They concluded that the relationship between CEO and shareholder wealth was small and had fallen significantly in the last 50 years. Mueller's (2006) study supports this observation by concluding that executive remuneration packages in the US increased by far more than could be accounted for by increases in managerial productivity in the 1990s. The study by Mueller (2006) indicated that using the organisational remuneration-performance relationship derived from 1993 data, CEO remunerations were 215% higher than predicted by the 1993 estimates.

Another study, conducted in the UK by Haynes *et al.* (2007), found that organisation size had a positive and significant impact on executive remuneration (in the remuneration-performance equation the slope on organisation size was found to be 0.21) and that the responsiveness of executive remuneration to organisation performance was much smaller when compared to the size of the organisation (the slope on organisation performance was found to be 0.12). A study by Duffhues and Kabir (2008) found no evidence of a positive pay-performance relationship for executives in the Netherlands, which led to the conclusion that executives in the Netherlands received rewards for reasons unrelated to performance. Duffhues and Kabir's study found that in the pay-performance equation, the regression slope on organisation performance between 1998 and 2001 was between -0.539 and -0.074, whilst the slope for organisation size between 1998 and 2001 was between 0.399 and 0.413.

In South Africa, a CEO pay-performance research study by Shaw (2011) looked at financial service organisations during the period 2005 to 2010. Shaw categorised organisation performance measures into three main categories: absolute financial performance measures, financial performance ratios and market performance measures. The study used economic profit, accounting profit and shareholder returns in the form of return on equity (ROE) and headline earnings per share (HEPS) as measures of organisational performance. Debt to assets ratio and total assets or book value were also included to ensure comprehensive measurement of organisational performance.

Shaw (2011) found a moderate to strong relationship between CEO remuneration and organisation performance. However, the results of the study indicated that there has been a decline in the relationship between 2008 and 2012: the average coefficient of correlation scores between organisation performance and book value, earnings before income tax depreciation and appreciation (EBITDA) and profit after tax were found to be 0.56, 0.52 and 0.45, respectively. The results of the study also showed an associated structural change in the mix of remuneration components, 'most notably there was an observed shift in CEO remuneration from variable pay to fixed pay' (Shaw, 2011, p. 102).

A similar study on South African financial institutions conducted by Van Blerck (2012) used EVA, ROE and share price as the organisation performance measures and considered a time period between 2002 and 2011. Van Blerck's

findings support those of Shaw (2011), finding a moderate correlation between share price and executive remuneration and only a weak relationship with ROE before 2007. Shaw's study found an average coefficient of correlation of 0.013 between remuneration and ROE, whilst Van Blerck found it to be 0.293. Van Blerck found that the remuneration received by executives in South African financial institutions correlated strongly with EVA and that the correlation strengthened after the 2008 financial crisis: the coefficient of correlation for EVA between 2002 and 2006 was found to be 0.592 and between 2007 and 2011 it found to be 0.663. More importantly, Van Blerck also found that executives based in the US have rewards that are strongly aligned to equity-based incentives compared to South African executives, whose rewards are strongly aligned to EVA: the coefficient of correlation for ROE between 2002 and 2006 was found to be 0.067 and between 2007 and 2011 it found to have increased to 0.338.

Conceptual underpinning of CEO pay-performance relationship

Whilst CEOs are responsible and accountable for their respective organisations' performance, and are highly incentivised through remuneration structures to ensure they perform their duties solely in the best interest of the shareholders, in recent years CEOs' remunerations have been in the limelight and often for the wrong reasons (Anderson & Kleiner, 2003; Enrione, Mazza & Zerboni, 2006; Matsumura & Shin, 2005; Ozkan, 2011). In view of many national recessions caused by the financial crisis of 2008, the high remuneration packages of executives, especially CEOs, has attracted the attention of the public, unions, investors, the media and academic researchers.

The public continues on the perception that executives receive excessive salaries and bonuses (Leon, 2012). The unions continue to express outrage at large remuneration increases in executives' salaries compared to national average salaries of employees (Mantshantsha, 2007). The investors expect that there should be a close alignment between executives' remunerations and performance of their respective organisations (Sharp, Mackay, Rankin & Aling, 2012). The unions, investors and the media seize on any executive's remuneration that appears excessive, particularly if recent performance of the organisation is regarded as poor (Perry & Zenner, 2001).

The academic researchers continue to focus on establishing the relationship between executives' remunerations and organisation performance. The remuneration of organisations' top executives should be virtually dependent on organisation performance and organisations that evaluate their CEOs will be successful overall even though the evaluation process is time consuming (Anderson & Kleiner, 2003). The relation between executive remuneration, especially that of CEOs, and organisations' performance is still an important issue in financial debate (Traichal, Gallinger & Johnson, 1999). According to Jensen and Murphy (1999), the executive remuneration literature has grown considerably over the last 50 years. Although the theoretical and empirical literature on

executive compensation is fairly well developed, it is far from complete, according to Canarella and Gasparyan (2008).

The literature reviewed indicates that research on executive pay-performance, especially for CEOs, has yielded mixed and inconclusive results due to the principal-agent problem and managerial power approach. According to the agency framework, executive remuneration is an efficient means of aligning executive interests more closely with those of shareholders through a remuneration contract that rewards superior company performance (Jensen & Meckling, 1976). The literature also indicates that innovation is needed to establish sound remuneration policies that are aligned with the long-term strategic plans of organisations. Corporate governance mechanisms are also utilised to ensure that the interests of both the principal and agent are aligned. According to McKnight and Weir (2009), corporate governance mechanisms are used to 'realign the interests of agents and principals and so reduce agency costs' (p. 140). The above discussions have identified two key points: firstly, executive remunerations should have a strong incentive effect and thus be related to performance and, secondly, due to potential conflicts of interest, safeguarding the objectivity of the remunerating process is crucial.

The corporate governance and disclosure requirements that are currently applicable in South Africa through the implementation of the *Companies Act* (2008) and King III (Institute of Directors Southern Africa, 2009) has given a clear indication that there is a need to ensure that executive remunerations are linked to their respective organisational performances. It is these regulatory changes and the current economic climate that make this research relevant. There is a need to link reward and performance, a powerful lever for driving business strategy.

Research design

Research approach

This research study was an empirical exploratory quantitative study that was aimed at assessing the relationship between CEO total remuneration and the financial performance of an organisation as this approach was the best way to answer the research questions. The total remuneration consisted of FP (including benefits) and STIs (these incentives measure performance for up to 1 year and typically include profit share, commission and bonus schemes).

The research took the form of a desktop study and was archival in nature, using secondary sources to provide the organisation financials and their respective executive remuneration data for CEOs. The research approach was ex-post facto in nature in that the focus was on reporting the characteristics of the variables rather than playing any role in manipulating them (Saunders & Lewis, 2012).

The research was also longitudinal in nature, allowing for the identification of trends and the isolation of any unusual observations either in the events or the data.

Research method

Research participants

The research data utilised were obtained for publicly listed organisations on the Johannesburg Stock Exchange (JSE). According to the JSE listing requirements, listed organisations are contractually bound to adopt King III and the *Companies Act of 2008* (Institute of Directors Southern Africa, 2009) and, as a result, these organisations were required to disclose the information needed for the research. The information used was deemed credible as it had been subject to financial audits that are stipulated by the JSE Securities Exchange rules.

The research data was drawn from the McGregor BFA database. McGregor BFA is South Africa's provider of financial data feeds and analysis tools and covers the JSE and global share prices as well as organisation information including annual reports and financial statements.

The research utilised publicly listed organisations on the JSE for the time period 2006–2012. The combined number of organisations listed on the JSE is 472 (JSE, 2009). The JSE top 40 organisations have a combined market capitalisation (MC) of 83.69% of the total JSE MC of all the 472 organisations on the JSE as of 25 April 2013 (Satrix, 2013). As a result, these JSE top 40 organisations were chosen as the research population as they represent a significant quantity of the total JSE. The proportion of the total capitalisation of the JSE top 40 organisations was seen as being large enough to be sufficient for the research. The same scoping process is consistent with that of previous research on executive remuneration done by Miller (1995).

The list of organisations on the JSE top 40 changes from year to year as a result of some organisations being replaced by organisations with growing MC effectively moving 'up the list'. The resulting number of organisations on the JSE top 40 between 2006 and 2012 was 57 in total. These 57 organisations were subjected to the following criteria for inclusion in the sample:

- The organisation had to have been on the JSE top 40 for the entire research period (2006–2012); this reduced the number of organisations to 27.
- The secondary research data required for the current research had to be available either from the McGregor BFA database or financial statements of the respective organisation; this reduced the number of organisations to 22.
- More than one organisation with the same executive receiving the same remuneration was considered as one organisation and the different organisation performance measures were added; this reduced the number of organisations to 21.

Table 1 contains the list of organisations included in the research sample.

Measuring instruments

Total remuneration was defined to include FP, the combination of the basic salary and benefits (car benefit,

TABLE 1: List of organisations included in the research sample.

Number	Organisation	Industry
1	ABSA Group Ltd	Financials
2	Anglo American Platinum Ltd	Basic materials
3	Anglo American PLC	Basic materials
4	BHP Billiton PLC	Basic materials
5	Exxaro Resources Ltd	Basic materials
6	FirstRand Ltd	Financials
7	Impala Platinum Holdings Ltd	Basic materials
8	Intu Properties PLC	Financials
9	Investec PLC	Financials
10	Kumba Iron Ore Ltd	Basic materials
11	MTN Group Ltd	Telecommunications
12	Naspers Ltd	Consumer Services
13	Nedbank Group Ltd	Financials
14	Old Mutual PLC	Financials
15	Remgro Ltd	Industrials
16	RMB Holdings Ltd	Financials
17	SABMiller PLC	Consumer goods
18	Sanlam Ltd	Financials
19	Sasol Ltd	Oil and gas
20	Standard Bank Group Ltd	Financials
21	Tiger Brands Ltd	Consumer goods

Note: listed alphabetically.

other benefits and cost of employee benefits) received during the organisation's financial year, and STIs (these incentives measure performance for up to 1 year, and typically include profit share, commission and bonus schemes) (21st Century Pay Solutions, 2010). Executive remuneration figures that were either in Great British Pound (GBP), United States Dollar (USD) or Euro (EUR), and not in South African Rand (ZAR), were converted to ZAR utilising the average exchange rates between 2006 and 2012: GBP/ZAR exchange rate used was 13.08, USD/ZAR was 7.74 and EUR/ZAR was 10.47.

Ideally, long-term incentives (LTIs) should be included in studies with the objective of determining the relationship between CEO remuneration and the financial performance of an organisation (Lippert & Porter, 1997; Murphy, 1985). However, the measurement of LTIs has been proven problematic, uncertain and only based on future performance targets at the time total remuneration is awarded. It has therefore become accepted practice to include only FP and STIs in pay-performance analyses (Core, Holthausen & Larcker, 1999).

The second unit of analysis was the financial performance of the organisations. For the purposes of this research, and largely based on past research work on pay-performance sensitivity, the following organisation financial performance measures were chosen (their definitions are sourced from McGregor BFA and Ward & Price, 2006):

- **Market capitalisation (MC):** The total value of the issued shares of a publicly traded organisation. This figure is used to determine an organisation's size. The unit of measurements for MC is usually the currency of the country, in this case ZAR:

$$\text{Market capitalisation} = \text{Issued Shares} \times \text{Market Price} \quad [\text{Eqn 1}]$$

- **Earnings per share (EPS):** The portion of an organisation's profit allocated to each outstanding share of common stock; it serves as an indicator of an organisation's profitability. The unit of measurements for EPS was South African Cents:

$$\text{EPS} = \frac{\text{Net Income} - \text{Dividends On Preferred Stock}}{\text{Average Outstanding Shares}} \quad [\text{Eqn 2}]$$

- **Return on Equity (ROE):** The amount of net income returned as a percentage of shareholders equity. It is a ratio that measures an organisation's efficiency in generating profit for each unit of shareholders' equity. ROE measures an organisation's profitability by revealing how much profit an organisation generates with the money shareholders have invested. The unit of measurements for ROE was a percentage:

$$\text{ROE} = \frac{\text{Net Income}}{\text{Shareholder Equity}} \quad [\text{Eqn 3}]$$

- **Economic value added (EVA):** A measure of an organisation's financial performance based on the residual wealth calculated by deducting cost of capital from its operating profit (adjusted for taxes on a cash basis). The unit of measurements for EVA was ZAR:

$$\text{EVA} = \frac{\text{Net Operating Profit After Tax (NOPAT)}}{\text{Capital Employed (CE)}} \times \text{Weighted Average Cost of Capital (WACC)} \quad [\text{Eqn 4}]$$

- **Market value added (MVA):** It was found that it is essential to analyse MVA by placing all organisations on a uniform basis. There are different approaches to establish this and the one chosen for this research was to express the MVA performance indicator as a ratio as opposed to the difference based on the general definition for MVA. The approach effectively standardises all the enterprises to have the same size and further facilitates comparisons between large and small organisations. However, the use of a ratio eliminates the contribution of size to value creation:

$$\text{MVA} = \frac{\text{Market Value}}{\text{Total Capital}} \quad [\text{Eqn 5}]$$

Research procedure

The relationship between CEO remuneration and measures of organisation performance were observed over a period of 7 years between 2006 and 2012. The time period included the recessionary decline phase due to the 2008 global financial crisis and the August 2011 stock market fall (Jensen & Murphy, 1999). The approach was chosen to ensure the validity of the research and also to ensure that the history for a given organisation would yield a maximum of seven observations. The 7-year period was also deemed sufficient to ensure limited influence of short-term irregularities, whilst being short enough to provide reliable estimates of the research constructs.

Statistical analysis

Correlation analysis and multiple regression analysis were used to determine two measures of the strength of the pay-performance relationship, namely the coefficient of correlation and the coefficient of determination respectively.

Results

Descriptive statistics

CEO remuneration: Fixed and variable pay

Table 2 contains a summary of the descriptive statistics for FP received by CEOs between 2006 and 2012.

Figure 1 shows a graphical representation of the descriptive statistics for CEO FP. Although the general trajectory of the average FP shows an upward trend, this increase slowed down during the recession period between 2008 and 2009. The FP mean and median plots in Figure 1 can both be approximated by linear equations with the coefficient of determination (R^2) equal to 0.9212 ($p = 0.0006100 < 0.10$ and $R = 0.9598$) and 0.9548 ($p = 0.0001498 < 0.10$ and $R = 0.9771$), respectively.

Table 3 contains a summary of the descriptive statistics for STIs received by CEOs between 2006 and 2012.

Figure 2 shows a graphical representation of the descriptive statistics for CEO STIs. There was no general trajectory observed for the average (mean) STIs between 2006 and 2012. On the contrary, it was observed that the median STIs had a downwards moving trajectory which was approximated by a linear equation with the coefficient of determination (R^2) equal to 0.6491 ($p = 0.02872 < 0.10$ and $R = 0.8056$). For a linear approximation of the STI mean, the coefficient of determination was found to be equal to 0.02797 ($p = 0.7200 > 0.1$, indicating statistical insignificance as the null hypothesis, which states that the slope of the linear approximation is equal to zero and has no effect, could not be rejected and $R = 0.1672$). For an approximation equation with the coefficient of determination (R^2) greater than that found for the median ($R^2 = 0.6491$), the STI mean approximation equation was found to be of the fourth degree with the coefficient of determination (R^2) being 0.9972.

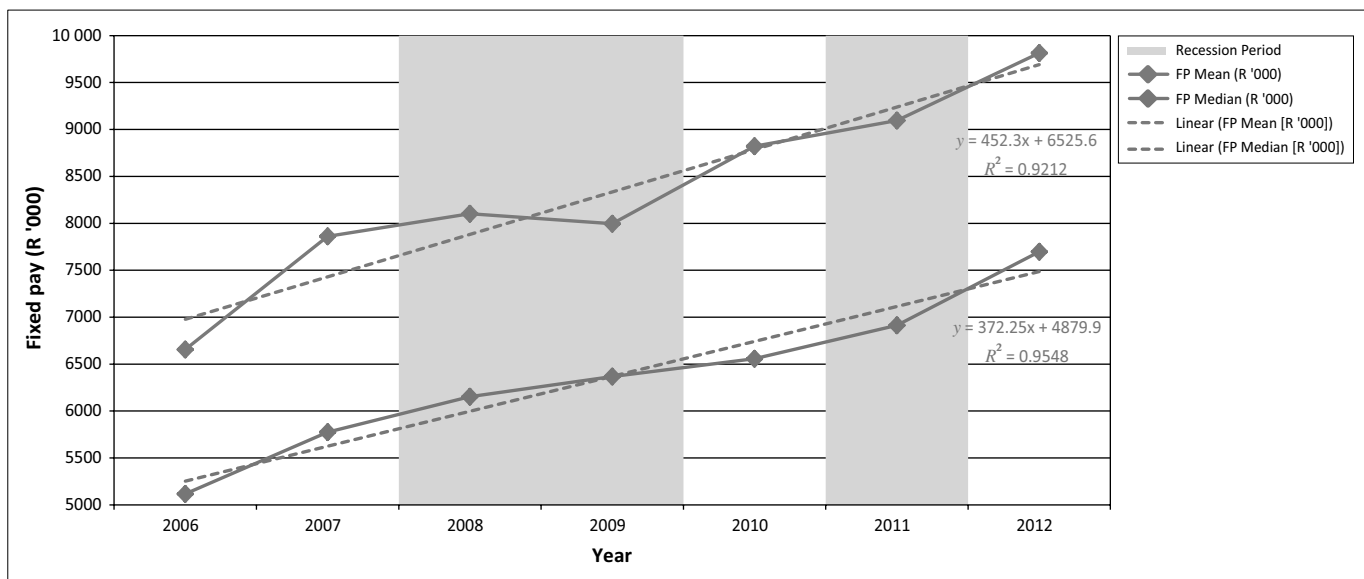
Organisation performance measures

Figure 3 shows the MC of the research sample, the combined JSE MC and the research sample percentage portion of the JSE between 2006 and 2012.

TABLE 2: CEO fixed pay summary (R '000).

Year	Mean	Standard deviation	Minimum	Median	Maximum
2006	6655	4759	2153	5118	18 612
2007	7861	6265	2353	5774	25 694
2008	8102	5800	2211	6153	21 392
2009	7996	5107	2433	6368	21 701
2010	8821	5752	2637	6558	22 104
2011	9095	5662	2957	6913	23 590
2012	9814	6244	1359	7698	24 697

$n = 21$.



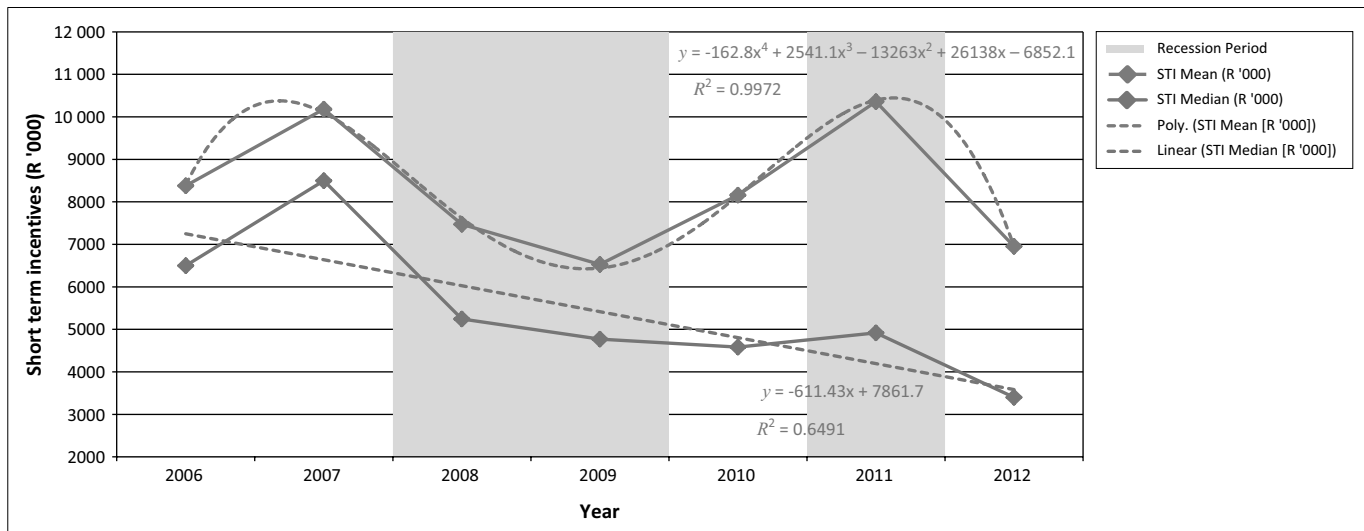
n = 21.
FP, fixed pay.

FIGURE 1: Graphical representation of the descriptive statistics for CEO fixed pay.

TABLE 3: CEO short-term incentives summary (R '000).

Year	Mean	Standard deviation	Minimum	Median	Maximum
2006	8381	7906	0	6500	31 797
2007	10 182	9399	0	8498	39 881
2008	7473	8982	0	5243	37 920
2009	6527	5821	0	4770	22 154
2010	8160	8087	0	4583	29 421
2011	10 357	12 470	0	4918	45 095
2012	6953	7324	0	3400	22 059

n = 21.



n = 21.
STI, short-term incentives.

FIGURE 2: Graphical representation of the descriptive statistics for CEO short-term incentives.

Despite the fact that only the 21 organisations of the JSE top 40 have been included in the research sample, these organisations, as illustrated in Figure 3, had a combined MC of between 50% and 82% of the total JSE MC for the research period between 2006 and 2012. The average percentage MC representation of the research sample to the JSE MC for the research period was 68%.

Table 4 contains a summary of the means of the descriptive statistics for organisation performance measures selected for the research study: MC, EPS, ROE, EVA and MVA.

Table 5 contains a summary of the standard deviations for the organisation performance measures.

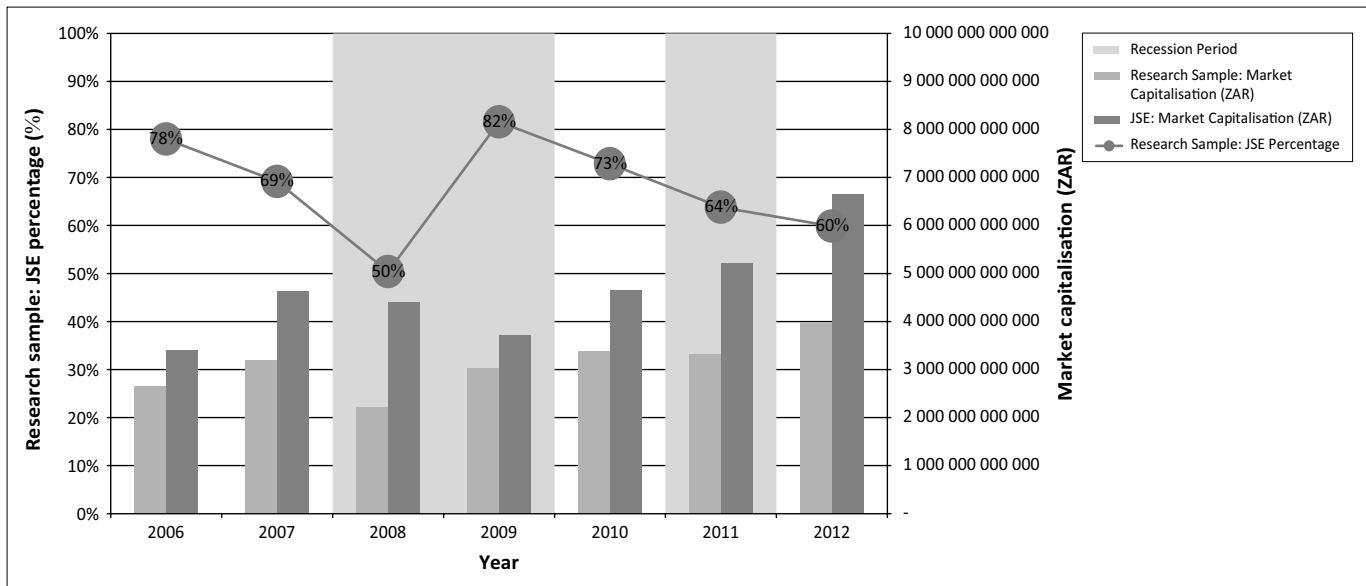


FIGURE 3: Market capitalisation: Research sample versus JSE.

TABLE 4: Organisational performance measures means.

Year	Market capitalisation (ZAR)	Earnings per share (c)	Return on investment (%)	Economic value added (R '000)	Market value added
2006	126 127 302 078	411 872	45.41	-96 040 059	2.68
2007	152 428 562 410	372 635	27.22	-55 045 568	2.92
2008	105 504 699 867	408 180	20.07	8 437 130	1.92
2009	143 840 910 288	277 988	21.37	-74 430 824	1.99
2010	161 080 579 054	351 671	19.95	-49 226 725	2.07
2011	158 206 364 568	436 858	23.08	4 623 051	1.98
2012	189 816 637 829	257 915	16.91	-50 811 025	2.03

n = 21.

TABLE 5: Organisational performance measures standard deviations.

Year	Market capitalisation (ZAR)	Earnings per share (c)	Return on investment (%)	Economic value added (R '000)	Market value added
2006	117 876 561 428	918 429	56.88	486 081 146	2.00
2007	147 782 173 297	871 015	23.38	360 619 615	2.90
2008	101 376 853 276	929 707	39.34	214 398 037	1.11
2009	138 000 304 554	648 033	30.31	338 667 551	1.60
2010	151 136 297 119	915 648	19.79	383 469 055	1.34
2011	141 199 051 489	1 155 145	22.68	228 620 487	1.37
2012	173 261 507 601	552 202	17.97	427 188 317	1.53

n = 21.

Results of the effects of the 2008 financial crisis

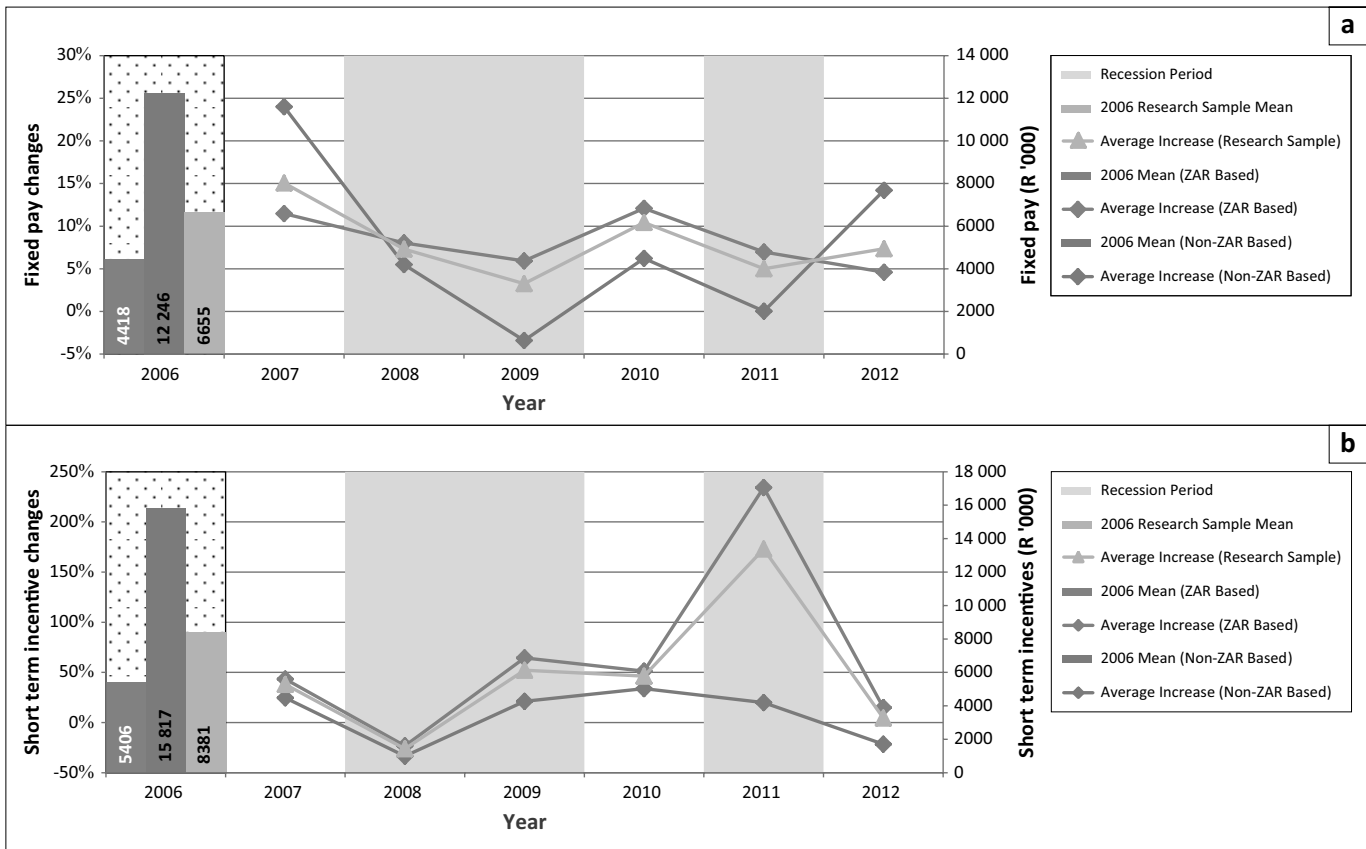
The primary objective of this research was to determine the relationship between CEO remuneration and the financial performance of an organisation. As a result, the first research question investigated whether any structural changes occurred with regard to the mix of remuneration components CEOs received after the 2008 financial crisis. Figure 4 shows year-on-year percentage changes in CEO total remuneration (FP and STI) between 2006 and 2012. Also included in Figure 4 are the respective initial FP and STI averages (i.e. for ZAR-based figures; non-ZAR-based figures and the total research sample) for 2006.

Figure 4 shows that the percentage year-on-year change trajectories for CEO FP listed in ZAR and other currencies were observed to be similar, except in 2012 when the two were going in opposite directions. As for CEO STIs, the

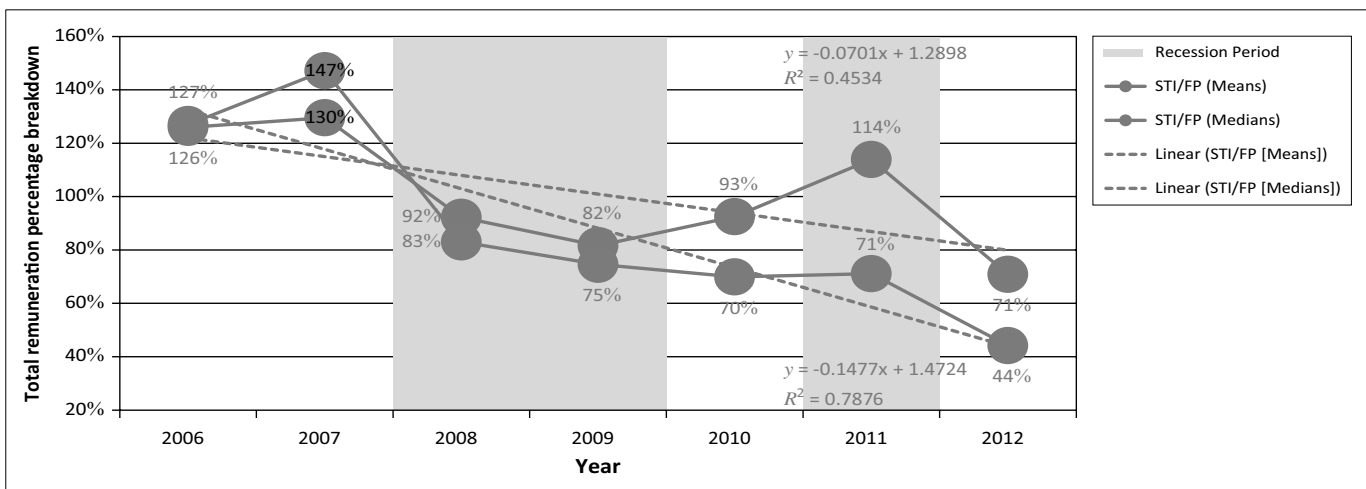
trajectories were observed to be similar except for 2011, when the CEO STIs listed in ZAR spiked whilst those listed in other currencies slowed down.

Figure 5 shows the calculated STI:FP ratios for means and medians between 2006 and 2012 with their respective trend lines. The trend lines indicate that there was a change in the mix in FP and STIs and that the change was statistically significant: R^2 mean = 0.4534 ($p = 0.09732 < 0.10$ and $R = 0.6733$) and R^2 median = 0.7876 ($p = 0.007677 < 0.10$ and $R = 0.8874$).

Figure 6 shows the mean percentage mix between FP and STI as a percentage of total remuneration received by CEOs. It is evident that FP increased from 44% in 2006 to 59% in 2012 and, in conjunction with Figure 4, indicates a trend of increasing FP compared to decreasing STIs.



n = 21.
FIGURE 4: CEO fixed pay (a) and short-term incentive (b) means and percentage changes.

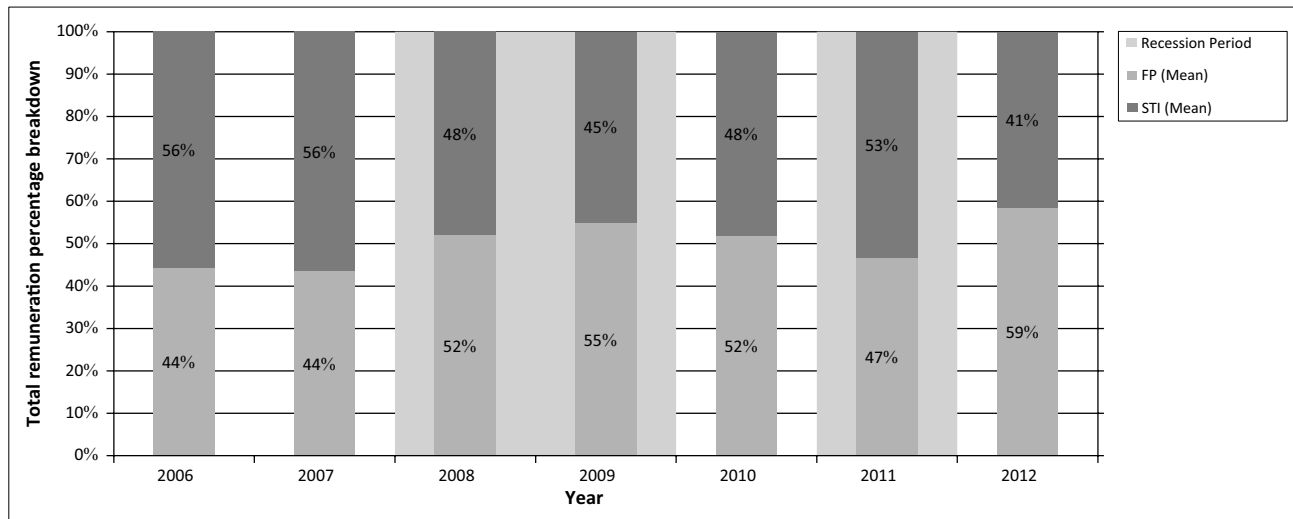


n = 21.
 STI, short-term incentives; FP, fixed pay.
FIGURE 5: Short-term incentive/fixed pay ratios (2006–2012).

Results of the correlation between CEO remuneration and organisation performance

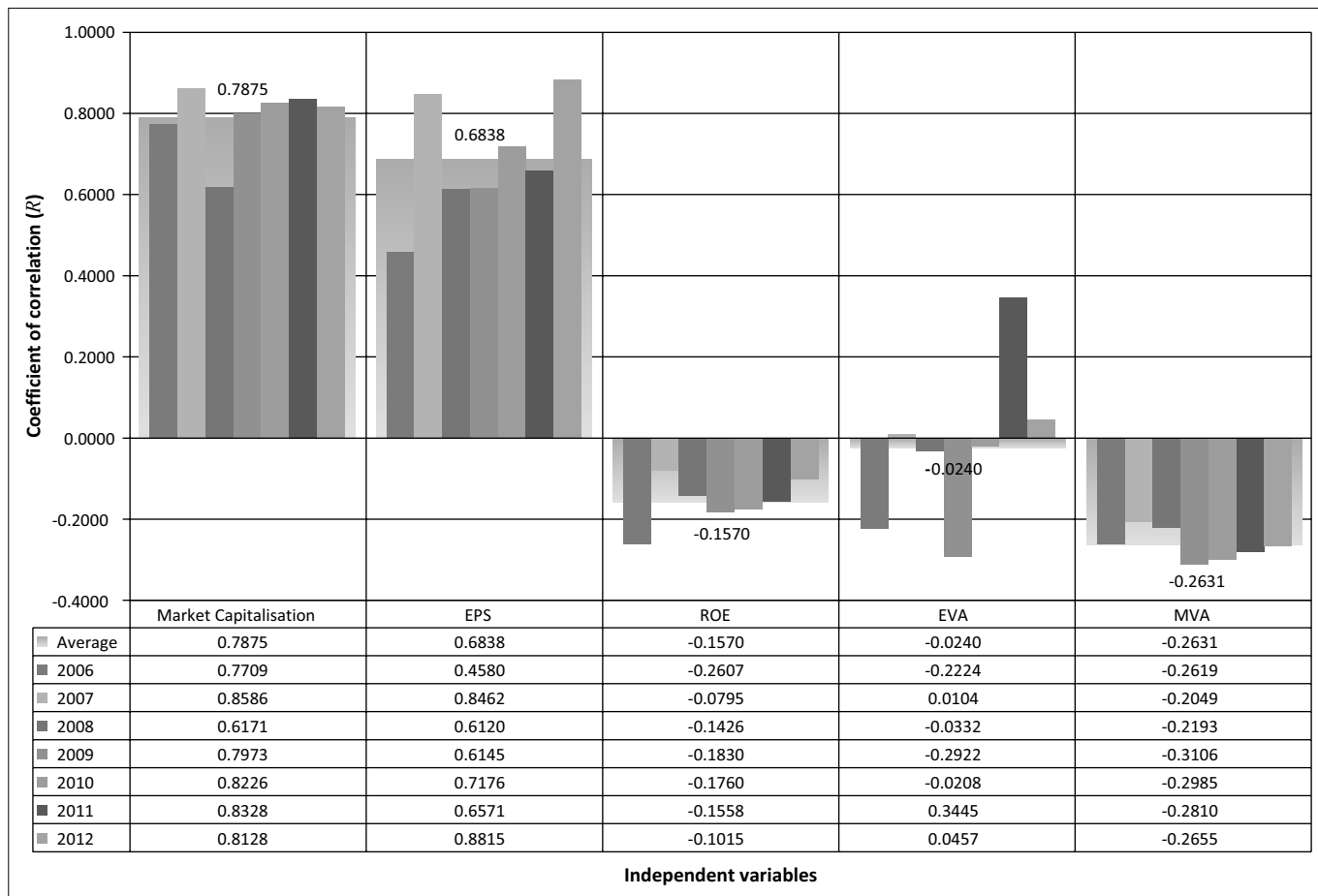
Figure 7 shows the coefficient of correlation (R) results for the correlation analysis that was done with FP as a dependant variable; independent variables considered for the correlation analysis included all the organisational financial performance measures selected for the research and are as listed on the horizontal axis of Figure 7. Figure 7 also includes the 7 years’

correlation results averages for each of the organisation financial performance measures and a table with all the correlation coefficient (R) numerical values. For example, the correlation coefficient between FP (dependant variable) and MC (independent variable) in 2006 on Figure 7 was found to be 0.7709, whilst that between FP (dependant variable) and MVA (independent variable) in 2006 on Figure 7 was -0.2619. Table 6 contains similar coefficient of correlation (R) results



n = 21.
FP, fixed pay; STI, short-term incentives.

FIGURE 6: Fixed pay – short term incentive mix (2006–2012).



n = 21.
EPS, Earnings per share; ROE, Return on Equity; EVA, economic value added; MVA, market value added.

FIGURE 7: Correlation analysis: Fixed pay and organisational performance measures.

to those found in Figure 7 and their associated *p*-values as determined using the Pearson product moment correlation coefficient method.

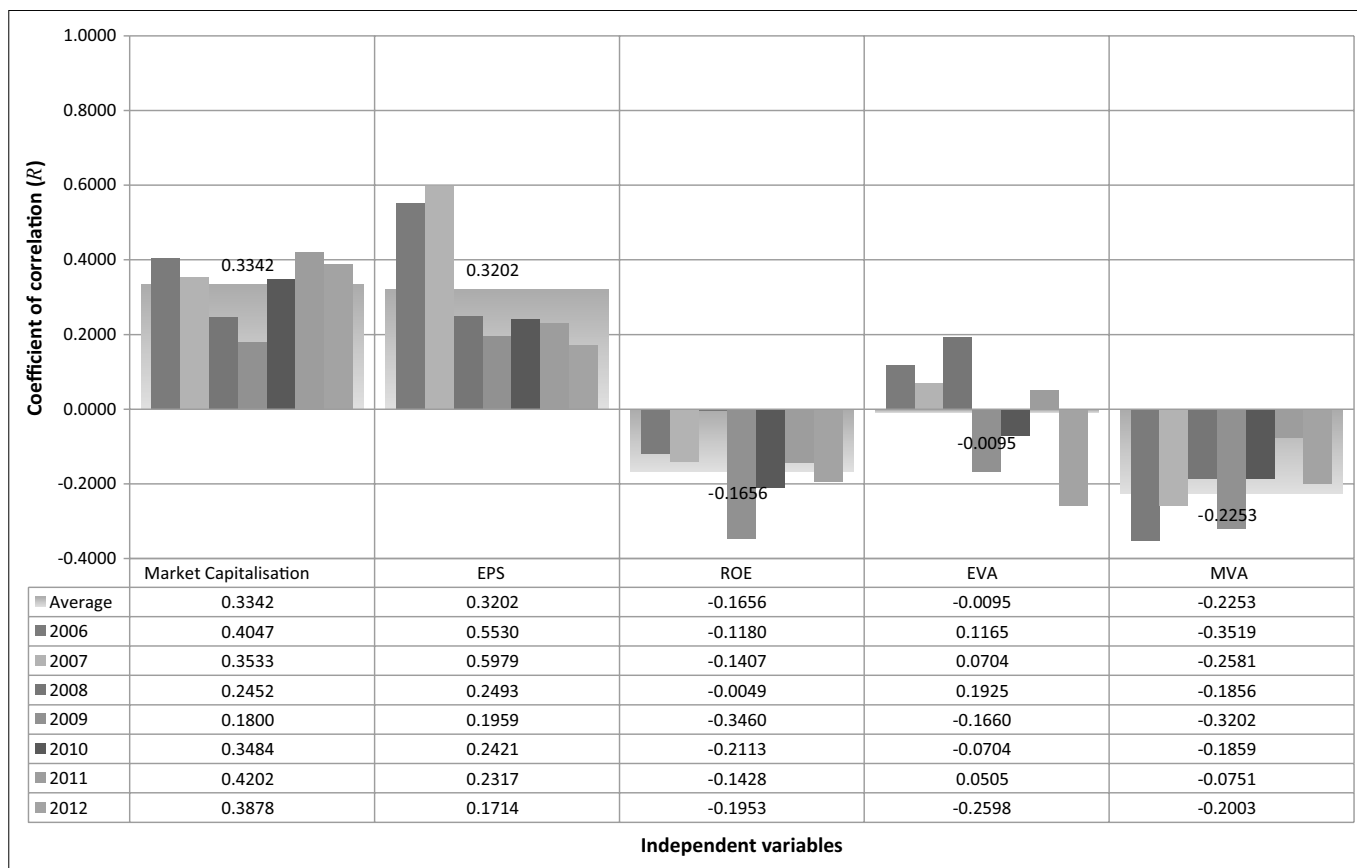
Figure 8 shows the correlation coefficient results for the correlation analysis that was done with STI means as the

dependant variable; independent variables are as listed on the horizontal axis and include all the selected organisation financial performance measures. Figure 8 also includes the 7 years' correlation results averages. Table 7 contains similar coefficient of correlation (*R*) results to those found in Figure 8 and their associated *p*-values as determined

TABLE 6: Correlation analysis: Fixed pay and organisational performance measures.

Year	Market capitalisation		Earnings per share		Return on investment		Economic value added		Market value added	
	ZAR	p-value	ZAR	p-value	ZAR	p-value	ZAR	p-value	ZAR	p-value
2006	0.7709	4.310E-05	0.4580	0.0368	-0.2607	0.2538	-0.2224	0.3325	-0.2619	0.2514
2007	0.8586	6.336E-07	0.8462	0.0000	-0.0795	0.7319	0.0104	0.9644	-0.2049	0.3729
2008	0.6171	2.883E-03	0.6120	0.0032	-0.1426	0.5374	-0.0332	0.8863	-0.2193	0.3396
2009	0.7973	1.507E-05	0.6145	0.0030	-0.1830	0.4271	-0.2922	0.1987	-0.3106	0.1706
2010	0.8226	4.721E-06	0.7176	0.0002	-0.1760	0.4454	-0.0208	0.9286	-0.2985	0.1887
2011	0.8328	2.804E-06	0.6571	0.0012	-0.1558	0.5002	0.3445	0.1262	-0.2810	0.2172
2012	0.8128	7.534E-06	0.8815	0.0000	-0.1015	0.6616	0.0457	0.8439	-0.2655	0.2448

n = 21.



n = 21.

EPS, Earnings per share; ROE, Return on Equity; EVA, economic value added; MVA, market value added.

FIGURE 8: Correlation analysis: Short-term incentives and organisational performance measures.

using the Pearson product moment correlation coefficient method.

Due to the extreme relative nature of outliers, especially for STIs paid to CEOs by organisations, the medians for CEOs remuneration were also considered in the correlation analysis. Medians are not influenced by outliers compared to means and in most cases when data sets have outliers, reporting the median as the central tendency of the data often gives a better ‘typical’ data value than the mean (Anderson, Sweeney, Williams, Freeman & Shoemsmith, 2007; Weiers, 2010).

Figure 9 shows the correlation results when the means and medians of the CEO remuneration and organisation

performance measures were considered, with the FP and STIs as the two separately considered dependent variables.

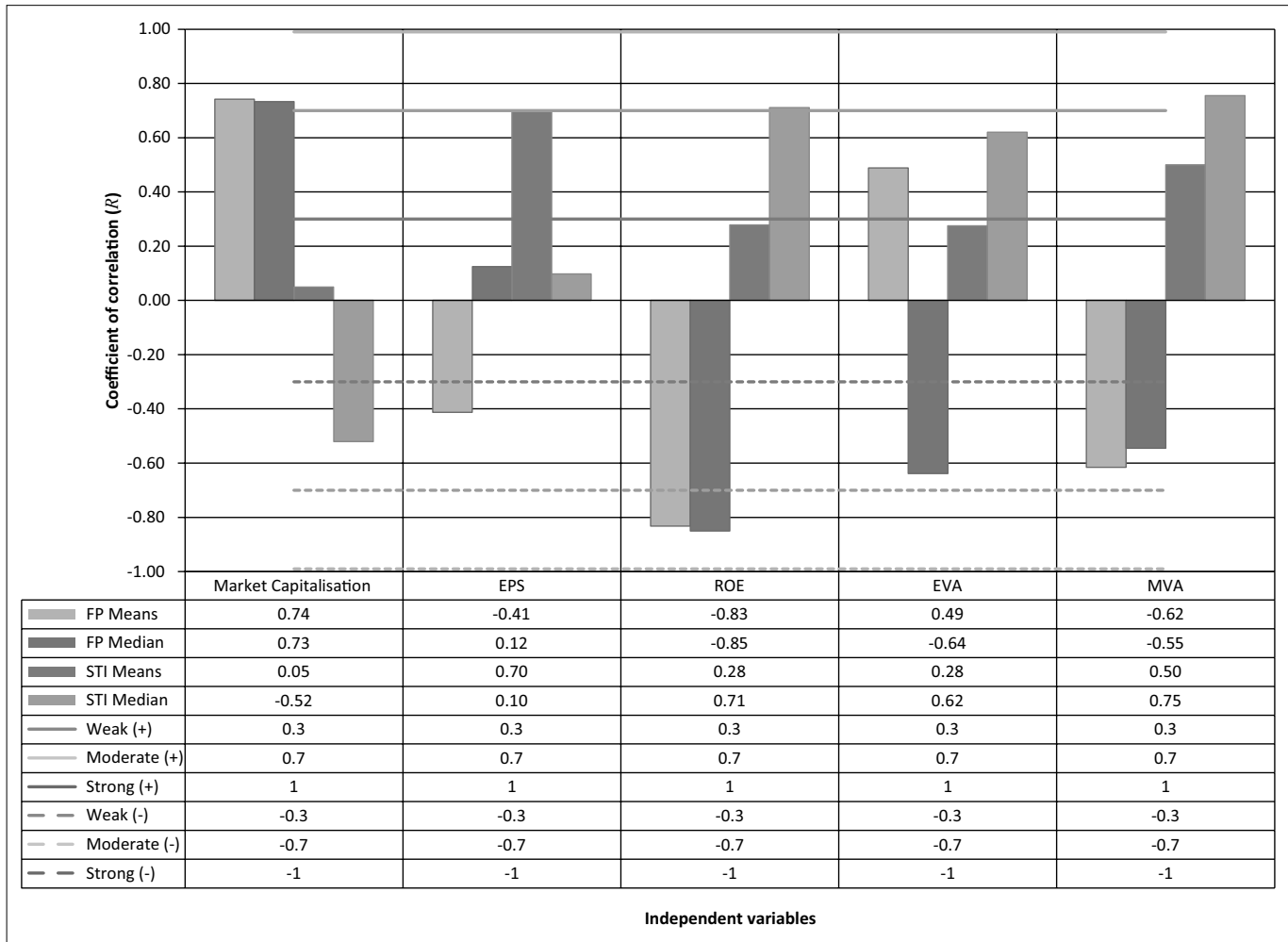
Figure 10 shows the correlation coefficients absolute value differences in the results found in Figure 9 between the means and medians of the two dependent variables (i.e. FP or STI).

Figure 10 illustrates that the observed absolute value differences in the coefficients of correlation between FP means and FP medians when used as the dependent variable are between 0.01 and 0.29. In contrast, the observed absolute differences in the correlation coefficient between STI means and medians when used as the dependent variable are between 0.25 and 0.60. This illustrates that the absolute

TABLE 7: Correlation analysis: Fixed pay and short-term incentives.

Year	Market capitalisation		Earnings per share		Return on investment		Economic value added		Market value added	
	ZAR	p-value	ZAR	p-value	ZAR	p-value	ZAR	p-value	ZAR	p-value
2006	0.4047	0.0688	0.5530	0.0093	-0.1180	0.6106	0.1165	0.6150	-0.3519	0.1177
2007	0.3533	0.1162	0.5979	0.0042	-0.1407	0.5429	0.0704	0.7616	-0.2581	0.2587
2008	0.2452	0.2841	0.2493	0.2757	-0.0049	0.9830	0.1925	0.4032	-0.1856	0.4204
2009	0.1800	0.4350	0.1959	0.3947	-0.3460	0.1244	-0.1660	0.4720	-0.3202	0.1571
2010	0.3484	0.1217	0.2421	0.2904	-0.2113	0.3578	-0.0704	0.7618	-0.1859	0.4197
2011	0.4202	0.0579	0.2317	0.3122	-0.1428	0.5370	0.0505	0.8280	-0.0751	0.7463
2012	0.3878	0.0824	0.1714	0.4575	-0.1953	0.3963	-0.2598	0.2554	-0.2003	0.3839

n = 21.



n = 21.

EPS, Earnings per share; ROE, Return on Equity; EVA, economic value added; MVA, market value added.

FIGURE 9: Correlation coefficients results: Means and medians.

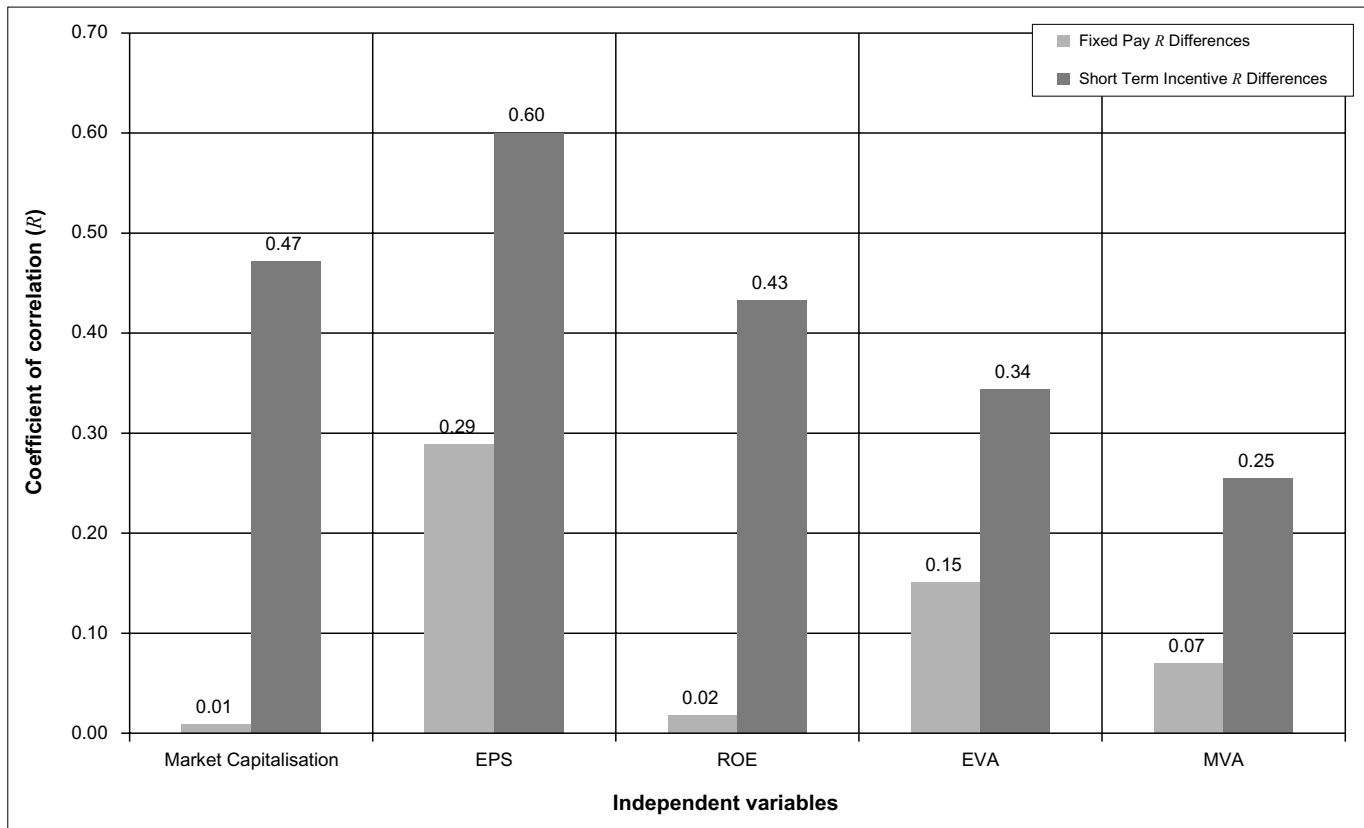
differences between means and medians are higher for STIs as compared to FP.

Discussion

The primary objective of this research study was to investigate the relationship between CEO remuneration and organisation performance in South Africa between 2006 and 2012 and to determine whether the two constructs were positively correlated. Understanding this relationship is critical to finding a suitable model to structure executive remuneration that will protect

shareholders from over-remunerating executives in times of economic appreciation, whilst protecting executives from being underpaid in times of economic depreciation.

The first research question investigated was whether there were any structural changes to the total remuneration received by CEOs as a result of the global financial crisis. The implementation of the *Companies Act* (2008) and King III (2009) were expected to cause some form of structural changes in remuneration, more specifically, and in the context of the current research, to ensure that there is a link between executive remuneration and organisation performance.



$n = 21$.

EPS, Earnings per share; ROE, Return on Equity; EVA, economic value added; MVA, market value added.

FIGURE 10: Means and medians correlation coefficients (R) differences.

The research findings strongly suggest that some structural changes to the total remuneration of CEOs occurred after 2008. The main structural change was an increase in FP accompanied by a decrease in STIs. These findings can be supported further by the calculated means and medians of the STI to FP ratios. The trend lines for the means and medians show that there was an upward movement between 2006 and 2007, which was followed by a downward movement in 2008. The general regression equations for the STI:FP ratios have the following negative slopes: $\beta_{\text{mean}} = -0.0701$ ($R^2_{\text{mean}} = 0.4534$, $p = 0.09732 < 0.10$) and $\beta_{\text{median}} = -0.1477$ ($R^2_{\text{median}} = 0.7876$, $p = 0.007677 < 0.10$).

It can be seen that CEOs are becoming more innovative as they are noticeably moving away from focusing on STIs, which are categorised as performance-related elements of remuneration. As a result, CEOs are focusing more on FP rather than STIs. This change in focus results in the *Companies Act* (2008) and King III (2009) requirements being less effective, as CEOs avoid being measured for performance. As Jensen and Murphy (1999, p. 64) state, 'the relentless focus on how much CEOs are remunerated diverts public attention from the real problem – how CEOs are paid'. Whilst the implementation of the *Companies Act* (2008) and King III (2009) was expected to cause structural changes driving the link between executive remuneration and organisation performance, the opposite has been observed.

The second research question was aimed at determining the correlation between CEO total remuneration and organisation

performance. Corporate governance and economic theories of remuneration largely suggest that 'organisational performance should affect an executive's remuneration to the extent that it serves as a proxy for unobservable managerial effort or productivity' (Murphy, 1985, p. 20). The expected pay-performance relationship was that a direct and strong relationship would be found to exist between CEO remuneration and measures of organisational performance.

Results indicate that FP was found to be weakly and inversely correlated to ROE during the research study period between 2006 and 2012 ($R_{\text{average}} = -0.1570$) (Bebchuk *et al.*, 2010). The inverse relationship between FP and MVA was found to be weak to moderate ($R_{\text{average}} = -0.2631$) (Bebchuk *et al.*, 2010). The relationship between FP and EVA was found to be weak to moderate, and inverse in some years ($R_{2006} = -0.2224$, $R_{2008} = -0.0332$, $R_{2009} = -0.2922$ and $R_{2010} = -0.0208$) whilst direct in other years ($R_{2007} = 0.0104$, $R_{2011} = 0.3445$ and $R_{2012} = 0.0457$). Both direct relationships between MC and EPS with FP were found to be moderate to strong ($R_{\text{MCAverage}} = 0.7875$ and $R_{\text{EPSAverage}} = 0.6838$).

Results indicate that STIs had an inverse relationship with ROE and the strength of the relationship was weak to moderate ($R_{\text{average}} = -0.1656$). A similar relationship, in terms of direction and strength, was observed between STIs and MVA and the relationship was inverse and weak to moderate ($R_{\text{average}} = 0.2253$). The relationship between STIs and EVA was found to be generally weak, and direct in some years

($R_{2006} = 0.1165$, $R_{2007} = 0.0704$, $R_{2008} = 0.1925$ and $R_{2011} = 0.0505$) whilst inverse in other years ($R_{2009} = -0.1660$, $R_{2010} = -0.0704$ and $R_{2012} = -0.2598$). Both direct relationships between MC and EPS with STIs were found to be weak to moderate ($R_{MC\text{average}} = 0.3342$ and $R_{EPS\text{average}} = 0.3202$).

The most stable of the findings was the direct relationship of CEO total remuneration with MC and EPS; another was the inverse relationship with ROE and MVA.

The findings of the relationship between CEO total remuneration and ROE support those found by Van Blerck (2012) and, more importantly, the behaviour of the relationship during and immediately after financial crisis was similar to what Van Blerck found in 2007 in the South African financial services sector.

MVA represents value created whilst ROE measures an organisation's profitability by revealing how much profit an organisation generates with the money shareholders have invested. The inverse relationship found between these performance measures and CEO total remuneration is of major concern, especially as value creation occurs during global financial difficulties when executives adopt a risk-averse orientation.

The relationship between CEO total remuneration and EVA tended to change direction depending on the global economic standings. When the global economy was experiencing uncertainty or difficulties (e.g. 2008 global financial crisis and August 2011 stock market fall), EVA was found to be leaning towards being more directly related to CEO total remuneration. When the global economy was performing well, EVA was found to be leaning towards being more inversely related to CEO total remuneration as organisations earned more profits and allocated less to the cost of financing their respective organisations' capital.

The correlation findings with regard to EVA suggest that CEOs, during economic certainty, engage more in empire building, taking investment projects that may not be profitable for the shareholder, but are undertaken purely to increase the size of the organisation. Similar findings were made by Hope and Thomas (2008), who concluded that executives grow organisations due to the fact that boards have limited information on which to judge their ability, and so growth in organisation size seems to be the next best solution in ensuring that executives are viewed favourably.

The average FP had a direct relationship with MC and EVA over the 7-year research period and the relationships were found to be strong and moderate. Results also indicate that average FP was inversely correlated to EPS, ROE and MVA and the respective relationships were moderate, strong and moderate.

Except for EVA, the relationship between STIs and all organisation financial performance measures were directly opposite to those found for FP. STIs were found to be moderately inversely related to MC and directly related to

the other four organisation financial performance measures. The relative relationship strengths of STIs with the EPS, ROE, EVA and MVA were found to be weak, strong, moderate and strong.

Shaw and Zhang (2010) point out that efficient remuneration contracts will link executive remuneration with organisation performance, whilst providing strong incentives for executives to operate in shareholders' best interests. The findings of this research, with regard to the directions and strengths of the relationships between CEO FP and organisation performance measures, suggest that the general pay-performance link has been lost. The directions and strengths of the relationships between STIs and organisation financial performance measures indicate that a link exists between what executives receive as STIs and accounting-based measures of performance.

The irony is that whilst the STI link with organisation financial performance measures (i.e. accounting-based measures) exists, the FP link with organisation performance measures continues to be eroded. Executives are avoiding STIs and paying greater attention to FP to reduce the impact of performance-related elements in determining their remuneration.

The above findings strongly suggest that failure to reward or punish executives for either superior or poor performance will continue to erode the link between CEO total remuneration and financial organisation performance. The optimal contracting approach does not appear to be working and the managerial power approach seems dominant, that is executive remuneration is not being used as a potential instrument for addressing agency problems, but has become part of the agency problem itself (Frydman & Jenter, 2010).

The long-term impact of this, according to Jensen and Murphy (1999), Anderson and Kleiner (2003) and Haynes *et al.* (2007), will be entrenched bureaucratic remuneration systems in which boards become reluctant to either reward CEOs for superior performance or punish them for poor performance.

Practical implications

This research suggests that a stronger test of the pay-performance link and the power of incentive design is required in order to ensure that executives are rewarded or punished for performance. The question on how executives are paid also needs to be considered. The research identifies the need for a robust and valid CEO pay-performance model to ensure consistency with the agency notion that top executives are rewarded for increases in shareholder wealth.

It is suggested that boards and remuneration committees need to pay more attention to the different performance measures available in assessing CEO performance. More attention should also be paid to reducing the subversive behaviour of CEOs, which serves to reduce the efficacy of the *Companies Act* (2008) and King III (2009) by avoiding the issue of CEOs being measured for performance.

Research limitations

This research only investigated the specific relationship between performance and pay and did not include information on the causal factors influencing CEO remuneration and the financial performance of the organisations. In addition, the size of the organisations studied, and the possible effect that this would have on the total remuneration of the CEO, was deemed to be beyond the scope of this research. The fact that all the organisations selected were large organisations could address the problem of organisation size as a threat to the validity of the research; however, it is suggested that further research should be conducted to see if the same findings apply to small and medium organisations.

Conclusion

In theory, efficient remuneration contracts will be designed well enough to link executive remuneration with organisation performance and provide strong incentives for executives to operate organisations in the best interest of the shareholders. Additionally, the *Companies Act* (2008) and King III (2009) specify that there should be a positive correlation between executive remuneration and organisation performance. The primary objective of this research was to take advantage of the available information on CEO remuneration data and requirements in terms of positive correlation between CEO remuneration and financial performance of organisations.

Based on the findings of the current research, it can be concluded that there have been structural changes after the 2008 global financial crisis with regard to total remuneration received by CEOs; these structural changes were further amplified after the August 2011 stock market fall. The findings of the current research indicate that these changes were deliberate as CEO were focusing more on fixed pay and moving away from performance-related short-term incentives, thus creating a disconnect between what CEOs are being paid and the performance of organisations.

More attention needs to be paid to the different behaviours of top executives, especially CEOs, in making the *Companies Act* (2008) and King III (2009) requirements ineffective as they avoid being measured on the performance of their organisations.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

M.B. (University of Johannesburg) was the project leader and academic supervisor and also contributed to writing the

manuscript. M.F.M. (University of Pretoria) was responsible for project design, field work and writing up the research.

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Corrigendum: Exploring the learnings derived from catalytic experiences in a leadership context

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Dates:

Published: 09 Dec. 2015

How to cite this article:

Horowitz, D.S., & Van Eeden, R. (2015).
Corrigendum: Exploring the learnings derived from catalytic experiences in a leadership context. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #598, 1 page.
<http://dx.doi.org/10.4102/sajhrm.v13i1.598-1>

Note:

Doi of original article: <http://dx.doi.org/10.4102/sajhrm.v13i1.598>

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This article is based on a master's dissertation completed by the first author in partial fulfilment of the requirements for the degree Masters in Philosophy, Personal and Professional Leadership at the University of Johannesburg. The authors requested a change in terms of the author details originally published to now reflect the affiliation with said university.

The Affiliation section has been updated to reflect the correct first affiliation.

Exploring the learnings derived from catalytic experiences in a leadership context

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Dates:

Received: 07 Oct. 2013

Accepted: 03 Dec. 2014

Published: 25 June 2015

How to cite this article:

Horowitz, D.S., & Van Eeden, R. (2015). Exploring the learnings derived from catalytic experiences in a leadership context. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #598, 10 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.598>

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Orientation: Personal leadership comprises self-awareness, authenticity, inspiration and passion. The concept of personal leadership was explored together with its relationship with leadership-related learnings derived from a catalytic experience.

Research purpose: The objective of the study was to explore the leadership-related learnings derived from a catalytic experience and any connection between these learnings, personal leadership and leadership in an organisational context.

Motivation for the study: Measurement of leaders' performance remains largely focused on the results achieved. The importance of personal leadership in the corporate environment is often ignored and even questioned. Recognising that there is a relationship between personal leadership and professional leadership enables leaders to connect who they are being and what they are doing. This can enhance their leadership.

Research design, approach and method: The study was conducted using a qualitative approach, specifically narrative enquiry. The sample comprised seven leaders who have had catalytic experiences in their lives. In-depth interviews were conducted and thematic analysis was used to identify themes on the leadership-related learnings gained from the leaders' catalytic experiences.

Main findings: Elements of personal leadership and the processes involved in the development of personal leadership were identified. It was furthermore shown that challenging experiences serve as learning opportunities and that time for reflection is essential in this learning process.

Practical/managerial implications: Leadership lessons are best learnt through experience. Using challenging experiences as learning opportunities may assist leaders in their growth and development.

Contribution: Leadership effectiveness and organisational effectiveness may be enhanced by a more holistic view of leadership that includes elements of personal leadership.

Introduction

Leadership is complex and cannot be bound by a single definition. Definitions of leadership include references to influence, inspiration and action and yet leadership is generated from within (Cashman, 2008). This is referred to as personal leadership (Hirzel, 2004). Personal leadership comprises self-awareness, authenticity, inspiration and passion. It refers to the characteristics unique to the individual and encompasses the 'being' aspects of leadership. Professional leadership refers to the characteristics associated with the individual's role in the organisation, thus encompassing the 'doing' aspects of leadership. The former resides within each leader; it is this concept that the study explores on a deeper level together with the relationship between personal leadership and leadership-related learnings derived from a catalytic or life-changing experience that alters the individual's self-concept.

Purpose

Leaders are often identified by what they do and the results they achieve. Cashman (2008, p. 22) is of the opinion that 'we tend to view leadership as an external event. We only see it as something that we do'. However, it is increasingly recognised that this external view of leadership is not enough to understand the full picture. Leadership competencies, skills and actions are often researched in relation to leadership excellence and there is a lack of recognition of the significance of personal leadership as a valued aspect of leadership within organisations (Badarocco, 1998; Cashman, 2008; Smith, 2009). The present study aimed to address this apparent lack of attention to this essential component of leadership. Organisations would benefit from shifting their focus to personal leadership aspects such as personal characteristics that are crucial for leadership, personal mastery, self-awareness and personal growth (Badarocco, 1998; Cashman, 2008;

Harle, 2005). Leaders could be helped to understand that there is a natural progression from personal leadership to interpersonal leadership through to professional leadership (Smith, 2009; Verrier & Smith, 2005), which establishes the connection for leaders between who they are and what they are doing in order to enhance their leadership.

The study furthermore approached the topic from a unique point of view by exploring the life experiences contributing to personal growth in a leadership context. It thus expands the research in this field. Leadership and personal development are inseparable; leadership is an 'intimate expression of who we are' (Cashman, 2008, p. 22). This encompasses the personal characteristics of leaders that drive what they do and thus drive their tangible outcomes. Personal leadership refers to the qualities and characteristics of leadership that are unique to that leader. Leaders who develop their personal leadership profile through a process of self-awareness and continue to evolve their profile by revisiting it regularly are more likely to be successful (Ulrich & Smallwood, 2007). Our experiences in life shape who we are and how we behave in various situations. Integrating these experiences in order to create a meaningful context that is unique to the individual underlies the development of personal leadership. Cashman (2008, p. 34) supports the view that 'personal mastery involves appreciating the rich mixture of our life experiences and how they dynamically form our unique existence'. Self-awareness is often enhanced through personal experiences and challenges. The assumption underlying this study was that if people can take their life experiences and derive learning from them, then they are likely to create something more meaningful in their lives as a result of these experiences. This idea was extrapolated to include learnings related to personal leadership in an organisational context (Horowitz, 2012). The personal growth experiences were specified as catalytic experiences. This assumption served as guideline in forming the research question and in designing the study.

The core research question was: 'What are the learnings gained from a catalytic experience and how do these learnings relate to leadership in an organisational context?' The research objectives were to (1) describe the learnings from the catalytic experiences, (2) identify the relationships between the learnings, personal leadership and leadership in an organisational context and (3) distil guidelines or recommendations for leadership development in organisations.

Literature review

Catalytic experiences

The literature does not refer to catalytic experiences per se but rather mentions turning points (Gerus & Brydges, 2006; McAdams, 2006), defining moments (Badarocco, 1997), crucible moments (Bennis & Thomas, 2002) and life-changing events (Boyatzis & McKee, 2005). The choice of the term *catalytic experience* for the purpose of this study was based on a desire to indicate that this is an experience that forms a catalyst in an individual's life so that the individual

is personally transformed as a result of it. A shift is created in the individual's level of self-awareness and in how they define themselves on a being level going forward. Catalytic experiences shape, transform or catalyse an individual to do something different, think differently or be different.

McGraw (2002) identifies some themes relating to defining moments. A defining moment is an experience or event that shapes a person's self-concept so that they are changed in some way. The experience may be positive or negative. The significance of a defining moment is determined by the person who experienced the moment, regardless of how trivial the same experience may be to someone else. These defining moments affect self-concept so that the latter is altered for an individual's remaining lifetime. Once an individual experiences this, there is a shift that could be permanent and the results put the individual on an entirely different path of action, behaviour and achievement. Finally, an individual may experience more than one defining moment in their life and each one is significant in terms of the learnings drawn from it.

Personal leadership

There is a large diversity in terms of the definitions of 'lead' and 'leader' (Allen, 1990). Nicholls (1988) suggests that we embrace the diversity in definitions of leadership rather than continually search for the one definition that satisfies all views. A common thread in the literature is the word influence. The way leaders influence has evolved over time and there has been a shift in leadership theories from task orientation and transactional leadership to people orientation and transformational leadership (Bass & Avolio, 1994; Cengage, 2006). Servant leadership has taken the evolution a step further by focusing on being of service (Stone & Patterson, 2005). Throughout the process of evolution, leadership qualities have also evolved from a focus on what the leader does to who the leader is. This is referred to as an inside-out approach to leadership, emphasised by personal leadership (Cashman, 2008).

Four leadership frameworks that include the concept of personal leadership have emerged from transformational leadership theory and servant leadership theory. Each has a slightly different interpretation of personal leadership, but they all include the significance of personal mastery and self-awareness in a leadership context. Smith (2009) identifies three categories of leadership, namely professional leadership, interpersonal leadership and personal leadership. Personal leadership relates to aspects of personal mastery and meaning and comprises four inner life dimensions, namely spiritual, physical, mental and emotional dimensions. Interpersonal leadership is defined as the study of relationships and relationship building and includes the social life dimension, whilst professional leadership refers to the importance of work and includes the three outer life dimensions, namely financial, career and ecological dimensions. Both interpersonal and professional leadership develop from personal leadership through personal growth and personal mastery.

Cashman's (2008) 'leadership from the inside out' looks at two aspects of leadership: inner and outer leadership. Inner leadership refers to personal leadership and considers the 'being' of leadership together with having a sense of meaning. Personal leadership is achieved through personal mastery, the latter requiring a process of growth. Authenticity is regarded as the basis for personal mastery and the most important, yet challenging leadership principle. Outer leadership relates to the 'doing' of leadership and interpersonal relationships.

Covey's (2004) whole person approach to leadership describes leadership in terms of two broad categories, namely character and competence. Character refers to personal leadership and self-awareness whereas competence refers to performance. Essential character traits are integrity (sense of commitment to oneself and others), maturity (balance between courage and consideration) and an abundance mentality (a mindset of 'there is plenty for everybody'). These are the components of personal mastery and hence personal leadership.

The final leadership framework considered was Senge's (1990) servant leadership. This framework does not exclude the need to perform as a leader, but it specifically seeks to explore the 'being' aspects of personal leadership. Senge (1990) emphasises the development of personal mastery as a lifelong learning process.

The preceding theories emphasise personal mastery as a foundation for personal leadership. Personal mastery is the process that allows leaders to build themselves from the inside out. This means paying conscious attention to who we are being as leaders, through self-awareness, and realising that this is as important as what we are doing as leaders (Cashman, 2008). By knowing ourselves more deeply, we can begin to manage our behaviours, emotions and expressions (Goleman, 2004).

The relationship between catalytic experiences and personal leadership

There is a body of research on leadership styles related to the personal leadership concept such as transformational leadership and servant leadership. These studies are mainly quantitative and show support for a relationship between personal characteristics (including self-efficacy and emotional intelligence) and leadership styles (Pillay, Viviers & Mayer, 2013; Ramchunder & Martins, 2014). The latter in turn was related to various desired outcomes such as organisational commitment, team commitment and team effectiveness and the job satisfaction and performance of subordinates (Mahembe & Engelbrecht, 2013; McLaggan, Bezuidenhout & Botha, 2013; Mokgolo, Mokgolo & Modiba, 2012). There is, however, a dearth of qualitative studies in this field (Beaty, Nkomo & Kriek, 2006) and specifically studies related to the development of the characteristics associated with personal leadership. Shannon and Van Dam (2013) discuss a leadership development programme that seems to centre on professional and interpersonal leadership concepts (as defined earlier in the present article). A personal leadership theme is, however, also included and a qualitative analysis

of the effect of the programme indicated that confidence and self-efficacy were, amongst others, outcomes of the programme.

The present study specifically considered the role of significant experiences in leadership development. George (2007) studied what can be termed as successful leaders and identifies the important contribution of their unique life stories to their motivation and success. Bennis and Thomas (2002) and McAdams (2006) also emphasise the catalytic role of experience in developing effective leadership qualities. Those participants who were able to create meaning from significant experiences were able to engage with their leadership role and saw themselves as capable of shaping a future based on what they have learned. Attributing meaning is often as a result of reflection on the experience. It can be suggested that in the organisational context, characterised by a continuous need for transformation, change in itself would act as a catalyst. Geldenhuys and Veldsman (2011, p. 1) refer to the 'hyper turbulent context' in which organisations function. Leadership plays an important role in such an environment (Eustace & Martins, 2014) and De Jager, Cilliers and Veldsman (2003) refer to the need to develop change leaders.

A catalytic experience generates a process in an individual. The self-concept is re-examined and perceptions of reality up to that point are questioned. Emerging from such an experience with a sense of learning, strength and growth empowers people from a life and leadership perspective (Bennis & Thomas, 2002). A catalytic experience generates a new level of awareness within an individual that starts a journey of self-discovery.

Badarocco (1998) applies this idea to leadership by creating the link between a defining moment and self-awareness. Three questions result from a catalytic experience: Who am I? Who are we? Who is the organisation? Asking these questions enhances the leader's understanding of the impact of the defining moment on their level of self-awareness and therefore on their personal leadership. This leads to more effective leadership. These questions solidify a sense of self-awareness that may not have been there before the experience of the defining moment. In the hero's journey, as depicted by Greenleaf (1977), the hero embarks on a journey and along the way he battles challenges and obstacles, defeats the dragon and returns home transformed. This story is used as a metaphor for the journeys of self-discovery that most people can identify themselves as having gone through at some point in their life.

In Figure 1 the authors propose a model to illustrate the development process as described in the literature. A catalytic experience is shown as one way in which self-awareness can be created and meaning enhanced. Both self-awareness and meaning in turn contribute to personal mastery and thus to personal leadership. The latter is defined in terms of the theories as previously discussed. This model served as basis for the research methodology but at the same

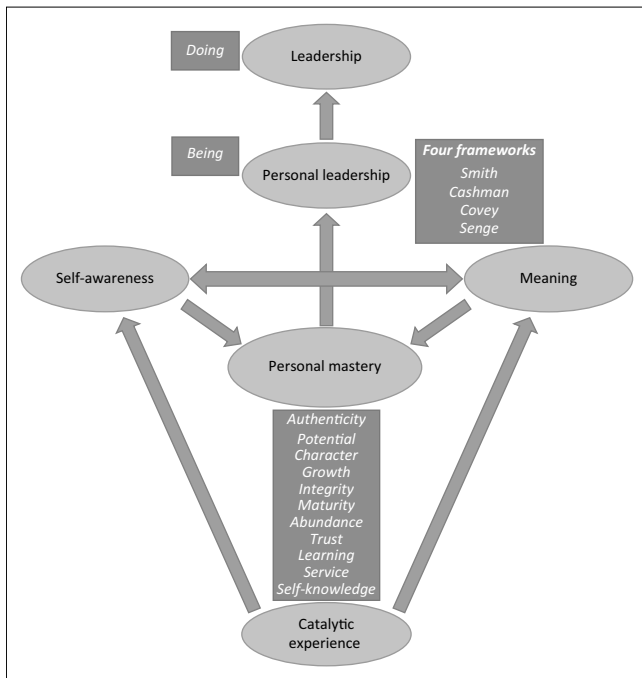


FIGURE 1: The literature review journey.

time the findings of the present study could provide support for this model. Furthermore, the leadership theories served as interpretive framework for the findings but the authors remained open to any new themes that might emerge or novel ways in which themes might emerge.

Method

A qualitative approach using narrative inquiry was followed in the present study. The aim was to explore leaders' stories of their catalytic experiences in order to understand the leadership-related learnings gained from these experiences.

Sample

The first author has a coaching practice that specialises in leadership development in the corporate environment. Business contacts and present and past clients were contacted for referrals to leaders who could serve as potential research participants. This is consistent with snowball sampling or chain-reference sampling (E.M. Schurink, 1998). Present coaching relationships may have affected objectivity during the interview and it was decided not to use the current client base of leaders as participants for the research, but only as an access point to other leaders that could become research participants. Past clients that had completed the coaching relationship at least two years prior to the start of the study were considered as potential research participants. Participation in all cases remained voluntary. Once leaders were identified as potential research participants, they were contacted directly via email to explain the nature of the research and to determine whether the leaders had in fact had a catalytic experience that they felt comfortable speaking about. Leaders further had to hold a senior position in a corporate environment. This choice was based on the level of complexity that leadership in these positions requires. This is

TABLE 1: Demographic data.

Gender	Industry	Title	Organisation size†	Years in leadership
Male	Automotive	General manager	Large	1–5
Male	Consulting	Managing director	Small	6–10
Male	Financial services	Managing director	Medium	1–5
Female	Financial services	Divisional head	Large	10+
Male	Consulting	Managing director	Medium	10+
Female	Automotive	General manager	Medium	6–10
Male	Financial services	Chief Executive Officer	Medium	6–10

†, small, less than 100 employees; medium, 100 to 500 employees; large, more than 500 employees.

in line with purposive sampling 'which is subjective since the researcher relies on his or her experience and judgment' (Guarte & Barrios, 2006, p. 277). The focus is on the exploration of the research question rather than representativeness in terms of a pre-specified population. This has implications for the generalisability of the results. Demographic data for the seven participants are given in Table 1.

Procedure

Participants were contacted telephonically to set up an interview date. Unstructured, in-depth interviews were conducted with each of the seven participants; the interviews were taped with their permission. Field notes were used together with the transcribed, recorded interviews and a reflective research journal to capture the data throughout the research process. Transcriptions and notes were stored in a manner that allowed access to the researchers only. When data are collected through in-depth interviews, the researcher influences what is reported and how it is reported (Fontana & Frey, 2005; Fourie & Van Eeden, 2010). The confessional tale style is used (Sparkes, 2002) and the findings are contextualised in terms of the research objectives and the research question (Poggenpoel, 1998). The results of the thematic analysis of the participants' reflections on the catalytic experiences were reported together with the researcher's interpretation of the leadership-related learnings derived from these experiences. In accordance with the informed, written consent given by the participants, anonymity and confidentiality were ensured in the manner in which the data were captured, stored, retrieved and thereafter utilised in the final write-up. The interviews were private, data were safely stored and no identifying information was published.

Data collection technique

Narrative enquiry reflects an interest in the biographical story as narrated by the person living it. Chase (2005, p. 653) defines the actual narrative as 'oral or written and may be elicited or heard during fieldwork, an interview or a naturally occurring conversation'. Each in-depth interview began with a definition by the interviewer of a catalytic experience. The catalytic experience may be one event or more, it could be positive or negative and personal or work-related experiences could be shared. From that point, the leaders were requested to share their stories in the manner that they found most comfortable. The focus was on the

description of the catalytic experience, the personal growth resulting from it and the learnings derived in a leadership context. It was left up to the participants to share their stories in any way that they wished and they could choose to tell their life story or a specific incident within it. The interviewer limited the guidance and direction given in terms of the manner in which participants told their story resulting in narratives (Squire, Andrews & Tamboukou, 2008). The life story of participants was regarded in terms of its relevance to the goals of this research; the aim was not to understand their full biographical history (Plummer, 2001). The interview ended with a check of the interview guide to ensure that the salient focus areas mentioned above were covered. The guide contained six broad questions (e.g. what have you learnt about yourself in the context of being a leader? What are the factors arising from the experience that have shaped your learning?), but these were only asked if a focus area was not already discussed by the participant.

Data analysis strategy

The transcripts of the taped interviews were re-read numerous times to make sense of the stories, to identify patterns and relationships and to draw out emerging themes. This is recommended when narrative material is involved (W. Schurink, 2009). A variation on Tesch's approach, as described by Poggenpoel (1998), was utilised, resulting in the identification of a number of main themes and subthemes on leadership-related learnings gained from the catalytic experiences. Each narrative was read to form an idea of the nature of the catalytic experience and the learnings derived from the experience. A list of these learnings was compiled for each narrative. Thereafter similar topics were clustered together across the interviews, resulting in main themes and subthemes.

The data collection, recording and analysis supported the reliability of the inferences drawn from the data (e.g. recording and transcribing the interviews). The research context and process were described in detail to determine the degree of similarity with other contexts (and thus the transferability of the findings) and to enable replication of the study (Denzin & Lincoln, 2005; Mackey & Gass, 2005). The results can only be generalised to another context if this context is similar in terms of the sample (amongst other elements) as described in the present study. Future replication of the study would require a process similar to that described here (also see Horowitz, 2012).

Findings

The participants described catalytic experiences that occurred over time (e.g. working for an abusive manager) or focused on specific catalytic experiences (e.g. a move to another country or the birth of a child). The types of experiences varied and were related to work, health, political influences, financial circumstances and personal circumstances. Although the majority of the experiences were described in terms such as 'challenging' or 'traumatic', there

TABLE 2: Themes and subthemes.

Theme	Subtheme
The 'doing' of leadership	Vision
	Taking responsibility
	Drive and hard work
The 'being' of leadership	Character
	Self-awareness
	Self-development
Interpersonal relationships	Communication and building relationships
	Developing people
Meaning and purpose	-

were experiences that were seen as positive. It is, however, important to note that the catalytic experiences described by the participants were highly individualised and the focus is not on the experiences per se, but on the common themes in terms of leadership learnings that could be identified. The themes and subthemes that were identified are summarised in Table 2.

These themes are illustrated below and in each instance reference is also made to the catalytic experience or experiences that an individual experienced. It is, however, important to note that the attribution of the leadership learnings to these events was already made by the participants themselves and the aim of the thematic analysis was the categorisation of the learnings.

The 'doing' of leadership

An important aspect of a leader's role is reflected in performance or action. This is a feature of the leader's role that is considered to be more tangible and therefore measurable. In the findings of the present study, this aspect was identified as the theme relating to the 'doing' of leadership. When the leaders in the study were asked to think about their catalytic experiences, they focused on what they do as leaders and how they could link their leadership actions to their catalytic experiences. One such area of focus was creating and following a vision. A second area of focus dealt with taking responsibility and a third with drive and hard work. These three focus areas formed the subthemes for the main theme: the 'doing' of leadership.

Considering the first subtheme, vision, it was referred to by some leaders as 'big picture thinking', 'goals' and 'objectives'. Most leaders believed that an important part of their leadership-related learnings comprised clarity on what their vision is, communicating this vision and bringing people along to achieve it. Part of their leadership role is to direct people and guide them towards an important outcome for the business. In the words of Leader 6, 'I now carry the company's vision and say "Guys, this is the vision". I get passionate about it and in that moment, I believe it'. This leader regarded various events as significant in terms of personal growth and development as a leader. These included working overseas and being exposed to an environment where excellence is valued. Interestingly, Leader 4 struggled to define her work role until coaching helped her to realise

that a personal vision is as important as a company vision: 'at the same time [*creating*] a vision for myself'.

From the leaders' stories about the catalytic experiences it became clear that these experiences resulted in an inclination to take responsibility (the second subtheme). Leader 5 spoke about having a 'valence' to step into a crisis and sort it out, creating order from the chaos. This leader explained that valence is a psychological term for a predisposition within one's self. It is a natural, instinctive response. Leader 5 felt that his valence stemmed from the first time he took responsibility in a crisis as expressed in his retelling of a financial crisis that he regarded as a catalytic experience. This leader said:

'My valence would be to move in whenever there is a crisis. Now I get triggered unconsciously because I've got a subconscious need ... that attracts that stuff in me'.

Responsibility as a leader includes the importance of letting go, delegating or not holding on to too much, taking responsibility for actions without blaming others, having an influence over people and making tough decisions. In the words of Leader 3, 'you can't be a good strong leader without making some tough strong decisions along the way'.

Every leader interviewed for the study spoke about drive, ambition, excellence and hard work as essential components of their leadership. This was the basis for the third subtheme in this category. Some of the terms used to describe this sense of drive were: ambition, commitment, focusing on one thing and getting good at it, moving forward without letting the negatives derail from goals, being a perfectionist, requiring a high quality of delivery from themselves and their staff, working late hours and focusing on the things that they can change or influence more than the things that are outside of their control. 'Taking action' and 'moving forward' were concepts that appeared repeatedly in the leaders' reflections on their learnings from their catalytic experiences. Leader 5 expressed the element of perfectionism as 'everything I do is 100%'. This is closely related to the concept of leading by example and the participants believed that the best way that they could teach others to be leaders is to show leadership through their own actions and by setting an example that others would want to follow. Leader 1 expressed this as 'walking the talk'. In reaction to experiences related to the political situation in South Africa, he decided to learn to lead rather than assuming the role of victim.

The 'being' of leadership

The second theme identified in the study related to the 'being' aspects of leadership. This theme was identified in the literature as aspects relating to personal leadership. When leaders ask themselves 'Who are we as leaders?' aspects relating to personal leadership or 'being' help them to come up with answers. The subthemes identified within this theme relate to character, self-awareness and personal development.

Leader 1 gave much thought to how character is shaped. He told the story of a sculptor who would spend hours gazing at a rock before beginning to sculpt. When asked why he did this, the sculptor responded that he needed to spend time looking at the elephant that is already in the rock. Only when he has the picture clearly in his mind, can he just chip away what is not necessary from the elephant. It has already been mentioned how Leader 1 decided to use his politically related experiences in a constructive manner and in the case of Leader 3 a destructive relationship with a superior taught him what to avoid in his own leadership style.

Essential leadership qualities were identified by the leaders, as follows:

- Humility in terms of ability to admit mistakes.
- Integrity relating to honesty and 'walking the talk'.
- Authenticity, which they reflected on as understanding who they are and being comfortable with themselves.
- Resilience in terms of withstanding hardship, not letting the negatives derail you and persevering through these.
- Courage to do the right things, make the sometimes tough decisions and to be a survivor.
- Charisma, which was also referred to as energy and passion.
- 'Trusting your gut'.
- Having patience and being calm.

The second subtheme that emerged from the study was that of self-awareness. Self-awareness is essential to answer the question 'Who am I as a leader?' Every leader spoke about self-awareness as being key to leadership-related learnings from their catalytic experiences. Understanding weaknesses and being aware of areas of strength are crucial aspects of being self-aware. As a result of their catalytic experiences, participants felt that they became more aware of their own and others' emotions. They also became more caring about how others feel and were able to express how they feel more easily than before. These traits resemble the concept of emotional intelligence which is considered a crucial leadership skill (Goleman, 2004). Leader 7 explained: 'You start wanting to know more about psychology, ... and get a lot of that EQ involved because previously I really wasn't like that'. A successful business gave him a sense of achievement but eventually resulted in an experience of burnout.

Self-containment or managing their own self by maintaining boundaries and not losing their sense of identity through their work was highlighted as being critical to leadership. Leader 7 stated it simply as:

'I am who I am ... I've completely redefined myself in terms of my identity so my identity is no longer work ... that mirror that gets held up when you just look at yourself'.

In this case the birth of a child served as the catalyst. Leader 4 experienced a coaching process as enabling her to separate her personal identity from her role at work. The latter became her primary identity due to personal problems including a handicapped child and the family's financial circumstances.

A common theme for the leaders was that of continuing their personal journey of self-exploration and reflection. They identified this as necessary in order to remain 'okay' even through some tough experiences. Leader 1 described this as follows: 'You lead through self. You've got to live it and become it'. Leader 2 referred to his personal journey as 'an understanding of where I can take myself personally to a completely new level'. Despite having had a difficult childhood, there were at various stages in his life mentors who saw his potential and helped him in developing this potential. Several leaders also brought up the personal reflection space and its importance in self-awareness.

The third subtheme was that of self-development. Self-development was seen to include all aspects of learning and growth. Learning was described by some as a curiosity to learn more about how their business works, through reading, experience or observation of other leaders. The ability to see things from a different perspective followed from the catalytic experiences together with an appreciation for new experiences. As Leader 6 stated, 'as a leader you need to go out and get experience. Don't be scared to do new stuff'. Various events in her life (amongst others resolving issues related to her sexual identity and the deaths of people close to her) created an awareness of her need to express her own individuality in how she lives. As Leader 5 put it:

'Also believe that a good education is important. So development of skills is important irrespective of the adversity or challenges you face as is providing opportunities for people to develop themselves'.

Despite the financial crisis in his life, he continued his studies at university. Growth in this theme is closely linked to learning. Leader 2 expressed this as follows:

'I've always looked to those other people that can teach you, so for me it's your environment as a great teacher and the people environment ... and hopefully that is the culture we start creating more and more in the business'.

The role mentors played in his life has already been referred to.

Interpersonal relationships

The third theme identified in the findings was the theme of interpersonal relationships. A leader achieves results mainly through the contribution of the people who work for them. Therefore, interpersonal relationships become a crucial aspect of fulfilling a leadership role. The two subthemes identified in this theme were effective communication and developing people.

Effective communication is characterised by openness and honesty. Listening and questioning emerged from the leaders' responses as a required leadership skill. The importance of regular feedback also emerged from the catalytic experiences. Leader 4 stated that 'the one thing I learnt out of my experience was to give feedback. So get feedback and give feedback'. She found herself in a position at work where

the expectations were not clearly defined resulting in feelings of incompetence. Effective communication is a prerequisite for building relationships. Leaders specifically mentioned trust, being inclusive, connecting with people, being part of a team and managing conflict as aspects that enhance the quality of interpersonal relationships. All these are facilitated by effective communication. Some leaders saw that in order to achieve their objectives as leaders, they needed to bring people along rather than tell them what to do. In the words of Leader 1, 'leadership is about relationships'. It is furthermore critical for leaders to embrace diversity and be open in relating to different kinds of people and ways of thinking. Leader 6 emphasised this by stating that 'you had to learn to communicate across diversity'. Again, her overseas experiences are reflected in this learning.

Participants also identified developing people as a core component of the leadership role and this is the second subtheme in the theme of interpersonal relationships. When looking at the support element of developing people, leaders reflected on the importance of a genuinely caring approach to people, showing support for your staff when they are battling with their work and treating them well. Leader 6 referred to the need to take the time to teach her staff by showing support and patience: 'Why do we have so much patience with children but none with adults?'. However, there has to be a balance between supporting and challenging others. The need to challenge people in order to encourage their growth implies that people have to be stretched in order for them to be stimulated to fulfil their potential. Developing people was associated with transformation, career development and ensuring that staff is encouraged to fulfil their potential. As Leader 2 said:

'My intent is to grow and develop people primarily ... I can challenge people and push them hard for their own good ... But I think in the essence I can see other people experience that and that empathy is there'.

Upon reflecting on what helped the leaders to grow and develop in their own careers, they found that having a mentor or role model helped significantly to move them further in their careers. Some actively sought out mentors to look up to and learn from and continue to do so. In the words of Leader 2:

'I think the other very important thing for me is that I've always had role models and I have always have had people that I've looked up to ... and had the ability to form relationships with people who have wanted to mentor me'.

Leader 7 expressed a desire to mentor others so that they can benefit from a mentoring relationship the way that he had benefited, by stating his intention as follows: 'I want to be a mentor and I want to guide this person in their personal growth'.

Meaning and purpose

The fourth theme identified in the study was that of meaning and purpose. Most of the leaders in telling their stories

referred to 'having a sense of purpose' or 'meaning'. All the leaders alluded to meaning and purpose either directly or indirectly. The leaders in the study either saw it as an integral part of their work as leaders or as a way of making a contribution outside of their work environment. For example, one leader described charity work that he gets involved in from a company perspective whereas another described the work that he does in drug rehabilitation which has no direct relationship to his career. The common theme for the leaders interviewed was that each leader described a sense of purpose through 'making a difference', having a 'cause', 'self-sacrifice' or attributing meaning to their life experiences.

The coaching process helped Leader 4 to realise she was responsible for improving the quality of her life: 'When you've got a fundamental values difference, then you've actually got to say, "Why are you here?"' Whereas the birth of a child forced Leader 7 to not just accept the feelings of burnout he was experiencing in his work but to redefine the meaning of his life: 'What am I on this earth for and how can I get more potential out of myself than really just for business?'

Having passion for your work and enjoying your leadership role were related to a sense of meaning and purpose. Leader 4 commented that 'if I'm passionate about something I'll give it my all to make it work'.

Discussion

The broad aim of this study was to explore the leadership-related learnings derived from a catalytic experience and any connection between these learnings, personal leadership and leadership in an organisational context. The study contributes by showing the value of a more holistic approach that emphasises the importance of personal leadership in leadership selection and development. The findings form the basis for recommendations on interventions that will facilitate the relationship between personal experience, self-awareness and leadership.

The first objective of the study was to describe the leadership learnings that emerged from the catalytic experiences. Four main categories of learnings were identified, namely: the 'doing' of leadership, the 'being' of leadership, interpersonal relationships and meaning and purpose. These themes and the related subthemes can be contextualised in terms of the second objective, namely to identify the relationships between the learnings, personal leadership and leadership in an organisational context. Consideration was given to the theoretical frameworks emphasising personal leadership and the development of personal mastery through self-awareness. The importance of attributing meaning to life experiences was also explored. The third objective was to distil guidelines or recommendations for leadership development in organisations. The learning process as it relates to the leadership role enabled leaders to get through their catalytic experiences and draw meaning from them. The opportunity created by this study for a time of reflection was also of value.

The four themes uncovered in the findings concur with the leadership frameworks. Smith (2009) identifies three categories of leadership that speak directly to the first three themes in the findings, namely professional leadership corresponding to the 'doing' of leadership, personal leadership corresponding to the 'being' of leadership and interpersonal leadership corresponding to interpersonal relationships. The fourth theme from the findings, meaning and purpose, is included in Smith's description of personal leadership. Cashman's (2008, p. 15) 'leadership from the inside out' looks at two aspects of leadership: inner and outer leadership. These align with the research findings by considering inner leadership as corresponding to the two themes of leadership the 'being' of leadership and meaning and purpose. Outer leadership corresponds to the remaining two themes from the findings, the 'doing' of leadership and interpersonal relationships. Similarly Covey's (2004) whole person approach to leadership describes leadership in terms of two broad categories, character and competence, that relate to the themes of the 'being' of leadership and meaning and purpose and the themes of the 'doing' of leadership and interpersonal relationships respectively. The final leadership framework considered was Senge's (1990) servant leadership. Servant leadership includes leadership aspects relating to leadership of self and others. It does not exclude the need to be a leader in terms of the 'doing' of leadership but the framework specifically seeks to explore the 'being' aspects of leadership together with meaning and purpose and interpersonal relationships. Senge's servant leadership corresponds to these three themes of the research findings, namely the 'being' of leadership, interpersonal relationships and meaning and purpose.

The characteristics of personal mastery identified from these leadership frameworks were also identified in the present study. Within the theme of the 'being' of leadership there are three subthemes relating to character, self-awareness and self-development. The personal mastery aspects aligned to this theme are authenticity, integrity and character, as part of the subtheme of character, self-knowledge corresponding to the subtheme of self-awareness and growth, maturity and learning corresponding to the subtheme of self-development. In the theme of interpersonal relationships, there are two subthemes: the first is developing people and the second is communication and building relationships. The corresponding personal mastery aspects are abundance and potential (corresponding to developing people) and trust (corresponding to communication and building relationships). The final personal mastery aspect of service corresponds to the theme of meaning and purpose. Self-awareness was identified in the literature review as a key component contributing to personal mastery (Hattingh, 2000) and it was also a prominent feature of the learnings in the present study.

In all the frameworks, meaning and purpose can be considered as part of the 'being' of leadership. Leadership learnings relating to meaning and purpose came out strongly in the findings of the study. What enabled all the leaders

to pull through their challenging catalytic experiences was the fact that they had a reason to push through. This gave them a strong sense of purpose. Based on Frankl's (1984) work, it is the people who can centre their work on a strong sense of meaning and purpose who eventually find the will and determination to carry on despite the challenges. Every leader in the study did this to a greater or lesser extent in order to get through their challenging catalytic experience. Whether this sense of purpose related to survival, responsibility in providing for the family or establishing an autonomous identity, the sense of purpose was strongly grounded in their experience. Every leader was able to get through and survive their experiences and then to draw learnings from them because of their ability to relate the challenging experience to a sense of meaning and purpose.

The findings provide support for the proposed influence of catalytic experiences in the development of the characteristics underlying personal leadership. The combination of themes and subthemes that emerged was unique to this group of participants and their experiences, but these themes and subthemes could be contextualised in terms of the theoretical framework, thus providing support for and adding to the latter. The proposed process of reflection leading to self-awareness and attribution of meaning was recognised together with the concepts underlying the higher order constructs of personal mastery and personal leadership. In addition to the theoretical contribution, these findings can also be implemented at an organisational level to improve the link between personal experience and leadership.

Firstly, a holistic view of leadership that brings together the 'doing' and 'being' aspects of leadership will contribute to leadership and organisational effectiveness. Both the 'doing' and the 'being' of leadership were reflected in the factors that helped participants get through the catalytic experiences and derive a sense of meaning from these experiences. The themes that were identified would be beneficial in planning any leadership development intervention within an organisation. Participants mentioned: external factors such as goal setting, intrapersonal factors related to character building and self-awareness and interpersonal factors including self-development through coaching and therapy as well as the development of others. This indicates that resources for dealing with difficult situations can come from an internal and external perspective. Leaders who have access to both may be helped in processing the experience more quickly and effectively. This is linked to the whole person approach to leadership (Covey, 2004).

Secondly, opportunities for reflection could be created and sought out. The leaders who used coaching and therapy found these modalities to be helpful in drawing out the learnings and deriving meaning from their experiences. The opportunity for reflection provided by the interview process, as part of the research study, was particularly valuable for some participants. It was the first time that they became aware of the extent of the impact that the catalytic experience

had had on them. Before the interview, they understood that they needed to push through, move on or survive. Looking back and spending time talking about it and reflecting on their past experiences helped them realise the significance of the experience and that it had a considerable influence on who they are, as leaders, today.

The study was based on self-reporting by the leaders with no corroboration of their leadership-related learnings and the impact on their leadership style by other parties that may have been involved. In future research it may be valuable to include feedback reflecting the observations of others. A 360-degree feedback process will imply self-reports and observations by others. Reliance on a once-off interview also limits opportunities for insights gained with time and further prompting. Aspects raised by the participants could be followed up in further studies. This includes a potential relationship between values and personal leadership as well as how leadership is driven by personal valence. A quantitative research design can furthermore be considered. Now that the major themes have been identified, one can embark on a large-scale study that shows how leaders view their learnings in terms of the themes identified. Objectivity in this type of study can be enhanced by means of a team approach.

The key learning from this study is to recognise the internal treasure chest that is inherent in each individual. It will help people become good leaders if they look deep inside themselves to understand themselves better and recognise the deep sense of purpose and meaning in their lives. It is the unique qualities and experiences that people have that contribute to their leadership journey and it is through life experiences and challenges that people develop and grow. Even a small learning and shift from within can have a far-reaching impact. If leaders continue to seek meaning and learnings from these experiences, they will discover everything they need in order to be true leaders.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships which may have inappropriately influenced them in writing this article.

Authors' contributions

D.S.H. (PEAC Solutions) conducted the research as a part of her master's dissertation. R.v.E. (University of South Africa) was the supervisor for this study. Both authors contributed to the writing of the article.

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Retention preferences and the relationship between total rewards, perceived organisational support and perceived supervisor support

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Dates:

Received: 22 Sept. 2014
Accepted: 22 June 2015
Published: 06 Aug. 2015

How to cite this article:

Smit, W., Stanz, K., & Bussin, M. (2015). Retention preferences and the relationship between total rewards, perceived organisational support and perceived supervisor support. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #665, 13 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.665>

Note:

Questionnaire is available on request.

Read online:



Scan this QR code with your smart phone or mobile device to read online.

Orientation: Currently there is much debate whether modifying traditional reward packages to focus on the preferences of multi-generations would be essential in attracting, motivating and retaining talent. Total reward factors, perceived organisational support and perceived supervisor support are distinct but related concepts, all of which appear to influence an employee's decision to stay at an organisation.

Research purpose: The objective of this study was to identify the different total reward components that multi-generations prefer as most important for retention. In essence, the study aims to establish possible relationships between multi-generations' total reward components, perceived organisational support, and perceived supervisor support.

Motivation for the study: This study is useful as it conducts a contemporary retention exploration that considers both the emerging demographic workforce shift and the new paradigm shift towards talent management.

Research methodology: A quantitative, cross-sectional research design was applied to gather data from employees ($N = 303$) from different industry sectors in South African organisations.

Main findings: The results showed that performance management and remuneration are considered to be the most important retention factors amongst multi-generation groups. Differences between total reward preferences and demographical variables, which include age, gender, race, industry and job level, were found.

Practical/managerial implications: Organisations should design their reward packages by taking employees preferences into account. More specifically, organisations should focus on remuneration, performance management and development opportunities in order to retain scarce skills.

Contribution/value additions: The results of the study can assist managers to design effective retention strategies, whilst also providing crucial information for the retention and motivation of employees.

Introduction

Key focus

'The **right** total reward strategy can deliver the **right** amount to the **right** people at the **right** time, for the **right** reasons' (Gross & Friedman, 2004, p. 10). The adapted quote illustrates that the most effective reward strategy could provide valuable factors that ultimately motivate and retain talented employees.

Some of the main challenges that organisations, especially South African organisations, are confronted with are skill scarcity and reducing turnover of talented employees (Ashton & Morton, 2005; Ready & Conger, 2007; Robert & Börjesson, 2006). Kerr-Phillips and Thomas (2009, p. 1) record that South Africa is undergoing an overall skill difficulty with regard to the recruitment of its leading talent or 'knowledge' employees. These knowledge employees could be perceived to be the key talent or upcoming talent in the organisation. The search for proficient employees, talent and intellectual capital is even more significant for strategic organisational success and increase in the organisation's overall financial performance (Lawler, 2008; Michaels, Handfield-Jones & Axelrod, 2001; Reindl, 2007; Van Rooyen, Du Toit, Botha & Rothmann, 2010).

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The focus of this study was to understand the total rewards options for the multi-generation workforce in South African organisations in order to identify whether different generations prefer different total reward components. The link between perceived organisational support (POS) and perceived supervisor support (PSS) and total reward was also investigated. An enriched understanding of retention preferences that influences organisational commitment may benefit the organisation that wants to retain its valuable talent.

Background

Lawler (2008) explains that the definition of talent offers a characterisation of what it can preserve, a declaration of what is missing and a proposal of actions needed to be implemented. Numerous nations and organisations are now engaged in the war for best talent (Ferguson & Brohaugh, 2009; Frase, 2007; Human Capital Institute & Vurv Technology, 2008; Kontoghiorghes & Frangou, 2009; Lawler, 2008). Retention factors such as POS and PSS impact employees' job satisfaction, job performance, commitment and turnover (Allen, Shore & Griffith, 2003; Dawley, Andrews & Bucklew, 2008; Du Plessis, 2010; Riggle, Edmondson & Hansen, 2009; Tuzun & Kalemci, 2011). In other words, POS and PSS are negatively associated with judgements to quit the organisation (Hui, Wong & Tjosvold, 2007; Van Schalkwyk, Els & Rothmann, 2011). Longenecker and Scazzero (2003) indicate that intent to leave correlates with job opportunity elsewhere, more money, a poor supervisor, lack of appreciation or inability to get time off from work. Therefore, effective consideration of POS and PSS components can assist in attracting, motivating and retaining employees.

Over the last few years, organisations have had difficulty facing the changing financial setting that has challenged the conventional reward procedures and plans (Briscoe, Schuler & Claus, 2009; Deloitte Development LLP, 2009; Guthrie, 2007; Rubino, 2006; Snelgar, Renard & Venter, 2013; Zingheim & Schuster, 2008). More specifically, research has shown that the different types of rewards employers offer to employees affect the recruitment and retention of top talent (Bussin 2007, 2012; Cox, Brown & Reilly, 2010; Gratton 2004; Guthrie, 2007; Lawler, 2008; Moore & Bussin, 2012; Mucha, 2004). In order to allow an organisation to respond effectively to employees' demands, the reward preferences of the multi-generational workforce should be investigated and understood (Giancola, 2009; Linkow, 2006; Martson, 2003; WorldatWork, 2007). There are various reward and compensation methods other than payment that managers should seriously consider (Armstrong, 2006; Deloitte, 2011; Kaliprasad, 2006). Furthermore, a highly effectual reward policy and practices will aid in attracting, motivating and retaining top talent available, whether globally or locally.

Trends from literature

Previous research has emphasised that the impact that generational differences have on, for example, communication

styles, equipment needs, professional growth preferences, remuneration, benefits, desired leadership and effective reward and recognitions systems can have a significant and profound effect in the work environment (Haeberle, Herzberg & Hobbs, 2009; Nienaber, Bussin & Henn, 2011).

However, if organisations do not cater for the generational preferences, especially for Generation X and Generation Y, it may lead to the downfall of the organisation, as these two generations can be seen as the future leaders within any organisation. Generation X and Generation Y will lead the workplace in the upcoming years and management needs to consider the preferences and motivation of these generations to ensure an engaged and motivated workforce. Karp, Fuller and Sirias (2002) add that policies are generally formulated by Baby Boomers and consequently neglect the needs and preferences of Generation X and Generation Y. This may lead to reward policies that are based on Baby Boomers' preferences, neglecting any other generational preferences. The focus of relevant retention research has thus far been focused on:

- The relationship between total reward components amongst different generations (Haeberle *et al.*, 2009).
- The employee's perception of supervisor and organisational support (Eisenberger, Singlhamber, Vandenberghe, Sucharski & Rhoades, 2002).

In recent years South Africa has focused much on organisational diversity that resulted from employee and cultural diversity; however, less attention has been given to generational differences within organisations. As can be expected, for many years only one generation was predominant; presently, there are four discrete generations prevalent in the working place, namely Veterans, Baby Boomers, Generation X and Generation Y. The understanding of these different generations has become increasingly important for organisations (Dawn, 2004; Du Plessis, 2010; Glass, 2007; Lancaster & Stillman, 2002; McGuire, Todnem & Hutchings, 2007; Reynolds, 2005; Sherman, 2006; Smola & Sutton, 2002; Zemke, Raines & Filipczak, 2002).

Research objectives

The primary objective is to determine whether, in South African organisations, generations prefer different total rewards options and what the relationship is between total reward, POS and PSS. More specifically, two research aims were compiled, namely to determine which reward factors employees rate as most important and to determine which factors are currently used to retain employees. In addition, the following six propositions were formulated from the literature:

- Proposition 1: There is a significant difference in level of importance of total rewards components between managers and employees.
- Proposition 2: Different generation groups prefer different total reward factors.
- Proposition 3: Age, gender, race, qualification, industry, job level, years with company and years remaining at

company play a moderating role in the relationship between total rewards and POS, as well as that between total reward and PSS.

- Proposition 4: A direct positive relationship exists between the employee's total reward components and POS.
- Proposition 5: A direct positive relationship exists between the employee's total reward components and PSS.
- Proposition 6: A direct positive relationship exists between the POS and PSS.

Contribution to the field

South Africa has a very high unemployment rate, which is currently established to be 23.9% (Statistics South Africa, 2012), and one would expect that organisations would be enthusiastically recruiting employees. However, this is not the case, due to limited skills available, employee mobility and the pending retirement of Baby Boomers (Hall & Sandelands, 2009; Masibigiri & Nienaber, 2011). Talent management has the potential to be the reason for an organisation demise or the reason for its continuous success.

An organisation's ability to retain talent holds economic benefits for the organisation, both through cost containment (decreasing replacement costs) and income generation (through efficient application of talent). This study provides significant value in the form of pointers for organisations and human resource (HR) departments in the process of attracting, recruiting and most of all retaining high-calibre talent. More specifically, this study is helpful for managers who are concerned with retaining personnel with scarce skills and provides noteworthy suggestions for effective HR policies and retention strategies in order to retain a competent workforce.

In addition, research on total reward and retention preferences for multi-generation groups is limited in the South African workplace. In addition to its practical relevance, this study can also greatly contribute on an academic level.

What will follow

In the subsequent section of this article, the researchers outline the research design, followed by a presentation of the results. Finally they discuss the results, highlight the implications of the study, outline limitations and make suggestions for areas of future research.

Literature review

Cascio (2003) describes the term retention as actions or plans engaged by management in order to keep employees from exiting the organisation; this includes aspects such as effectively rewarding employees, maintaining interactions, ensuring organisational-person fit and providing a secure, healthy work setting. Subsequently, it is vital that when organisations attain the appropriate skilled employees, they implement retention strategies to prevent them from leaving (Frank, Finnegan & Taylor, 2004; Heneman & Judge, 2003; Kaye & Jordan Evans, 1999; Lockwood, 2006; Wright, 2010).

Döckel's (2003) and Van Dyk and Coetzee's (2012) South African studies revealed six vital retention factors, whilst Bussin and Fletcher (2008) and Van Rooy (2010) as well as Deloitte (2011) found that different generations favour different rewards. Thus, organisations need to investigate their reward schemes and their ability to address the requirements and expectations of these employees, since the costs of major benefits are on the increase (Arnold & Venter, 2008; Breihan, 2007; Chiang, 2005; Corby, Palmer & Lindop, 2009; Costello, 2010; De Lange, 2010; Dencker, Joshi & Martocchio, 2007; Dulebohn, Molly, Pichler & Murray, 2009; Giancola, 2007; Gray, 2008; Gross & Friedman, 2004; Heneman, 2007; Hill & Tande, 2006; Longenecker & Scazzero, 2003; Muteswa & Ortlepp, 2011; Nienaber *et al.*, 2011; Sung & Todd, 2004; Swanepoel, Erasmus & Schenk 2008).

Retention and reward

Total rewards is a term used to explain the support reward elements in the work environment. This can include financial, non-financial, indirect as well as direct, intrinsic and extrinsic rewards that are offered to an employee (Armstrong, 2006; Bussin, 2012; Cable & Judge, 2002; Costello, 2010; Hiles, 2009; WorldatWork, 2010). According to the Corporate Leadership Council Advisory Board, approximately 25% of the decision whether to stay at an organisation relates to remuneration (Bussin, 2012). This raises the question of whether higher compensation will in fact motivate talented employees to stay at the organisation.

Tang and West (1998) add that when employees receive adequate remuneration, they will concentrate more on inherent needs such as acknowledgement, appreciation, training and development and achievement. Reward models are used by many organisations as a starting point from which to design their own unique total reward model (Bussin, 2012; Nienaber *et al.*, 2011). Such models include: The WorldatWork (2007) total rewards model, the Armstrong (2006) total reward model, the Zingheim and Schuster (2008) total reward model, the Towers Perrin (2011) model of total reward, the Corporate Leadership Council (2007) components of total rewards, the Armstrong and Thompson (2002) total rewards model and Aon Hewitt's (2012) reward model.

Generations

Members of a generation group share a special history and these shared incidents or experience shape a generation's attitudes, perceptions and behaviours as they grow up together (Codrington & Grant-Marshall, 2004; Du Plessis, 2010; Sullivan, Forret, Carraher & Mainiero, 2009; Yang & Guy, 2006). However, Giancola (2008) argues that there are no distinct generations but rather that differences are related to individual life cycle and career stages. For this purpose of the study, the guidelines for multi-generations were based on the dates given by Lancaster and Stillman (2002), Reynolds (2005) and Zemke *et al.* (2002); these were identified as: Veterans (born 1922–1945), Baby Boomers (born 1946–1964), Generation X (born 1965–1980) and Generation Y

(Born 1981–1999). The GI Generation (born 1900–1921) was excluded, as most people who were born before 1920 do not participate actively in the workplace any more.

Each generation has its own features and values and attitudes toward work-based events; more specifically, employees' requests and preferences change over time (Dwyer, 2009; Gross & Friedman, 2004; Jenkins, 2008; Kapoor & Solomon, 2011; Meyer & Kirsten, 2012; Netswera, Rankhumise & Mavundla, 2005; Orciani, 2009; Smola & Sutton, 2002; Snelgar *et al.*, 2013; Van der Merwe, 2012). On a practical note it is impossible to compile unique reward profiles for large to medium-sized organisations as it would be difficult to manage and administer these profiles, as indicated by Nienaber *et al.* (2011). A resolution to this issue is, for instance, propositions of diverse rewards for different employee groups, based on characteristics such as job level, business unit, life cycle, geographic location, generation, age, family size, occupation, education level or religion (Du Toit, Erasmus & Strydom, 2007; Mercer, 2008; Snelgar *et al.*, 2013).

Some previous literature indicated that the most appreciated rewards for Veterans, Baby Boomers, Generation X and Generation Y do in fact differ (Bussin, 2012; Metha, Anderson & Dubinsky, 2000; Nuijoo & Meyer, 2012; Reynolds, 2005; Society for Human Resource Management, SHRM, 2009; Zingheim & Schuster, 2008). However, Jorgens (2003) and Noble and Schewe (2003) and in South Africa Moore (2010) as well as Nienaber *et al.* (2011) have found that different generations do not have different reward preferences.

POS: Employees develop an outlook or a worldwide belief about the degree to which their organisation appreciates their contribution and cares about their general well-being, which is known as their POS, as defined by Eisenberger *et al.* (2002). Thus, it can be argued that individuals who perceive that organisational support is very high are less likely to seek and undertake alternative employment (Allen *et al.*, 2003; Armstrong-Stassen & Ursel, 2009; Dawley *et al.*, 2008; Du Plessis, 2010; Harris, Harris & Harvey, 2007; Hui *et al.*, 2007; Jawahar & Hemmasi, 2006; Riggle *et al.* 2009; Van Schalkwyk *et al.*, 2011; Van Vuuren, 2006).

PSS: Employees develop overall insights about the degree to which their supervisors appreciate their contributions and are concerned about their well-being (Eisenberger *et al.*, 2002). An employee's satisfaction with their direct supervisor and their perception of their supervisor's willingness to care for them has been shown to reduce intended turnover and improve the employee's commitment (Dawley *et al.*, 2008; Du Plessis, 2010). Various studies have investigated the positive relationship between POS and PSS. However, very few studies have investigated the direction of the correlation between POS and PSS (Du Plessis, 2010; Eisenberger *et al.*, 2002) or the mechanisms responsible for this association. It could be argued that PSS is a foundation or precursor of POS (Allen *et al.*, 2003; Dawley *et al.*, 2008; Rhoades & Eisenberger,

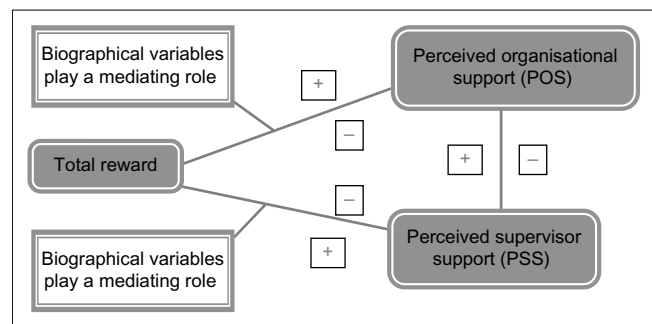


FIGURE 1: Integrated conceptual model.

2002; Shanock & Eisenberger, 2006; Zagencyk, Scott, Gibney, Murrell & Thatcher, 2010).

The proposed path of the relationship between these constructs is demonstrated in Figure 1 and provides the contextual framework for the study.

Research design

Research approach

A quantitative research approach was used for this study. Quantitative research looks at numbers and statistical interpretation of the data gathered from questionnaires as opposed to looking at processes and meanings as in qualitative research (Creswell, 2007). Quantitative research is concerned with the facts or responses of participants. Moreover, a non-experimental design was used. This is the most widely used method and aims to describe and explore certain research topics (Maree, 2010; O'Neil, 2010). A cross-sectional design was used to gather the data in order to achieve the specific aims of this study. This study was conducted using a quantitative exploration paradigm, enabling the researcher to generate statistical analysis to investigate the research objectives of this study.

Various other studies have also opted to follow a quantitative survey research design approach during their exploration of possible relationships between an employee's POS and PSS (Chew & Wong, 2008; Dawley *et al.*, 2008, DeConinck, 2010; Eisenberger *et al.*, 2002; Jawahar & Hemmasi, 2006; Shanock & Eisenberger, 2006). This study was conducted electronically, distributing a self-administered questionnaire through a Web survey tool, namely the SurveyMonkey website.

Research method

Research participants

Population refers to the complete set of cases or members (Saunders, Lewis & Thornhill, 2009). The chairperson of 21st Century Pay Solutions Group (Pty) Ltd made their database available, which enabled the use of the sample population of 5000 organisations and individuals in South Africa.

A total of 318 responses were received from the population of 5000. After cleaning the data, only 303 responses could be

used. This is a response rate of 4.3%. Of the 303 responses, the age group that provided the largest response was between the 48–66 years group (44.2%), 51.5% of the responses were from women, 72.9% of the responses came from White respondents and respondents with an honours degree provided 34.3% of the responses; the majority of the respondents were from the producer services sector (36.05%) and 33.7% of the respondents are in general or executive management positions. Respondents were grouped according to the length of time that they wished to remain at their current organisation. The group from which the largest number of responses came was intent to remain at the organisation for more than 5 years (55.8%).

Measuring instruments

Three constructs were consequently measured, namely: total reward components (which included the biographical questions), perceived organisational support and perceived supervisor support.

Total Reward Questionnaire

The Total Reward Questionnaire was compiled from the seven Retention Factor Scale and the WorldatWork reward model's five main components. The total reward instrument used by Moore (2010) showed a Cronbach's alpha of 0.821. Döckel (2003) developed the Retention Factor Scale (RFS) in order to measure participants' satisfaction with the following seven retention factors: compensation, job characteristics, opportunities for training and development, supervisor support career opportunities, work-life balance and commitment to the organisation. This RFS reported a Cronbach's alpha of 0.80 for the instrument's reliability. The Total Rewards Model Questionnaire contains the following components:

- compensation (five items)
- benefits (12 items)
- work-life balance (eight items)
- performance management and recognition (five items)
- development and career opportunities (seven items).

Thus, the Total Rewards Questionnaire consists of 37 closed-ended questions. Two separate scales were used to determine current utilisation and level of importance. Current utilisation was indicated on a five-point scale ranging from 1 (no extent) to 5 (very great extent), whilst the level of importance was indicated on a six-point Likert-type scale ranging from 1 (not important at all) to 5 (extremely important), with a not applicable option (6). Question 6B of the Total Reward Questionnaire consisted of a ranking question where the participant could rank the five main components in order of importance according to their preference.

Survey of Perceived Organisational Support

The Survey of Perceived Organizational Support (SPOS) measures the employee's perception of the organisation's attitude towards them (Shore & Tetrick, 1991). As a result

one can conclude that the SPOS aims to measure the POS of the employee. The shortened version of the SPOS consists of six items that require the respondent to indicate the extent of their agreement with each statement on a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Du Plessis's (2010) study indicated a 0.863 Cronbach's alpha coefficient, which indicates that the SPOS is highly reliable and can consistently measure POS in a recruitment organisation.

Survey of Perceived Supervisor Support

This instrument aims to evaluate the employees' perception that their supervisor values their input and is concerned about their welfare. As a result one can conclude that the Survey of Perceived Supervisor Support (SoPSS) aims to measure the PSS of the employee. In order to assess this, it was adapted from the SPOS in the same manner as used by Eisenberger *et al.* (2002) and Shanock and Eisenberger (2006). They replaced the word organisation with the term supervisor throughout the SoPSS in order to determine the employees' PSS. The questionnaire consequently also consists of eight items and requires the respondents to score their answers on a seven point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Du Plessis's (2010) study indicated a 0.886 Cronbach's alpha coefficient, which indicates that the SoPSS is highly reliable.

Research procedure

A draft copy of the questionnaire was sent to five respondents randomly chosen for a pilot study. The final questionnaire was emailed to the potential respondents only after essential alterations indicated in the pilot study had been implemented. The researcher obtained ethical clearance from the chairperson of 21st Century Pay Solutions Group to make use of the database available. An orderly and systematic manner was followed to ensure that objectivity was maintained at all times and no comments or answers were imposed on the respondents. The primary researcher was available if any questions or concerns arose and data was recorded on the researcher's personal laptop as well as on a backup flash drive. No financial or non-financial incentives were used to encourage participation.

Statistical analysis

In this case, the data were extracted from the SurveyMonkey website and transcribed into an Excel file. This format made it possible to upload the data to a statistical software package. Analysis of the data was performed using the Statistical Programme for the Social Sciences (SPSS) program. Frequency tables represent the easiest kind of data analysis according to Hill and Lewicki (2007). This type of analysis was used due to descriptive nature of the study. Factor analysis refers to a technique used to take a large set of variables and reduce or summarise the data using a smaller set of factors or components (Pallant, 2011). In this study factor analysis was used to determine how each

sub-component of the Total Reward Questionnaire loaded onto the five factors identified by WorldatWork (2007). The most general measure of reliability analysis is the Cronbach's alpha coefficient (Saunders *et al.*, 2009). A cut-off point of 0.7 was used as a guideline for acceptable reliability (Field, 2009).

Pearson product-moment correlation was calculated as the analysis of the relationship between measured variables was obtained (Field, 2009). Multiple regression analysis was conducted to analyse the relationship between the total reward components and the variables, namely POS, PSS and biographical variables. In this case the t-test analysis was conducted to determine the significant differences in mean scores for gender group in terms of total reward preferences, POS and PSS. ANOVA calculations were used to determine if significant differences existed between the different generations' total reward and biographical variables. A confidence interval level of 95% was used to determine statistical significance where p was less than 0.05 (Pallant, 2011).

Results

The results and discussion thereof are reported according to the stated research aims and propositions.

Table 1 shows that the five total reward components are ranked or preferred as follows in order of importance: compensation, work-life balance, benefits, career development and opportunities and lastly performance management and recognition.

Aim 1: To determine the reward factors that are currently being used the most to retain employees

The results of the gap analysis, which compared the means for current utilisation as well as level of importance of each factor under total reward, showed unique results. The study investigated seven main categories for total reward, namely compensation, communication work enabler, life convenience, benefits and safety, work-life balance, performance management and recognition as well as career development and opportunities.

More specifically, the study highlighted the following sub-points that are currently utilised to retain employees: base salary, provident or pension fund, comfortable work environment, performance support and training opportunities.

TABLE 1: Mean statistic of total reward components in order of importance for sample.

Total reward components	Mean statistic
Compensation	2.256
Work-life balance	2.675
Benefits	3.098
Career development and opportunities	3.482
Performance management and recognition	3.487

Aim 2: To determine the most important total reward factors to retain employees

In addition to current utilisation, the study also investigated the level of importance of the five main categories of total reward, namely compensation, benefits, work-life balance, performance management and recognition and career and development opportunities. The overall mean statistics for all the respondents were also analysed.

The results showed the total rewards in order of importance are, according to the study: compensation, work-life balance, benefits, development and career opportunities and performance management and recognition. More specifically, under compensation the sub-component market-related salary was rated the highest in terms of importance; under benefits provident or pension fund was rated highest, under work-life balance the highest-ranked component was community contribution and under performance management and recognition it was leadership style. Lastly, under development and career opportunities the sub-component organisational climate was rated the highest in terms of level of importance for participants.

Proposition 1: There is a significant difference in preference for total reward factors between managers and employees

To investigate this proposition, the mean differences and ANOVA analysis for the three main job level groups were analysed. The job level groups were general or executive managers, managers and staff. The three most important factors rated for general and executive managers (Group 1) were compensation, performance management and development and career opportunities. Junior and senior managers (Group 2) rated compensation, performance management and benefits and safety as most important to retain them, whilst staff, specialists, technicians and other, (Group 3) rated performance management, development opportunities and benefits and safety as the top three factors to retain them.

These results indicate that there are differences in retention preference factors between manager and employees.

Proposition 2: Different generation groups prefer different total reward factors

To investigate this proposition, the mean differences for the three main generation groups were analysed. The generation groups were determined according to age: Generation Y (aged 31 and younger), Generation X (32–47 years old) and Baby Boomers and Veterans (47 and older) (Lancaster & Stillman, 2002; Reynolds, 2005; Zemke *et al.*, 2002).

A mean represents the arithmetic average of a group of scores; Table 2 shows that for Generation Y the top three most important total reward components are performance management, development and benefits and safety. For Generation X, performance management, development

opportunities and compensation are important to retain them, whilst for Baby Boomers and Veterans the top three total reward components are compensation, performance management and benefits and safety. Overall, the different generation groups prefer more or less the same total reward components; therefore this proposition was rejected.

Proposition 3: Age, gender, race, qualification industry, job level, years with company and years remaining at company play a mediating role in the relationship between total reward and POS as well as that between total reward and PSS

In order to test this proposition, the study used hierarchical regression and ANOVA analysis and the *t*-test. From the regression analysis only age, gender, race industry and job level showed significant results, indicating that only those biographical variables play a mediating role between total reward and POS as well as between total reward and PSS.

Proposition 4: A direct positive relationship exists between the employee's total reward and POS

This study investigated the Pearson product-moment analysis for this proposition; it revealed a strong significantly positive relationship between total reward and POS. This supports findings by Dawley *et al.* (2008), Du Plessis (2010), Harris *et al.* (2007) Jawahar and Hemmasi (2006) and Riggle *et al.* (2009) that an employee's total reward are an originator or foundation for POS. This could be explained by the fact that an employee's perception of retention factors is supportive of the perception of how the organisation appreciates their input and is concerned about their general happiness.

The findings from Table 3 indicate that there is a strong practically significant positive correlation [$r_{(df=237, p > 0.001)} = 0.298$, medium effect] between total reward components and POS: high levels of total reward components are associated with an

increase in POS. Table 3 further indicates that there is a strong practical significant positive relationship [$r_{(df=233, p > 0.001)} = 0.250$, medium effect] between total reward and PSS: high levels of total reward components are associated with high levels of PSS.

Table 3 portrays a large practically significant positive correlation [$r_{(df=230, p > 0.001)} = 0.662$, large effect] between POS and PSS in this study. This indicates that an increased perception of organisational support can be associated with an increased perception of supervisor support. More specifically, the correlation between total reward's seven subscales and POS as well as these seven subscales and PSS is illustrated in Table 4.

From Table 4, one can derive that each of the total reward subscales correlates significantly and positively with POS and PSS. However, between life convenience and POS there was no significant correlation nor was there correlation between life convenience and PSS. This is also true for benefits and safety and PSS, which shows a non-significant positive relationship. Thus, proposition 4, 5 and 6 were accepted.

Proposition 5: A direct positive relationship exist between the employee's total reward and PSS

The results of the Pearson product-moment correlation analysis displayed a medium practically significant positive correlation between employees' total reward and POS and between total reward and PSS.

Proposition 6: A direct positive relationship exists between POS and PSS

Pearson product-moment analysis was conducted and revealed a strong practically significant relationship between POS and PSS: high levels of POS are related with high levels of PSS.

The confirmation and strength of the various relationships are illustrated in Figure 2.

TABLE 2: Generation group differences and the level of importance for the seven total reward categories.

Rated as important	Generation Y (< 31)	Generation X (32–47)	Baby Boomers and Veterans (47+)
1	Performance management and recognition (<i>M</i> = 4.10)	Performance management and recognition (<i>M</i> = 4.15)	Compensation (<i>M</i> = 4.04)
2	Development and career opportunities (<i>M</i> = 4.09)	Development and career opportunities (<i>M</i> = 4.02)	Performance management and recognition (<i>M</i> = 3.86)
3	Benefits and safety (<i>M</i> = 3.91)	Compensation (<i>M</i> = 4.00)	Benefits and safety (<i>M</i> = 3.74)
4	Compensation (<i>M</i> = 3.81)	Benefits and safety (<i>M</i> = 3.85)	Development and career opportunities (<i>M</i> = 3.59)
5	Work-life balance (<i>M</i> = 3.68)	Communication work enabler (<i>M</i> = 3.51)	Communication work enabler (<i>M</i> = 3.33)
6	Communication work enabler (<i>M</i> = 3.13)	Work-life balance (<i>M</i> = 3.50)	Work-life balance (<i>M</i> = 2.96)
7	Life convenience (<i>M</i> = 2.61)	Life convenience (<i>M</i> = 2.39)	Life convenience (<i>M</i> = 2.04)

TABLE 3: Correlation table between total reward, perceived organisational support and perceived supervisor support.

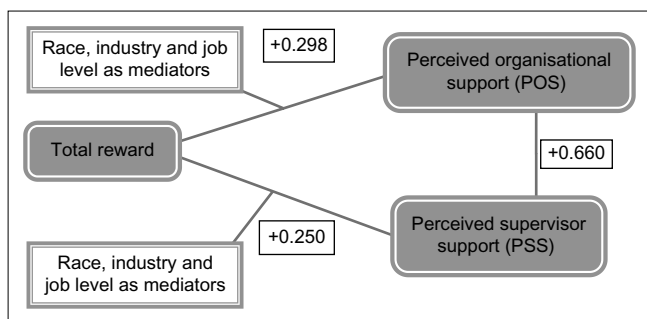
Dimension	Total reward	Perceived organisational support	Perceived supervisor support
Total reward	1.00000	-	-
Perceived organisational support	0.298*‡	1.00000	-
Perceived supervisor support	0.250*‡	0.662*‡	1.00000

‡, practically significant correlation (large effect): $r > 0.50$.
*, statistically significant: $p > 0.01$

TABLE 4: Correlation table between total reward subscales, perceived organisational support and perceived supervisor support.

Reward factor	Compensation	Communication work enabler	Life convenience	Benefits and safety	Work-life balance	Performance management and recognition	Development and career opportunities	Perceived organisational support	Perceived supervisor support
Compensation	1	-	-	-	-	-	-	-	-
Communication work enabler	0.529*	1	-	-	-	-	-	-	-
Life convenience	0.263*	0.295*	1	-	-	-	-	-	-
Benefits and safety	0.575*	0.514*	0.391*	1	-	-	-	-	-
Work-life balance	0.266*	0.327*	0.481*	0.367*	1	-	-	-	-
Performance management and recognition	0.465*	0.394*	0.339*	0.398*	0.585*	1	-	-	-
Development and career opportunities	0.430*	0.383*	0.400*	0.436*	0.581*	0.690*	1	-	-
Perceived organisational support	0.227*	0.199*	0.035	0.083	0.271*	0.351*	0.271*	1	-
Perceived supervisor support	0.200*	0.091	-0.004	0.150*	0.161*	0.307*	0.238*	0.662*	1

*, statistically significant: $p > 0,01$

**FIGURE 2:** Integrated conceptual model.

Discussion

The objective of this study was to investigate the relationship between total reward, POS and PSS. More specifically, the researchers sought to determine the reward factors that would retain employees in each of the four generations.

Current reward factors used in retention of employees

These results are in accordance with the literature (Nienaber *et al.*, 2011), which shows performance and career management, work-life balance and variable pay are currently used to retain talent. The results are also in agreement with other literature of total reward models (Aon Hewitt, 2013; Armstrong, 2006; Armstrong & Thompson, 2002; Corporate Leadership Council, 2007; Towers Perrin, 2011; WorldatWork, 2007; Zingheim & Schuster, 2008) which explain financial and non-financial aspects of total rewards. All of these models are starting points from which organisations can design total rewards packages specific to their organisation's needs.

Reward factors that employees consider to be most important

The results match previous research (Armstrong, 2006; Bussin & Fletcher, 2008; Döckel, 2003; Haynes, 2002; Hiles, 2009; Metha *et al.*, 2000; Muteswa & Ortlepp, 2011; Parker &

Wright, 2001; SHRM, 2009), which has stated that employee rewards important to retain high-calibre talent include financial and non-financial rewards.

On the other hand, these results are in contrast with other research (Chew & Chan, 2008; Mahaney & Lederer, 2006; Rynes, Gerhart & Minette, 2004; Tang, Luna-Aroca, Sutarso & Tang, 2004), which recognises that pay is known to be a possible precursor to lack of organisational commitment and intention to stay, but that payment alone will not be adequate to counter this. For instance, low payment might motivate an employee to leave, but high payment might not necessarily retain them. Thus, intrinsic rewards are equally important as pay; these include achievement, performance, challenging work, variety, responsibility and professional growth.

The results confirm previous studies that employees still regard compensation and remuneration as the most important factor to retain them at their respective organisations (Bussin, 2012; Eskom, 2009; Muteswa & Ortlepp, 2011; Parker & Wright, 2001).

This contradicts numerous researchers who argue that promotion, career development and non-physical and intrinsic motivation factors are more important for employees than just compensation or remuneration (Deloitte, 2011; Mahaney & Lederer, 2006; SHRM, 2009; Tang *et al.* 2004; Towers Perrin, 2011). Metha *et al.* (2000) highlight that younger employees tend to prefer more physical rewards such as medical aid, maternity or paternity leave whilst older employees may value standard options or contributions to their retirement plans.

Proposition 1: There is a significant difference in preference for total reward factors between managers and employees

It can be deduced that managers prefer compensation and performance management as they are already established in

their careers, whilst staff, specialists, technicians and other, prefer development opportunities, benefits and safety as they see stability and professional growth as essential in their careers.

Proposition 2: Different generation groups prefer different total reward factors

This research shows that there are some differences amongst generation preferences, especially total reward, which supports and corresponds to previous studies (Bussin, 2012; Deloitte, 2011; Reynolds, 2005; Zingheim & Schuster, 2008).

As shown by Jorgens (2003), Noble and Schewe (2003) and in South Africa by Moore (2010) as well as Nienaber *et al.* (2011), different generations do not have different reward preferences. Thus these previous studies differed from this study's results, which revealed that there are small differences in generational retention preferences. Moreover, these results are in contrast with research done by Giancola (2008), which states that there are no distinct generational differences and that differences in preferences correspond rather to individual life cycles and career stages.

It can be deduced that Baby Boomers and Veterans would choose compensation, work-life balance and benefits as the top three components that would convince them to stay at their respective organisations, as they place high value on hard work, obeying rules, dedication and military principles (Colon, 2005; Gesell, 2010; Hahn, 2011; Jacobson, 2007; Orciani, 2009; Zemke *et al.*, 2001). The rating of benefits as the third most important was surprising as it was expected that preference for this reward would increase as the employee gets older.

Employees from Generation X are willing to develop their skills and take on challenges and are perceived to be very adaptive in the changing business world. Therefore, work-life balance, benefits, development and career opportunities as well as performance management and recognition are important to them in level of importance after compensation. They are excellent at multi-tasking and working on projects simultaneously and place high value on work-life balance (Gursoy, Maier & Chi, 2008). Jacobson (2007) agrees with this statement and adds that Generation X employees view their jobs as temporary and themselves as free agents.

In contrast, Generation Y employees placed emphasis on compensation, work-life balance, and development and career opportunities as the top three total reward components. Generation Y employees favour teamwork and choose to follow orders; they prefer to work flexible hours in order to successfully complete their tasks in their own way (Dawn, 2004; Dwyer, 2009; Gesell, 2010; Gursoy *et al.*, 2008; Iyer & Reisenwitz, 2009). Employees in this generation use the information channels that exist to familiarise themselves with the environment and display a constant need for knowledge. In addition, it can be believed that Generation Y employees seek challenges and learning and development

opportunities in order to grow in their respective careers as they are open-minded and goal-orientated.

Proposition 3: Age, gender, race, qualification industry, job level, years with company and years remaining at company play a mediating role in the relationship between total reward and POS as well as between total reward and PSS

The results in terms of these relationships are in accordance with previous studies by Twenge, Campbell, Hoffman and Lance (2010), Lawton and Chernyshenko (2008), Chiang and Birtch (2006), Gorman (2000), Hedge, Borman and Lammlein (2006), Nienaber *et al.* (2011) and Snelgar *et al.* (2013), which showed that reward preferences may differ according number of children, age, race job level, qualifications, years of service, marital status and gender.

In terms of age, this is explained in the discussion on proposition 2. There was a statistical significant difference identified for gender, with different scores for men and women in the work-life balance, performance management and development and career opportunities reward categories. This could mean that women have a higher preference for broader total rewards packages, as opposed to packages consisting of financial components only, which is in accordance with the literature (Chiang & Birtch, 2006; Nienaber *et al.*, 2011; Snelgar *et al.*, 2013), which found that women have stronger preferences for remuneration and benefits as well as a conducive work environment.

For race groups, there were statistical significant results mostly for Black, Indian and White employees. This supports previous research that culture and background play a role in preferences (Nienaber *et al.*, 2011). A history marked by being ignored could explain why Black and Indian employees have different total reward preferences. These feelings could potentially extend to employment practices.

In terms of industry group, there was also statistical significant difference between all the industry groups, especially for communication work enabler and work-life balance total reward components. This could be due to organisational differences and preferences. For job level, statistical significant differences were explained in the discussion on proposition 1.

Proposition 4: A direct positive relationship exists between the employee's total reward and POS

This confirmation of this proposition is an important finding, since most evidence in the relevant literature shows that the impact of the employee's perception of retention factors and POS correlate. Similarly, findings from research shows that POS is harmfully connected to judgements of employees exiting the organisation (Hui *et al.*, 2007; Van Schalkwyk, Els & Rothmann, 2011). Equally, POS was also positively linked to remaining with the organisation.

Proposition 5: A direct positive relationship exists between the employee's total reward and PSS

One would expect a correlation between these two concepts due to the unique total reward and support from supervisors. Supervisors are leader implementers of total reward practices and consequently they are associated with the employees' perception of the organisation's total reward practices. The employee's perception that the organisation's total reward practices improve talent retention will result in the perception that their supervisor values their input and cares about their general welfare.

This does affirm discoveries by Allen *et al.* (2003) and Knight-Turvey and Neal (2003) that supportive HR practices that demonstrate an organisation's willingness to invest in its talent will enhance talent retention. If organisations comprehend total reward practices, dedication of resources to these practices will lead to the acquisition and retention of top talent, as suggested by Giancola (2007), Heneman and Judge (2003), Nienaber *et al.* (2011) and Sung and Todd (2004). It can therefore be concluded that high levels of POS can be linked to an increased decision to stay at the organisation concerned. This confirms the positive relationship between an employee's perception that a supervisor is willing to care for them and support them and the employee's intention to leave the organisation, as established by Dawley *et al.* (2008).

Proposition 6: A direct positive relationship exists between POS and PSS

The results confirm proposition 6 and numerous other studies that have already established a positive relationship between POS and PSS (Allen *et al.*, 2003; Dawley *et al.*, 2008; DeConinck, 2010; Du Plessis, 2010; Eisenberger *et al.*, 2002; Rhoades & Eisenberger, 2002; Shanock & Eisenberger, 2006; Zagenczyk *et al.*, 2010).

However, the direction of the relationship between PSS and POS is still debated, given that both directions have been confirmed in previous explorations. The extent to which employees perceive that their supervisors are concerned about their well-being and support them will therefore influence their perception that the organisation also cares about and supports them. This implies that a supervisor is a representative of the organisation through total reward practices and accordingly becomes a personification of total reward practices. On the other hand, one can argue that an employee's perception that the organisation values their contribution and cares for their overall well-being will direct them to believe that their supervisors are also positively inclined towards them.

Despite this study providing relevant insights into total reward amongst different generation within South Africa organisations, it is expected that this study has the usual limitations of questionnaire research. The sample of this study was a sample of convenience. The literature reviewed

the perceptions and preferences of the generations regarding reward or remuneration packages. An effort should be made to investigate aspects such as organisational maturity or organisational life cycle. In terms of this study, a few methodological suggestions can be made. The six-point Likert current utilisation scale applied in the Total Reward Questionnaire should be further defined to improve the reliability and validity of responses. Another recommendation is that the age groups could be divided into intervals of 10 years. It is recommended that qualitative approaches and methods such as interviews or focus groups should be applied to complement the questionnaire. Organisations should encourage developing a culture of research and this must be supported by top management in order to encourage employees to participate in research studies.

Future research should either focus on organisations in a bigger variety of industries or merely on different organisations in one specific industry to ensure that results can be easily generalised. Possible gaps for future research opportunities to explore include total reward, POS and PSS and their relation to performance of the organisation or talent management practices.

Conclusion

The study of total reward and, specifically, different generation groups' perceptions regarding this field is ever changing and transformation still exists in the essence of knowledge. Talent management is a comprehensive, multidimensional concept with a myriad of perceptions that influence its effectiveness. It holds the potential to influence talent retention amongst different generations of employees. This potential ability of talent management to unlock capital has been the driving force behind it becoming a popular field of study.

The effect of work prospects and preferences on turnover intentions changes consistently, which implies that enriching employees' expectations of a 'brighter tomorrow' in their jobs can improve the probability of retention. So too does the present study propose that there is still much more to discover about the dynamic complex relationship between multi-generations' reward preferences and their perceived organisational or supervisor support. The key to attracting and most of all retaining excellent employees is based on an improved diverse total reward model that is a vital foundation for the employee value proposition.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

K.S. (University of Pretoria) was the academic supervisor and was responsible for the design of the project. M.B.

(University of Johannesburg) helped with the data collection and contributed to the preparation of the manuscript. W.S. (University of Pretoria) was responsible for the research and fieldwork and wrote this article.

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Work engagement and meaningful work across generational cohorts

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PO Box 524, Auckland Park
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Dates:

Received: 09 Jan. 2015

Accepted: 13 July 2015

Published: 28 Aug. 2015

How to cite this article:

Hoole, C., & Bonnema, J. (2015). Work engagement and meaningful work across generational cohorts. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #681, 11 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.681>

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Orientation: Engaging employees and providing employees with a sense of meaning at work is not a one-size-fits-all approach. Although research has shown that differences between work engagement and meaningful work amongst generational cohorts exist, results are still inconclusive. With age becoming increasingly more important as a diversity factor, a better understanding of the dynamics between work engagement and meaningful work across different generational cohorts is necessary to design the right strategy for each organisation's unique parameters.

Research purpose: The aim of this study was to determine whether there is a relationship between work engagement and meaningful work and whether there are significant variances between the levels of work engagement and meaningful work between different generational cohorts.

Motivation for study: Work engagement has consistently been highlighted by researchers and human resources experts as a recommended solution to provide companies with the upper hand when it comes to creating a competitive edge. Yet, levels of work engagement are far from ideal, requiring intensified efforts to identify solutions towards raising overall engagement levels. In recent years, much of the focus in terms of generating engagement has been aimed in the direction of financial rewards and other benefits; some organisational experts are of the opinion that a shift is occurring towards meaningful work instead of monetary rewards as the driver of engagement. The changing nature of the work landscape also suggests that generational cohorts experience work engagement and meaningful work differently. Understanding these complexities is mandatory in creating solutions towards improving levels of engagement and meaningful work.

Research approach, design and method: A cross-sectional quantitative research approach has been followed. The Utrecht Work Engagement Scale (UWES) and Psychological Meaningful Scale (PMS) were administered to 261 participants across several financial institutions in Gauteng, including three generational cohorts (Baby Boomers, Generation X and Generation Y).

Main findings: A moderate relationship was found to exist between work engagement and meaningful work. The Baby Boomer generation experiences the highest levels of engagement and meaningful work. Significant differences were found between Baby Boomers and Generation X and Baby Boomers and Generation Y. No significant difference were noted between Generation X and Generation Y.

Practical/managerial implications: A one-size-fits-all strategy to improve work engagement and the sense of meaning in work does not exist. Results of this study suggest that various approaches based on the needs of each cohort may be required in order to sustain engagement. Older workers in particular prove to be far more valuable and productive and should be treated with care.

Contribution: Whilst a large amount of information exists in terms of generational cohorts, not all findings are supported by empirical research to link the concept of work engagement to the different generational cohorts. The conventional belief that older people are less engaged and do not find meaning in their work has been proven to be a misconception, which highlights the danger of stereotypical beliefs. The findings suggest that older employees are still very valuable resources and can contribute significantly to the organisation's success, but have different needs and values than other age groups. Customised engagement strategies tailored towards different generational cohorts might be more beneficial.

Introduction

Work engagement has been hailed by researchers and human resources experts as a solution to improve the overall functioning of organisations and individuals within organisations. Many studies have pointed out that work engagement has become an important predictor

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in determining organisational outcomes and has been associated with business success (Bakker & Schaufeli, 2008; Bakker *et al.*, 2007; Gallup Consulting, 2008; Schaufeli, 2013).

An engaged workforce may potentially enhance the competitive edge required in the current economic landscape. Whilst high levels of engagement add value, low levels can have a detrimental effect on the bottom line of organisations. According to global reports, disengaged employee-related productivity losses translate into billions of dollars per year (Bates, 2004; Gallup Consulting, 2008). It seems that a gap exists between ideal engagement levels and the realisation thereof. According to research, almost 71% of organisations include engagement components in their performance measurement tools, but only 35% consider themselves successful in terms of positive engagement outcomes (Evenson, 2014).

There are various factors that contribute to employees' experience of engagement in the workplace. According to Wrzesniewski, McCauley, Rozin and Schwartz (1997), individuals spend more than a third of their lives engaged in their jobs. Individuals will pursue different work roles throughout their careers which will allow them to better define and discover themselves.

Furthermore, over the last two decades it has also been noted that there has been a shift in psychology towards a more positive approach focusing on people's strengths (Rothmann, 2003; Seligman & Csikszentmihalyi, 2000). Research has highlighted that engaged employees are more hands-on, dedicated to maintaining a quality performance standard, take responsibility for their own growth and are now more involved in their jobs than ever, utilising every single skill and capability they possess to fulfil the myriad of roles in business (Rothmann & Rothmann, 2010; Schaufeli, 2013).

One important point that needs to be made is how work engagement is defined. Construct contamination, confusion and redundancy in the field of engagement has been a problem for at least the last three decades since Morrow (1983) called for a moratorium on the further development of work-related constructs. Since then very little has changed, resulting in the erroneous use of interchangeable constructs such as work engagement, employee engagement, employee involvement, commitment, passion, organisational commitment, to name a few (Havenga, Stanz, Visagie & Wait, 2011; Macey & Schneider, 2008; Morrow, 1983; Roodt, 2004; Schaufeli, 2013). Although it is not in the ambit of this article to go into the detail of the history of the construct development of work engagement and related constructs, it suffices to say that although ample evidence exists that work engagement is conceptually a unique and independent construct (Bakker & Demerouti, 2008; Schaufeli, 2013; Sonnentag, 2011), the debate is still ongoing. It is therefore imperative for every study to clearly define how it conceptualises and operationalises its definition of engagement.

For the purpose of this study we therefore define work engagement as 'a positive, fulfilling, work-related state of mind

that is characterized by vigour, dedication, and absorption' (Schaufeli, Salanova, González-Romá & Bakker, 2002, p. 74).

Work engagement could therefore be understood as the underlying energy of the organisation which might be utilised towards organisational success and personal benefits for the individual (Pech & Slade, 2006). Despite the recognised advantages of high work engagement and meaningful work levels within the workplace, statistics still indicate that actual levels and outcomes are far from ideal.

As work engagement contributes towards overall organisational success, attention needs to be paid to work dimensions that might be related to engagement levels. In recent years, companies have relied on financial rewards and other benefits to elevate engagement levels (Scott & McMullen, 2010). New arguments are however surfacing to support the notion that meaningful work (rather than monetary rewards) could be employed as the driver of engagement (Wells-Lepley, 2013). Erickson (2011, p. 1) proposes that 'meaning is the new money', indicating that meaningful work instead of higher pay could facilitate more effort from employees. But do we all experience meaning in the same way, and if we do not what does it mean for organisations? Researchers have long argued whether differences exist amongst generational cohorts in terms of what motivates them and drives them to perform optimally (Deal, Altman & Rogelberg, 2010; Drake, 2012; Kapoor & Solomon, 2011; Miller, 2008). Recent years have seen trends in older workers working past their normal retirement age (Boone-James, Mckechnie & Swanberg, 2011; Miller & Nyce, 2014). Considering stereotypical beliefs that older workers are less engaged than younger workers, issues become more serious. If older workers are going to be in the workforce for a number of additional years, organisations would want them to be as optimal and engaged as possible. If differences between generational cohorts exist, engagement strategies need to be adjusted and customised accordingly.

Literature review

Relationship between work engagement and meaningful work

Work engagement is defined by Schaufeli and Bakker (2003) as an energetic connection that exists between employees and their jobs. As a result, engaged employees are more effective and equipped to cope with demanding situations in the workplace. Whilst some schools of thought position engagement as the opposite of burnout (Maslach & Leiter, 1997), the work of Schaufeli and Bakker views engagement as an independent construct, which presents as an enduring state of mind (Schaufeli *et al.*, 2002). Engaged employees demonstrate vigour, dedication and absorption when executing tasks in the workplace (Schaufeli *et al.*, 2002).

Schaufeli, Taris and Van Rhenen (2008) propose that engagement contains an element of balance and resilience, as engaged employees tend to feel tired when they work hard, but not in a way that was associated with burnout. Engaged

employees do not develop into workaholics; instead they merely work hard as result of a high internal drive.

Work engagement should not be confused with other constructs, even though some similarities are found when commitment, job satisfaction and involvement are discussed (Maslach, Schaufeli & Leiter, 2001; Schaufeli, 2013). Work engagement may go far beyond commitment, as it identifies engaged employees as people who are not merely committed or passionate, but people who are fully aligned with the goals of the organisation and who make a distinct effort to contribute (BlessingWhite, 2012). Maslach *et al.* (2001) are of the opinion that engagement clearly differs from job satisfaction and involvement in terms of personal fulfilment and energy. According to these researchers, fulfilment and energy could be associated with engagement, but could not be observed clearly in the other two constructs. It can therefore be deduced that the concepts (engagement, commitment, satisfaction and involvement) are related, but that engagement contains a deeper dimension of well-being, emotional and behavioural responses, such as experiencing joy and fulfilment at work (Crabtree, 2005; Hallberg & Schaufeli, 2006; Schaufeli *et al.*, 2002).

Meaningful work originated as a concept from the philosophical principles associated with the meaning of life, as a feeling of purpose in one's overall existence which creates a sense of harmony and completeness (Overell, 2008). Frankl (1984) indicates that the search for meaning is one of the most important motivators during the lifespan of a human being. Meaningful work can then imply that a person would also find a sense of harmony and completeness in their occupational environment.

Kant defines work that provides autonomy, a sufficient income and the opportunity to develop on a moral level as meaningful work (Bowie, 1998). Meaningful work has also been linked to Maslow's (1943) need hierarchy. The hierarchy places self-actualisation at the top of the pyramid, with the underlying principle that when a certain need is fulfilled, another takes its place. A person therefore always strives to become fully realised (Maslow, 1943). According to Overell (2008), this translates into self-actualisation in work and happens when a person assimilates work completely into identity. Kahn (1990) describes meaningfulness at work as the experience that effort is justified and rewarded accordingly.

Various researchers have linked meaningful work to the values and needs of the individual and identify different dimensions of the construct. Chalofsky and Krishna (2009, p. 195) view meaningful work as a state of 'integrated wholeness', where a 'sense of self', 'the work itself' and 'sense of balance' play a role. Lips-Wiersema and Wright (2012, p. 655) identify four dimensions of meaningful work which relate closely to the needs of the individual and the needs of others. These dimensions can be identified as 'developing the self', 'unity with others', 'service to others' and 'expressing full potential'. May, Gilson and Harter (2004) state that the

value that a person finds in work is aligned to aspirations and priorities. Meaningful work could also contribute towards a person's sense of security and dignity (Ayers, Miller-Dyce & Carlone, 2008). Fairlie (2011) identifies meaningful work as the presence of qualities in the workplace or the work itself that is aligned to a person's definition of meaning. Empowerment research in the workplace indicates that successful and committed employees experience feelings of meaningfulness during the execution of tasks (Thomas & Velthouse, 1990; Tymon, 1988).

On a theoretical level, several researchers have argued that relationships between work engagement and meaningful work exist on multiple levels. For instance, the affective component of engagement presents a link with the search for meaning and purpose. Csikszentmihalyi (1975) wrote about the holistic sensation that people experience a feeling of total involvement: the idea of holism is related to fulfilment, whilst the idea of involvement may refer to a high level of engagement. Holbeche and Springett (2003) argued that people strive towards finding meaning in life and work, and once they are able to find fulfilment from a professional perspective, they tend to experience increased engagement.

Other researchers argue that the experience of meaningful work could be viewed as a moderator to engagement (Anitha, 2014; Dullien, 2012; Macey & Schneider, 2008; Wells-Lepley, 2013). Hirschi (2012) supports the notion that meaningful work can foster an environment where engagement levels would be higher. Kular, Gatenby, Rees, Soane and Truss (2008) infer that meaningfulness contributes to a positive attitude towards work and can lead to higher engagement levels. Other field experts, such as Koloc (2013), are of the opinion that meaningful work can lure and retain talent. Meaningfulness, safety, and availability contribute to engagement levels according to May *et al.* (2004). Employees who are able to find alignment between the meaning they derive from their work and their personal views of meaning will tend to be more engaged and more fulfilled (King & Napa, 1998; Schaufeli *et al.*, 2002).

Not only is meaningfulness one of the conditions for engagement (Kahn, 1990) but it is also one of the largest single predictors of engagement (Fairlie, 2011).

Generational cohorts

A generational cohort can be described as a group of individuals who share certain life stages and experiences during the same historical time frame (Kowske, Rasch & Wiley, 2010). Members of a cohort will therefore be born, attend educational institutions, start work, engage in marriage and retire from the workforce during roughly the same period of time. Whilst living within these time frames, members of a generational cohort are exposed to historical happenings and certain phenomena on cultural and social terrains; these experiences influence their thinking and attitudes, and this in turn can impact on their behaviour (Schewe & Noble, 2000). The generational cohorts that are

predominantly represented in the current workforce are the Baby Boomers, Generation X and Generation Y.

Baby Boomers can be defined as individuals born between 1946 and 1964, Generation X represents those born between 1965 and 1980 and Generation Y (also known as Millennials) represents those born between 1981 and 1999 (Meriac, Woehr & Banister, 2010).

Each cohort displays certain characteristics and contributes in their own way to the workplace.

Baby Boomers

Baby Boomers grew up in a time of economic growth and also experienced political and ideological turmoil during the 1960s (Hornbostel, Kumar & Smith, 2011). The employees in this cohort are currently nearing retirement (Parry & Urwin, 2009). According to Hornbostel *et al.* (2011), Baby Boomers are ambitious, highly competitive and work-driven. They place value on being committed to an organisation and will most likely remain at the same place of work for their entire life (Drewery, Riley & Staff, 2008).

Generation X

Generation X's members are the children of Baby Boomers, who grew up in an era of significant technological innovation (Wong, Gardiner, Lang & Coulon, 2008). They are most likely to have experienced minimal supervision whilst their parents were working and are characterised as independent (Hornbostel *et al.*, 2011). Generation X members have been active in the workplace for the past 30 years and make up a large portion of employment statistics. According to Hornbostel *et al.* (2011), Generation X members carry some of the beliefs of their parents, such as the drive for money, challenge and progressing within their careers, but they also place an emphasis on work-life balance and a more informal work environment. Generation X members are believed to be more flexible than Baby Boomers (White, 2011).

Generation Y

Generation Y grew up in the age of social media and cyberspace, and has significant advantage over Baby Boomers in terms of being technologically savvy (Deal *et al.*, 2010). Generation Y members are currently entering the world of work; some might have been part of the workforce for the past few years (Parry & Urwin, 2009). Generation Y members are team players with a strong need to be included in groups. They want to feel valued and recognised within the workplace, grow and learn. If an environment does not provide these types of work values, they will not hesitate to leave the organisation. Generation Y members are inclined to multitask more and to provide their services for the greater good (White, 2011). Wong *et al.* (2008) hypothesise that Generation Y is bombarded with negative media reports and has been exposed to the failures of previous generations at a much higher level than previous generations.

Generational cohorts, work engagement and meaningful work

In terms of meaningful work, previous findings suggest that employees' values influence their experience of meaningful work, which, in turn, could have an impact on work engagement levels. But is there a significant difference in the work values and experience of meaningful work between the cohorts? Researchers are not in agreement on the issue. Some believe that variances exist and that employers should build engagement and meaningful work strategies to accommodate the unique generational needs (Drake, 2012; Kunreuther, 2003). According to Kapoor and Solomon (2011), each cohort brings its own contribution to the workplace. Overell (2008) proposes that the life stage of a person has a significant impact on what they want from work in order to find it meaningful. Research suggests that variances might exist amongst cohorts in terms of the conceptualisation of meaningful work during different life stages (Glass, 2007; Miller, 2008). As a result, varying approaches based on the needs of each cohort may be required in order to sustain engagement (AON Hewitt, 2013; Dwyer, 2009; Pitt-Catsoupes & Matz-Costa, 2009; Robinson, Perryman & Hayday, 2004). Miller (2008) argues that meaning in work is altered as a person gains more experience. Global studies produce conflicting results relating to the generational cohorts and engagement. In regions such as Asia Pacific, Europe, Latin America and North America, Baby Boomers seem to be more engaged than their younger counterparts (AON Hewitt, 2013). In sub-Saharan Africa, Generation Y presents higher engagement levels than the other two cohorts (Emergent Growth, 2013; Maurer, 2013). In Australia, Baby Boomers and Millennials are identified as the most engaged (Australian Public Service Commission, 2012), in South Africa, Kenexa's (2012) findings identify Generation Y members as displaying the highest level of engagement, whilst Coetzee and De Villiers (2010) indicate that older generations experience higher levels of engagement than Generation Y. These findings indicate the possibility of cultural and regional influences on the development of engagement cultures.

Boone-James *et al.* (2011) indicate that age groups should be a consideration when studying engagement, a term they very broadly defined as 'the employee's perception of his/her value to the organization, the employee's loyalty and commitment to the organization, and his/her willingness to contribute to the good of the organization' (p. 11), as they view age as a new factor of diversity, whilst conceding that certain stereotypes may exist. Others feel that no significant differences exist and that minimal effort should be directed towards separate engagement approaches (Deal *et al.*, 2010; Młodzik & De Meuse, 2010).

More specific findings have been proposed by various researchers in terms of the perceived differences in work values amongst generations. Kompier (2005) argues that younger workers (Generation Y) tend to question the nature of meaningful work at a higher level than their older colleagues. Schaufeli *et al.* (2002), as well as Coetzee and De

Villiers (2010), argue that older workers tend to be more engaged. Wong *et al.* (2008) conclude that Generation X and Generation Y tend to be more ambitious but less optimistic than their counterparts in the Baby Boomer generation.

Generation X and Generation Y are also motivated by greater workplace challenges than the older generation. D'Amato and Herzfeldt (2008) indicate that the younger generations (Generation X and Generation Y) will be more likely to remain connected to their organisation if the opportunity for learning exists, whereas older workers are less focused on learning and more on the development of leadership and commitment. Generation X and Generation Y prefer a collaborative workplace, tend to be more tolerant of diversity and are more inclined to belong to groups than Baby Boomers (Wong *et al.*, 2008). This might be due to the fact that Baby Boomers are approaching the end of their careers and, as a result, are severing their ties with other people who will remain in the workforce. Generation Y members, on the other hand, are just starting to enter the workforce and therefore need to affiliate themselves to become integrated members of the organisation (Wong *et al.*, 2008).

Should variances exist, organisations can tailor their engagement strategies towards this diversity in order to be successful. Kapoor and Solomon (2011) propagate that a level of understanding needs to be created between the members of different generations who share the same workspace. By fostering a generational-friendly environment, organisations are also investing in the development of future leaders (Kunreuther, 2003).

Problem statement and research questions

The focus of many organisations is shifting towards customising their engagement strategies. Well-informed strategies need to be supported by good research. Work engagement should not be underestimated when it comes to creating a productive and efficient workplace. Several studies have focused on the importance of high levels of engagement in order to facilitate other outcomes, such as low absenteeism, high organisational commitment and employee wellness. Meaningful work is closely related to work engagement, and it is postulated that employees who experience meaningful work may display higher levels of work engagement (Dik & Duffy, 2007).

This study will therefore attempt to shed light on the interaction of these variables by testing whether there are significant differences between the levels of engagement and the experience of meaningful work amongst different generational cohorts and what the relationship is between them. The research will therefore attempt to answer the following questions:

- Question 1: Is there a positive relationship between work engagement and meaningful work?
- Question 2: Are there significant differences between the generational cohorts in terms of meaningful work?

- Question 3: Are there significant differences between the generational cohorts in terms of work engagement?

Research method

Sampling procedures

Participants were selected by using non-probability stratified sampling from organisations within Gauteng, South Africa, to ensure a sufficient number of respondents for each generational cohort.

As work engagement levels were to be measured, individuals who had been working for one year or longer within the organisation needed to be included to allow for reasonable levels of engagement and meaningfulness.

The questionnaire consisted of three parts, including biographic information, the Utrecht Work Engagement Scale (UWES) developed by Schaufeli and Bakker (2003) and the Psychological Meaningfulness Scale (PMS) developed by Tymon (1988).

A total of 320 questionnaires were distributed, out of which 283 were returned (88% response rate). After data vetting processes, 261 surveys (82%) were identified as viable for the purposes of the analysis. Twenty-two cases (7%) were excluded due to incomplete data, or work experience of less than one year.

Whilst questions relating to all three dimensions in the UWES were included, it is assumed that all items relate to engagement, which allowed unidimensional use of the instrument, an approach endorsed by several other authors (De Bruin, Hill, Henn & Muller, 2013; Rothmann, Jorgensen & Hill, 2011).

Ethical considerations

In any research project, ethical dimensions need to be considered. All participants in this study were included on the basis that they were fully briefed on the purpose of the project. Participation was voluntary and individuals had the opportunity to withdraw at any time. Furthermore, no participant's name was included in the study: responses were only labelled in terms of a numbering system. Organisations were also not explicitly mentioned, as the data were handled in a consolidated manner. In terms of data coding, each company was assigned an alpha character to ensure full anonymity.

Results

Descriptive statistics

Descriptive statistics were calculated in order to provide more information about the sample and to determine whether assumption-related violations existed (see Table 1).

In terms of the generational cohorts, participants belonged to one of three groups, depending on their year of birth. Participants born between the years 1946 and 1964 were grouped into the cohort labelled Baby Boomers, participants

TABLE 1: Demographic characteristics of participants.

Item	Characteristic	Frequency	Percentage
Gender	Male	128	49
	Female	133	51
Ethnicity	Black	60	23
	Mixed race	15	5.7
	Indian/Asian	14	5.4
	White	170	65.1
	Missing/Invalid	1	0.8
Marital status	Married (Civil)	128	49.6
	Married (Traditional)	18	7
	Polygamous marriage	1	0.4
	Living with partner	15	5.8
	Never married	62	24
	Widow/Widower	8	3.1
	Separated	2	0.8
	Divorced	24	9.3
Employment status	Permanent	220	84.3
	Temporary	7	2.7
	Contract	33	12.6
	Missing	1	0.4
Organisational hierarchy	Administrative	64	24.9
	Craft/Trade	2	0.8
	Support services	2	0.8
	Management	47	18.3
	Technical	14	5.4
	Legal	7	2.7
	Marketing and sales	10	3.9
	Human resources	6	2.3
	Financial	33	12.8
	Information technology	34	13.2
	Purchasing/Tenders	4	1.6
	Inventory	1	0.4
	Quality assurance	10	3.9
	Customer services	12	4.7
Other	11	4.3	

TABLE 2: Generational cohorts.

Year of birth	Generational cohort	Frequency	Percentage
1946–1964	Baby Boomers	64	24.52
1965–1980	Generation X	93	35.63
1981–1999	Generation Y	104	39.85

N = 261.

TABLE 3: Skewness and kurtosis.

Variable	Skewness	Kurtosis
Engagement	-0.31	-0.48
Meaningful work	-0.4	-0.56
Age	-0.26	-1.4

born between 1965 and 1980 were allocated to the Generation X cohort and participants born between 1981 and 1999 were classified as Generation Y. The mean age for Baby Boomers, Generation X and Generation Y were 57, 42 and 28 respectively and can be seen in Table 2.

Normality of distribution

The data was scrutinised for any violations in terms of outliers, skewness and kurtosis levels. Although some level of skewness existed (Table 3), scores were acceptable for the size of the sample (Tabachnick & Fidell, 2006).

Reliability

The commonly-used indicator for reliability is the Cronbach's alpha coefficient, which is considered acceptable when above 0.70 and preferably above 0.80 (Field, 2009; Pallant, 2005; Tabachnick & Fidell, 2006).

Cronbach's alpha scores of 0.93 and 0.72 were obtained for the UWES and PMS respectively. In the case of the PMS one should take into consideration that reliability also tends to be lower when a scale consists of fewer than 10 items (Pallant, 2005).

Correlation

In order to examine the relationship between work engagement and meaningful work, Pearson's correlation coefficient was calculated. A moderate, positive correlation of 0.43 and statistical significance at the 0.01 level were achieved, indicating that higher levels of engagement can be associated with higher levels of meaningful work.

Multivariate analysis of variance

In order to understand how generational membership affects engagement and meaningfulness, a multivariate analysis of variance (MANOVA) was conducted. MANOVA, as opposed to multiple analysis of variance (ANOVAs) was chosen to avoid Type I errors and to show potential interaction effects.

To determine whether the assumption of homogeneity of variance-covariance matrices are adhered to, the Box Test was included in the analysis. According to the results (Significant value 0.782), it can be assumed that the homogeneity assumption has not been violated, as it presents larger than 0.001 (Pallant, 2005).

According to the Levene test, a significance value of less than 0.05 indicates violation of the assumptions of equality of variance. The Levene scores for work engagement and psychological meaningfulness respectively were 0.649 and 0.714, indicating no related issues.

The results of the multivariate tests (Table 4) indicated that significant differences were present between the groups in terms of the dependant variables. For smaller sample sizes or groups with unequal sizes, the Pillai's trace is often the preferable measure and offers the best protection against Type I errors (Field, 2009). It can be assumed that a difference exists between the cohorts in terms of the relationship between engagement and meaningfulness.

Significance in terms of each of the variables were further investigated (test of between-subjects effects, Table 5).

The Baby Boomer cohort obtained the highest level of engagement (79.85), Generation X scored the second highest (74.13) and the Generation Y cohort scored the lowest (70.71).

TABLE 4: Multivariate analysis.

Multivariate measure	Value	F	Hypothesis df	Error df	Significance	Partial eta squared
Pillai's trace	0.104	6.278	4	460	0	0.052
Wilks's lambda	0.897	6.420	4	458	0	0.053
Hotelling's trace	0.115	6.560	4	456	0	0.054
Roy's largest root	0.113	13.047	2	230	0	0.102

TABLE 5: Estimated marginal means.

Variable	Cohort	Mean
Engagement	Baby Boomers	79.85
	Generation X	74.13
	Generation Y	70.71
Meaningfulness	Baby Boomers	15.35
	Generation X	14.78
	Generation Y	14.07

When the meaningfulness levels are studied, the same pattern emerges. The Baby Boomers have the highest level of meaningfulness (15.35), Generation X members present with the second highest level (14.78) and Generation Y members have the lowest levels of the three cohorts (14.07).

Differences in themselves might not always have statistical significance. In order to determine whether there are significant differences between the groups, post hoc tests were executed (Table 6).

The multivariate tests, the Pillai's trace and Wilks's lambda values of 0.000 for both indicate that the differences were significant. In terms of engagement, there are significant differences between the Baby Boomer generation and the other two cohorts, whilst no significant difference is present between Generation X and Generation Y.

When meaningfulness is considered, a significant difference is present between Baby Boomers and Generation Y, but no significant variances are found between the Generation X and Generation Y members, or between members of the Baby Boomer and Generation X cohorts. To understand the differences between the groups in more practical terms and to determine the effect size of the differences, Cohen's *d* was calculated for each cohort for engagement and meaningful work respectively. The results can be seen in Table 7.

Discussion

The purpose of this study was to investigate the relationship between work engagement and meaningful work and to compare levels of engagement and meaningfulness across different generational cohorts in the workplace.

Based on the results of the study, the findings in terms of each research question are discussed further.

Question 1

Is there a positive relationship between meaningful work and engagement?

As discussed, many authors support the idea that a relationship exists between meaningful work and engagement

(Anitha, 2014; Dullien, 2012; Fairlie, 2011; Kahn, 1990; Macey & Schneider, 2008; Wells-Lepley, 2013). According to the results of this study, a moderate positive relationship exists between the two variables. This implies that higher levels of meaningful work could imply higher engagement levels, which could prompt organisations to pay more attention to the content of work and other factors such as person-job fit, again taking into consideration factors such as age, career stages and second careers.

Question 2

Are there significant differences between the generational cohorts in terms of meaningful work?

One of the main gaps identified by previous research is inconclusive evidence on whether there are any real differences in the experience of meaningful work between the generational cohorts (Boone-James *et al.*, 2011; Drake, 2012; Kapoor & Solomon, 2011; Kunreuther, 2003; Overell, 2008).

In terms of meaningful work, this study presented only a significant difference between Baby Boomers and Generation Y. If one takes the theory into account that each cohort will conceptualise meaning in work differently according to the life stage that they are in and that meaning will change as more experience is gained (Boone-James *et al.*, 2011; Glass, 2007; Miller, 2008), the results can partially be accounted for as the differences between Generation X and Baby Boomers are a lot less pronounced. Perhaps the segmentation of generational cohorts should also be scrutinised in finer detail to improve the richness of the data.

Question 3

Are there significant differences between the generational cohorts in terms of engagement?

As with the case of meaningful work, global studies deliver conflicting results when it comes to the engagements levels of generational cohorts in the workplace. The results of this study indicated a significant difference between the Baby Boomer generation and the other two cohorts, but no significant difference between Generation X and Generation Y. Baby Boomers are the most engaged, supporting results found by Coetzee and De Villiers (2010). This also supports other international studies who indicated similar trends (AON Hewitt, 2013; Australian Public Service Commission, 2012).

The differences in engagement levels between the cohorts could be attributed to various factors. If Baby Boomers are highly ambitious, competitive, dedicated and driven

TABLE 6: Post hoc tests.

Variable	Multivariate measure	(I) Cohort	(J) Cohort	Mean difference	Standard error	Significance	95% confidence interval		
							Lower bound	Upper bound	
Engagement	Tukey HSD	Baby Boomers	Generation X	5.7123*	2.06293	0.017	0.8459	10.5787	
			Generation Y	9.1383*	2.02100	0.000	4.3708	13.9058	
		Generation X	Baby Boomers	-5.7123*	2.06293	0.017	-10.5787	-0.8459	
			Generation Y	3.426	1.82479	0.148	-0.8787	7.7307	
		Generation Y	Baby Boomers	-9.1383*	2.02100	0.000	-13.9058	-4.3708	
			Generation X	-3.426	1.82479	0.148	-7.7307	0.8787	
		Scheffe	Baby Boomers	Generation X	5.7123*	2.06293	0.023	0.6297	10.7949
				Generation Y	9.1383*	2.02100	0.000	4.1590	14.1176
			Generation X	Baby Boomers	-5.7123*	2.06293	0.023	-10.7949	-0.6297
				Generation Y	3.426	1.82479	0.174	-1.0699	7.9219
			Generation Y	Baby Boomers	-9.1383*	2.02100	0.000	-14.1176	-4.1590
				Generation X	-3.426	1.82479	0.174	-7.9219	1.0699
	LSD	Baby Boomers	Generation X	5.7123*	2.06293	0.006	1.6476	9.7770	
			Generation Y	9.1383*	2.02100	0.000	5.1563	13.1203	
		Generation X	Baby Boomers	-5.7123*	2.06293	0.006	-9.7770	-1.6476	
			Generation Y	3.426	1.82479	0.062	-0.1694	7.0215	
		Generation Y	Baby Boomers	-9.1383*	2.02100	0.000	-13.1203	-5.1563	
			Generation X	-3.426	1.82479	0.062	-7.0215	0.1694	
	Bonferroni	Baby Boomers	Generation X	5.7123*	2.06293	0.018	0.7373	10.6873	
			Generation Y	9.1383*	2.02100	0.000	4.2644	14.0122	
		Generation X	Baby Boomers	-5.7123*	2.06293	0.018	-10.6873	-0.7373	
			Generation Y	3.426	1.82479	0.185	-0.9747	7.8267	
		Generation Y	Baby Boomers	-9.1383*	2.02100	0.000	-14.0122	-4.2644	
			Generation X	-3.426	1.82479	0.185	-7.8267	0.9747	
Meaningfulness	Tukey HSD	Baby Boomers	Generation X	0.5617	.43425	0.400	-0.4627	1.5861	
			Generation Y	1.2796*	.42543	0.008	0.2760	2.2832	
		Generation X	Baby Boomers	-0.5617	.43425	0.400	-1.5861	0.4627	
			Generation Y	0.7179	.38412	0.150	-0.1882	1.6241	
		Generation Y	Baby Boomers	-1.2796*	.42543	0.008	-2.2832	-0.2760	
			Generation X	-0.7179	.38412	0.150	-1.6241	0.1882	
		Scheffe	Baby Boomers	Generation X	0.5617	.43425	0.435	-0.5082	1.6316
				Generation Y	1.2796*	.42543	0.012	0.2315	2.3278
			Generation X	Baby Boomers	-0.5617	.43425	0.435	-1.6316	0.5082
				Generation Y	0.7179	.38412	0.177	-0.2285	1.6643
			Generation Y	Baby Boomers	-1.2796*	.42543	0.012	-2.3278	-0.2315
				Generation X	-0.7179	.38412	0.177	-1.6643	0.2285
	LSD	Baby Boomers	Generation X	0.5617	.43425	0.197	-0.2939	1.4173	
			Generation Y	1.2796*	.42543	0.003	0.4414	2.1178	
		Generation X	Baby Boomers	-0.5617	.43425	0.197	-1.4173	0.2939	
			Generation Y	0.7179	.38412	0.063	-0.0389	1.4748	
		Generation Y	Baby Boomers	-1.2796*	.42543	0.003	-2.1178	-0.4414	
			Generation X	-0.7179	.38412	0.063	-1.4748	0.0389	
	Bonferroni	Baby Boomers	Generation X	0.5617	.43425	0.591	-0.4856	1.6089	
			Generation Y	1.2796*	.42543	0.009	0.2536	2.3056	
		Generation X	Baby Boomers	-0.5617	.43425	0.591	-1.6089	0.4856	
			Generation Y	0.7179	.38412	0.189	-0.2084	1.6443	
		Generation Y	Baby Boomers	-1.2796*	.42543	0.009	-2.3056	-0.2536	
			Generation X	-0.7179	.38412	0.189	-1.6443	0.2084	

Note: Based on observed means. The error term is mean square (error) = 6.438.

*, The mean difference is significant at the 0.05 level.

(Drewery, Riley & Staff, 2008; Hornbostel *et al.*, 2011; White, 2011), it can be inferred that they might be more engaged in their work in order to reach their goals. The differences can be attributed to the different generational experiences that impact on behaviour (Glass, 2007). One can also not completely rule out other factors such as personality factors and temperament that may have contributed to some of the observed differences (Langelaan, Bakker, Van Doornen & Schaufeli, 2006), although the focus of the study

was not on individual differences but on differences between generational cohorts.

Implications for organisations

The changing generational landscape can be taken into consideration when the engagement levels of the cohorts are interpreted from this study, as it provides an additional contextual background. As employees within the workforce mature, the distribution of the generational cohorts is

TABLE 7: Effect size (Cohen's *d*) for differences between groups for engagement and meaningful work.

Variable	Cohen's <i>d</i>	Cohort
Work Engagement	0.50	Baby Boomers
		Gen X
	0.64	Baby Boomers
		Gen Y
	0.14	Gen X
		Gen Y
Meaningful work	0.46	Baby Boomers
		Gen X
	0.56	Baby Boomers
		Gen Y
	0.01	Gen X
		Gen Y

changing. According to Mlodzik and De Meuse (2010), the estimated generational stratification for 2010 and beyond in the USA is as follows: 5% Matures (the generation preceding the Baby Boomers), 38% Baby Boomers, 32% Generation X and 25% Generation Y. Future predictions indicate that by 2020, Generation Y will be the predominant cohort (42% of the workforce), whilst Generation X will remain relatively stable at 30%. The Mature cohort will be reduced to 1% of the workforce, whilst Baby Boomers will represent 22% and a new cohort will be introduced in the form of Generation Z (Mlodzik & De Meuse, 2010).

In today's workplace, members from the older cohorts are not necessarily leaving the workforce once they reach retirement age. In the current financial climate, people continue to work well beyond retirement age to enable a more comfortable lifestyle. For this reason, it is important to facilitate higher engagement levels amongst older employees (Hornbostel *et al.*, 2011). Benchmark surveys have indicated that 60% of South African pensioners appear to be in financial crisis and 31% continued some form of employment after their official retirement date to supplement their income (Sanlam, 2013).

The results of the study indicate that Baby Boomers are the most engaged, and this finding has various implications. Firstly, it could be projected that organisations within South Africa might risk losing the most engaged cohort in the near future. This also has another implication, which is that the larger part of the workforce might not be optimally engaged. According to studies, the impact of less engaged employees could translate into large financial losses (Bates, 2004; Gallup Consulting, 2008). Organisations should therefore attempt to understand how engagement levels could affect their organisational success and act accordingly.

Limitations

Some limitations should be noted. Common method bias may have influenced the results as respondents were asked to respond to more than one construct in the same survey at the same time. With smaller sample sizes, any significant differences between groups should be treated with caution. The Baby Boomers cohort was a much smaller group than the other two cohorts which could have influenced the results.

This also poses a problem in terms of generalisability of the results.

Perhaps one of the downfalls of using well-established instruments is that one sometimes assumes that they remain relevant over time. Significant differences between Baby Boomers and Generation Y could, besides others factors, also be attributed to test item bias, simply having a different understanding or interpretation of the constructs being measured. Differential item functioning (Karami, 2012) is recommended to address this shortcoming. Another possible cause that could have been overlooked in explaining at least some of the differences is the use of composite scores in analysing mean differences between groups (Steinmetz, 2013). According to Steinmetz (2013), researchers in social sciences often assume that partial invariance of the measurement instrument is sufficient, which might not be the case when working with composite scores. Results should therefore be treated with care.

Recommendations

Within the diverse and changing landscape in the workplace, the focus of many organisations needs to start shifting towards the needs and values of different generational cohorts. The fact that Baby Boomers outperformed Generation X and Generation Y in terms of both work engagement and meaningful work indicates that they have a lot more to offer than what stereotypically has been believed. Whilst this study provides relevant information in terms of the engagement and meaningful work levels between the cohorts, more in-depth research is required to enable organisations to customise better engagement strategies.

It would for instance be interesting to investigate the engagement levels over time, to determine whether these vary for the same participants across a specific time period. Furthermore, it is recommended that more is done to understand how different generations approach meaningful work and whether the same definitions are present across different cohorts. This could aid organisations to tailor their selection, development and reward policies to suit individuals from different age groups.

Attention could be paid to the interaction between the different generations in the workforce to determine whether the groups experiencing higher levels of engagement and meaningfulness could ultimately play a role in elevating these levels amongst the other groups. It is further suggested that more in-depth mixed approaches such as qualitative and longitudinal studies should investigate other factors such as personality differences across generational cohorts and the influences of the different career stages on the experience of work.

Conclusion

This study showed that a positive moderate relationship exists between work engagement and meaningful work and

that efforts to increase engagement levels will have a positive effect on workers' experiences of meaningfulness in their work. Beliefs that older people are less engaged and find work less meaningful are proven incorrect. In both instances, Baby Boomers outperformed their younger counterparts. The results therefore suggest that organisations should take age into serious consideration when designing their engagement strategies. With people retiring later, organisations need to keep their older workers engaged, but also need to determine which elements the other generational cohorts find meaningful in their work to become more engaged and customise their strategies accordingly.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

Authors' contributions

C.H. (University of Johannesburg) was the supervisor of the research study. She was responsible for making conceptual contributions to the study and contributed to updating and revising the literature review, executing the data analysis and writing the article. J.B. (University of Johannesburg) was responsible for conceptual contributions to the study; she was the main contributor to the literature review and was responsible for data collection and data capturing.

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Psychological capital, subjective well-being, burnout and job satisfaction amongst educators in the Umlazi region in South Africa

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Dates:

Received: 13 Jan. 2014
Accepted: 05 Sept. 2014
Published: 16 Sept. 2015

How to cite this article:

Hansen, A., Buitendach, J.H., & Kanengoni, H. (2015). Psychological capital, subjective well-being, burnout and job satisfaction amongst educators in the Umlazi region in South Africa. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #621, 9 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.621>

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Orientation: Challenges faced by educators in South Africa are increasing due to their working conditions, which in turn affects the educators' enthusiasm towards their jobs. Change will likely be witnessed when educators are able to attain a positive and rewarding life, develop and flourish as individuals.

Research purpose: This study sought to investigate the relationship between psychological capital (PsyCap), subjective well-being, burnout and job satisfaction and to explore whether PsyCap mediates the relationship between subjective well-being and burnout.

Motivation for the study: The study is premised on the fact that enhancing the positive attributes and strengths of educators can have a positive impact not only on their performance and commitment, but also on the satisfaction of students.

Research approach, design and method: This cross-sectional study used a biographical questionnaire, PsyCap questionnaire, satisfaction with life scale, burnout inventory and Minnesota job satisfaction questionnaire to collect data from 103 educators.

Main findings: Findings indicated statistically significant relationships between PsyCap, subjective well-being, burnout and job satisfaction. PsyCap was found to mediate the relationship between subjective well-being and burnout.

Managerial implications: PsyCap mediates the relationship between subjective well-being and burnout. Organisations can minimise burnout through the enhancement of positive capacities inherent in PsyCap and the aiding potential of subjective well-being.

Contribution/value-add: The findings highlighted the aiding potential of subjective well-being as well as the possible resources PsyCap, subjective well-being and job satisfaction can provide in times of distress.

Introduction

Teachers often occupy a role far beyond that of an educator to their students, as they aim to understand the plethora of factors affecting the learning abilities of their students and thereby promote a positive and enriching environment for optimal learning of their students (Govender, 2011). Hammett and Staeheli (2009) are of the view that many teachers lack the skills to promote an expected effective and relevant learning environment for their students. Hammett and Staeheli further posit that the challenges and demands teachers face in South Africa are unique, overwhelming and increasing constantly due to the vast socioeconomic disparities teachers find themselves facing. Access to adequate resources has been cited as problematic by many educators in South Africa, which in turn affects the motivation and enthusiasm teachers possess for their jobs and eventually the quality of education students receive (Hammett & Staeheli, 2009). In recent years, the South African basic education sector witnessed the introduction of different systems of curriculum (such as Outcome-Based Education), which is believed to have placed a significant amount of stress on teachers as they have had to adapt to the changing curricula (Ladbrook, 2009).

Despite the demands placed on teachers, there is a consensus that teachers often concern themselves with trying to fix the problems encountered by their learners, whilst neglecting the need to focus on developing their own strengths and qualities (Hammett & Staeheli, 2009). Enhancing the positive attributes and strengths of educators leads not only to a positive impact on their performance, commitment and satisfaction, but also to an increase in satisfaction amongst students, which enables them to achieve higher academic results (Luthans, Norman, Avolio & Avey, 2008). One of the fundamental purposes of teachers is not only enriching the educational needs of the youth, but also inspiring and encouraging students to flourish and live a positive

and rewarding life. It is imperative that educators in South Africa achieve job satisfaction to enhance commitment to their jobs and performance improvement (Luthans *et al.*, 2008). In order for educators to transfer positive outlook to students and cultivate a generation of positive, flourishing, committed and satisfied youth, who are able to excel in all spheres of life, it is imperative for teachers to become aware of their strengths and positive attributes.

A shared consensus exists amongst researchers (e.g. Clark, 2000; Rothmann & Barkhuizen, 2008) that education institutions worldwide are developing an imbalance with their environments arising because schools face an overload of demands and are equipped with an undersupply of response capabilities. This is taxing and often contributes to the depletion of internal resources teachers possess for their valuable work. In this regard, it is necessary for a positive approach to be taken in the study of educators and how certain positive capacities can aid in the development and flourishing of educators. It should be noted that in the current study, the terms learners and students as well as the terms teachers and educators are used interchangeably. In light of the above, the study sought to investigate the potential link between psychological capital, subjective well-being, burnout and job satisfaction. Psychological capital (PsyCap) and the tremendous potential value it can provide in the work arena were explored. The effect of PsyCap was assessed to determine whether its positive capacities play a role in increasing job satisfaction amongst teachers, whilst decreasing the levels of burnout. In order to address the objective of the study, the following research questions were asked:

- How have psychological capital, subjective well-being, burnout and job satisfaction been conceptualised in the literature?
- What is the relationship between psychological capital, subjective well-being, burnout and job satisfaction?
- Does psychological capital mediate the relationship between subjective well-being and burnout?

Literature review

This study is situated in the positive psychology sub-discipline, which entails the study of human happiness: the conditions and processes that contribute to the flourishing or optimal functioning of people, groups and institutions (Gable & Haidt, 2005). This field was propounded to provide an alternative direction to psychology's main focus on weaknesses that plague individuals and creating ways to fix these weaknesses that would create a psychologically and physically sound individual (Seligman, Steen, Park & Peterson, 2005). On a lighter note, Seligman and Csikszentmihalyi (2000) advocate focus on the positive aspects individuals possess whilst de-emphasising the focus on weaknesses, which is especially relevant for educators within the South African context. The rationale for incorporating the concept of positive psychology is that teachers have a direct impact on the quality of education students receive. It therefore becomes necessary to examine

ways of enhancing and cultivating positive capacities (which may act as buffers when educators experience challenging demands and encounter symptoms of burnout) in teachers (Herbert, 2011).

The theoretical framework underpinning this study is the Conservation of Resources theory (COR) (Hobfoll, 1989), which highlights elements necessary to form positive emotions, positive individual traits and positive institutions, which are the three main propositions of positive psychology. COR holds that everyone seeks to conserve the quantity and quality of their resources (which contain instrumental and symbolic value to them) and to limit any circumstance that might endanger the quantity or quality of these resources (Lee, 2010). In addition, COR places emphasis on resources (which may include but are not limited to personal characteristics, conditions or energies), which influence an individual's ability to cope with stressors. It is believed that individuals experience stress, even when that stress is merely perceived, as a consequence of factors that threaten to diminish their resources and they then seek to retain their resources in order to maintain equilibrium. Luthans, Avolio, Avey and Norman (2007) share the same sentiments as COR in that individuals who possess all the positive psychological capacities will prove to be better performers in their jobs as well as be more satisfied workers. This can have a significant impact on teacher turnover rates and can have positive influence on the quality of education in South Africa. In light of the above, research illustrating the effect of positive emotions and positive resources, and how these positive capacities may mediate between burnout and improve the well-being of individuals and lead to satisfaction, is important.

Psychological capital

Psychological capital emerged from the field of positive organisational scholarship, which is premised on the belief that unlocking hidden potential in individuals and focusing on their excellence benefits not only the individual but also the organisation. PsyCap focuses on the personal strengths and positive qualities of individuals and this focus is believed to lead to improved individual and organisational performance (Luthans, Luthans & Luthans, 2004). Luthans, Youssef and Avolio (2007) contend that PsyCap entails an individual's positive psychological state of development and is characterised by: (1) having confidence (*self-efficacy*) to take on and put in the necessary effort to succeed at challenging tasks, (2) making a positive attribution (*optimism*) about succeeding now and in the future, (3) persevering towards goals and, when necessary, redirecting paths to goals (*hope*) in order to succeed and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (*resilience*) to attain success. It is believed that individuals who score high on *self-efficacy* feel a sense of reliance, certainty and assurance in their skills and knowledge, which enables them to effectively accomplish tasks and be in control of certain situations (Stajkovic & Luthans, 1998). *Optimistic* individuals often internalise positive events and externalise negative events (Seligman, 1998). This definition of PsyCap

emphasises that these positive psychological capacities have developmental properties that can be enhanced as well as be drawn from when individuals feel the need.

Cetin (2011) found job satisfaction to be positively related to the hope, resilience and optimism whilst Herbert (2011) found high levels of hope, optimism, self-efficacy and optimism to be associated with low levels of burnout and stress. The findings of the research conducted by Herbert reflect the same possibilities and assumptions in this study, of positive attributes negating the effects of demands and stressors. In this regard, if teachers could strive towards their goals and overcome barriers, possess confidence in themselves and their work tasks as well as have hope and an optimistic outlook about their work, they would be more likely to report low rates of burnout and high job satisfaction.

Subjective well-being

Subjective well-being is a derivative of the positive psychology field and entails the cultivating of positive emotions to ensure the optimal functioning and experience of individuals (Ryan & Deci, 2001). Well-being has been differentiated into two categories: hedonic well-being and eudaimonic well-being (Culbertson, Fullagar & Mills, 2010). The hedonic aspect of well-being refers to subjective emotions such as happiness and the experience of pleasure and is thereby characterised by the presence of positive moods and the absence of negative moods (Ryan & Deci, 2001). In contrast, the eudaimonic aspect is more cognition based and focused on the motivation individuals possess to achieve their goals and thereby contributes to positive feelings (Culbertson *et al.*, 2010). It is important to distinguish between subjective well-being and happiness, as happiness implies a high ratio of positive to negative feelings (Uchida, Norasakkunkit & Kitayama, 2004) and subjective well-being comprises a broad category of phenomena that includes people's emotional responses, domain satisfaction and global judgments of life satisfaction (Diener, Suh, Lucas & Smith, 1999). In this study, only subjective well-being was assessed, as it incorporates how individuals both feel and think about their lives (self-evaluation) (Ozmete, 2011). Research conducted on teacher burnout (e.g. Jackson & Rothmann, 2006) has focused on how teachers may be unsuited to their environmental demands, which is usually perceived as the reason for the high rates of burnout amongst teachers. A study conducted by Vazi *et al.* (2011) reported that indicators of subjective and psychological well-being can be evaluated for inclusion in burnout prevention interventions in teachers. However, little or no research has incorporated the health-promoting effect of subjective well-being on burnout, which is reported as having an aiding potential during times of distress (Vazi *et al.*, 2011), making that a notable additive contribution of this study.

Burnout

Burnout is a term often used to describe instances when individuals experience mental exhaustion (Schaufeli, 2003)

and tend to be pervasive in human service occupations such as education (Rothmann & Barkhuizen, 2008). There have been many definitions proposed to conceptualise burnout, with some referring to it as a cluster of psychological (affective and cognitive), physical and behavioural symptoms (e.g. Van Tonder & Williams, 2009). However, the most common definition of burnout was put forth by Maslach and Jackson (1986), who conceptualise burnout as a syndrome of emotional exhaustion, depersonalisation and reduced personal accomplishment that can occur in individuals who do 'people work' of some kind. Burnout, known to develop over time depending on various factors, can be understood as a self-perpetuating process that negatively affects individuals in achievement of their goals whilst depleting their resources (Van Tonder & Williams, 2009). Maslach, Schaufeli and Leiter (2001) distinguish three dimensions inherent in burnout: *exhaustion*, *cynicism* and *reduced personal efficacy*. *Exhaustion* was described as feelings of decreased emotional resources, *cynicism* as a pessimistic attitude towards work and *reduced professional efficacy* as feelings of incompetency. Within the education profession, burnout can be seen as including three distinct dimensions: emotional exhaustion, depersonalisation and low personal accomplishment. Burnout is common amongst educators in South Africa as they often have to teach massive classes (40–60 students) with inadequate resources and teaching equipment; this was especially highlighted upon the introduction of the OBE system in 2000 (Van Tonder & Williams, 2009). Studies on burnout (e.g. George, Louw & Badenhorst, 2008; Rothmann, 2003) have shown that burnout plays a factor in job turnover, absenteeism, low morale and job dissatisfaction. Since burnout has often been linked to the experience of stress and subsequently job dissatisfaction, it has become of paramount importance to focus on the positive aspects of individuals and work, which likely lead to job satisfaction.

Job satisfaction

Locke (1976) defines job satisfaction as 'a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences' (p. 1304). Implicit in this definition of job satisfaction is the importance of both affect and cognition. The evaluation of a job, therefore, involves both thinking and feelings, which can be linked to the affective and cognitive aspects of subjective well-being. Job satisfaction has been researched extensively to determine its link to worker productivity and organisational effectiveness (e.g. Menon & Athanasoula-Reppa, 2011) with Shann (1998) emphasising that teacher job satisfaction should be understood as a multi-faceted construct. Shann further proposes that teacher job satisfaction is directly linked to teacher commitment and retention and therefore contributes to school effectiveness. Research on job satisfaction amongst teachers (e.g. Gendin & Sergeev, 2002) has received increased attention recently as the teaching profession recorded a declining status and due to high turnover rates reported in developing countries over the past few decades (Buckley, Schneider & Shang, 2005). There is general consensus that different attitudes of teachers, their physical

TABLE 1: Demographic characteristics of participants.

Characteristic	Demographic	Frequency	%
Gender	Male	14	13.6
	Female	89	86.4
Race	African	6	5.8
	Indian	22	21.4
	Mixed race	1	1.0
	White	74	71.8
Age group	20–25	8	7.8
	26–30	14	13.6
	31–35	9	8.7
	36–40	13	12.6
	41 and older	59	57.3
Qualifications	Grade 12	7	6.8
	Diploma	39	37.9
	Degree	33	32
	Honours	19	18.4
	Master's	5	4.9
Tenure	1–2 years	13	12.6
	3–4 years	13	12.6
	5–6 years	17	16.5
	7–8 years	10	9.7
	9–10 years	3	2.9
	Over 10 years	47	45.6

N = 103.

well-being, life expectancy, absenteeism, turnover and their success in the profession are all dependent on the degree of job satisfaction experienced. With this in mind, the limited studies (e.g. Herbert, 2011; Wang, Liu, Wang & Wang, 2012) on relationships between PsyCap and burnout in educational settings within South African situations highlight the need for more focus on assessing the psychological capacities inherent in PsyCap, their possible positive role in enhancing job satisfaction and how they can help decrease burnout amongst educators.

Method

Measures

Research participants

Using convenience sampling, the study sampled 103 educators across four selected educational institutions in the Umlazi region of KwaZulu-Natal. Close to half (45%) of the sample of 89 women and 14 men had over 10 years' experience in the field. The majority of the sample was in the 41 and older age group (57.3%) whilst the lowest number belonged to the 20–25 year age group. Most of the participants were White (74), followed by respondents of Indian (22), African (6) and mixed race (1) descent. The majority of participants held a diploma (37.9%); a large percentage of the participants held degrees (32.0%), with only a few holding a master's degree (4.9%). The demographic characteristics of the participants are illustrated in Table 1.

Measuring instruments

A composite questionnaire was used that consisted of a biographical data sheet, a psychological capital questionnaire, a satisfaction with life scale, the burnout inventory and the Minnesota job satisfaction questionnaire.

Psychological Capital Questionnaire (PCQ): The 24-item PCQ consists of four subscales that measure self-efficacy, hope, optimism and resilience (Luthans, Avolio, Avey & Norman, 2007) on a six-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). An item reflecting the self-efficacy subscale is 'I feel confident helping to set targets or goals in my work area'. An item reflecting the hope subscale is 'If I should find myself in a jam at work, I could think of many ways to get out of it'. An item reflecting the optimism subscale is 'I always look on the bright side of things regarding my job'. An item reflecting the resilience subscale is 'I usually take stressful things at work in my stride'. A study conducted by Du Plessis and Barkhuizen (2012) in South Africa found the reliability coefficients of the four subscales to be 0.86, 0.86, 0.77 and 0.81 respectively, values that indicate a high internal consistency between the items.

Satisfaction with Life Scale (SWLS): To measure subjective well-being the SWLS, developed by Diener, Emmons, Larsen and Griffin (1985), consists of five items measured on a seven-point Likert scale ranging from 1 (strongly agree) to 7 (strongly disagree). A study conducted by Maluka and Grieve (2003) in South Africa found the Cronbach's alpha coefficient of the SWLS to be 0.77.

Oldenberg Burnout Inventory (OLBI): The OLBI (Demerouti, 1999) used to measure burnout consists of 16 items on a four-point Likert scale with two subscales which measure exhaustion and disengagement. An item reflecting the exhaustion subscale is 'After my work, I usually feel worn out and weary' and one reflecting the disengagement is 'Over time, one can become disconnected from this type of work'. A similar study conducted by Tilakdharee, Ramidial and Parumasur (2010) in South Africa found the Cronbach's alpha reliabilities for the two subscales to be 0.82 and 0.80 respectively and found the overall Cronbach's alpha for the OLBI to be 0.93.

Minnesota Job Satisfaction Questionnaire (MSQ): The MSQ (Weiss, Dawis, England & Lofquist, 1967) measures job satisfaction on a five-point Likert scale and consists of three subscales: intrinsic satisfaction, extrinsic satisfaction and general satisfaction. An item reflecting the intrinsic subscale is 'Being able to keep busy all the time'. An item reflecting the extrinsic subscale is 'The way my boss handles his/her workers'. General satisfaction is a summation of all items. A South African study conducted by Buitendach and Rothmann (2009) found the Cronbach's alpha reliabilities for the three subscales to be 0.82, 0.79 and 0.86; therefore, these questionnaires were considered acceptable to be used for this study.

Research design

This cross-sectional study employed a quantitative research design for its objectivity and cost effectiveness and to allow for collection of data that could not directly be observed. The use of a survey was also deemed most appropriate as the

TABLE 2: Initial eigenvalues for the total variances explained.

Questionnaire	Component	Initial eigenvalues		
		Total	% of variance	Cumulative %
Oldenberg Burnout Inventory	1	5.423	33.892	33.892
	2	1.837	11.483	45.375
Psychological Capital Questionnaire	1	8.339	34.748	34.748
Minneapolis Life Satisfaction Questionnaire	1	5.963	29.817	29.817

study targeted a large number of participants at one specific time.

Research procedure

The study protocol was approved by the University of KwaZulu Research Ethics Committee. Permission to collect data in a two week period was also sought from the principals in the selected schools before all participants gave their informed consents in writing to participate in the study. The questionnaire was administered by the researcher directly to each participant in the selected schools. After completion, questionnaires were submitted in a sealed collection box provided by the researcher. Refusal to complete the questionnaire, even after informed consent had been given, was allowed.

Statistical analysis

Data were analysed using the SPSS statistical program version 21. Firstly, *descriptive statistics* were computed to obtain the minimum and maximum scores of each questionnaire and to calculate the standard deviation, mean, kurtosis and skewness of values. Using guidelines provided by Nunnally and Bernstein (1994), acceptable Cronbach's alpha coefficients equal to or greater than 0.70 were considered in determining the reliability of the instruments. *Exploratory factor analysis* (EFA) was conducted on PsyCap, burnout and job satisfaction to investigate construct validity and to determine the factors that best represented the data. EFA allowed for the factors influencing the participants' responses to be determined and allowed for the identification of underlying factors (Suhr, 2006). Inferential statistics were used to make inferences about the population. The current research study made use of the Pearson's *r* correlation analysis to determine the relationship between PsyCap, subjective well-being, burnout and job satisfaction. Baron and Kenny's (1986) mediation model was used for linear regression analysis to determine whether psychological capital mediated the relationship between subjective well-being and burnout. A Sobel test further assessed whether PsyCap carried the effects of subjective well-being to burnout.

Results

Exploratory factor analysis

EFA was conducted on the items of the PCQ, the OLBI and the MSQ to determine the underlying factors in the scales. According to Pillay, Buitendach and Kanengoni (2014), factor analysis entails the use of a specialised statistical

technique particularly useful for investigating construct validity.

Factor analysis conducted on the PCQ showed a Keizer-Meyer-Olkin value of 0.846, which exceeds the recommended value of 0.6 and the Bartlett's test of sphericity showed a statistical significance. The outcome showed that 23 of the 24 items (all but Item 20) loaded on one factor, which was labelled PsyCap. An analysis of the eigenvalues and the scree plot revealed that only one factor could be extracted (see Table 2). The single factor included all four subscales of PsyCap; therefore, this one factor included items reflecting all four positive psychological states.

An analysis of the eigenvalues in Table 2 showed that two factors could be extracted from the OLBI. When factor analysis was conducted, 12 of the 16 items loaded on the two factors. The Keizer-Meyer-Olkin value was 0.822, which exceeds the recommended value of 0.6, and the Bartlett's test of sphericity showed a statistical significance. Factor 1 was labelled *Disengagement* and included items 1, 3, 5, 6, 7 and 15, which indicated that individuals distanced themselves from work and formed negative attitudes about their jobs and work tasks. Factor 2 was labelled *Exhaustion* and included items 2, 4, 8, 10, 12 and 14, which indicated that individuals felt that their emotional resources were depleted. An item illustrating Exhaustion is 'After my work, I usually feel worn out and weary'.

Factor analysis of the MSQ, an examination of the scree plot and eigenvalues (see Table 2) showed that one factor could be extracted. The Keizer-Meyer-Olkin value (0.766) exceeded the recommended value of 0.6 and the Bartlett's test of sphericity showed a statistical significance. Items 3, 5, 6, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19 and 20 (14 of the 20) loaded on one factor. This single factor was labelled *General satisfaction*. The General satisfaction factor included both the intrinsic and extrinsic subscales of job satisfaction. General satisfaction included items related to the feelings individuals possessed regarding the nature and aspects of their work tasks and work environment.

Descriptive statistics

The results of the Komogorov-Smirnov test conducted on PsyCap, subjective well-being, burnout, and job satisfaction revealed no differences between the distributions of the sample and population as the significance values for all four scales were above 0.05, thus indicating that the sample distributions were normally distributed. The Cronbach's

TABLE 3: Descriptive statistics and reliability statistics for the scales.

Variable	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis	α
PsyCap	66	138	109.77	14.72	-0.3	-0.14	0.91
SW	5	30	13.33	5.47	0.8	0.38	0.81
Burnout	18	51	35.91	6.9	-0.33	-0.19	0.86
Disengagement	7	22	14.07	3.09	-0.09	0.07	0.73
Exhaustion	4	17	11.98	2.51	-0.47	0.08	0.69
GS	28	67	52.57	8.43	-0.79	0.45	0.88

$N = 103$.

PsyCap, Psychological capital; SW, Subjective well-being; GS, General satisfaction, α , Alpha.

TABLE 4: Correlations between the scales and factors.

Measuring instrument	PsyCap	SW	Burnout	DE	EX	GS
PsyCap	1	-	-	-	-	-
SW	-0.30**†	1	-	-	-	-
Burnout	-0.62**††	-0.37**†	1	-	-	-
DE	-0.64**††	-0.38**†	0.90**††	1	-	-
EX	-0.54**††	-0.24*	0.87**††	0.66**††	1	-
GS	0.52**††	0.42**†	-0.55**††	-0.57**††	-0.38**†	1

PsyCap, Psychological capital; SW, Subjective well-being; DE, Disengagement; EX, Exhaustion; GS, General satisfaction.

*, $p \leq 0.05$; **, $p \leq 0.01$; †, $r \geq 0.30$ – Practically significant relationship (Medium effect); ††, $r \geq 0.50$ – Practically significant relationship (Large effect).

TABLE 5: Coefficients showing the relative contribution of subjective wellbeing and PsyCap in predicting burnout.

Model		Unstandardised coefficients (β)	SE	Standardised coefficients (β)	T	P	F	R	R^2
1	(Constant)	29.69	1.68	-	17.7	0	16.08	0.37	0.137
	SW	0.47	0.17	0.37	4.01	0.00*	-	-	-
2	(Constant)	120.02	3.69	-	32.5	0	8.99	0.29	0.082
	PsyCap	-0.77	0.26	-0.29	-2.99	0.00*	-	-	-
3	(Constant)	61.14	4.66	-	13.1	0	36.93	0.65	0.425
	SW	0.27	0.1	0.21	2.66	0.09	-	-	-
	PsyCap	-0.26	0.04	-0.56	-7.07	0.00*	-	-	-

SW, Subjective Well-being; SE, standard error.

*, $p \leq 0.05$.

alpha coefficients for all measuring instruments were acceptable based on the guidelines provided by Nunnally and Bernstein (1994): psychological capital scale ($\alpha \geq 0.70$, $r = 0.91$), subjective well-being scale ($\alpha \geq 0.70$, $r = 0.81$), burnout scale ($\alpha \geq 0.70$, $r = 0.86$), Disengagement ($\alpha \geq 0.70$, $r = 0.73$), Exhaustion ($\alpha \leq 0.70$, $r = 0.69$) and General satisfaction ($\alpha \geq 0.70$, $r = 0.88$).

Pearson's correlation analysis

A Pearson correlation analysis was conducted to determine the relationship between psychological capital, subjective well-being, burnout and job satisfaction. The findings in Table 4 indicate that PsyCap had a statistically and practically significant relationship with subjective well-being ($r = -0.30$, $p \leq 0.01$, medium effect), with burnout ($r = -0.62$, $p \leq 0.01$, large effect), and with both subscales of burnout, disengagement ($r = -0.64$, $p \leq 0.01$, large effect) and exhaustion ($r = -0.54$, $p \leq 0.01$, large effect). The correlation analysis also revealed that PsyCap had a statistically and practically significant relationship with job satisfaction (general satisfaction) ($r = 0.52$, $p \leq 0.01$, large effect). A statistically and practically significant relationship was found to exist between and subjective well-being and burnout ($r = -0.37$, $p \leq 0.01$, medium effect). Subjective well-being was also found to have a statistically and practically significant relationship with disengagement ($r = -0.38$, $p \leq 0.01$, medium effect), with

exhaustion ($r = -0.24$, $p \leq 0.05$, medium effect) and with job satisfaction (general satisfaction) ($r = 0.42$, $p \leq 0.01$, medium effect). The correlation analysis showed that burnout had a statistically and practically significant relationship with job satisfaction (general satisfaction) ($r = -0.55$, $p \leq 0.01$, large effect).

Regression analysis

A multiple regression analysis was conducted to determine whether PsyCap mediated the relationship between subjective well-being and burnout. According to Baron and Kenny (1986), three steps must be fulfilled in order to test for mediation. To test for mediation beta coefficients of different regression equations must be compared (Baron & Kenny, 1986). Firstly, the mediator should be predicted by the independent variable. Secondly, the dependent variable should be predicted by the mediator and the independent variable. Lastly, the dependent variable should be regressed on the independent variable, whilst controlling the mediator. If all the steps are conducted and they prove significant and the independent variable does not predict the dependent variable whilst controlling the mediator, this indicates perfect mediation.

As shown in Table 5, in step 1, subjective well-being was entered into the analysis and was found to be a statistically significant predictor of burnout ($\beta = 0.37$; $t = 4.01$; $p < 0.05$).

In step 2, PsyCap was found to significantly predict burnout ($\beta = -0.29$; $t = -2.99$; $p < 0.05$). Lastly, when subjective well-being was added into the regression equation in step 3, only the regression coefficient of PsyCap ($\beta = -0.56$; $t = -7.07$; $p < 0.05$) was statistically and practically significant (large effect). However, the regression coefficient of subjective well-being was not statistically significant when PsyCap was controlled for in the equation. Findings in Table 5 further demonstrate that 13.7% ($R^2 = 0.137$; $F = 16.08$; $p \leq 0.05$) of the variance in burnout was explained by subjective well-being; when PsyCap was entered into the analysis, 42.5% ($R^2 = 0.425$; $F = 8.99$; $p \leq 0.05$) of the variance in burnout was accounted for. From this observation, it can therefore be deduced that PsyCap mediates the relationship between subjective well-being and burnout. To further support this outcome, a Sobel test was conducted ($Z = 2.77$ and $p = 0.005$). According to this mediation analysis, PsyCap was confirmed as mediating the relationship between subjective well-being and burnout.

Discussion

The general aim of the study was to determine the potential link between psychological capital, subjective well-being, burnout and job satisfaction and assess whether PsyCap mediated the relationship between subjective well-being and burnout amongst educators in Umlazi, KwaZulu-Natal. Luthans, Avolio, Avey and Norman (2007) found that the four subscales of the PCQ can load separately on four different factors, indicating that all four of the subscales can provide a measure of PsyCap and their own subscale as well. The two factors found on the OBLLI, which were labelled disengagement and exhaustion, corresponded to the two factors that were found by Demerouti (1999) for the OLBI. The intrinsic and extrinsic subscales of the MSQ loaded onto one factor. George *et al.* (2008) found a three-factor model for job satisfaction in their research and identified the intrinsic, extrinsic and general satisfaction subscales of job satisfaction. Weiss *et al.* (1967) suggest that a three-factor model can be used to measure job satisfaction; however, they propose that the third factor was a summation of the intrinsic and extrinsic subscales. This research study thus labelled the one factor General satisfaction and included in it both the intrinsic and extrinsic subscales of job satisfaction. A possible reason why a one-factor model best fitted the data in this research study may be attributed to the relatively small sample size of this study.

Findings from the Pearson's correlations revealed that as educators' levels of subjective well-being increased, their levels of PsyCap decreased. This is contrary to the findings by Avey, Luthans and Jensen (2009), which revealed a statistically and practically significant positive relationship between PsyCap and subjective well-being. The psychological resources in PsyCap have been found to have developmental properties (Luthans, Youssef & Avolio, 2007). These developmental properties of PsyCap suggest that these psychological resources will not be drawn on if individuals feel satisfied or if there is no need to draw on them. The findings from the study at hand support the

state or trait debate surrounding the construct of PsyCap. The result of the Pearson correlation suggests that educators that are satisfied with their lives, experience frequent positive emotions and infrequent negative emotions and are less likely to draw on the internal positive psychological resources inherent in PsyCap, suggesting that when educators' levels of PsyCap are high then their levels of exhaustion and disengagement are low. This can be explained through the theoretical framework underlying this study, COR, which suggests that individuals work to conserve and protect their resources and thus aim to increase their positive resources to deter and cope with stressors (Lee, 2010). The positive psychological resources inherent in PsyCap can serve as a personal characteristic resource. This suggests that as educators experience negative feelings and states due to exhaustion or disengagement as a result of their work tasks or environment, they draw on the positive psychological resources in PsyCap to counter the effects of exhaustion and disengagement.

A study conducted by Herbert (2011) revealed that high levels of PsyCap were associated with low levels of burnout, which supports the possibility of PsyCap being a personal coping resource. The psychological resources inherent in PsyCap (self-efficacy, hope, optimism and resilience) may prevent against the development and progression of burnout. In a similar study, Larson and Luthans (2006) found a statistically and practically significant relationship between PsyCap and job satisfaction. This finding highlights the positive effects of the psychological resources inherent in PsyCap. As educators' levels of PsyCap increase, the more satisfied they are with factors pertaining to their jobs and the more satisfaction they derive from internal aspects of their jobs.

Vazi *et al.* (2011) suggest that subjective well-being can have a positive effect on burnout and can have aiding potential during times of distress, thus lessening the negative effects or the onset of burnout. This assertion is supported by the findings in this study: as educators' levels of subjective well-being increased, their levels of disengagement and exhaustion decreased, thus indicating that subjective well-being may have deterred the feelings of exhaustion and disengagement educators may have experienced in their work tasks and environment. Thus, low levels of disengagement and exhaustion were reported when levels of job satisfaction were high. Job satisfaction was found to have a statistically and practically significant relationship with subjective well-being. In a similar study, Malka and Chatman (2003) found a statistically and practically significant relationship between job satisfaction and subjective well-being. This relationship suggests that educators' were not only satisfied with their lives in general, but were also satisfied with the intrinsic and extrinsic aspects of their jobs and work environment. This indicated that PsyCap mediated the relationship between subjective well-being and burnout. The result of the Sobel test confirmed the mediating effect of PsyCap on the relationship between subjective well-being and burnout. This is supported by Luthans, Youssef and Avolio (2007),

who contend that PsyCap can serve as a psychological resource that can be drawn on during periods of distress. Further research conducted by Vazi *et al.* (2011) suggests that subjective well-being can have aiding potential during times of stress, thus lessening the negative effects of stress such as burnout. The results indicate the possibility of the positive psychological capacities inherent in PsyCap, coupled with the aiding potential of subjective well-being being carried over to reduce the negative effect of burnout on the well-being of educators.

Limitations of the study

It should be recognised that this research suffers from several limitations that need to be addressed in future studies. Firstly, this study used a relatively small sample size across different educational institutions that were in the same geographical location. Secondly, the participants were conveniently sampled based on easy accessibility and the employment of a cross-sectional design did not allow the establishment of causal direction of relationships between PsyCap, subjective well-being, burnout and job satisfaction. Lastly, the use of self-reported questionnaires in data collection may have affected the reliability and validity of the study as participants may have answered in a socially desirable manner. In this regard, the findings from this research may not be generalised beyond our study population, but this is an exploratory, investigative work from which tentative developments can be deduced rather than conclusive trends.

Recommendations for future research

Future research should incorporate a larger sample so that more informative results can help to decrease burnout rates amongst educators, whilst increasing their satisfaction and well-being. Larger multi-site investigations may be conducted to increase the reliability of future research and confirm the current findings before firm conclusions can be made regarding the potential link between PsyCap, subjective well-being, burnout and job satisfaction. Future researchers may come up with more definitive results by using longitudinal research designs to assess whether the demands and challenges experienced differ across educational institutions and geographical locations and can thus affect the burnout and satisfaction rates of educators.

Contributions of the study

There has currently been no research conducted using PsyCap as a mediating variable between subjective well-being and burnout. The research study also indicated that job satisfaction could also be drawn on as a resource to mitigate the negative effects of burnout. Little or no research to date has highlighted the aiding potential of subjective well-being for educators or the possible resource job satisfaction can provide in times of distress. To follow on the current study, further research can be conducted to illustrate the role that PsyCap can play as a resource and the role that subjective well-being and job satisfaction can play as resources in

times of stress. The findings provided valuable information with respect to increasing satisfaction and well-being rates through the enhancement of PsyCap whilst minimising the burnout rates amongst educators. This is essential for educators as they play an invaluable role and this study's findings are imperative to counter the high burnout rates and, indirectly, the high teacher turnover rates. This study's additive contribution to the body of research conducted on PsyCap in the South African context is noteworthy as it highlights the positive influence PsyCap can have amongst South African educators.

Conclusions and implications

The positive psychological states inherent in PsyCap can be invested in and managed and can thus be drawn on during times of need to enhance a person's ability to perform and increase organisational performance. The direct positive link between subjective well-being and job satisfaction can be utilised by individuals and practitioners in assessing whether individuals are living up to their expectations or not; if the individuals score high on subjective well-being, they likely achieve job satisfaction. Similarly, if educators experience high levels of PsyCap, it is more likely that they will experience low levels of exhaustion and disengagement. Another general conclusion drawn from the findings is that as educator's levels of PsyCap increase, the more likely they are to be satisfied with factors pertaining to their jobs and the internal aspects of their jobs. An interesting thing from the findings to note is the inference that the more educators are satisfied with their lives in general the more likely they are to be satisfied with the intrinsic and extrinsic aspects of their jobs and work environment. An inverse relationship between job satisfaction and both exhaustion and disengagement may imply that, if educator's levels of job satisfaction are high the more likely they are to experience low levels of exhaustion and disengagement. PsyCap was found to mediate the relationship between subjective well-being and burnout, which implies that the enhancement of the positive capacities of PsyCap and the aiding potential of subjective well-being can help minimise burnout.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

Authors' contributions

A.H. (University of KwaZulu-Natal) was responsible for formulating ideas, conducting fieldwork, statistical analysis and presentation of findings. J.H.B. (University of KwaZulu-Natal) supervised and made conceptual contributions and to the study. H.K. (University of the Free State) was also involved in statistical analysis, co-authored the results and wrote the final article as well as addressing the editor's concerns.

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The use of the job enrichment technique for decision-making in higher education: The case of the Philippines

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Dates:

Received: 08 May 2014
Accepted: 13 July 2015
Published: 28 Sept. 2015

How to cite this article:

Adeyemo, K.S., Sehoole, C., & Cueno, C.G. (2015). The use of the job enrichment technique for decision-making in higher education: The case of the Philippines. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #645, 9 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.645>

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Orientation: This article provides an explorative analysis of the use of the job enrichment technique for decision-making in higher education in the Philippines.

Research purpose: The profile of administrators in charge of decision-making was investigated in terms of their level of familiarity with, and use of, this technique in achieving the goals of enriching jobs, retaining staff and ensuring job-motivation in higher education.

Motivation for the study: Given the increasingly competitive higher education environment in which higher education employees, including academics, work, the pressure on their performance, and their search for ideal working conditions, it is important to measure the impact of the job enrichment technique on employee and higher education organisations.

Research design, approach and method: The study used a quantitative method. The respondents of this study consisted of 206 administrators. Spearman Rank, Correlation Coefficient, Point Bi serial and Chi-square were used to analyse the relationships between the demographic characteristics and job enrichment technique. Multiple Regression Coefficient was used to predict job enrichment.

Main findings: The findings suggest that educational attainment and experience are the most important factors for predicting success as an administrator in higher education.

Practical and managerial implications: Job enrichment should not only focus on the knowledge, experience and skills of administrators, but should be extended to encompass the context and working conditions of employees.

Contribution: In the context of fiscal austerity measures that result in fewer resources becoming available for higher education, it is important to have competent decision-makers who are able to motivate staff.

Introduction

Global challenges facing the academic profession and motivation in higher education

Higher education has been faced with complex decisions caused by the increasing challenge of the availability of public resources for higher education. Government must strive to meet competing demands that are made on the fiscal sector, and this has led to several changes and reforms in higher education, worldwide. These changes have occurred in different areas that directly and adversely affect the academic profession:

- terms and conditions of employment have deteriorated and relative salaries have slumped
- members of the academic staff are older
- younger staff members are disproportionately non-tenured and, typically, in part-time employment (Bundy, 2006, p. 8).

These factors compound problems of enrolment, cost containment, budget limitations, restructuring and public pressure for accountability. Resource constraints have led to higher education institutions offering their staff members low salaries and providing poor working conditions which, simultaneously, affect both the performance of the staff and higher education.

The literature shows that higher education has attempted to cope with the challenges of improving job satisfaction by joining industry in adopting classical or modern management approaches, such as the job enrichment technique, amongst others, to improve administrative and organisational efficiency (Valero, 1997). Job enrichment is a motivation technique and it is considered useful in boosting morale of employees and for decision-making. The need to boost employee morale as an important part of management and administration is reflected in a study on Australian higher education (Bexley, James & Arkoudis, 2011), which found that in 20 universities academics

were dissatisfied with the lack of recognition of teaching in promotion processes, despite efforts by some universities to include teaching performance and achievement in promotion criteria.

In Australia close to half of the mid- to late-career staff members indicated that their work was a source of considerable personal stress. There were observable mobility plans amongst Australian academics with statistics showing the following trends:

- 25% intended moving to an overseas institution
- 26% intended leaving higher education altogether
- another 21% intended retiring.

Their most common reason was dissatisfaction with institutional or sectorial culture (Bexley *et al.*, 2011). In the US context Rhoades (1998) argues that academics are managed professionals who are increasingly subject to management decisions and are more and more stratified. Altbach, Reisberg and Pacheco (2012) suggest that it has become progressively more difficult to recruit 'the brightest and the best' to academic careers. This, in part, is resultant from the fact that neither salaries nor conditions of service are as attractive as they once were.

Similarly, the Philippines and a number of its higher education institutions have faced deep-seated organisational problems. As a result, there were 35,526 displaced workers in different occupational categories – notably in the education sector (Department of Labour and Employment, 2011–2013). Recession, because of the replacement of workers, continued to outpace accession, resulting from the expansion of business activities, including those in the education sector (11.30% vs 1.46%). There were more resignations than layoffs in twelve sub-sectors, including education, and employee-initiated separations or resignations (3.35%) exceeded employer-initiated separations or layoffs (2.94%) (DOLE, 2011–2013, p. 2). A lack of self-motivation or self-satisfaction has contributed to high rates of separation or resignation. The implication of these factors in higher education is that academic staff members who are not happy with their working conditions are more likely to be absent from work and are more likely to quit when better opportunities become available. This has a negative impact on students as less motivated staff members are unlikely to motivate students to excel in their work, and a high staff turn-over from resignations is likely to impact negatively on the students. Moreover, continuity in their learning experience may be disrupted because of exposure to different teaching personnel and styles. The challenges which Philippine higher education faces have a global resonance. In order to guard against the negative effects of this challenge, the job enrichment technique is a strategy that this article advocates. The main objective of this study is to investigate and analyse the demographic characteristics of selected administrators at higher education institutions in the Philippines in terms of the use of the job enrichment technique for decision-making (Figure 1).

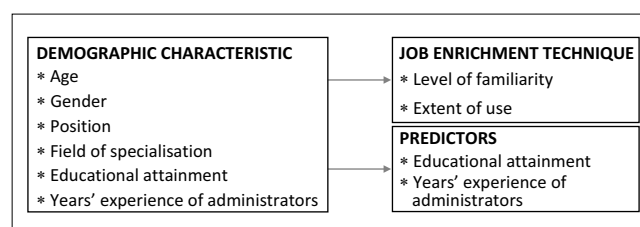


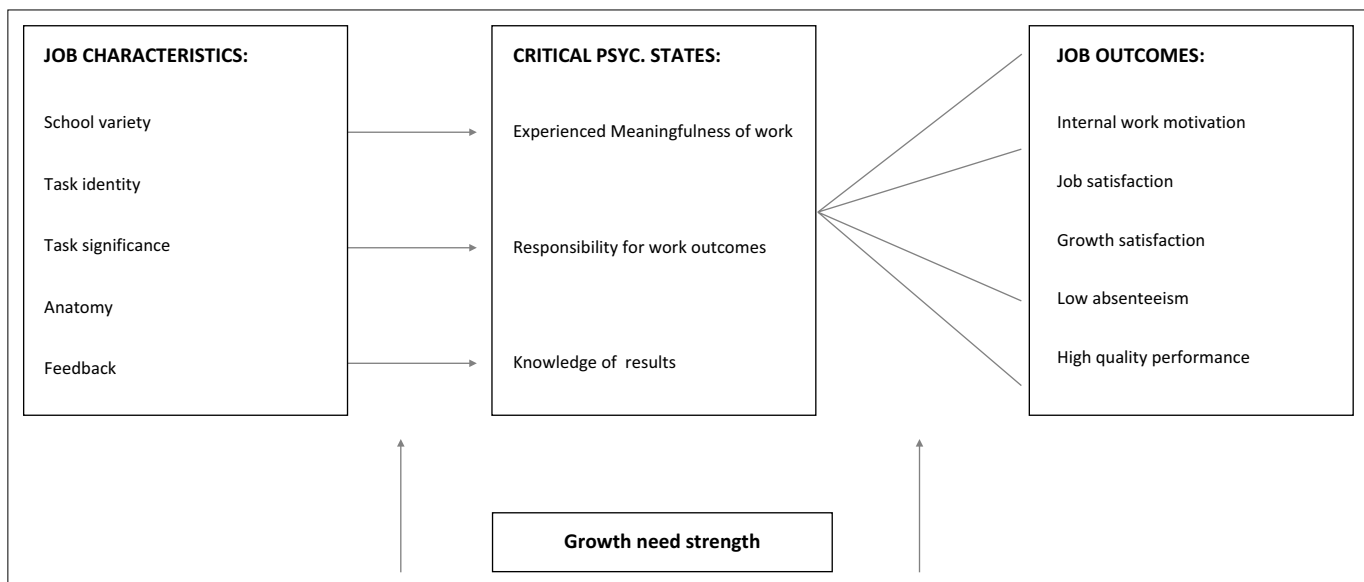
FIGURE 1: The relationship between variables.

This study will contribute new ideas on the use of the job enrichment technique in relation to performance in higher education and, particularly, to its administrators in the decision-making process. Effective use of job enrichment techniques is considered essential to motivate employees to a higher level of productivity, and is useful for administrators to improve performance and quality of higher education.

The Job Characteristic Model

Several factors can influence heightened job satisfaction and the improved performance of staff members (Orpen, 2011). The Job Characteristic Model developed by Hackman and Oldham (see Figure 2) assumes that if five job characteristics are present, such as skills variety, task variety, task significance, autonomy and feedback, then three psychological states, such as experiencing meaningfulness of work, accepting responsibility of work outcomes, and acquiring a knowledge of results critical to motivation, can be produced and these will lead to good performance amongst employees. Together the combined characteristics can produce positive outcomes, such as internal work motivation, job satisfaction, growth satisfaction, low absenteeism and high quality performance (see Kotila, 2001). If these are combined with a good leadership style, all five of the core dimensions of the Job Characteristic Model in a single job should result in job enrichment (Uduji, 2013), which allows both administrators and academics to grow and develop.

Some elements of the Job Characteristics Model are central to the nature of the academic profession, such as autonomy and feedback, accepting responsibility for work and outcomes and academics need to be given space to do their work. As Locke and Teichler (2007) suggest, academics are a highly select group of people who have succeeded – in most countries and over long periods of history – therefore the governance of their institutions must ensure the highest quality and significance of higher education. Without a strong, well-educated and committed professional body, no academic institution or higher education system can be successful (Altbach *et al.*, 2012). For this reason, higher education institutions need to provide ideal conditions for the recruitment and retention of their staff members. Retention strategies can include the use of the job enrichment technique in a strategic way to support and create enabling conditions for academics to carry out their work.



Source: Mione, P. (n.d.). Job enrichment. Retrieved August 22, 2013, from http://edweb.sdsu.edu/people/arossett/pie/Interventions/jobdesign_1.htm and Deom Drez, J. (1999). *Motivation through needs, job design, and satisfaction*. Chapter 7, slide 20. Retrieved February 14, 2014, from <http://www.sui.edu/departments/cola/psyc323/chat07/index.htm>

FIGURE 2: Job characteristics model.

In educational organisations the focus should be on motivating staff members to contribute to the aims and objectives of higher education in a particular context. In order to achieve this, employees should not be treated as raw material (input) but they should rather be seen as a constituent part of the process of providing quality education (output). Lunenburg and Ornstein (2008) categorise the operation of higher education into three parts, namely: input, transformation process and output. They explain that output includes:

- employee performance
- the growth levels of employees
- employee turn-over
- employee absenteeism
- employee-management relations
- school community relations
- employee job satisfaction.

In order to avoid the negative effects of a lack of output, administrators in decision-making positions should become familiar with the job enrichment technique, and do so efficiently and effectively to achieve the goals of increasing job performance and the retention staff. A long-standing debate concerns whether or not job satisfaction and a high level of morale improve efficiency and performance in a system, such as higher education. Therefore, it is important to examine the demographic characteristics of administrators who make decisions in higher education, in order to determine their ability to achieve the goals of increasing job performance and the retention of staff rather than to continuously lose them.

Methodology

The study used multivariate analysis of variance to analyse the use of the job enrichment technique, by staff administrators at universities in the Cavite Province of the Philippines, for decision-making at their institutions.

A survey questionnaire designed by Valero (1997) was adapted to gather the relevant data from 163 administrators using the simple random sampling technique. The items were arranged in different major segments: questions were asked to gather information regarding the demographic characteristics of the respondents, including age, gender, position, experience as an administrator, educational attainment and field of specialisation. Further questions on their familiarity with the job enrichment technique were designed in such a way that they would allow for a matrix of multiple responses from the administrators. Familiarity was categorised into four possible responses:

- Not familiar
- Somehow familiar (no expertise)
- Somewhat familiar (limited expertise)
- Very familiar (expert in its use).

To gather data concerning the extent of the use of the job enrichment technique, an organised matrix table was designed. The columns were labelled in terms of four options:

- never use
- occasionally use (irregularly)
- frequently use (repeatedly)
- always use (extensively).

The data were analysed using the Statistical Package for Social Sciences (SPSS).

To ensure the reliability of the data and to reduce chances of bias, the first part of the questionnaire collected demographic information of the administrators, and the other parts dealt with the level of familiarity and extent of use of the job enrichment technique. The aim was to compare the profile of administrators with the answers they supplied in other part of the questionnaire. Where there were discrepancies in the information that was supplied, follow-up interviews

were conducted to address and clarify these discrepancies. In addition, document analysis of personnel information/appraisal was conducted for triangulation purposes. A literature review was conducted to assess the relevance and applicability of the job enrichment technique in the broader higher education environment – other than the Philippines.

The implications of job enrichment in Philippine higher education

There have been prior studies on the use of the job enrichment technique (Leach & Wall, 2004; Niehoff, Moorman, Blakely & Fuller, 2008; Uduji, 2013; Umstot, Bell & Mitchell, 1976). However, few of these studies examine job enrichment in relation to performance in higher education and, particularly, to its administrators in decision-making (see, for example, Orpen, 2011). Hence, we examine the demographic characteristics of administrators who make decisions in order to determine which of these features will assist them in becoming familiar with, and in using, the job enrichment technique efficiently and effectively.

Making decisions that enhance the job performance of staff at higher education institutions is one of the key roles of higher education administrators. In emphasising this role, the *Philippine Education Act* of 1985 demands accountability from administrators on decisions taken that are related to the efficient and effective administration and management of their various institutions (Sarmiento III, 2008). The Act mandates all administrators to take full responsibility for their decisions, assuming that they have the expertise and experience to occupy dynamic and decision-making positions (Adeyemo, 2013). This responsibility includes motivating staff to perform in terms of quality teaching and learning. A benefit of improved job enrichment is a higher level of staff retention which contributes to ensuring that quality service is rendered (Riehl, 2000). To achieve the objectives of higher education, job enrichment can be used as a motivating technique whereby employees are given the opportunity to use their abilities (Pillai, Masood, Amoodi, Husain & Koshy, 2012) and be rewarded accordingly. Hence, job enrichment can be seen as a critical determinant of job involvement and, subsequently, impacts on organisational effectiveness and success (Govender & Parumasur, 2010).

The effective use of job enrichment can reverse the effects of boredom, lack of flexibility and employee dissatisfaction (Leach & Wall, 2004). Thus, performance can be enhanced and achieved if employees are motivated and satisfied. However, both employees and organisations need to be assessed and their short-comings addressed before job enrichment can be effective or achieve the expected performance. There is a need to know whether or not employees prefer jobs that involve responsibility, variety, feedback, challenge, accountability, significance and opportunity in order to understand how to motivate them without changing their job classification (Cunningham & Eberle, 1990). Enriching jobs are particularly effective in developing employees, provided that the jobs are truly enriched and that the process

does not just increase the amount of work required of them (Brown, 2004). Similarly, job enrichment should encourage employees to operate more efficiently if they are allowed to take responsibility, learn new skills, and are prepared to advance to a higher position. Consequently, the employees' loyalty can be developed (Niehoff *et al.*, 2008) and they are, thus, likely to stay with an employer for longer. It is evident that job enrichment has a positive effect on job performance (Umstot *et al.*, 1976). If job enrichment can provide such benefits to staff members in educational organisations, then it is important to pay attention to its effective use in the decision-making process.

Age and decision-making

In terms of age, for instance, Queen and Hess (2010) argue that there is little difference between young and old when it comes to making sensitive decisions. However, age differences are likely to become more significant when it comes to complex decision-making. They further claim that the effects of age in decision-making are not universal. Jennings, Hunt and Munn (1996) believe that most unethical decisions are made by members of the younger age group. In the Philippines the Commission on Higher Education (CHED) issued Memorandum Order No. 6, Series of 2009 which pegged the minimum age of applicants for a position at State Universities and Colleges (SUC). For the position of president, chancellor or vice-chancellor, candidates should not be less than 35 years of age and not more than 61 at the time of their application (CHED, 2009). Adeyemo (2013) reports that many administrators in higher education in the Philippines are in their 50s, whilst a report by the RAND Corporation (1994–2011) asserts that the majority of administrators will not remain in their jobs beyond the age of 55. For instance, only 14.1% and 44.8% of the administrators of this age category were 'somehow' (no expertise) and 'somewhat' (limited expertise) familiar with the job enrichment technique, respectively, whilst 41.1% of them frequently used it and 9.8% never used it (Adeyemo, 2013). However, the frequent use of this technique by administrators has not provided a solution for the problem of a high staff turnover rate in the Philippines.

These findings do not reveal that older administrators are able to make more effective decisions or that they are very familiar with, or able to apply, job enrichment in decision-making in their various departments or institutions.

Gender and decision-making

In his study Bell (1995) suggests that male administrators set the standard for what is valued and that female administrators have to prove themselves as effective leaders. Rather than being gender-related Manjider and Priyan (2009) believe that the relevant education that builds knowledge and broadens continuous and comprehensive experience is important for effective decision-making. Essentially, this implies that administrators require relevant training and experience in related fields to perform well in their roles. According to

the ICFAI University (2005), training should not just focus on stimulating diverse thinking but it should also remove mental blocks, such as the fear of failure, the fear of rejection, and the fear of disapproval. This is even more important in a higher education context where academics cherish their autonomy and are more likely to insist on their rights. Grogan and Andrews (2002) emphasise equal opportunity in assigning positions to employees because poor decision-making comes from a lack of knowledge as well as a lack of experience (Jackson & Kelley, 2002; Knapp, Copland & Talbert, 2003) and not, necessarily, from gender differences. When applied to academics, poor decision-making can lead to the undermining of, and a lack of respect for, decision-makers.

Experience as an administrator, level of education and the decision-making position

Given the complexities and the challenges in higher education for academics, in relation to their working conditions, it is important to examine the experience and level of education of administrators in higher education, with a view to identifying the skills and ideal working conditions which would be relevant for the management of the academics. MacDade (2008) explained that administrators in the United States scarcely anticipated their current administrative positions and they had minimal management training. In surveys of secondary and higher education, administrators have indicated their need for qualifications in related fields of management and sufficient administrative experience before moving into senior leadership positions (MacDade, 2008). Therefore, administrators need both the skills which can be acquired through formal training and experience in order to have complete mastery of all leadership and management roles in an educational organisation.

In the Philippines, the CHED Memorandum No. 16, Series of 2009 stipulates that applicants for the post of president or chancellor at SUC must have at least 5 years of work experience, preferably in an academic field, as president or chancellor, vice-president or vice-chancellor, dean, campus administrator or director. Consequently, decision-making positions cannot be assigned arbitrarily or on the basis of age and gender because productivity and performance are linked to evidence of administrators possessing relevant education, training and experience. In other words, performance is an outcome of trained and experienced administrators. Because of politics – and for many other discriminatory reasons – leadership positions are occupied by staff members with little or no experience (Adeyemo, 2013). This practice has not only contributed to low quality education but it is also responsible for the slow growth and development of many higher education institutions.

Demographic characteristics of administrators in this study

The demographic characteristics of administrators in this study include age, gender, level of education, field

of specialisation, position and years of experience as an administrator.

Age

The age of administrators who participated in the study was categorised in terms of establishing whether they were young, middle-aged, old or older.

Gender

Gender was categorised as either male or female.

Level of education

Level of Education was used to determine whether administrators possessed a Bachelor's degree or whether Master's degree studies were being undertaken or completed, or whether doctoral studies were being undertaken or had been completed.

Field of specialisation

Field of specialisation in this context refers to the administrators' area of specialisation. This was classified into management, medical, science and social sciences.

Position

Administrators' positions were categorised as:

1. administrative executive that includes president, chancellor, school director and vice-president, deputy vice-chancellor for administration
2. administrative operative that includes administrative directors, administrative heads and coordinators.

Academic executive includes vice-president and vice-chancellor for academic affairs; and dean, chairman, and academic coordinator, which were classified as academic operative positions.

Experience as an administrator

The administrators' years of experience were categorised as reflected in Table 1.

Level of familiarity with the job enrichment technique

The level of familiarity with the job enrichment technique was classified in terms of whether administrators were 'very familiar', 'somewhat familiar', 'somehow familiar', or 'not familiar' with this technique.

Extent of use of the job enrichment technique

The extent of use of the job enrichment technique by administrators was classified in terms of whether

TABLE 1: Range qualitative description in terms of administrators' experience.

Years of experience as administrators	Interpretation
Less than 5 years	Minimal administrative experience
5–10 years	Good administrative experience
11 years and above	High administrative experience

TABLE 2: Distribution of administrators by population, sample size and actual number of respondents.

School administrator	Population size	Sample size	Actual respondent
President/Chancellor	11	6	5
Vice-President/Vice-Chancellor	44	21	8
Dean	54	26	18
Director	21	10	10
Chairperson	65	31	31
Coordinator	76	36	31
Registrar/Record	32	15	12
Accountant/Bursar	11	6	8
Guidance/Student affairs	22	11	16
Librarian	11	0	6
Others	78	6	18
Total	425	206	163

Note: Sampling fraction was used to calculate actual sample size from each category of administrator.

The formula is as follows: $n = N / (1 + Ne^2)$ (Slovin Formula), Where N = Population size, n = Sample size, e = desire margin of error (which is 5%).

$n = 425 / (1 + 425 (0.05)^2)$; $N = 206$ (sample size).

To compute the sampling fraction, researchers used the formula below: Sampling fraction = n/N , Where n = sample size and N = Population size. Therefore, Sampling fraction = 206 administrators/ 425 administrators = 0.48 (Sampling fraction).

administrators 'always', 'frequently', 'occasionally', or 'never' used it in their institutions or departments.

Sampling

Refer to Table 2 for the sampling.

Results and discussion

The results and discussion are in terms of the administrators' demographic characteristics and their use of the job enrichment technique.

Administrators' demographic characteristics

It was found that administrators in the population sample of this study were mostly 50 years and older (31.9%). Female administrators were in the majority in academic and administrative positions (57.7%). A Master's degree or PhD ongoing (39.3%) was the highest educational qualification held by the administrators. Many administrators specialised in Social Science fields (32.5%) and many occupied academic operative positions (47.7%), such as dean, director, chairman, and coordinator. The majority of administrators (52.8%) had less than 5 years' experience. The majority of the institutions were privately owned and operated. An analysis of the results shows that administrators in management positions were female and much older than other administrative employees, their education qualifications were below the minimum requirement for the role and were not in a related field of management and they had insufficient work experience in the area of higher education. This poor profile of administrators has implications for decisions that are made which can also affect academics.

The findings confirm the requirements stipulated in the CHED Memorandum Order No. 6, Series of 2009 that the minimum age of applicants for SUC presidency must not be less than 35 years and not more than 61 at the time of the application. It is also in line with the report of the

RAND Corporation (1994–2011) that found that there were relatively few principals (administrators) in their positions beyond the age of 55. The results imply that administrators in charge of decision-making are relatively older people, but there is no evidence that age helps older administrators make effective decisions to retain staff or that these administrators are very familiar with – or, indeed, always use – the technique.

In terms of the gender, the majority (57.7%) of administrators in this study are female. The findings are similar to those of Rodeles (2009), who found that the majority of respondents were female, in his study of environmental conditions at a College of Education attached to the De LaSalle University-Dasmarinas in the Philippines in the school year, 2006–2007. It strengthens the statement by Sarmiento (2008) that gender is not a requirement, but only that an administrator must be a Filipino. The majority of administrators in higher education in the Philippines are female and, if the decisions they are making have not significantly impacted on job-motivation or satisfaction of employees, it is questionable whether or not Filipino female administrators are really able to perform their roles. It should, therefore, be ensured that male and foreign administrators are also well-represented for skills transfer purposes – a way of internationalising the Philippines' higher education.

In terms of educational attainment, the majority of administrators in the sample (39.3%) had a Master's degree and were studying towards a doctorate, followed by those with a Bachelor's degree (30%) and a doctorate. Only 25.8% had completed their doctorate, which is required for a decision-making position in higher education. The study revealed that the majority of administrators in higher education were people who were likely to struggle in making decisions. They would also struggle to integrate people into a work situation that would motivate them to work together productively to achieve the objectives of higher education. The primary duties, of administrators in enriching jobs, are to help employees release and guide their inner drives which they already have in terms of expected performance. This responsibility requires that administrators should have been trained in advanced management and should be experienced in using management-decision tools which require a high-level qualification. This is a fusion process which, simultaneously, serves both personal and organisational objectives (Davis, 1997).

In terms of field of specialisation, the majority of the respondents in the sample for this study specialised mainly in Social Sciences (32.5%), followed by Management (23.9%) and then Medicine (17.2%). The findings contradict Sarmiento's (2008) recommendation that administrators should hold appropriate degrees. An appropriate degree is one in a field of specialisation that is relevant to the administrator's prospective or present position in a department or faculty. It is considered relevant for administrators to hold an academic degree in the field of management, and to use job enrichment to achieve the goals of job-motivation and satisfaction. The

implications of these results are that administrators are not able to use the job enrichment technique and that the veracity behind the use of decision-making techniques and the management of higher education is not known to them.

In terms of the position, the majority of respondents in the sample for this study hold academic operative positions (41.7%), followed by academic executive positions (13.5%). The findings clearly show that administrators are paid to make decisions, as the majority are operative academics, such as deans and heads of department. However, there is no evidence to show the importance of these positions or the quality of output of such decision-making positions, as the majority of the administrators do not qualify academically for their positions and they have not acquired experience to make job-enriching decisions for their employees.

With regard to the years of experience of administrators, the majority of the respondents in this sample (52.8%) are newly appointed administrators with less than 5 years of administrative experience in an administrative position – followed by those who had up to 10 years of experience (21.5%). The findings demonstrate non-compliance with Section 5 of CHED Memorandum No. 16, Series of 2009 which requires an applicant for the post of SUC president, chancellor or vice-chancellor to have at least 5 years of experience – preferably in academic employment as president, vice-president, dean, campus administrator or director. The findings show that the majority of administrators have less than 5 years of experience and this may explain some of the limitations these administrators have in terms of their ability to manage the dynamics of a higher education organisation. In the Philippine context, this situation reflects poor working conditions and salaries which also affect academics and lead to a high staff turnover (DOLE, 2011–2013). One of the signs of deteriorating human relations is the phenomenon known as ‘low morale’. High morale is the hallmark of a well-managed higher education institution, but it cannot be forced into existence or bought. Higher education must provide conditions and an environment to make it happen. It is, fundamentally, the result of the good application of the job enrichment technique.

Administrators’ demographic characteristics and the use of the job enrichment technique

The findings, concerning the relationship between administrators’ characteristics and their use of enrichment techniques, reveal that only educational attainment ($r = 0.303$) in related fields and experience as an administrator can facilitate the use of the job enrichment technique (Table 3). This, subsequently, will lead to job-motivation and satisfaction of employees. Other demographic characteristics, such as age, gender, and position were found not to be significantly related to the use of the job enrichment technique. However, administrators should have achieved an appropriate level of education to be able to use the job enrichment technique to create job satisfaction and high performance amongst

TABLE 3: Relationship between administrators’ demographic characteristics and the use of job enrichment technique.

Demographic characteristic	Chi-square computed	Degree of freedom	N	P-value	Interpretation
Age	-	-	0.174*	0.032	Not significant
Gender	-	-	-0.119*	0.066	Not significant
Educational attainment	15.625	6	0.303	0.016	Significant
Field of specialisation	9.830	9	0.251	0.363	Not significant
Position	8.854	9	0.232	0.451	Not significant
Year of experience as administrator	-	-	0.059*	0.484	Not significant

*, Chi-square.

TABLE 4: Predictors of job enrichment.

Regression parameter	Regression coefficient	Standard error	T-computed	P-value
Constant	3.097	0.071	43.361	0.000
Educational attainment with an advanced degree	0.331	0.137	2.414	0.017

Multiple $r = 0.192$; R square = 0.037; Adjusted R square = 0.030.

$Y = 3.097 + 0.331X_1$, Where Y – Level of Familiarity; X_1 – Educational Attainment 1 if advanced degree 0 otherwise.

employees and to discourage constant separations or resignations from jobs. This supports the findings of Jackson and Kelley (2002), and Knapp *et al.* (2003) who maintain that poor decision-making is the result of a lack of knowledge as well as experience. It is, therefore, believed that the limitations of education and experience do affect administrators’ levels of familiarity with, and use of, the job enrichment technique at their institutions.

Without relevant experience and qualifications in job enrichment in the Philippines – and in other places – administrators will not be able to manage staff members, as they are not likely to be able to utilise management language for boosting moral, nor are they likely to acquire sound information for effective decision-making. Decision-making positions require a sound knowledge of the complex modern human environment in order to enrich employees in their overall performance in the higher education system of any country. There is no magic mirror on which administrators can depend to reflect the attitudes of employees (Cavite State University Module, 2008). They need to actively interact with staff members and learn about their attitudes. In contemporary higher education organisations, major changes have occurred in employee relations policies which have attracted more unqualified academics and have resulted in losing highly qualified academics who have the potential to improve the organisation system of higher education from the inside. More specifically, there is no guarantee that untrained or inexperienced administrators can fill the gap in making decisions concerning job enrichment and satisfaction.

Table 4 reflects the predictors of the job enrichment technique. The results show that the attainment of an advanced degree (0.33) is a determinant in the use of job enrichment for effective decision-making. Therefore, administrators should have an advanced degree or its equivalent to be familiar with, and to be able to use, the job enrichment and motivation technique.

The findings suggest that only educational attainment and years of experience as an administrator determine or predict familiarity with the role and the use of the job enrichment technique. Although the experience of administrators is important, the level of educational attainment is considered to be more significant in the order of priorities. Nevertheless, the Philippines' higher education has called for internal organisational reform, which is not limited to an improved salary structure and good working conditions, but also to the availability of resources to attract and to retain highly qualified staff in terms of job satisfaction and performance.

Conclusion and recommendations

This article provides an explorative analysis of the use of the job enrichment technique for decision-making in higher education in the Philippines. It has analysed the impact of this technique on employees and higher education organisations. The profile of administrators in charge of decision-making was investigated in terms of their level of familiarity with, and use of, this technique in achieving the goals of enriching jobs, retaining staff and ensuring job-motivation in higher education. Given the increasingly competitive higher education environment in which higher education employees find themselves, the pressure on their performance, and their search for ideal working conditions, it is important to have competent decision-makers who are able to motivate staff.

It is recommended that administrators should have a relevant qualification and sufficient experience in working in higher education institutions before assuming supervisory roles at educational institutions. These requirements are strongly recommended for administrators, as past experience has an influence on future performance and determines the outcomes and successes of their institutions.

This study further recommends that government regulatory bodies in charge of higher education should examine and place an emphasis and re-emphasise on the administrators' fields of specialisation, their experience as administrators, and their levels of educational attainment. These should be part of the critical requirements to be considered before any learning institution may be issued with a permit to operate as a higher education institution. This should also apply to the appointment of the head of a higher education institution.

Finally, job enrichment should not only focus on the knowledge, experience and skills of administrators, but should be extended to encompass the context and working conditions of employees. Higher education should also be well-resourced to attract a high calibre of qualified and experienced academic and the job enrichment technique should be used to achieve desired results. The appropriate use of resources, combined with well-trained and qualified decision-makers will go far in developing the capacity to reverse the slump in conditions of employment, such as poor salaries, increased workloads and stress levels, and the

compounding challenges of motivating academic staff in terms of efficiency. This, in turn, will result in creating ideal conditions to attract the brightest minds to the academic profession, which is important in an increasingly globalised world where academics should be encouraged and their jobs should be enriched in order for them to perform optimally in the workplace.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships which may have inappropriately influenced them in writing this article.

Authors' contributions

K.S.A. (University of Pretoria) was the lead writer and responsible for the research conceptualisation, prepared samples, data collection and interpretation. C.S. (University of Pretoria) was responsible for literature review writing and C.G.C. (Cavite State University) supervised the research project and the design.

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The relationship between servant leadership and employee empowerment, commitment, trust and innovative behaviour: A project management perspective

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Dates:

Received: 11 May 2015

Accepted: 22 July 2015

Published: 16 Oct. 2015

How to cite this article:

Krog, C.L., & Govender, K. (2015). The relationship between servant leadership and employee empowerment, commitment, trust and innovative behaviour: A project management perspective. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #712, 12 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.712>

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Orientation: Understanding the relationship between a project sponsor's servant leadership traits and employee commitment, trust and innovative behaviour.

Research purpose: This study aimed to understand the relationship, if any, between a project sponsor's servant leadership traits of altruistic calling, emotional healing, wisdom, persuasive mapping and organisational stewardship and a project team's empowerment, commitment, trust and innovative behaviour.

Motivation of the study: Most project leadership studies focus on understanding the role and power position of the project manager, with very little research being dedicated to understanding the effect the leadership style has on the project team and project success.

Research approach: A survey was conducted amongst a non-probability sample of 48 project team members from amongst a population of 257, comprising project managers, business analysts and IT staff of a medium sized fleet management organisation that is in the process of implementing an entirely new enterprise resource planning system.

Main findings: Through inferential statistical analysis, using structural equation modelling and path analysis, it was determined that persuasive mapping has the strongest impact on employee innovative behaviour, followed by employee commitment and trust via the mediator of employee perceived empowerment. Wisdom and organisational stewardship had a negative impact on employee perceived empowerment.

Practical/managerial implications: Project sponsors need to exhibit persuasive mapping, altruistic calling and emotional healing traits due to the significant influence that these have on employee innovative behaviour, commitment and trust, albeit through their perceived empowerment.

Contribution/value-add: This study contributes to knowledge of leadership, more especially servant leadership and its significance in project management, which knowledge may contribute to project success.

Introduction

Leadership has remained a fascination through the ages, possibly because of its mysterious nature and also because it touches everyone's lives (Yukl, 2013, p. 17). Within the project management field, leadership is recognised as a key practical skill; however, what is more interesting is the extent to which traditional leadership models and theories are able to successfully capture their effectiveness within a project environment (Clarke, 2012, pp. 128–129). Tannenbaum and Schmidt (1973, as cited in Clarke, 2012, p. 197) argue that leadership style offers a means to categorise the different leaders' behaviours within the current context and provides the mechanism to establish the manner in which a project manager would behave towards the project team.

Most studies focus on understanding the roles and power position of the project manager (Clarke, 2012, p. 128), with very little research being dedicated to understanding the effect of the leadership style on the project team. With the rapid expansion of organisations utilising projects as an everyday form within the workplace (Jessen, 2002, as cited in Clarke, 2012, p. 128) it is important to understand the relationship between the project sponsor's leadership style and the project team's 'outcomes'.

Although Greenleaf's (1970) servant leadership essay sparked much interest, resulting in many articles being written supporting it as a fresh approach to leadership (Sipe & Frick, 2009, as cited by Hayden, 2011, p. 3) it is only in the last 5 years, that it has been possible to measure the servant leadership dimensions within a leader (Hayden, 2011, p. 4). This however only addresses half of the problem, as the ability to measure follower outcomes is also imperative (Greenleaf, 1970, as cited in Hayden, 2011, p. 2). Furthermore, an understanding of followers' 'outcomes' goes beyond those elements identified by Greenleaf, namely, healthier, wiser, freer, autonomous and becoming servant leaders themselves, and requires further investigation. Moreover, although studies have focused on the servant leader in a general organisational environment, very little attention has been given to understanding the servant leader in a project environment, especially the role of a project sponsor. Furthermore, little or no attention has been given to understanding the optimal leadership profile of a project sponsor and even less to understanding the influence that the project sponsor's leadership style has on the individual outcomes within a project team.

In light of the above, the focus of this article is to understand the influence, if any, that a project sponsor's servant leadership traits of altruistic calling, emotional healing, wisdom, persuasive mapping and organisational stewardship have on a project team's 'outcomes', which, for the purposes of this article are defined as: employee empowerment, commitment, trust and innovative behaviour.

Literature review

Leadership

Yukl (2013, p. 26) argues that a leader's characteristics have been the dominant focus of leadership studies, with specific emphasis on one or all of the following characteristics: trait, behaviour, or power. Research in the field of, inter alia, contingency or situational theory states that the ideal leadership style is dependent on the situation, the follower and the leader (Hannay, 2009, p. 2). This approach emphasises the importance of contextual factors that influence leadership processes, the major variables being the type of work to be carried out, the type of organisation and the external environment (Yukl, 2013, p. 29). Emerging leadership theories suggest that the true power of a leader is no longer linked to the leader's position within the organisation, but rather to transforming the organisation and its workers (Burns, 1978 as cited by Stone & Patterson, 2005, p. 7). Today's leadership theory studies have evolved and extend into focusing on the ethical leader, which encompasses transforming, servant, authentic and spiritual leadership styles (Yukl, 2013, p. 335).

Project leadership

As a result of the environmental challenges, projects are proving to be an effective vehicle for organisations to be flexible and adaptable to their changing environments and are therefore able to assist organisations achieve their

strategy, in the development of new products and services and to continually improve the organisation and its product and service offering (Winter *et al.*, 2006, as cited by Leyva & Matović, 2011, p. 1). Hauschildt *et al.* (2000, as cited by Thompson, 2010, p. 6) identified that both technical components and organisational and human aspects are the challenges that affect the success of a project, and they established that the technical components contributed to 50% of the challenge, with the remaining 50% being organisational and human aspects, with leadership being the major factor.

Leadership in a project team has yet to receive the attention that it deserves (Clarke, 2012, p. 128) and has primarily focused on trying to identify the optimal leadership profiles of a project manager for different project types. According to Riaz, Masood and Mohammad (2013, p. 99) in order for a project to be a success, it is essential that the right leadership and management skills, knowledge, expertise and characteristics are present in order for the right decisions to be made at the right time, with the right resources allocated to the right place. Project leadership is ultimately responsible for defining a clear and understandable project mission outlining the project outcomes, which can be measured (Anantatmula, 2010, p. 19). Although there is no definitive leadership style that is preferred above others as the ideal style when leading projects (Anantatmula, 2010, p. 14), Thompson (2010) has recognised servant leadership as being a model that may assist in overcoming many of the challenges a leader may face on a project. In order for a project to be a success it relies heavily on effective and efficient activities performed by individuals at three levels, namely the project sponsor, project managers and project team members (Kilkelly, 2011, p. 4). Project teams are widely used in organisations that undertake research and development, innovation and product development, and are relatively easy to study as they have clearly defined tasks, dedicated resources with a fairly stable membership and leadership structure (Rickards & Moger, 2000, p. 273). It is the responsibility of the project's leadership, in this case the project sponsor, to ensure that the project team forms a cohesive unit, which can only be achieved through the continual nurturing of the team in order to cultivate a team that has its own unique identity and personality, whilst remaining focused on its objectives and goals. According to Redick, Reyna, Schaffer and Toomey (2014, p. 29), one of the most challenging tasks of the leader or project sponsor is to get the project team to work together as a team, since without a cohesive team, the project could be in jeopardy of being unsuccessful.

The concern for societies is on leadership that is focused on employee well-being (Van Dierendonck, 2010, p. 1228); servant leadership emerged as a leadership theory that has been linked to ethics, virtues and morality (Parris & Peachey, 2013, p. 378). Graham (1991, as cited by Van Dierendonck, 2010, p. 2) states that servant leadership may be of particular relevance in this era due to its focus on social responsibility.

Servant leadership

The concept 'servant leadership' was coined by Greenleaf (1970, as cited by Yukl, 2013, p. 336) who defined it as an individual's desire to serve others. Servant leadership can be defined as the manner in which a servant leader goes about influencing their followers; a servant leader is also the leader who actively understands and practises behaviour that places the good of those they lead over their own self-interest: the emphasis is placed on developing followers rather than the glorification of the leader (Hale & Fields, 2007, as cited by Walumbwa, Hartnell & Oke, 2010, p. 517). Whilst researchers acknowledge that volumes have been written about servant leadership and its attributes, the focus of this article is on Barbuto and Wheeler's (2006) five servant leadership dimensions, namely altruistic calling, emotional healing, wisdom, persuasive mapping and organisational stewardship, and an exploration of how the aforementioned are related to employee commitment, trust and innovative behaviour mediated through employee empowerment. A brief description of each of the aforementioned constructs thus follows, resulting in the formulation of hypotheses to explore the proposed relationships.

Empowerment

In order for teams to be effective, the members should be empowered and trusted, committed and given space to be innovative. The impact of empowered employees goes beyond the organisation, which ultimately results in a better society (Patterson, as cited by Van Winkle, Allen, De Vore & Winston, 2014, p. 72), which confirms what Greenleaf (1970) noted, namely, that a leader who uses power and authority to create a better society is defined as a servant leader (Van Winkle *et al.*, 2014, p. 72).

The empowerment of individuals in a project team context has become an important area of study as there is increasing evidence that what holds true for empowering employees in a general organisational context does not necessarily translate to a project context (Nauman *et al.*, 2010 as cited by Tuuli, Rowlinson, Fellows & Liu, 2012, p. 150). This research endeavoured to investigate the influence servant leadership has on empowering a project team utilising the employee empowerment assessment developed by Menon (2001, p. 166).

Altruistic calling and employee empowerment

Greenleaf (1977, as cited by Hayden, 2011, p. 23) describes altruistic calling as the conscious choice of the leader to serve others. Fry (2003, p. 112) further describes altruism in a spiritual leadership setting as 'unconditional, unselfish, loyal, and benevolent care, concern, and appreciation for both self and others'. Scott and Seglow (2007, as cited by Vaughn, 2014, p. 7) define altruism as a means to 'promote the interests of others' with Smith *et al.* (1983, as cited by Chin, 2011, p. 4) expanding on this and describing altruism as a 'pro-social act' towards individuals within an organisation. From the above it is apparent that altruism is the force that

drives an individual to act in the service of others, without regard for their own well-being; it is not motivated by the recognition or rewards that can be had as a result of serving others. Thus, altruistic calling may therefore impact on how a project sponsor influences the project team to be inspired to achieve the objectives of the project.

According to Hannay (2009, p. 5), in order for a servant leader to be effective they will require the participation and interaction of their employees, and in order for employees to participate and interact, they need to feel empowered, that is, they need the freedom (autonomy) to be able to contribute their thoughts, opinions and recommendations in a work environment where those contributions are respected and utilised. In order for employees to work autonomously they need to feel empowered to do so; thus empowerment is about giving employees the autonomy to make the necessary decisions as to how they go about their daily tasks (Haas, 2010, as cited in Humborstad & Perry, 2011, p. 326). In light of the above, and with respect to the project sponsor as the servant leader and the project team member as the employee, it is hypothesised that:

- **Hypothesis 1:** Altruistic calling will be positively related to employee perceived empowerment.

Emotional healing and employee empowerment

Barbuto and Wheeler (2006, p. 318) define emotional healing as a leader's commitment and skill in helping others recover spiritually from a trauma. They further expand and state that leaders who are skilled in emotional healing are empathic individuals and great listeners, thereby facilitating the healing process. Leaders with this emotional healing trait will create a safe environment for employees to voice both their personal and professional issues. Some scholars have argued that the ability of a leader to provide emotional healing to employees goes beyond the individual and provides the emotional stability for the organisation as a whole (Weymes, 2003, as cited in Barbuto & Gifford, 2010, p. 6). Emotional healing has been associated with the leader's ability to really listen to their followers and that the leader is empathetic to the plight of others. An empathic leader has the ability to create an environment that is safe for their followers to express both their professional and personal issues (Barbuto & Wheeler, 2006, p. 318). In light of the above, specifically with respect to the project sponsor (as servant leader) and project team members as employees, it may be hypothesised that:

- **Hypothesis 2:** Emotional healing will be positively related to employee perceived empowerment.

Wisdom and employee empowerment

Scholars have likened wisdom to notions of awareness and the astuteness of the leader to pick up cues in their environments (Barbuto & Wheeler, 2006, p. 306). McKenna and Rooney (2005, p. 2) on the other hand summarise wisdom as being the intellect of both rational (scientific) practices as well as transcendent (tacit) processes that include imagination, intuition and creativity. Wisdom in a leader

has also been defined as the ability of the leader to assess their environment and extract the necessary cues from the environment to make decisions based on an understanding of what the consequences would be as a result of their decisions (Barbuto & Wheeler, 2006, cited in Hayden, 2011, p. 23). Based on the above, and with respect to the project sponsor and project team members, it is hypothesised that:

- **Hypothesis 3:** Wisdom will be positively related to employee perceived empowerment.

Persuasive mapping and employee empowerment

Greenleaf (1980, as cited by Russell & Stone, 2002, p. 151) highlights persuasion as a fundamental trait of the servant leader. Persuasive mapping also enables the servant leader to identify their followers' needs as well as be able to provide the necessary information so that their followers are able to perceive the importance of their work (Chin & Pan, 2011, as cited by Klein, 2014, p. 58). Another important aspect of persuasive mapping is that the leader's influencing ability stems from a place where they are not reliant on formal authority or legitimate power to influence their followers (Barbuto & Wheeler, 2006, p. 307).

In order to have a lasting and effective influence over their followers, the servant leader needs to approach persuasion from a rational perspective and have the ability to identify their follower's needs. Bennis and Nanus (1997, as cited by Russell & Stone, 2002, p. 152) state that a 'pull' leadership style will result in employees being empowered. Thus, through influencing their followers, servant leaders are ultimately persuading their team to follow their lead willingly and thus the employees are empowered to choose to follow. Greenleaf (1980, as cited in Russell & Stone, 2002, p. 151) argues that persuasion on the part of the leader is to go out ahead of the team, to show them the way forward; followers voluntarily and willingly follow as they are empowered to do so. Considering the above, this study hypothesises that:

- **Hypothesis 4:** Persuasive mapping will be positively related to employee perceived empowerment.

Organisational stewardship and employee empowerment

Organisational stewardship is not only the servant leader's ability to create a sense of community within the organisation, but also includes the leader's passion for impacting positively on society as a whole (Klein, 2014, p. 3). Due to the ever growing demand on organisations to stay ahead of the game, it is becoming increasingly important for organisations to evolve and adopt innovative approaches to organisational stewardship. Stewardship encompasses empowerment and the individual 'choosing partnership over patriarchy' and 'distributing ownership and responsibility' (Block, 1993, as cited by Russell & Stone, 2002, p. 149). By sharing and owning the responsibility for organisational stewardship, employees will feel empowered to act. In light of the above, it is hypothesised that:

- **Hypothesis 5:** Organisational stewardship will be positively related to employee perceived empowerment.

Employee empowerment and commitment

Team commitment has three dimensions that can be identified, namely *affective* commitment, which describes an employee's commitment and willingness to remain with the a team because they want to, *continuance* commitment, which describes the costs associated with leaving a team and results in an employee remaining with said team because they have to, and *normative* commitment, which refers to an employee remaining with a team because they ought to as a result of their feelings of obligation towards the team (Mahembe & Engelbrecht, 2013, p. 1).

According to Seibert, Wang and Courtright (2011, p. 985), when an employee has feelings of autonomy and empowerment, it is probable that these feelings will result in increased commitment to the organisation. Furthermore, employee empowerment has also been associated with an increase in continuance commitment as the employee would be reluctant to leave a work environment that is empowering, since the employee may view leaving the organisation as sacrificing something of value (Meyer & Allen, 1991, as cited by Seibert *et al.*, 2011, p. 985). Taking into consideration the abovementioned, it is hypothesised that:

- **Hypothesis 6:** Project team member's perceived empowerment will be positively related to their commitment.

Employee empowerment and trust

Anantatmula (2010, p. 19) states that trust encourages project team members to work together in a collaborative manner, encourages networking amongst the team members and enables the team to innovate. Leaders demonstrate their trust in team members through their actions, such as how much the leader controls or checks up on the team's work, the level of delegation, as well as the amount of freedom the team members are given in order to participate (Barry, 2002, as cited in Redick *et al.*, 2014, p. 24).

Trust is a key factor for leaders to establish as it enables the leader to motivate the team to accomplish both the mission and vision of the project and allows the leader to manage any conflicts that may arise that, if unresolved, could impact negatively on project performance and may prevent the team from forming a cohesive unit (Anantatmula, 2010, p. 19). Leadership style has been noted as playing a significant indirect role in forming team cohesiveness and efficacy, via trust amongst team members (Chuang *et al.*, 2004, as cited by Fung, 2014, p. 4). Employees perceive empowerment as a sign that their leader trusts them and, in turn, the employee trusts their leader, colleagues and organisation (Henkin & Moyer, 2006, as cited in Berraies *et al.*, 2014, p. 86). In light of the aforementioned arguments, this study hypothesises that:

- **Hypothesis 7:** Employees' perceived empowerment will be positively related to trust.

Employee empowerment and innovative behaviour

Innovative behaviour, which includes creativity and servant leadership, has been cited as an important leadership construct that encourages creativity (Neubert *et al.*, 2007, as cited by Yoshida, Sendjaya, Hirst & Cooper, 2014, p. 2). The development of new services, which requires innovative behaviour by employees, is heavily dependent on leadership (De Jong & Den Hartog, 2003, p. 7), and effective leadership has been credited for the presence of innovative behaviour in an organisation (Khan, Aslam & Riaz, 2012, p. 18). According to some researchers, leadership has been noted to stimulate innovative behaviour (Kouzes & Posner, 2002; Mumford *et al.*, 2010, as cited by Noor & Dzulkifli, 2013, p. 129).

Research has identified a strong relationship between employee empowerment and innovation, which encompasses both the encouragement to innovative and actual innovative behaviour (Fernandez & Moldogaziev, 2013, p. 492). The empowering of employees is important for initiating the process of innovation as it provides the employee with the independence to act in new and creative ways that go against the normal organisational standard operating processes and procedures (Pierce & Delbecq, 1977, as cited by Fernandez & Moldogaziev, 2013, p. 492). In order to explore the relationship between employee empowerment and innovative behaviour in a project management context, H8 was formulated:

- **Hypothesis 8:** The employee's perceived empowerment will be positively related to their innovative behaviour.

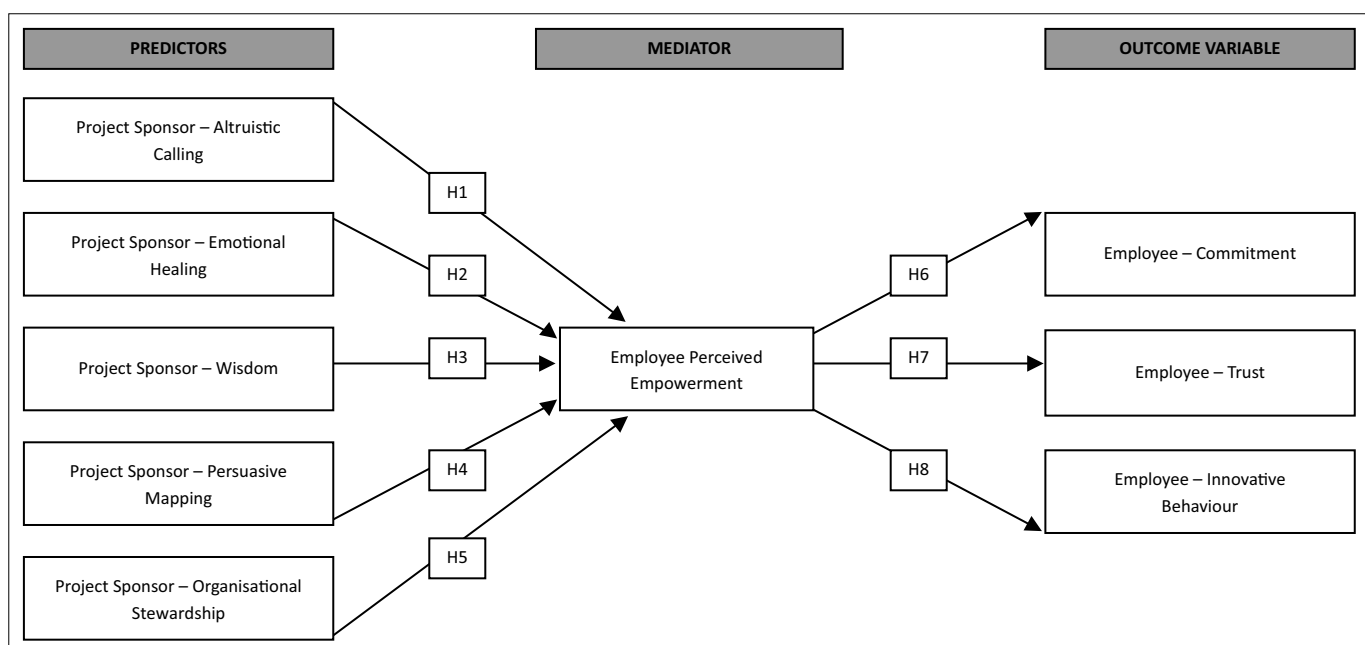
The various relationships hypothesised between the project sponsor as the servant leader and the project team members as employees are depicted in the conceptual model in Figure 1. The above hypothesised relationships depicted in the

conceptual model were explored using the methodology explained below.

Method

Research context

This study was conducted in a medium sized organisation that provides products and services within the fleet management industry in South Africa and surrounding African countries. The organisation was in the process of implementing an entirely new enterprise resource planning (ERP) system that was to form the foundation for the organisation's information technology (IT) solution. A critical part of the organisational strategy is to improve on and automate its business, remove redundant processes and implement key performance indicators (KPIs) set against each process in order to manage employee and supplier deliverables and service delivery to clients. The objective of the IT project is to empower its employees, clients and suppliers and increase the organisation's client base without having to increase staff overheads. The ERP system will enable the delivery of an additional six IT solutions which will utilise the ERP transactional data and processes to deliver the following: a client and supplier portal, mobility solutions, business intelligence reporting, output documentation and transactional reporting, system integration and enterprise content management. The unique organisational requirements necessitated the need for the project sponsor to have an active hands-on approach and to personally engage and work with all members of the project team in order to deliver the ERP and its additional six IT solutions to the organisation. The project team was made up of the following sub-units that are interdependent: the project sponsor, the programme manager, four IT managers, the project manager, the business analysts, the functional unit representatives comprising the



Source: Compiled by the authors

FIGURE 1: Hypothesised relationships and conceptual model.

general managers, external consultants representing third party suppliers and developers, all of whom are required to collaborate in order to achieve the project objectives. The outcomes of empowerment, commitment, trust and innovative behaviour will be measured at these sub-unit levels, with the servant leadership traits being measured at the project sponsor's level.

Sample

Non-probability sampling, specifically purposive or judgement sampling, was used (Ivankova, Creswell & Plano Clark, 2011, p. 178), as it ensured that the 'sample selected for the study was representative of the population in terms of the context of the study based on the researcher's specific purpose, and expert opinion regarding the population being studied'. The sample comprised third party 'supplier' employees fulfilling the role of consultants on the ERP project and project managers, as well as internal employees fulfilling the role of business analysts, general managers, IT managers, project managers and developers. The survey was conducted amongst a non-probability sample of 48 project team members from amongst a population of 257, comprising project managers, business analysts and IT staff of the fleet management organisation.

Research instruments

Servant leadership measurement

The traits of servant leadership were measured by means of the Servant Leadership Questionnaire developed by Barbuto and Wheeler (2006, as cited in Hayden, 2011, p. 22). The aforementioned authors derived five conceptually and empirically distinct servant leadership factors, namely altruistic calling, emotional healing, persuasive mapping, wisdom and organisational stewardship, analysed the five-factor construct and confirmed the revised 23-item instrument's internal consistency whose Cronbach's coefficient alphas ranged from 0.82 to 0.92 (Freeman, 2011, p. 127).

Employee empowerment

Menon's (2001) Employee Empowerment Questionnaire was used to measure employee empowerment, since it is both valid and reliable. Menon's approach to employee empowerment was an integrative psychological approach and was developed on the basis that the psychological experience of power forms the basis for feeling empowered (Menon, 2001, p. 153). Although the questionnaire had three sub-categories, namely perceived control, perceived competence and goal internalisation, the researchers selected specific questions from each sub-category on the basis that they were aligned to the purpose of this study and the hypotheses proposed.

Commitment

The Organizational Commitment Questionnaire adapted from the questionnaire developed by Tayyab and Tariq

(2001) was used to measure organisational commitment, since it was deemed reliable (0.93 alpha coefficient on the full scale, with the subscales ranging between 0.89 and 0.95). However, only a select number of questions were included in the combined questionnaire used for this study's purposes, namely those that could be reasonably modified to represent accurate scenarios that the project team member could face in a project environment and those aligned to the purpose of the study and the proposed hypotheses.

Innovative behaviour

Dobni (2008) developed a questionnaire to measure innovative behaviour which was associated with unidimensionality and activities and elements of innovation. Certain questions were selected from Dobni's questionnaire from amongst those that appeared under the subheading of 'organizational constituency' because they resonated with situations that could be contextualised by a project team member within the setting of the project environment.

Data collection procedure

For the purposes of this study, the group administration method was adopted, which entailed arranging an appropriate date, time and location for the respondents to complete the questionnaire. However, in instances when the respondent was not available, an electronic version of the questionnaire was emailed for completion and returned electronically.

Ethical considerations

Written permission was obtained from the organisation implementing the ERP system. Further, written permission was received from the project sponsor, who is the independent variable in this study; finally, each questionnaire incorporated a covering letter addressed to the respondents which explained the research process. Furthermore, the researcher was cognisant of the sensitivities regarding the research and the resultant impact that the research may have on the participants.

Data analysis

The Smart PLS software for structural equation modelling was used to explore the relationships in the proposed conceptual model and assess the measurement instruments. Smart PLS is a regression based technique that has emerged as a powerful approach to test causal relationships amongst variables (Chinomona & Surujlal, 2012), even under conditions of non-normality. In addition, Smart PLS can handle complex predictive models in small to medium sample sizes and therefore fits the purpose of this study since the current study sample size is relatively small (44). PLS also generates path coefficients for the relationships modelled amongst the constructs. The significance of these coefficients was assessed using the bootstrap procedure (with 100 sub-samples), which provided the t-values for each path estimate.

TABLE 1: Accuracy analysis statistics.

Research constructs	Mean value	Factor loading	R-squared value	Cronbach's alpha value	CR value	Average variance extracted
AC						
AC1	0.864					
AC2	0.946					
AC3	0.922	2.977	-	0.927	0.948	0.821
AC4	0.89					
EH						
EH1	0.767					
EH2	0.954					
EH3	0.966	3.841	-	0.936	0.946	0.816
EH4	0.913					
W						
W1	0.797					
W2	0.849					
W3	0.89	3.545	-	0.904	0.927	0.718
W4	0.863					
W5	0.831					
PM						
PM1	0.836					
PM2	0.817					
PM3	0.784	3.75	-	0.894	0.918	0.691
PM4	0.877					
PM5	0.839					
OS						
OS1	0.652					
OS2	0.795					
OS3	0.577	3.636	-	0.793	0.853	0.541
OS4	0.861					
OS5	0.759					
EPE						
EPE1	0.611					
EPE2	0.75					
EPE3	0.745	3.568	0.091	0.74	0.828	0.503
EPE4	0.777					
EPE5	0.614					
EC						
EC1	0.702					
EC2	0.814					
EC3	0.738	3.841	0.419	0.833	0.882	0.6
EC4	0.813					
EC5	0.799					
ET						
ET1	0.71					
ET2	0.803					
ET3	0.888	3.227	0.128	0.853	0.89	0.621
ET4	0.834					
ET5	0.693					
EIB						
EIB1	0.814					
EIB2	0.76					
EIB3	0.833	3.591	0.464	0.755	0.832	0.508
EIB4	0.592					
EIB5	0.502					

AC, Altruistic caring; EC, Employee commitment; EH, Emotional healing; EIB, Employee innovative behaviour; EPE, Employee perceived empowerment; ET, Employee trust; OS, Organisational sponsorship; PM, Persuasive mapping; W, Wisdom.

Results

Table 1 shows the measurement reliability, validity, mean values and the item loadings of the variables. Convergent validity was determined by assessing the values of items that loaded on their respective variables. The item loadings are expected to reach a threshold of 0.5 or higher to be

acceptable. Discriminant validity was checked by ensuring that there was no significant inter-research variable cross-loadings (Chin, 1998). As reflected in Table 1, all items have loadings greater than 0.5, with no cross-loadings greater than 0.750, whilst the t-statistics were derived from bootstrapping (100 resamples). As such, this confirms that all the measurement items converged well

TABLE 2: Correlation between research constructs.

Research construct	AC	EC	EH	EIB	EPE	ET	OS	PM	W
AC	1.000	-	-	-	-	-	-	-	-
EC	0.549	1.000	-	-	-	-	-	-	-
EH	0.637	0.389	1.000	-	-	-	-	-	-
EIB	0.386	0.669	0.260	1.000	-	-	-	-	-
EPE	0.280	0.658	0.225	0.690	1.000	-	-	-	-
ET	0.297	0.238	0.161	0.525	0.385	1.000	-	-	-
OS	0.660	0.387	0.605	0.175	0.205	0.169	1.000	-	-
PM	0.542	0.529	0.526	0.275	0.386	0.086	0.750	1.000	-
W	0.515	0.479	0.428	0.370	0.228	0.285	0.673	0.747	1.000

AC, Altruistic caring; EC, Employee commitment; EH, Emotional healing; EIB, Employee innovative behaviour; EPE, Employee perceived empowerment; ET, Employee trust; OS, Organisational sponsorship; PM, Persuasive mapping; W, Wisdom.

TABLE 3: Results of structural equation model analysis.

Hypothesised relationship	Hypothesis	Path coefficients	T-statistics	Hypothesis rejected or supported
AC → EPE	H1	0.217	2.029	Supported (Significant)
EH → EPE	H2	0.016	0.065	Supported (Insignificant)
W → EPE	H3	-0.0117	0.590	Rejected (Insignificant)
PM → EPE	H4	0.570	2.209	Supported (Significant)
OS → EPE	H5	-0.297	2.058	Rejected (Significant)
EPE → EC	H6	0.658	8.765	Supported (Significant)
EPE → ET	H7	0.385	2.259	Supported (Significant)
EPE → EIB	H8	0.690	10.537	Supported (Significant)

AC, Altruistic caring; EC, Employee commitment; EH, Emotional healing; EIB, Employee innovative behaviour; EPE, Employee perceived empowerment; ET, Employee trust; OS, Organisational sponsorship; PM, Persuasive mapping; W, Wisdom.

on their respective constructs and therefore are acceptable measures.

According to Chin (1998), research variables should have an average variance extracted (AVE) of more than 0.5 and inter-construct correlations should be less than 0.850 for discriminant validity to exist. Table 1 reflects that all constructs exceeded these criteria, with the AVE being greater than 0.503 and the highest inter-construct correlation value being 0.750 (Table 2). The aforementioned confirms the existence of discriminant validity of the measurement used in this study.

Table 3 and Figure 2 present the results of the PLS analysis procedure on the structural model, along with the path estimates and t-values. Support for the study hypotheses, which are labelled on their corresponding paths in Figure 2, could be ascertained by examining the directionality (positive or negative) of the path coefficients and the significance of the t-values. The standardised path coefficients are expected to be at least 0.2 and preferably greater than 0.3 (Chin, 1998).

Although the results provide support for the proposed positive relationships between the hypotheses, Table 3 indicates that only three (H3, H4 and H5) of the posited relationships are statistically significant (t-statistics value is greater than 2). Figure 2 and Table 3 provide the path coefficients for H1, H2, H3, H4, H5, H6, H7 and H8 (0.217, 0.016, -0.117, 0.570, -0.297, 0.658, 0.385 and 0.690 respectively). By following the formulae provided by Tenehaus, Vinzi, Chatelin and Lauro (2005), the global goodness-of-fit (GoF) statistic for the research model was calculated using the equation:

$$\text{GoF} = \sqrt{\text{AVE} \times R^2} \quad [\text{Eqn 1}]$$

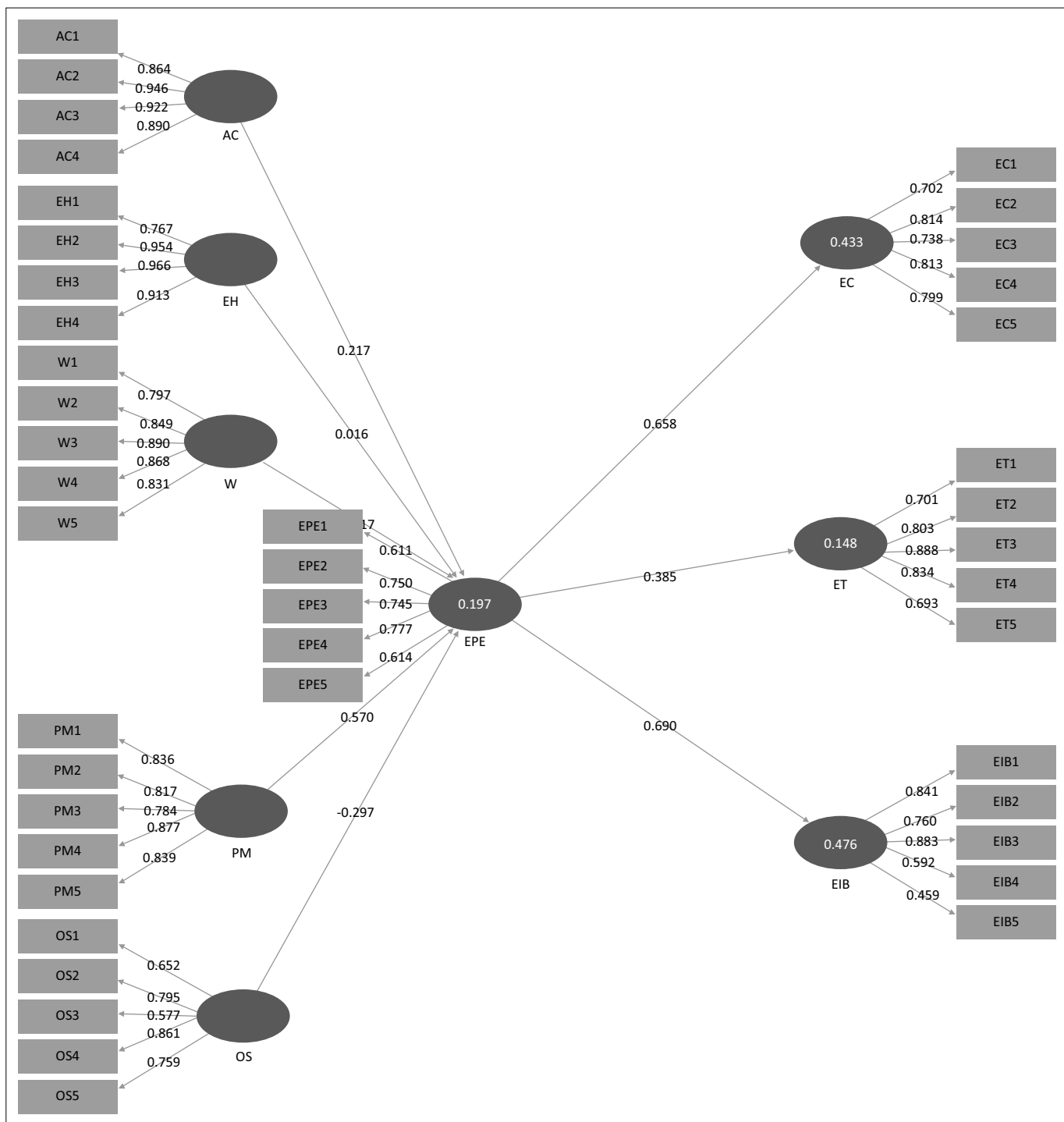
The calculated global GoF is 0.38, which exceeds the threshold of 0.36 suggested by Wetzels, Odekerken-Schröder and Van Oppen (2009); this led the researchers to conclude that the research model has a good overall fit.

In summary, this study reveals that persuasive mapping has strongest influence on employee perceived empowerment compared to altruistic caring, emotional healing, wisdom and organisational sponsorship. However, wisdom and organisational sponsorship have a negative effect on employee perceived empowerment, whilst at the same time, the relationships between wisdom and employee perceived empowerment and emotional healing and employee perceived empowerment relationships are insignificant. On the other hand, employee perceived empowerment has a stronger effect on employee innovative behaviour, when compared to employee trust and employee commitment.

The results also show that persuasive mapping has the strongest impact on employee innovative behaviour, followed by employee commitment and lastly, employee trust via employee perceived empowerment. By implication, the findings indicate that the more the employers or sponsors use a persuasive approach in their leadership, the more the employees will feel empowered and consequently the more willing they are to adopt innovative behaviour.

Discussion of the findings

Haas (2010, as cited in Humborstad & Perry, 2011, p. 326) argues that autonomy comes about when employees are



Source: Compiled by the authors

AC, Altruistic caring; EC, Employee commitment; EH, Emotional healing; EIB, Employee innovative behaviour; EPE, Employee perceived empowerment; ET, Employee trust; OS, Organisational sponsorship; PM, Persuasive mapping; W, Wisdom.

FIGURE 2: Measurement and structural model results.

empowered, by their leader, to be self-sufficient in conducting their day-to-day activities as they see fit. This study supports that the aforementioned assertion is equally applicable in a project environment as well, since the altruistic calling in a project sponsor is positively related to the project team's sense of employee perceived empowerment (H1).

Although Barbuto and Wheeler (2006, p. 318) highlight that the servant leadership trait of emotional healing

would empower employees to express their personal and professional issues, this study did not support the postulation made by the researcher, and the results were insignificant (H2). Furthermore, although Manz (1998, as cited in Russell & Stone, 2002, p. 152) states that if a leader is wise, they will guide and support their followers by empowering them to lead themselves, this view was also not supported in this study, since the servant leadership trait of 'wisdom' did not result in an empowered project team (H3). According

to Hannay (2009, p. 5), if employees feel that their leader is omnipotent and unquestioningly correct in all matters, it is unlikely then that they will feel empowered to provide an opinion or challenge their leader's position. This could be the case in this study, where the project team members are intimidated by the project sponsor's wisdom and therefore do not feel empowered to offer their opinion or object to or challenge the project sponsor. The project environment may also not lend itself to the project team members feeling empowered, due to the circumstances of the project; the project sponsor may be taking unilateral decisions, as a result of their assumed wisdom, which sees them not consulting with or getting feedback from the project team members, which may create a sense of disempowerment amongst the project team members. These unilateral decisions maybe as a result of the constraints and pressures experienced within a project environment where time is of the essence.

According to some existing research, persuasive mapping involves empowering employees to make their own decisions; thus, when employees follow, they do so willingly (Bennis & Nanus, 1997, as cited in Russell & Stone, 2002, p. 152). This study supports the aforementioned, in that the results show that persuasive mapping of the project sponsor results in the project team feeling empowered (H4).

In order for organisational stewardship to be adopted, a leader needs to empower their followers so that they freely choose to become stewards themselves (Fairholm, 1997, 1998, as cited in Russell & Stone, 2002, p. 149). The leader empowers followers by creating a partnership with them so that organisational stewardship is a responsibility that is jointly owned by all parties (Block, 1993, as cited in Russell & Stone, 2002, p. 149). The results of this study do not support the aforementioned views, in that it was evident that organisational stewardship in the project sponsor did not result in the project team members being empowered (H5).

Research shows that when employees experience a sense of empowerment it translates into an increase in the employee's commitment to the organisation (Seibert *et al.*, 2011, p. 985). Additionally, an increase in continuance commitment ensues when employees feel empowered; this continuance commitment is accounted for by the employee experiencing a sense of loss of something they hold as valuable should they leave the organisation (Meyer & Allen, 1991, as cited by Seibert *et al.*, 2011, p. 985). This study further supports the aforementioned views, in that the project team members felt empowered, which translated into them being committed to the project (H6). Some studies have also argued that when employees feel empowered they perceive it as a sign that their leader trusts them, which translates into the employees then trusting their leader, their colleagues, as well as the organisation (Henkin & Moye, 2006, as cited in Berraies *et al.*, 2014, p. 86). The aforementioned seems to true in a project management environment, since, in this study, the project team members felt empowered and this translated into a positive relationship with trust amongst the project team

members (H7). Recent studies have acknowledged the strong relationship that exists between employee empowerment and employee innovativeness (Fernandez & Moldogaziev, 2013, p. 492), and empowerment has been identified as a key initiator of the innovation process within employees, since through empowerment, employees have autonomy to act in ways that are novel and unique and which go against the existing status quo (Pierce & Delbecq, 1977, as cited by Fernandez & Moldogaziev, 2013, p. 492). This study also supports the aforementioned views in that there is a strong relationship between the project team's perception of empowerment and their innovative behaviour (H8).

Practical implications

The findings provide fruitful implications to both practitioners and academicians. On the academic side, this study contributes to the leadership literature by systematically exploring the impact of altruistic caring, emotional healing, wisdom, persuasive mapping and organisational sponsorship on employee commitment, employee trust and employee innovative behaviour through the mediating role of employee perceived empowerment in a project management context in South Africa. In particular, the findings provide tentative support for the proposition that altruistic caring, emotional healing and persuasive mapping should be recognised as significant 'instruments' to influence employee innovative behaviour, commitment and trust via employee empowerment. On the practitioners' side, the important influential role of persuasive mapping and altruistic caring on employee empowerment and consequently on employee innovative behaviour, commitment and trust is highlighted. This study points out that project leaders should adopt and exhibit persuasive mapping and altruistic caring leadership qualities, in order to make their employees feel empowered and consequently stimulate their innovative behaviour, commitment and trust.

Limitations

This study, albeit exploratory, was conducted in one organisation and one project. For greater generalisation, a repeated study in different organisational contexts is necessary. A further limitation is the geographic spread of the study, which only concentrated on a single province (out of nine) in South Africa. Moreover, the study was limited to only 44 participants in one organisation.

Recommendations

The limitations of this research can also be viewed as avenues for future studies. An important limitation is the geographic spread of the study since it only concentrated on a single province (out of the nine South African provinces). Subsequent research should contemplate replicating this study in other provinces of South Africa or even other African countries for comparison. Moreover, since the study was limited to only 44 participants in one organisation in South Africa, future studies should consider expanding

the data collection to include a larger, more representative sample. Finally, further research could also investigate the effects of other servant leadership dimensions on employee empowerment. Such an expanded model may likely yield more interesting research findings and insights of value to both academics and practitioners alike.

Conclusion

The purpose of this study was to determine the influence of altruistic caring, emotional healing, wisdom, persuasive mapping and organisational sponsorship on employee commitment, employee trust and employee innovative behaviour through the mediating role of employee perceived empowerment. In particular, eight hypotheses were postulated and tested using data from 44 respondents in South Africa. The empirical results supported three of the research hypotheses and five in a significant way. The findings indicate that persuasive mapping has the strongest impact on employee innovative behaviour followed by employee commitment and lastly employee trust via employee perceived empowerment when compared to the influence of altruistic caring, wisdom, emotional healing and organisational sponsorship on the same.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

This article was extracted from the MBA dissertation of C.L.K. (Regenesys Business School) whose study was supervised by K.G. (University of KwaZulu-Natal). The article was primarily written by K.G. K.G. advised C.K. on the data analysis and interpretation of the findings and write-up thereof.

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The influence of trait-emotional intelligence on authentic leadership

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Dates:

Received: 21 May 2015

Accepted: 26 Aug. 2015

Published: 04 Nov. 2015

How to cite this article:

Kotzé, M., & Nel, P. (2015).
The influence of trait-
emotional intelligence on
authentic leadership. *SA
Journal of Human Resource
Management/SA Tydskrif vir
Menslikehulpbronbestuur*,
13(1), Art. #716, 9 pages.
[http://dx.doi.org/10.4102/
sajhrm.v13i1.716](http://dx.doi.org/10.4102/sajhrm.v13i1.716)

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Orientation: Authentic leadership is a relatively new construct that has recently gained increasing attention resulting from challenges faced by organisations relating to ethical meltdowns, corruption and fraud.

Research purpose: This study seeks to explore the relationship between components of emotional intelligence and authentic leadership.

Motivation for the study: Several authors called for more empirical investigations into the antecedents of authentic leadership. Despite the important role that emotions play in leadership, empirical studies were lacking about the influence of different components of emotional intelligence to authentic leadership.

Research design, approach and method: Data were collected, using questionnaires obtained from 341 full-time employed applicants to MBA and leadership programmes in a South African Business School. Relationships between variables were analysed, using Pearson product-moment correlations and stepwise multiple regression.

Main findings: The results indicated that emotional intelligence has positive statistically significant associations with authentic leadership. Specifically, those who scored high on all the emotional intelligence components also scored high on authentic leadership. In addition, the emotional intelligence component of empathy was a statistically significant predictor of authentic leadership.

Practical/managerial implications: Initial findings suggest the potential value of recognising and developing the emotional intelligence of leaders to enable them to lead their organisations authentically to desired, successful outcomes. As empathy has been shown to be the most important emotional intelligence predictor of authentic leadership, leaders need to understand when subordinates perceive a leader as displaying empathic emotion.

Contribution: This study contributes to the literature and empirical research on the antecedents of authentic leadership.

Introduction

The challenges faced by public, private and even non-profit organisations relating to ethical meltdowns, corruption, accounting fraud, and IP infringement (Price Waterhouse Coopers, 2014), as well as the growing attention paid to corporate social responsibility (Lawler & Ashman, 2012), have created a public need for organisational leaders who keep themselves accountable and who can lead with integrity, courage, and transparency (Diddams & Chang, 2012). Leadership has always been more difficult in challenging times (Avolio & Gardner, 2005) and, in the face of such pressures, people look for organisational leaders of character and integrity to provide direction, to help them find meaning in their work, and to restore confidence, hope, and optimism by relating genuinely to all stakeholders (associates, customers, suppliers, owners, and communities) (Avolio & Gardner, 2005; Gardner, Avolio, Luthans, May & Walumbwa, 2005). This type of leadership has been termed 'authentic leadership', referring to genuine leaders who lead by example in fostering healthy ethical climates, and who are not only true to themselves but who, likewise, lead others by helping them to achieve authenticity (Gardner *et al.*, 2005). These leaders focus on their own moral compass and internal principles when facing unethical or ambiguous business practices (Diddams & Chang, 2012).

Authenticity is seen 'as a broad psychological construct, reflecting one's general tendencies to view oneself within one's social environment and to conduct one's life according to one's deeply-held values' (Ilies, Morgeson & Nahrgang, 2005, p. 376). 'At more specific levels, authenticity is manifested in concrete aspects of one's' behaviour 'and existence, such as in leading others'. Avolio, Luthans and Walumbwa (2004) describe authentic leaders as:

those who are deeply aware of how they think and behave and are perceived by others as being aware of their own and others' values/moral perspectives, knowledge, and strengths; aware of the context in which they operate; and who are confident, hopeful, optimistic, resilient, and of high moral character. (p. 4)

As first referenced in management and organisational literature, authenticity 'viewed the authentic capacity of a leader as a litmus test of executive quality' (Emuwa, 2013).

Authentic leadership has been associated with the following:

- promoting 'positive outcomes, such as' extra effort, increased trust, positive emotions, organisational commitment, and organisational citizenship behaviours (Dasborough, Todorova & Qu, 2014; Peus, Wesche, Streicher, Braun & Frey, 2012)
- employee creativity and innovativeness (Müceldili, Turan & Erdil, 2013; Rego, Sousa, Marques & Cunha, 2012)
- new venture performance (Hmieleski, Cole & Baron, 2012)
- follower empowerment, commitment to and satisfaction with supervisors (Emuwa, 2013; Müceldili *et al.*, 2013)
- eudaemonic well-being (Ilies *et al.*, 2005).

Research has also indicated 'that authentic leadership may be particularly beneficial when shared among team members' within leadership teams (Hmieleski *et al.*, 2012, p. 1479). In other words, although shared authentic leadership originates within individuals, it can also manifest as a team 'level property through members' common experiences, mutual interactions, and attraction-selection-attrition processes' (Hmieleski *et al.*, 2012, p. 1479).

Because of the impact of everyday emotions on organisational life and the obvious demands for emotional labour inherent to the leadership role (Avolio, Gardner, Walumbwa, Luthans & May, 2004; Gardner, Fischer & Hunt, 2009; Humphrey, Pollack & Hawver, 2008; Walter, Cole & Humphrey, 2011), the role of emotions in leadership cannot be ignored. Gardner *et al.* (2009) state that:

although role demands of the leadership position and situational factors may create chronic needs for leaders to regulate emotions, acute events at work have the most immediate impact on a leader's emotions. (p. 469)

Subsequently, the role that positive emotions and trust may play in the authentic leadership process has been proposed by several researchers (Avolio, Gardner, Walumbwa, Luthans & May, 2004; Gardner *et al.*, 2005, 2009; Ilies *et al.*, 2005; Walter *et al.*, 2011). Those leaders who can effectively display and manage emotions, and who can accurately identify and understand others' emotions, can better observe the spirit of their employees (Vlăsceanu, 2012). 'By tapping into the rich information that emotions provide, authentic leaders can often alter followers' thinking and' behaviour 'in ways that allow them to' negotiate organisational challenges more effectively (Avolio, Gardner, Walumbwa, Luthans & May, 2004, p. 812). 'By working together on daily activities, leaders' and followers' emotions and moods converge through the process of emotional contagion'. Therefore, 'if

authentic leaders experience more positive affective states (through self-awareness and relational orientation) than inauthentic leaders, their followers will experience more positive affective states' through emotional contagion (Ilies *et al.*, 2005, p. 384). Gardner *et al.* (2009) argue that 'genuine emotional displays by a leader are positively related to the' favourability 'of follower impressions', and 'follower perceptions of leader authenticity'.

Given this fundamental role of emotions in leadership (Walter *et al.*, 2011), emotional intelligence (EI) may be crucial in the authentic leadership process (Gardner *et al.*, 2009). 'Emotionally intelligent individuals are posited not only' to 'be aware of their emotions, but' also to 'understand the causes and effects of such emotions on cognitive processes and decision making, and how' these 'change over time'. Theoretically, EI is expected to influence leadership outcomes through alternative channels, by enabling leaders to manage their own and their followers' feelings more effectively (Walter *et al.*, 2011). Individuals with higher EI are likely to exhibit higher self-awareness (Ilies *et al.*, 2005), thus:

[the] implication for authentic leadership development is that heightened levels of self-awareness will help leaders to understand and take into account their own and others' feelings, without being ruled by emotional impulses triggered by the moment. (Gardner *et al.*, 2005, p. 353)

A study by Peus *et al.* (2012) supports empirically the proposition that the development 'of authentic leadership as perceived by followers is' related 'directly to the gaining of self-knowledge by the leader.' Furthermore, the results of their study show 'that followers evaluate leaders in terms of the consistency with which leaders behave in ways that are consonant with their core values or guiding purposes' (Peus, 2012, p. 343).

Research relating EI and authentic leadership specifically is basically non-existent (Gardner, Cogliser, Davis & Dickens, 2011; Kiyani, Saher, Saleem & Iqbal, 2013). Excluding the study by Kiyani *et al.* (2013), who examined the mediating effect of the authentic leadership style on the relationship between managers' EI (total score) and employee outcomes, no empirical studies relating to the direct relationship between components of EI and authentic leadership could be found. Walter *et al.* (2011) explain that, by examining the EI-leadership link, scholars can promote further confidence in the relevance of EI, and contribute new insights that can assist educators, trainers, and management professionals in utilising emotional intelligence more effectively. Also, Gardner *et al.* (2011) 'called for more empirical investigations of the various antecedents' in authentic leadership, 'and, specifically, for further research that examines what components and situations develop a deeper understanding of the authentic leader-follower relationships' (Gardner *et al.*, 2011, p. 1140).

Research purpose

In light of the above context, the purpose of the present research is to determine the influence of the various components of EI on authentic leadership.

Conceptualisation of authentic leadership

A variety of approaches and interpretations representing a developing framework within which to understand the concept of authenticity and authentic leadership is evident from the literature (Eagly, 2005; Lawler & Ashman, 2012; Liu, Cuthcher & Grant, 2015). 'The concept that dominates current theorising, as well as empirical research, is the one proposed by Avolio and his colleagues' (Avolio, Gardner, Walumbwa, Luthans & May, 2004; Gardner *et al.*, 2005; Gardner *et al.*, 2011; Ilies *et al.*, 2005; Luthans & Avolio, 2003; Walumbwa, Avolio, Gardner, Wernsing & Peterson, 2008). Building on conceptualisations 'of authentic leadership by Avolio, Gardner and colleagues' (Avolio & Gardner, 2005; Gardner *et al.*, 2005) and Ilies *et al.* (2005), Walumbwa *et al.* (2008) 'define authentic leadership as 'a pattern of leader' behaviour 'that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness', and internalised 'moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development' (Walumbwa *et al.*, 2008, p. 94).

The above authors propose that authentic leadership consists of four distinct but related substantive components: self-awareness, relational transparency, balanced processing, and internalised moral perspective. In this model of authentic leadership, *self-awareness*:

refers to showing an understanding of one's strengths and weaknesses and the multifaceted nature of the self, which includes gaining insight into the self through exposure to others, and being cognisant of one's impact on other people. (Walumbwa *et al.*, 2008, p. 54)

'*Relational transparency* refers to presenting one's authentic self to others' and, therefore, promotes 'trust through disclosures that involve' sharing 'openly information and expressions of one's true thoughts and feelings whilst trying to' minimise 'displays of inappropriate' emotion (Walumbwa *et al.*, 2008, p. 95). '*Balanced processing* refers to leaders who show that they' analyse 'all relevant data' objectively before coming to a decision; they 'also solicit views that challenge their deeply-held' assumptions (Walumbwa *et al.*, 2008, p. 95). Finally, '*internalised moral perspective* refers to an internalised and integrated form of self-regulation that is 'guided by internal moral standards' and values as opposed to group, organisational, and societal pressures. This results in expressed decision making and behaviour that is consistent with these internalised values. According to Rego *et al.* (2012, p. 430), empirical evidence shows that a core authentic 'factor can emerge from the relationships' between these four dimensions. These 'individual factors do not add any meaningful incremental validity beyond the common core higher factor, suggesting that the variance attributable to' the overall authentic leadership construct 'is more important than the variance imputable to each individual dimension of the' authentic leadership construct. In essence, this means that it may be preferable to conceptualise authentic leadership as a unidimensional construct. Therefore, considering

authentic leadership as a core construct is also conceptually plausible. The four authentic leadership 'dimensions are self-regulatory processes governed partially' by 'leaders' internal standards and their evaluations of their own' behaviour. The perspective on authentic leadership advanced by the above researchers recognises and articulates the central role of an internalised moral perspective on 'authentic leadership and its development. It focuses explicitly on the development of authentic leaders and authentic followers, which' makes it state-like and 'ultimately something one can develop in leaders' (Avolio & Luthans, 2006; Luthans & Avolio, 2003; Walumbwa *et al.*, 2008).

Although authentic leadership shows some overlap with, and can incorporate different modern perspectives on, leadership, such as transformational, charismatic, servant, and spiritual leadership (Avolio & Gardner, 2005; Diddams & Chang, 2012; Kiyani *et al.*, 2013), authentic leadership as a construct is gaining legitimacy in its own right (Kiyani *et al.*, 2013). Avolio and Gardner (2005) stress that authentic leadership is more generic and represents a 'root construct' that provides the basis for other forms of positive leadership. Avolio and Gardner (2005):

believe the key distinction is that authentic leaders are anchored by their own deep sense of self; they know where they stand on important issues, values, and beliefs. With that base, they stay their course and convey to others, oftentimes through actions ... just words, what they represent in terms of principles, values, and ethics. (p. 329)

Emotional intelligence

The various models of EI are divided into three distinct categories (Ashkanasy & Daus, 2005; Walter *et al.*, 2011). The first category is referred to as the ability model (Mandell & Pherwani, 2003; Van Rooy, Alonso & Viswesvaran, 2005). The ability EI approach was introduced by Salovey and Mayer (1990), who view emotional intelligence as the ability of individuals to not only discriminate between different feelings and emotions experienced by themselves, but to also be able to monitor these feelings and emotions. Subsequently, these individuals use this information to guide their own thinking. This approach employs ability-based EI tests that capture individuals' performance in solving emotional problems (Fiori *et al.*, 2014; Walter *et al.*, 2011).

The second category also draws on Salovey and Mayer's definition, but rather than employing ability-based tests, it uses self-assessments or reports by others of emotional intelligent behaviour (Ashkanasy & Daus, 2005; Walter *et al.*, 2011). The third category is referred to as the so-called 'mixed models' (Brackett, Mayer & Warner, 2004) or 'trait models' (Petrides & Furnham, 2001). The trait models of emotional intelligence blend emotional intelligence as an ability with certain traits, competencies, and behaviour (Zeng & Miller, 2003), 'and generally include broad arrays of non-cognitive factors, such as personality and motivation' (Brackett *et al.*, 2004; Van Rooy *et al.*, 2005). This approach regards EI as a dispositional tendency representing a conglomerate of

cognitive, personality, motivational, and affective attributes, and usually makes use of self-assessments or other-report measures (Fiori *et al.*, 2014; Mikolajczak, 2009). Both the Bar-On model of EI (Bar-On, 2000), as well as the emotional competence model of EI (Goleman, 1995, 1998; Goleman, Boyatzis & McKee, 2002) are viewed as mixed models of EI.

Similar to the Bar-On model, Goleman's (1998) model also emphasises 'non-cognitive intelligence' (Muyia, 2009). Goleman's model is viewed as a 'performance-based' model, 'centered on the emotional development of workplace leaders'. It focuses on four dimensions:

1. 'self-awareness – the ability to recognize one's own feelings, abilities, and limitations'
2. 'relationship management – the ability to influence others, manage conflict, and inspire others'
3. 'social awareness – the ability to read the emotions of others (this also involves empathy)'
4. 'self-management – the ability to control one's own negative emotions and to be trustworthy' (Muyia, 2009, p. 692).

The trait EI perspective has been criticised, firstly, for using self-reports which, critics contend, scarcely 'reflect self-perceptions and therefore constitute unreliable assessments of objective competencies'. Secondly, it has been criticised for correlating with existing personality traits too closely to be useful (Mikolajczak, 2009). Nonetheless, after examining different EI ability and self-report measurement instruments, and exploring the 'relationships of EI factors with other cognitive abilities and personality dimensions', Barchard and Hakstian (2004) conclude that 'self-report measures are better understood as measures of self-perceptions of abilities than as measures of EI abilities themselves'. Self-report measures 'are not associated with the same factors as maximum-performance tests that putatively measure the same constructs, and they' correlate 'with personality dimensions but not with cognitive abilities (Barchard & Hakstian, 2004, p. 460)'.

In support of this argument, Davies, Lane, Devonport and Scott (2010) state that self-report measures add value in that they do not contradict the subjective nature of emotions. Collecting data relating to self-perceptions may be useful in itself for two reasons. Firstly, if a person's self-concept is accurate, his or her perceived emotional skills and abilities may be predictive of actual skills and abilities (Brackett & Geher, 2006). Secondly, because people tend to act according to their stated beliefs (Bandura, 1997), self-reported scores may be predictive of actual performance in a particular context (Davies *et al.*, 2010). In response to criticism relating to the unreliable assessments of objective competencies in the case of trait EI, Mikolajczak (2009) states that this argument proves to be incorrect, as trait EI does relate to objective criteria. As trait EI has neurobiological correlates, not only does it correlate with the speed of emotional information processing (Austin, 2005), but it also predicts objective life-outcomes, such as

work performance, income, and cooperation (Mikolajczak, 2009). The critique which argues that trait EI correlates too closely with existing personality traits to be useful is also refuted by various studies, such as that of Tett, Fox and Wang (2005), which show that trait EI is distinct from other dispositional domains, such as personality traits. According to these authors, self-reports offer reliable and valid means of assessing trait EI. Joseph and Newman (2010) confirm these results as their study also showed that trait EI explains additional variance over and above related traits, such as the Big Five personality factors.

Research design

Research approach

In order to execute the research, the current study followed a cross-sectional design with a survey data collection technique.

Research method

Research participants

A total of 341 aspiring Business School students in full-time employment who had applied for MBA and leadership programmes participated in the study. Males ($n = 206$) were in the majority (60.4%), compared with 135 females (39.6%). The age of these participants had the following ranges:

- 25.5% from 31–35 years (the majority age group)
- 22.9% from 26–30 years
- 22.0% from 36–40 years
- 15.0% from 41–45 years
- 8.8% from 46–50 years
- 4.7% from 21–25 years
- 1.2% were older than 50 years.

Additional information regarding the sample can be found in Table 1.

Measuring instruments

Authentic Leadership: AL was measured using the Authentic Leadership Questionnaire (ALQ) (Walumbwa *et al.*, 2008). Grounded in the perspective of authentic leadership by Avolio, Gardner, Luthans, May, Walumbwa

TABLE 1: Additional biographical information of sample.

Variable	Sub-dimensions	Frequency	%
Language	Afrikaans	105	31
	SeSotho	102	30
	SeTswana	43	12
	Other language group (including English, IsiXhosa, IsiZulu, Sepedi, Tsonga, etc.)	91	27
Tertiary Qualification	Diploma	135	40
	B-degree	90	26
	Postgraduate diploma	24	7
	Other qualification	92	27
Employment Sector	Public	120	35
	Private	182	53
	Other	39	12

and colleagues (Avolio & Gardner, 2005; Gardner *et al.*, 2005). The questionnaire is the instrument most frequently used as a measure of authentic leadership (Gardner *et al.*, 2011). The ALQ consists of 16 five-point items, and measures four dimensions: self-awareness, relational transparency, internalised moral perspective, and balanced processing. Items include statements such as 'seeks feedback to improve interactions with others' (self-awareness); 'says exactly what he or she means' (relational transparency), 'demonstrates beliefs that are consistent with actions' (internalised moral perspective) and 'listens carefully to different points of views before coming to conclusions' (balanced processing). Individuals report the frequency (0: 'not at all'; 4: 'frequently, if not always') with which they adopt the 16 behaviours and attitudes.

Emotional intelligence

EI was measured using the Rahim Emotional Quotient Index (REQUI). It is a multidimensional measure of trait EI, and was developed using the dimensions of EI proposed by Goleman (1995). It is a self-assessment survey for both subordinates and supervisors to evaluate either their own level of emotional intelligence or the emotional intelligence of their supervisors (Abas, 2010; Rahim *et al.*, 2002). The self-rating instrument requires respondents to provide their opinions about the way they perceive themselves in relation to Goleman's five dimensions of emotional intelligence. These dimensions are (Rahim *et al.*, 2002, p. 305):

- **Self-awareness:** 'The ability to be aware of which emotions, moods, and impulses one is experiencing, and why'. This dimension is also indicative of an individual's awareness of the effects his or her feelings have on others.
- **Self-regulation:** 'The ability to keep one's own emotions and impulses in check, and to remain calm and composed in volatile situations, irrespective of one's emotions'.
- **Motivation:** 'The ability to remain focused on goals, despite setbacks. This dimension also indicates an individual who is able to operate from hope for success rather than a fear of failure'.
- **Empathy:** 'A person's ability to understand the feelings conveyed through verbal and non-verbal messages, providing emotional support when needed, and to understand the connection between others' emotions and behaviour'.
- **Social skills:** 'The ability of individuals 'to handle problems without demeaning others who work with them'. This dimension 'also includes the ability to refrain from letting one's own negative feelings towards another individual inhibit collaboration, and to handle conflict with tact and diplomacy'.
- The 'instrument uses a 7-point Likert scale (7 = Strongly Agree ... 1 = Strongly Disagree ...) for ranking each item, a higher score' indicates a greater dimension of Emotional intelligence. Examples of statements included in the survey are: 'I keep my distressing emotions in check' and 'I understand the link between employees' emotions and what they do' (Abas, 2010).

Statistical analysis

The study employed LISREL 8.80 (Jöreskog & Sörbom, 2006) to estimate the goodness-of-fit associated with each of the two constructs (EI and authentic leadership). To determine whether the data was skewed, a test of multivariate normality should be performed (Jöreskog & Sörbom, 2006). This test indicated that the data was indeed skewed which required the current study to use the robust maximum likelihood method of estimation (Brown, 2006, pp. 65, 347). Additionally, several fit indices were used, including the Satorra-Bentler Scaled Chi-square, Root Mean Square Error of Approximation (RMSEA), Standardised Root Mean Square Residual (SRMR), Comparative Fit Index (CFI), and the Goodness-of-Fit Index (GFI). Values close to 0.95 for GFI and CFI are considered indicative of good model fit. According to Hu and Bentler (1999, p. 1) a model has acceptable fit when the values for RMSEA are close to 0.06, while values smaller than 0.08 are acceptable for SRMR. In estimating the reliability associated with the dimensions of the two constructs (EI and authentic leadership), Cronbach's alpha (α) was calculated. Estimates exceeding 0.6 are deemed acceptable (Hair, Black, Babin, Anderson & Tatham, 2006, pp. 137, 778). The Pearson product-moment correlation was used to investigate the degree to which the dimensions of emotional intelligence are significantly correlated with authentic leadership. In addition, Guilford's informal interpretation of r was used to interpret the strength of the obtained correlations (Tredoux & Durrheim, 2002). To determine which of the components of EI are significant predictors of authentic leadership, stepwise multiple regression was used (Field, 2005).

Results

The results section consists of five tables encompassing the statistical outcomes from the collected data, followed by a short report. Table 2 and Table 3 report on the psychometric properties (goodness-of-fit statistics and Cronbach's alpha coefficients). Table 4 presents the correlations between variables. Tables 5–6 show the results of the stepwise multiple regression analysis with EI components as the predictors of authentic leadership.

Psychometric properties of the instruments

From Table 2 it is evident that the REQUI shows acceptable levels of fit when considering the RMSEA, SRMR, and CFI. The Authentic Leadership Questionnaire also exhibits acceptable fit when looking at both the CFI and SRMR.

TABLE 2: Goodness-of-fit statistics.

Fit index	Emotional intelligence	Authentic leadership
S-B χ^2	566.07	265.14
df	395	98
RMSEA	0.036†	0.071‡
CFI	0.99	0.95
SRMR	0.037	0.082

†, (0.029; 0.042); ‡, 0.061; 0.081.

TABLE 3: Reliability estimates.

Variable	Number of items	Cronbach's alpha
Transparency (Authentic Leadership)	5	0.60
Moral/Ethical (Authentic Leadership)	4	0.78
Balanced Processing (Authentic Leadership)	3	0.43
Self-Awareness (Authentic Leadership)	4	0.76
Self-Awareness (Emotional Intelligence)	6	0.91
Self-Regulation (Emotional Intelligence)	6	0.91
Motivation (Emotional Intelligence)	6	0.93
Empathy (Emotional Intelligence)	6	0.90
Social Skills (Emotional Intelligence)	6	0.91

TABLE 4: Correlations between components of emotional intelligence and authentic leadership.

Variable	Authentic leadership (Total)
Self-Awareness	0.23†
Self-Regulation	0.22†
Motivation	0.15†
Empathy	0.24†
Social Skills	0.23†

†, Correlation is significant at the 0.001 level.

The majority of the variables have acceptable reliability estimates – see Table 3. However, the balanced processing component of the authentic leadership construct may leave room for improvement ($\alpha = 0.43$).

Correlations between emotional intelligence components and authentic leadership

It is evident from Table 4 that all the components of EI are significantly correlated to authentic leadership. More specifically, empathy has the strongest relationship with authentic leadership whilst motivation has the weakest relationship with authentic leadership. Using Guilford's informal interpretation of r , it is clear that the majority of the correlations (0.20 and higher) can be interpreted as low correlations, and definite but small relationships. These results show that those individuals who have higher levels of EI also view themselves as more authentic leaders.

Emotional intelligence components as predictors of authentic leadership

To determine whether or not any of the EI components are significant predictors of authentic leadership, the results of the stepwise multiple regression need to be consulted (see Tables 5–6). From Table 5 it is evident that three components of EI are significant predictors of authentic leadership. However, the sign associated with the regression coefficient for motivation is reversed. This result was unexpected, given that the bivariate correlation between motivation and authentic leadership is positive. As multicollinearity may be the reason for this, further investigation into the variance inflation factor (VIF) as well as tolerance was necessary. Evidence of multicollinearity is observed by determining both the VIF as well as tolerance (Hair *et al.*, 2006). Variables with the lowest tolerance and the highest VIF may be removed to improve the interpretation of the regression model. Hence, after further investigation, the variable motivation was removed from the second stepwise multiple regression model.

TABLE 5: Stepwise multiple regression.

Variable	β	Standard error	t	p	Cumulative R -square	Tolerance	VIF
Empathy	0.36	0.11	3.33	0.00	0.06	0.22	4.57
Motivation	-0.37	0.11	-3.29	0.00	0.08	0.10	5.53
Social Skills	0.25	0.11	2.36	0.01	0.09	0.22	4.67

TABLE 6: Stepwise multiple-regression (revised).

Variable	β	Standard error	t	p
Empathy	0.24	0.05	-3.65	0.00

From Table 6 it is evident that after the removal of the EI variable motivation from the multiple regression model (resulting from multicollinearity), EI empathy was the only significant predictor of authentic leadership. It explained 6% of the variance ($F = 21.63$, $p = 0.00$).

Discussion

Outline of the results

The purpose of the present study was to examine the influence of the various components of EI on authentic leadership. Broadly speaking, the results showed that trait EI was positively linked to authentic leadership. Six percent of the variance in authentic leadership could be explained by one of the EI components, namely, empathy.

Empathy showed the strongest relationship to authentic leadership and also contributed the most to authentic leadership. This finding supports both theoretical arguments (Butler & Chinowsky, 2006; Humphrey *et al.*, 2008; Mahsud, Yukl & Prussia, 2010; Riggio & Reichard, 2008) and prior empirical research (Rubin, Munz & Bommer, 2005; Sadri, Weber & Gentry, 2011) relating empathy to other leadership behaviours and styles. Prior research (Kellett, Humphrey & Sleeth, 2006) indicated a significant correlation between empathy and both task-oriented and relations-oriented leadership behaviour. Furthermore, a study by Sadri *et al.* (2011) shows that leaders who are rated by their subordinates as engaging in behaviour that signals empathic emotion are perceived as better performers by their bosses. Several other studies found a strong relationship between empathy and transformational leadership (Butler & Chinowsky, 2006; Rubin *et al.*, 2005).

In light of the above, it makes sense that leaders with high empathy are more able to recognise when different relations behaviours are relevant (Mahsud *et al.*, 2010) for example: to know when to be more supportive, encouraging, and helpful if a subordinate is anxious or overstressed by the pressures of the job, or to be able to detect any underlying feelings of injustice and resentment about assignments, rewards, and support from the leader. Humphrey *et al.* (2008) state that an emotionally intelligent leader may be capable of expressing authentic sympathy and support toward frustrated followers, whilst Riggio and Reichard (2008) argue that emotional sensitivity, originally conceptualised as leader empathy (Bass, 1960, 1990) allows leaders to gauge the emotional reactions and

general emotional tone of a group. These authors propose that leader emotional sensitivity is positively associated with high quality leader-member relationships, and is also associated with better assessment of negative moods amongst followers. As authentic leadership places a high premium on the fostering of a strong relationship between a leader and individual followers (Riggio & Reichard, 2008), as well as focusing on understanding those whom they serve (Diddams & Chang, 2012), the role of empathy in authentic leadership is evident.

EI social skills also showed a significant relationship with self-perceived authentic leadership. Social skills, as measured in this study, include refraining from one's own negative feelings towards another individual in order not to inhibit collaboration, and to handle conflict with tact and diplomacy. This finding does not come as a surprise as several researchers have emphasised the relational nature of authentic leadership (Avolio & Gardner, 2005; Eagly, 2005), and the importance of viewing oneself within one's social environment (Ilies *et al.*, 2005). Also, the role that positive emotions and trust may play in the authentic leadership process (Avolio, Gardner, Walumbwa, Luthans & May, 2004; Gardner *et al.*, 2009; Walter *et al.*, 2011), as well as the ability of the leader to manage emotions in this relationship with followers (Vlăsceanu, 2012), relate to these findings. Prior research regarding conflict handling and leadership showed a positive relationship between effective conflict management and authentic leadership. A study by Maldonado (2012) explored the relationship between leadership style and effective conflict management in healthcare organisations. The results of the qualitative study indicated that the transformational and authentic leadership styles are most effective in implementing approaches to conflict resolution, whilst leaders who have higher EI and better communication skills are more effective in managing conflict.

The role of self-awareness, and self-regulation in authentic leadership was also evident. Several researchers (Avolio & Gardner, 2005; Dasborough *et al.*, 2014; Gardner *et al.*, 2005; Walumbwa *et al.*, 2008) emphasised the importance of self-awareness, self-knowledge, and self-regulation in authentic leadership. The results of this study showed that there were statistically significant relationships between self-awareness and authentic leadership, and self-regulation and authentic leadership. These results were expected, as emotional self-awareness is essential in the understanding of one's self and in the understanding and management of others (Hopkins, O'Neil & Williams, 2007). Peus *et al.* (2012) examined self-knowledge and self-consistency as antecedents of authentic leadership. The results of their empirical study indicated that both self-knowledge and self-consistency can be regarded as antecedents of authentic leadership. Diddams and Chang argue that it is not always possible to judge one's own level of self-awareness. 'Rather than equate self-awareness with extensive self-knowledge alone, they suggest that authentic leaders are also more aware of their own ambiguities,

inconsistencies, and limits to self-knowledge'. There should be the realisation that one's self-knowledge will always be incomplete (Diddams & Chang, 2012, p. 597).

Practical implications

Since EI empathy has been shown to be the most important EI predictor of authentic leadership, leaders need to understand when subordinates perceive a leader as displaying empathic emotion. Therefore, in order to develop authentic leaders, it may be meaningful to identify how empathy manifests in the workplace, as no detailed descriptions of empathy behaviour in the workplace exist. This research also suggests that emotional and social skills are both related to authentic leadership, therefore, we suggest that, at a more practical level, emotional and social skills can be targeted for assessment and development, and can be an important component of an authentic leadership development programme. Executive coaching can be used to improve interpersonal skills, such as empathy, whilst multisource feedback programmes, including role modelling and leadership training interventions, can be used to increase self-awareness and assist leaders to obtain a deeper understanding of their strengths and weaknesses and improve 'relations behaviours'.

Limitations and recommendations

The results presented in this article should be understood within the context of the limitations of the study. Firstly, EI was measured by means of self-reporting which can be subjected to biases. 'However, since this study was largely concerned with self-perceptions, the use of such self-reports is not unreasonable' (Schmitt, 1994, p. 393). Furthermore, 'common source bias poses a potential problem in this study, since all variables are based on' self-assessment. Therefore, as further studies have not provided additional support for the influence of EI on authentic leadership, it should not be used to inform selection decisions. 'In future studies, it may be fruitful to complement data' with additional data from different sources, such as the perceptions of followers. In terms of future research, it is recommended that perhaps the different components of both EI and authentic leadership can be assessed using the above means, instead of using a composite score for authentic leadership. This may create deeper insight into the relationships between the different components embedded in both these constructs. It is especially important to define the different components of EI measured clearly in order to enable the comparison of the results of different empirical studies. Further, qualitative follow-up studies may provide more depth to clarify and discuss the nature of the relationships identified.

Conclusion

Little empirical work exists on the antecedents of authentic leadership. This study contributes much-needed empirical evidence in support of various components of EI and its relationship to authentic behaviour. These results support

theoretical arguments that authentic leaders are more sensitive interpersonally and, therefore, measure higher on empathy and social skills. It also supports the empirical and theoretical proposals that self-awareness and self-regulation may very well differentiate leaders' performance in authentic leadership behaviour. This study has provided the first empirical evidence on the components of EI as antecedents of authentic leadership which is particularly important since 'knowledge about the antecedents of authentic leadership provides a foundation for authentic leadership development' (Peus *et al.*, 2012, p. 332).

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships which may have inappropriately influenced them in writing this article.

Authors' contributions

M.K. (University of the Free State) was responsible for the conceptualisation, literature review, data-gathering, and discussion of the results. P.N. (University of the Free State) executed the research design, statistical analysis, and also wrote that section of the article.

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The effect of a total rewards strategy on school teachers' retention

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Dates:

Received: 06 Mar. 2015

Accepted: 21 Aug. 2015

Published: 05 Nov. 2015

How to cite this article:

Makhuzeni, B., & Barkhuizen, E.N. (2015). The effect of a total rewards strategy on school teachers' retention. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #699, 10 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.699>

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Orientation: South African schools are facing significant challenges to retain a talented pool of school teachers. A total rewards strategy could assist schools to reduce teacher turnover.

Research purpose: The aim of this study was to determine the effect of a total rewards strategy on the turnover intentions of school teachers in the North-West province.

Motivation: The under supply of quality teachers has negative consequences for both school pupils and the larger community.

Research approach, design and method: A qualitative research approach was followed using semi-structured interviews to gather data from teachers in the North-West province ($N = 6$).

Main findings: The findings showed that performance management, career development and compensations of teachers were poorly applied in schools. Teachers strongly considered leaving the teaching profession as a result of poor rewards. The participants were fairly satisfied with their work benefits and work-life balance.

Practical/managerial implications: School management should implement reward practices and policies that will attract and enhance retention of school teachers.

Contribution: This research highlighted the problematic areas in the reward systems for school teachers and the subsequent impact thereof on their turnover intentions.

Introduction

The retention of quality teachers is a major problem in South African schools (Steyn, 2013). Factors contributing to the shortage of educators include resignation, medical boarding, dismissal, emigration of highly trained professionals for greener pastures and restrictions related to self-development and a lack of recognition for good performance (Adedeji & Olaniyan, 2011; Schullion, 2011). In particular, teachers are constantly protesting as a result of the poor remuneration and reward practices (Armstrong, 2007). As a result of these factors teachers are leaving the teaching profession for better compensation in developed countries or other career prospects (South African Council for Educators, 2010). Teacher turnover leads to a significant loss of service efficiency which eventually has a detrimental effect on the performance of school children (Williams, Champion & Hall, 2012).

The task of the Department of Education is, therefore, to develop attractive reward and remuneration practices that will retain a talented pool of school teachers (Armstrong, 2009; SACE, 2010). According to Shukia (2009) effective reward and retention policies improve teacher abilities and the school's overall effectiveness. Retention policies should be able to attract new employees, satisfy the older generation of employees and motivate current employees to stay within the organisation (Barkhuizen, 2014). One of the best methods that institutions can implement to retain employees is to adopt good remuneration practices (Davis & Edge, 2004; Gerhart & Rynes, 2003).

The main objective of this research was to determine the effect of reward and remuneration practices on the retention of school teachers in the North-West province. More specifically this research addressed the following research questions:

- What are teacher's perceptions of the current state of rewards in the teaching profession?
- To what extent do rewards influence teachers' decisions to leave the teaching profession?

This research is motivated by the fact that the Global Competitiveness Report continues to rank South Africa as poor in terms of people development (Schwab, 2015). This is a consequence of a poor schooling system that fails to deliver scholars with the necessary skills and competencies to add value to the country as whole (Dieltiens & Meny-Gibert, 2012). This research is further

motivated by the fact that quality school teachers are becoming a scarce resource within developing countries which in turn has a negative impact on the overall school performance (Bartlett, 2011; Ruchi & Justin, 2014).

A recent report by the North-West Provincial Legislature (2013) pointed out that the allocation of teachers at schools is a major challenge. The significant shortage of teachers had a profound impact on the performance and pass rate of grade 12 learners. Other problems highlighted included:

- some teachers absconding from their duties to leave learners unattended
- service delivery protests that led to the poor attendance of learners
- School Governing Bodies that are not functioning well
- teenage pregnancy
- a lack of resources such as water and sanitation at schools
- scholar transport problems.

In addition to these a study by Leke-ateh, Assan and Debeila (2013) showed that teacher trainees are not adequately prepared for teaching practice, mentors are not sufficiently involved in teaching practice because they lack knowledge of mentorship, and the assessment and awarding of teaching practice marks are subjective. We believe that this research will make an important contribution towards highlighting the reward factors that will retain quality school teachers in a developing context such as South Africa.

Literature review

Total rewards

Total compensation systems aim to achieve multiple goals, including:

- attracting employees
- retaining solid performers
- motivating performance
- spending compensation money wisely
- aligning employees with organisational goals
- rewarding the behaviour that the organisation wants to encourage (Reddick & Cogburn, 2008).

For the purposes of this research we used the Total Rewards Model of the World at Work Society as a framework to explore teachers' perceptions of rewards in the workplace. The World at Work Society (2011), for professionals, developed and validated a total rewards model to reflect the strategic elements of the employer-employee exchange and how it affects the attraction, motivation, retention and engagement of employees. According to this model the total rewards strategy of an organisations should consist of the following five practices:

- Compensation – The fix of variable pay provided to employees by the employer for services rendered.
- Benefits – The programs an employer can use such as health, income protection and retirements benefits to provide security for employees and their families and supplement the cash component that employees receive.

- Work-life Balance – The organisational support structures that enable employees to achieve success both in the workplace and at home.
- Performance management – The alignment of employee efforts towards the achievement of business goals and effectiveness.
- Career development – The opportunities and mechanisms for employees to advance their skills and competencies in their future careers.

Nthebe (2015) recently applied the total rewards model to a sample of school principals in the North-West province. The results showed that total rewards were a significant predictor of well-being and service orientation of school principals. This study, furthermore, proved that the total rewards model is applicable for use in the public sector domain as well.

Remuneration: Remuneration can be demarcated into compensation and incentives. Employees are remunerated when an income or other financial benefits are allotted to them for service rendered (Baguiley, 2009). The pay arrangement regulates what an employee is paid once the job has been assessed on its virtual worth. The organisation governs the pay construction and the pay rankings for jobs of comparable significance and complexities (Barkhuizen, 2011). Organisations are now discovering the necessity to cultivate tailor-made compensation practices to reward the exclusive critical skills of gifted employees (Schlechter, Faught & Bussin, 2014). In a highly globalised setting, it is obligatory to have extremely flexible and customised compensation strategies to reward exceedingly skilled employees. Organisations are under growing pressure to develop aptitude and skills related pay for inspiring employees to advance their knowledge, skills and abilities on a continuous basis (Durai, 2010).

The available research clearly points out that teachers are poorly compensated and underpaid (see Correa, Parry & Reyes, 2015; Qureshi, 2015; Smith, Conley & You, 2015). Krueger (2002) maintains that public revenue must be used justifiably to fund public schools, including teachers' salaries, which must be wholly paid by the government. Although the post-apartheid equalisation of teacher pay initially resulted in a substantial increase in teacher salaries, evidence suggests that salary increases during the past decade plateaued to the extent that teachers are not able to match their cost of living (Armstrong, 2009; Strauss, 2012). Research by van der Berg and Burger (2010) found that financial incentives for South African teachers are limited as a result of fiscal constraints. A study by Rothstein (2015) showed that teacher tenure can only be accomplished by large increases in salaries.

Benefits: Beam and McFadden (2001) refer to benefits as the financial or non-financial payments that employees receive for continuing their employment with the company. Benefits include employer-provided benefits for death, accident, sickness, retirement or unemployment. Fringe benefits are a collection of numerous benefits delivered by an employer, which are exempt from taxation (Berger & Berger, 2008).

Fringe benefits commonly include health insurance, group term life coverage, education reimbursement and other related benefits (Armstrong & Murlis, 2007).

According to a report by SACE (2010) teachers regarded non-financial rewards such as employer brand, working hours, and holidays as important factors that will attract and retain them in the teaching profession. Teachers furthermore regarded sense of community, personal connectedness and the opportunity to make a difference to school children (Müller, Alliata & Benninghoff, 2009) as important benefits in the teaching profession. Strauss (2012) found similar results in a sample of school teachers in South African rural schools.

Work-life Balance: Work place flexibility attracts skilled and motivated employees (Disselkamp, 2013). Flexibility can further improve customer service and retention, more committed employees and greater employee retention (Christensen & Schneider, 2010; Maitland & Thomson, 2011).

Various studies to date explored the factors that enhance the work-life balance of teachers. The results showed that teachers with high levels of emotional intelligence and who are satisfied with their pay experience less work-family conflict (see Kappagoda & Sampath, 2014; Khokhar & Ziaur-Rehman, 2014). Strauss (2012) found that family support and work-life excellence are key motivators to retain teachers in rural schools. A study by Vorster and Barkhuizen (2013) indicated that support from both the family and work context are essential to maintain a balanced work and personal life. Hudson (2012) highlighted the importance of willing and capable assigned mentors who can model practices and provide feedback on beginning teacher's practices to enable them to maintain a healthy work-life balance.

Miryala and Chiluka (2012) pointed out the importance of work-life balance policies and programmes that enable the teaching community to balance their work and personal life needs. Padma, Reddy and Sudhir (2014) further mention that work-life balance facilities are important tools to attract and retain a talented pool of school teachers. Clearly then a supportive work environment is important to assist teachers in managing their multiple roles and, at the same time, results in lower attrition rates (Chawla & Sondhi, 2011).

Performance and Recognition: A good performance management system can act as a positive method to identify developmental opportunities and implement succession planning processes (Mondy, Noe & Premeaux, 2002). Performance appraisals are useful mechanisms to improve employee performance, within the educational field (Steinberg, 2014; Tuytens & Devos, 2012).

The performance management systems in many schools, however, are subjected to intense scrutiny as teachers are being held accountable for the performance of learners (Monyatsi, Steyn & Kamper, 2006). The Education Labour

Relations Council introduced the Integrated Quality Management System (IQMS) in 2003 to assess amongst others the performance of school teachers (Mosoge & Pilane, 2014). The findings of Mosoge and Pilane indicate that the lack of knowledge and expertise on the IQMS processes such as mentoring, coaching, and monitoring hampers the effective implementation of performance management. Consequently teachers are being blamed by management for poor school performance who are also ignoring the failures of control systems or broader systematic issues.

Day (2012) found that poor performance management systems in schools resulted in destabilisation, increased workload, intensification of work, a crisis of professional identity for many teachers and a subsequent loss of public confidence and service quality. According to Briere, Simonsen, Sugai and Myers (2015) constructive performance feedback is important to retain younger teachers in the profession. A study by Tuytens and Devos (2012) showed that the extent to which teachers are allowed to participate in the performance appraisal system significantly influences their perceptions of procedural fairness and usefulness of performance feedback.

Recognition for performance is an important factor to enhance employee morale (Smithe & London, 2009). High employee morale reduces stress, absenteeism and turnover and increases employee performance (McCleod, 2010). Research showed that enhanced performance recognition motivates teachers to advance their careers (Patton & Parker, 2015). Non-recognition for performance, however, reduces the quality teaching of school children (Hanhela, 2014). Educators, therefore, should receive regular feedback on their own performance as well as recognition for a job well done (Williams *et al.*, 2012).

Career Development: The importance of career development of school teachers is widely documented. The development of school teachers can result in several positive outcomes such as:

- increased work identity (Du Plessis, Carroll & Gillies, 2015)
- enhanced quality of interaction with school children (Pianta *et al.*, 2014)
- an improved teaching climate (Avidov-Ungar, Friedman & Olshtain, 2014)
- self-efficacy and confidence (Chia-Pin, Chin-Chung & Meilun, 2014)
- collaboration skills (Morel, 2014).

Employers can contribute significantly to their staff members' career development by supporting career development activities within the department (Foskett & Lumby, 2002). Schullion (2011) is of the opinion that the Department of Education can motivate and retain educators by providing them with other career path opportunities to occupy senior positions based on good performance and proven managerial skills.

Applied within the South African context teachers in rural areas are limited in terms of career development opportunities (Strauss, 2012). Career development opportunities are important factors that attract younger generations to organisations (Barkhuizen, 2014). The high turnover rate of quality younger teachers results in teaching becoming an ageing profession (Armstrong, 2007). The Department of Education, therefore, has to invest in career development programmes to attract and retain quality school teachers.

Research design

Research approach

A qualitative research approach using semi-structured interviews based on the framework of the total rewards strategy was used. According to Pring (2004) qualitative research seeks to understand a given research problem or topic from the perspectives of the local population that it involves. In broad terms qualitative research is an approach that allows one to examine people's experiences in detail (Hennink, Hutter & Bailey, 2011). Qualitative data are organised, interpreted, analysed and communicated so as to address real world concerns (Tracy, 2013).

Research strategy

A case study strategy was applied for this research. A case study strategy was deemed most appropriate as the researchers aimed to investigate a contemporary phenomenon in the real-life context (Cresswell, 2009). More specifically this research followed a multiple case study design which included several cases as a unit of analyses, in this case it was teachers (Yin, 2012). The themes were derived from the semi-structured interviews and were compared with the relevant literature to generate a universal result.

Research setting

The research setting included two samples. The first sample included three teachers who were employed in public schools in the Mafikeng are of the North-West province. The second sample included three teachers who were previously employed in the North-West provincial schools but who left the teaching profession for other research opportunities. The latter participants were also situated in the Mafikeng area. The participants were interviewed at their offices for the sake of convenience, so that they could feel comfortable and to ensure privacy.

Research method

Entrée and establishing researcher roles

Permission was requested from the Head of the Department of Education in the North West province to enter schools in the North West province. Once approval was obtained, school principals were approached for permission to conduct the research, which was granted. Ethical approval was obtained from North-West University prior to the execution of the research. Confidentiality was maintained at all times.

Sampling

The unit of analysis for this study was North West province schools. Six participants were selected on a purposive convenience basis to participate in the study. Three of the participants were still employed as teachers at the time of the interviews and three had left the profession for other career opportunities. All of the participants could give an account of the reward system of the schools. An equal number of males and females participated in this research. All of the participants were representative of the African ethnic group. Five of the participants were in possession of a Degree and had more than ten years of teaching experience.

Data collection method

The data were collected through semi-structured interviews, in which the researcher prepares a list of themes and questions to be covered during the interview (Saunders, Lewis & Thornhill, 2007). The number, order and nature of questions vary from one interview to the next, and are dependent on the context and situation within which the interview takes place. According to Bless, Higson-Smith and Kagee (2006), qualitative interviewing has a unique advantage as a result of its specific form. The researcher has the opportunity to learn about other elements related to the topic, about which the researcher would otherwise be unaware. The researcher also receives the opportunity to hear the participants view concerning the factors of focus in the study. The interviews were conducted in English. The questions were based on the total rewards framework of the World at Work Society (2011). The teachers were asked to indicate how they experience and have experienced the five rewards practices as specified in this model. The questions were phrased to determine whether these rewards will influence them or have influenced them to leave the teaching profession.

Recording of data

As qualitative research produces a considerable amount of data it became imperative to ensure the easy retrieval of data for later detailed analysis. To support this method of data collection, audio recordings and transcriptions were taken and deemed to be appropriate. In addition, notes were taken during the interviews to provide information concerning the participants' non-verbal communication. Verbatim transcriptions were transcribed of the data.

Data analyses

According to Bryman and Bell (2012) qualitative analyses begin in the field as researchers identify problems during observations and interviewing. Theme (content) analyses were applied to analyse and interpret the data. The analyses started with a process for organising the data that were collected (Thyme, Wiberg, Lundberg & Graneham, 2013). Thereafter the data were systematically analysed to identify the themes and sub-themes. Cooper and Schindler (2011)

maintain that theme analyses prevent selective perception of the content and ensure reliability and validity in qualitative research.

Ensuring the quality and rigour of the research

Data verification is a process where different types of data are tested for accuracy and inconsistencies after data migration is completed (Morse & Niehaus, 2009). The trustworthiness of a qualitative study was ensured by maintaining high credibility and objectivity (Stempien & Loeb, 2002). As a qualitative researcher's perspective is naturally biased as a result of the researcher's association with the data, sources, and methods, various audit strategies were used to confirm findings. The data transcriptions were returned to participants to verify the accuracy of the statements. Peer debriefing was also applied. These methods enhanced the trustworthiness of interpretations and findings (Bamberger, 2000).

Reporting

The findings of this research are reported in table format. The themes and sub-themes extracted from the interviews are substantiated by direct quotes. This method conforms with the modernistic qualitative research approach where the researcher seeks for support that a conclusion applies in a specific research context (Cresswell, 2009).

Findings

Table 1 presents the themes that emerged from the focus group sessions. The table gives the frequency with which themes emerged. The researchers identified 15 themes from the combined responses of the participants. Table 1 shows that 'availability of leave opportunities (i.e. sick, holiday, study)', 'lack of recognition for performance' and 'lack of career advancement opportunities' were the themes that occurred most often.

The themes were further clustered into the five main categories of rewards based on the frequencies of the

TABLE 1: Themes deduced from the participants.

Themes	F
Availability of leave opportunities (i.e. sick, holiday, study)	19
Lack of recognition for performance	11
Lack of career advancement opportunities	11
Support from family	10
Poor performance management	8
Flexible work	7
Management and collegial support	7
Poor Salaries	5
Contribution to child development	5
Unfair promotion practices	5
Salaries do not match cost of living	5
Teaching experience for career advancement	5
Qualifications for career advancement	4
Unclear Performance Targets	3
Poor preparation for career changes	3

sub-themes. Combined themes in this study were mostly related to performance management. Remuneration appeared to be the least important theme in this study. The main themes and sub-themes are presented in Table 2. This article discusses the themes according to the framework presented in the literature review.

Theme: Performance management and recognition

Combined, the themes relating to performance management and recognition occurred mostly in this study. The lack of recognition for performance was one of the sub-themes that was mentioned second most often in this study (11 times). The participants in particular discussed how teachers are never recognised for good performance which in turn lowered their morale. Some of the participants mentioned the following:

'Definitely the Department did not recognize teachers ... I am one of them who produced the best results in English in the satchet around Rustenburg ... no recognition at all'. (Participant 4, Male, Master's Degree, resigned teacher, eight years working experience in the teaching profession)

Participant 2 supported this view by adding:

'In terms of recognition teachers aren't getting that much recognition ... most of the time you find that is the learners'. (Participant 2, Female, Master's Degree, teacher, 23 years working experience in the teaching profession)

The findings revealed that the participants were generally dissatisfied with the performance management of teachers (eight times). The participants indicated that whilst they were teachers no performance management system existed. As mentioned by one of the participants:

'What can I say about this performance management system by then there was no performance management system'. (Participant 5, Female, Bachelor's Degree, resigned teacher, three years of work experience in the teaching profession)

In support Participant 4 added:

'There were not policies that outlined performance in schools. There was no guidance'. (Participant 4, Male, Master's Degree, resigned teacher, eight years working experience in the teaching profession)

The participants also had reservations about the performance targets and were of the opinion that they are not achievable:

'According to them they say these standards are attainable but however at some point it does not it does not work with us'. (Participant 1, Female, Bachelor's Degree, teacher, four years working experience in the teaching profession)

Theme: Benefits

The sub-themes relating to benefits occurred second most in this study. Generally the participants appeared to be satisfied with the benefits offered by the teaching profession.

TABLE 2: Categories of main and sub-themes.

Main Theme	Sub-Themes	F	Total
Performance Management and Recognition	Lack of recognition for performance	11	27
	Poor performance management	8	
	Unclear Performance Targets	3	
	Unfair promotion practices	5	
Benefits	Availability of leave opportunities (i.e. sick, holiday, study)	19	26
	Contribution to child development	7	
Work-life Balance	Support from family	10	24
	Flexible work	7	
	Management and collegial support	7	
Career Development	Lack of career advancement opportunities	11	23
	Teaching experience for career advancement	5	
	Qualifications for career advancement	4	
	Poor preparation for career changes	3	
Remuneration	Poor Salaries	5	10
	Salaries do not match cost of living	5	

The availability of various leave benefits such as study leave, vacations and sick leave were the themes that occurred mostly in this study (19 times). Participant three explained this theme as follows:

'I can say all this benefits work for me especially sick leave, study leave and paid public holidays because with study leave I can be able to study and obtain more qualifications ...'. (Participant 3, Male, Bachelor's Degree, Teacher, four years of work experience in the teaching profession)

Another participant added:

'I would say the ones that best suited me were public holidays in a sense that I was staying away from my family and so public holidays, paid public holidays were giving me time to go meet my family'. (Participant 4, Male, Master's Degree, resigned teacher, eight years working experience in the teaching profession)

The participants indicated that one of the reasons they are still in the teaching profession is because of the fact that they can make a contribution to a child's life. The participants who left the profession also highlighted that child development is a positive aspect of teaching. One of the participants mentioned:

'When you teach the kid you are helping the nation. You are giving skills to children ... you are empowering them to be good citizen, to be skilled workers for the future one day. You are laying a foundation for something good in the future that is the only advantage because the nation must be educated'. (Participant 6, Male, Matric plus teaching Diploma, resigned teacher, four years of working experience in the teaching profession)

Another participant added:

'For me the advantage of teaching is that you get to work with young minds you know the good thing is having to you also had a hand in building the child to be something nice in life'. (Participant 2, Female, Master's Degree, teacher, 23 years working experience in the teaching profession)

Theme: Work-life balance

Work-life balance was the theme that was mentioned the third most in this study based on the sub-themes derived from the

participants' responses. The participants highlighted that family support for their work enabled them to meet work and personal life demands. As mentioned by one of the participants:

'My family of course they are always there for me they encourage me to go on and on when I want to quit'. (Participant 1, Female, Bachelor's Degree, teacher, four years working experience in the teaching profession)

Another participant added:

'From my family I receive lot of support ... They understand being a teacher there is many challenges that you need deal with'. (Participant 2, Female, Master's Degree, teacher, 23 years working experience in the teaching profession)

Management support from school principals was also highlighted as a contributing factor to the work-life balance of teachers. Some participants mentioned:

'In terms of the profession we have subject advisors, we have colleagues who are on our side ... we got principals who always take care of us ... so in my school there is so much support and the department they do visit us for the support'. (Participant 1, Female, Bachelor's Degree, teacher, four years working experience in the teaching profession)

Participant 4 also highlighted the importance of management support:

'The principal were I started working ... he was a real leader ... he is the one who kept me in the profession ... he was like a father to me'. (Participant 4, Male, Master's Degree, resigned teacher, eight years working experience in the teaching profession)

Theme: Career development

The sub-themes relating to career development were the fourth most important for this study. The participants in general highlighted the lack of career development opportunities for teachers. This sub-theme occurred second most in this study (11 times). The findings showed that the participants appeared to be dissatisfied with the career development opportunities for teachers. Participant two explained this as follows:

'When it comes to advancement opportunities there aren't that many ... it is all about experience ..., experience if you don't have experience then you are not considered therefore you have to be a teacher maybe for 4 years or 5 years and that could assist in order to go to a higher level or post rather than that you will still be in the same position'. (Participant 2, Female, Master's Degree, teacher, 23 years working experience in the teaching profession)

Participants also highlighted unfair career advancement practices and favouritism. The participants highlighted that in order to advance you must be a relative of someone in the school in which you work, or you must be affiliated to a union and be very close to the leader of that union. As mentioned by one of the participants:

'Within the teaching profession there is the favoritism and advancement of opportunities ... you can't get a better post especially when you are new is better if you stayed there for a particular period and then favoritism, I don't like the way they are doing it. I believe everybody deserve opportunity as everyone in there'. (Participant 3, Male, Bachelor's Degree, Teacher, four years of work experience in the teaching profession)

Another participant added:

'Talking about advancement opportunities this one is a very painful thing in a sense that is only union members who get promoted ... you have to be affiliated to unions and be very close to leaders of union to be able to get promotion ... there is no equality at all'. (Participant 4, Male, Master's Degree, resigned teacher, eight years working experience in the teaching profession)

According to participants, a career development plan exists in some schools and is absent in others; it all depends on the principal and how professional and organised he or she is. Other participants, especially those who are still in the profession, highlighted that in the current system a career development plan exists even though they feel it does not cater for the old teachers who are accustomed to the old system in which there was no career development plan. The respondents also indicated that teachers are not given sufficient time to familiarise themselves with new school curriculums. As mentioned by one of the participants:

'ah when it comes to teaching this career development plan it doesn't work for old teachers especially with the changes that are happening regularly it doesn't suit them at all because it doesn't help them to develop, can be able to deliver the best content to the learners'. (Participant 3, Male, Bachelor's Degree, resigned Teacher, four years of work experience in the teaching profession)

Another participant added:

'For sure Department of Education did not have any career development plan ... not at all ... I can say, teachers were not encouraged at all to go at reading'. (Participant 4, Male, Master's Degree, resigned teacher, eight years working experience in the teaching profession)

Theme: Compensation

The sub-themes relating to compensation were less frequently mentioned compared to the rest of the themes. However, the findings relating to the current compensation of teachers

are deemed important. Most of the participants were in agreement that teacher payment is poor and not sufficient to cover their costs of living. Participant three described this theme as follows:

'I have considered quitting this profession because we don't get much recognition and reward on this profession and our salary is as little as we cannot do anything with it'. (Participant 3, Male, Bachelor's Degree, Teacher, four years of work experience in the teaching profession)

Those participants, who had already left the profession for other careers, mentioned that they could not cover most of their basic needs when they were still in the teaching profession. Participant one mentioned the following:

'We want changes if I have to speak for all of us ... the money is not enough it ... does not match with the standard of living'. (Participant 1, Female, Bachelor's Degree, teacher, four years working experience in the teaching profession)

The above sentiment was echoed by Participant 4 who stated:

'Unfortunately at that time the money was very little I struggled to meet my needs'. (Participant 4, Male, Master's Degree, resigned teacher, eight years working experience in the teaching profession)

Discussion

The main objective of this research was to investigate the effect of rewards on the retention of school teachers. More specifically this research aimed to investigate teachers' perceptions of the current rewards in the teaching profession. Furthermore this research aimed to investigate the extent to which rewards influence teachers' decisions to leave the teaching profession.

In this research we used the Total Rewards Model of the World at Work Society (2011) to determine the extent to which teachers experienced performance management, benefits, work-life balance, career development and compensation in their respective schools. The participants highlighted the lack of poor performance management systems in schools and specifically the lack of recognition for performance. The poor performance management system might be a consequence of the lack of understanding of the IQMS system (see Mosoge & Pilane, 2014). Some of the participants highlighted the lack of performance guidance. The lack of performance policies and non-compliance with performance management systems can reduce teaching quality and service delivery (Hanhela, 2014; Smithe & London, 2009). More concerning is that non-recognition for performance can result in increased absenteeism and eventually increased teacher turnover (McCleod, 2010).

The participants in this study seemed to be fairly satisfied with the benefits associated with the teaching profession. Most of the participants highlighted leave benefits (i.e. study, health and holiday) as important factors that will keep them in the teaching profession. These results confirm

the findings of the SACE (2010) report that indicated that holiday benefits are an important retention factor for teachers. Teachers also mentioned the opportunity to work with children and make a contribution to their lives as a key factor that motivates them to remain in the teaching profession. The results are in line with previous studies which highlighted teacher-child interaction as an important teacher attrition factor (Strauss, 2012).

The findings showed that the participants are satisfied with their work-personal life balance. The participants mentioned that support from their families assisted them to deal more effectively with work demands (see Strauss, 2012). Management support from school principals was also a key factor that enabled the participants to manage work-family conflict. Several studies pointed out the importance of a supportive work environment in the attraction and attrition of school teachers (Hudson, 2012; Miryala & Chiluka, 2012). Based on the above findings we can conclude that a healthy work-life balance is best achieved when employees are supported both from their work and family domains.

The findings of this research reemphasised the lack of career development opportunities in teaching (see Armstrong, 2007; Strauss, 2012). The results are concerning as the retention, especially of younger employees, depends on the availability of career development opportunities (Barkhuizen, 2014). Furthermore, teachers are also not able to benefit from the positive outcomes of career development (see Avidov-Ungar *et al.*, 2014; Pianta *et al.*, 2014) which in turn may hamper quality service delivery and teaching performance (Williams *et al.*, 2012).

Finally, the findings showed that the compensation of teachers remains problematic. Most of the participants in this research were in agreement that teacher salaries are poor and prevent them from living a reasonable quality of life (see Correa *et al.*, 2015; Qureshi, 2015; Smith *et al.*, 2015; Strauss, 2012). Moreover, the findings clearly pointed out that the participants considered other career avenues as a consequence of poor remuneration (Davis & Edge, 2004; Gerhart & Rynes, 2003). In line with Rothstein (2015), school management needs to increase teacher remuneration as a measure to retain teachers.

To summarise, our findings showed that the factors that will contribute to teachers' turnover intentions include the lack of performance recognition, poor performance and rewards, no performance management system, no career advancement, no support from the profession and favouritism in terms of promotions. On the other hand our research also showed that the factors that will attract teachers to schools include flexible work, work-life balance, study leave, sick leave, child development and good leadership from the school principals. The future and sustainability of South Africa as a developing country is dependent on a good educational sector. Therefore,

school managers are encouraged to develop appropriate reward policies and practices to create a healthy work environment that will secure a competent and skilled teacher workforce.

Practical implications

The findings of this research have important practical implications for the teaching profession. Although this research included a small sample, school management should take cognisance of problematic reward factors such as teacher compensation, performance management and recognition and career development, and implement corrective measures to retain quality school teachers.

The career development opportunities of teachers can also be enhanced. A career development plan should clearly outline the skills and knowledge that teachers need to enhance their careers, as well as outline how teachers can enhance the daily operations of the school and the expectation of the Department from teachers (Mosoge & Pilane, 2014).

The findings of this research indicated that the Department of Education should consider developing the Department with more creative financial and non-financial rewards to attract and retain teachers. Furthermore teacher salaries need to be market related to ensure that they do not explore other career avenues.

Limitations of the Study

This research had some limitations. As a result of the small sample size the findings of this study are not generalisable to the general population. Firstly, the findings of this research study are only applicable to the specified area and cannot be expanded to the rest of the province or country. Secondly, the data were collected at one point in time which limits the research in terms of making a cause and effect relationship over a longer period of time.

Recommendations for future research

The results of this research provide various opportunities for future research. From a theoretical point of view the total rewards model can be expanded to include benefits for specific occupational domains such as teaching. The model can further be expanded to quantitatively assess and detect the effectiveness and organisational compliance with reward practices. Longitudinal studies can also be applied to test teacher perceptions of rewards over a longer period of time. Future studies should also focus on testing how reward practices differ between different generations based on their work experience. Future quantitative studies can benefit from testing total rewards with other outcome variables such as teacher performance. Finally, this study can also be expanded to other provinces in South Africa to compare total rewards practices at a national level.

Conclusion

In conclusion, this research highlighted the importance of sound rewards and remuneration practices for the attraction and retention of teachers in the teaching profession. The Total Rewards Model of World at Work proved its utility as a framework to benchmark current teacher rewards. The findings of this research should encourage school management to take stock of current reward practices and take corrective and preventive actions to reduce teacher turnover.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships which may have inappropriately influenced them in writing this article.

Authors' contributions

This article is based on the Masters study of B.M. (North-West University) of which E.N.B. (North-West University) was the supervisor. B.M. compiled the article and E.N.B. provided editorial inputs.

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Health challenges in South African automotive companies: Wellness in the workplace

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Dates:

Received: 15 Nov. 2014

Accepted: 02 July 2015

Published: 26 Nov. 2015

How to cite this article:

Meyer-Weitz, A., Baasner-Weihs, F., & Weihs, M. (2015). Health challenges in South African automotive companies: Wellness in the workplace. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #672, 11 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.672>

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Orientation: In South Africa, workplace programmes in the automotive industry focus predominantly on occupational health and safety and HIV and AIDS. The implementation of focused workplace interventions might be hampered when companies are not convinced that the condition (i.e. HIV and AIDS) is the main negative health influencing factor responsible for increased production costs.

Research purpose: The study investigated the health influencing conditions perceived to negatively impact company production costs and related interventions.

Motivation for the study: Apart from HIV and AIDS, little information is available about the health challenges in the South African workplace and focused HIV and AIDS programmes might only partly respond to the key health challenges of workplaces. The inter-relatedness of various risky lifestyle factors linked to health conditions necessitates a comprehensive health promotion approach.

Research approach, design and method: A cross-sectional survey was conducted amongst 74 companies selected through stratified random sampling. Non-parametric tests were conducted to investigate the health influencing factors perceived to impact production costs, the monitoring thereof, extent of containment and the implementation of interventions in terms of company size and ownership.

Main findings: The health factors perceived to have a moderate to large impact were HIV and AIDS, smoking, alcohol use, stress, back and neck ache and tuberculosis, also reported to be better monitored and managed by medium and large organisations. Small organisations reported a smaller impact, fewer efforts and less success. HIV and AIDS programmes were more evident in large companies and those with wellness programmes (52%). Workplace programmes enabled better monitoring and managing of impacting health conditions. Smaller organisations were not convinced of the benefits of interventions in addressing health challenges.

Practical/managerial implications: As the impacting health conditions seemed linked, comprehensive and integrated wellness programmes are required to address the health issues and ensure organisations' competitiveness.

Contribution: The results contribute to a better understanding of the perceived salient health influencing factors that impact on production costs. Data support the inter-relationships between the identified health concerns and call for more holistic wellness programmes.

Introduction

A healthy, well-trained, highly qualified and motivated workforce is critical for organisations' competitiveness in the global market. The workplace has been identified and has become a key health-promoting setting worldwide with corporate strategies and interventions directed at enhancing employees' health and well-being (Burton, 2010; Dornan & Jane-Llopis, 2010; ILO, 2009; Van Wyngaardt, 2010). In most countries, workplace wellness-promoting strategies focus on health and safety, lifestyle and psychosocial factors (Burton, 2010). In South Africa, health matters in the workplace are regulated by a predominant labour approach to occupational health and safety as outlined by the *Occupational Health and Safety Act* (No. 85 of 1993). The HIV and AIDS pandemic however has necessitated a more public health approach to health matters as more focused HIV and AIDS initiatives are required and encouraged by the International Labour Organisation's Recommendation 200 (ILO, 2010). It is argued that company initiatives can slow down the HIV infection rate and reduce human suffering by improving knowledge regarding HIV and AIDS and tuberculosis (TB), facilitate access to HIV counselling and testing (HCT) and the timely support and treatment of HIV-infected employees and their partners (Department of Labour, 2000, 2012). The South African private sector, various corporate structures like the South

African Business Coalition on Health and AIDS (SABCOHA), the Automotive Industry Development Centre Eastern Cape (AIDC EC) and international donor organisations responded by advocating and supporting the implementation of HIV and AIDS workplace programmes (HAWPs). Strong support was developed for the integration of HAWPs into broader workplace wellness programmes (WWPs) (SABCOHA, 2012). Workplace wellness is currently high on the Southern African Development Community's (SADC) agenda and reporting on health initiatives as part of companies' statutory reporting is being discussed as it is considered to be beneficial to businesses and socioeconomic development (Mail & Guardian, 2015).

Purpose

Whilst many South African organisations have responded to the challenges posed by the HIV epidemic by implementing HAWPs, others have been slow to respond. The automotive component manufacturing sector seems to face challenges in this regard. One important factor might be perceptions that a workplace programme only focusing on HIV and AIDS is unlikely to successfully address their health challenges. According to the Healthy Company Index, a study conducted by Discovery in 2014 amongst 151 South African companies in partnership with the University of Cambridge and RAND Europe, the three most prevalent health concerns reported by employers are stress, blood pressure and cholesterol, whilst employees' most prevalent chronic diseases are high blood pressure, depression and diabetes (Discovery, 2014). Although the importance of addressing HIV and AIDS in the workplace is widely supported and governed by guidelines and policies, it is likely that the implementation of HAWPs is hampered when companies are not convinced that HIV and AIDS is the main negative health influencing factor responsible for increased production costs. The question arises whether comprehensive wellness programmes addressing various negative health influencing factors impacting organisations' production costs would not be considered more acceptable whilst simultaneously also providing the necessary platform to address HIV and AIDS. Little is however known of the health conditions perceived to negatively impact production costs of companies in the automotive sector.

The aim of this descriptive study was therefore to gain a better understanding of the health conditions perceived to negatively influence the production costs of South African companies in the automotive manufacturing sector and their related responses to enable a more informed view of appropriate responses to their health challenges. Ethical clearance for the study was obtained from the Ethics Committee of the University of KwaZulu-Natal (HSS/1424/010M).

Literature review

The World Health Organization (WHO) considers workplace health programmes as one of the best-buy

options for prevention and control of noncommunicable diseases and for mental health (WHO, 2015). However, HIV and AIDS remains a key focus in workplaces globally as organisations have an economic interest and a moral obligation to engage in the prevention of HIV and AIDS, ensure access to support and treatment, whilst also ensuring a safe work environment free from HIV and AIDS stigma and discrimination (ILO, 2010). Despite the relative stability of the HIV and AIDS pandemic in South Africa over the last years, HIV and AIDS has a profound impact on the social and economic development of the country as the age groups mostly affected are the economically active group, between the ages of 29 and 35 years (Department of Health, 2013). A study in the South African automotive manufacturing sector revealed that 33% of companies perceived HIV and AIDS to have a major impact on profits and indicated that investment decisions were influenced by HIV and AIDS related factors (Van Wyngaardt, 2010). However, the SABCOHA 2005 survey found that in comparison to medium and large companies, small companies (fewer than 100 employees) have reported less noticeable HIV and AIDS related impacts (Ellis, 2006; Ellis & Terwin, 2005). It is also known that small and medium-sized enterprises (SMEs) face a number of structural constraints to implementing workplace programmes, including a lack of designated human resource personnel (Connelly & Rosen, 2005; Hannon *et al.*, 2012). The lack of resources is also hindering the proper assessment of needs and the monitoring and evaluation of interventions. Scepticism about the likely effectiveness of health promotion programmes could be linked to the anticipated investment costs required for workplace interventions in relation to the possible benefits (George & Quinlan, 2009).

Current practice shows that large South African original equipment manufacturers (OEMs) like for example Ford, VW, GM and Mercedes-Benz have incorporated HIV and AIDS programmes into wellness programmes, also addressing other health conditions (Panter, 2009). This is supported by findings of large surveys, for example the global survey of health promotion, workplace wellness and productivity strategies (Buck Consultants, 2014), which have reported that in African workplaces, workplace safety, work-life issues and stress were, next to infectious diseases and HIV and AIDS, mentioned as the most important health issues driving the corporate wellness strategy. Several literature sources recommend extending the scope of workplace interventions beyond HIV related issues (Arend, 2008; Dickinson, 2008).

Furthermore, the inter-relatedness of various risky lifestyle factors linked to health conditions necessitate a comprehensive health promotion approach. For example, HIV infection is the strongest risk factor for tuberculosis (TB) and is responsible for South Africa's TB epidemic, further compounded by increasing drug resistance (Abdool Karim, Churchyard, Abdool Karim & Lawn, 2009). People abusing alcohol and drugs are known to be at greater risk for HIV infection due to the increased likelihood for

engaging in unprotected sex (Fisher, Bang & Kapiga, 2007; Rehm, Shield, Joharchi & Shuper, 2012). Problematic use of alcohol is high amongst employees in many South African industry sectors with alcohol use being a major risk factor for communicable and noncommunicable diseases, injuries and mental disorders (Parry, Patra & Rehm, 2011; Rehm *et al.*, 2010). Furthermore, alcohol abuse by employees can cause serious accidents and interfere with work efficiency and precision. Alcohol and drug abuse has been found to significantly impact employee work performance and absenteeism (Chakraborty & Subramanya, 2013; Verster *et al.*, 2010).

A statistically positive relationship is also found between stress and substance use, that is, alcohol and smoking (Azagba & Sharaf, 2011, 2012a; Hassani *et al.*, 2014). The use of both substances are known risk factors for various chronic diseases, such as asthma (Henneberger *et al.*, 2015), cardiovascular disease and related conditions (Chandola *et al.*, 2008). Stress on the other hand, is also associated with increased body mass index (Azagba & Sharaf, 2012b), anxiety, depression, hostility and headaches (Stansfeld & Candy, 2006), which are conditions linked to both absenteeism and presenteeism. Several studies confirm the relationship of musculoskeletal symptoms amongst workers and the physical, psychosocial and organisational environment in the workplace and consequently argue for a multifaceted approach by improving physical, psychosocial and organisational aspects of the working environment (Frederiksen, Karsten, Indahl & Bendix, 2015; Widanarko, Legg, Devereux & Stevenson, 2012, 2014).

Evidence exists for the health and well-being effects of WHPs linked to increased productivity and job satisfaction (Aldana, Merrill, Price, Hardy & Hager, 2005; Blake, Zhou & Batt, 2013; Torp, Grimsmo, Hagen, Duran & Gudbergsson, 2013). The cost effectiveness of WHPs is particularly enhanced when both physical and psychosocial factors are addressed (Cancelliere, Cassidy, Ammendolia & Côté, 2011). This could also be applicable to small businesses as there is evidence that by integrating wellness into their culture and operations, small companies can improve the health of the entire workforce population (Merrill *et al.*, 2011).

The literature provides a vast range of arguments to support the implementation of holistic WHPs addressing the various health influencing factors impacting on employees and consequently the organisation. However, in reality, the availability of data to inform company management about the specific needs of their employees with regard to health issues might be limited (ILO, 2009; WHO, 2015). As little information is available on the views of companies in the South African automotive sector about health conditions impacting their production costs, ways in which these are monitored and managed as well as their views about current interventions, this study aims to explore these issues to better inform WHPs in this sector.

Method

Research approach

The study is an exploratory descriptive study using a quantitative research approach. A cross-sectional survey was conducted amongst companies in the automotive manufacturing sector in South Africa.

Participants

An updated, representative South African AIDC EC database with 527 companies was used as the sampling frame for the stratified random sampling of 258 companies across all nine provinces. The realised sample comprised 74 companies from a total of 167 companies who initially agreed to participate in the study. The survey questionnaire was directed at company representatives, such as human resource managers or general managers.

Measuring instruments

The survey questionnaire was designed to be self-administered and to investigate the following aspects: company details (size, annual turnover, number of employees and skills level), questions with regard to the impact of health conditions on production costs, monitoring efforts and success in management of health conditions using a five-point Likert scale. Items pertaining to company responses to HIV and AIDS and general wellness were also included. A pilot study was conducted to assess the appropriateness of the questionnaire before data collection.

Data collection

The company representatives were contacted to negotiate study participation. The aims and objectives of the study, the voluntary nature of participation, confidentiality and anonymity of data were discussed. The data collection process was clarified: instruments were either distributed via fax or email to be returned within a two-week period, with follow-up calls as a reminder. Whilst only 74 companies returned their questionnaires, they were well distributed across the provinces in relation to the database used as a sampling frame. Missing information was minimal and random.

Data analysis

Data processing and analysis were conducted using SPSS 19 (Statistical Package for the Social Sciences). Frequencies were calculated for all the items followed by descriptive and central tendency exploration. Recoding was done to improve the response categories for analysis; company size was coded as small (8–49 employees), medium (50–199 employees) and large (200+ employees). Company ownership was coded as multinational organisations (1) and national or local ownership (2).

Non-parametric tests were used as the data was not normally distributed. Kruskal-Wallis tests were conducted to assess the median scores of the different sized

companies pertaining to: perceived impact of different health conditions on their production costs, the extent of their monitoring efforts and success in the management of the health conditions, beliefs about the likely success of WWP and HAWPs to address their health challenges and views of health conditions that should be included in WWPs.

The Mann-Whitney *U*-tests were used to assess the difference between multinational and national organisations on the above measures. In addition these tests were also used to assess the difference between those who indicated having a WWP (Yes or No) pertaining to perceptions about the monitoring and perceived success in the management of health conditions. Cohen's (1988) criteria was used to assess the effect sizes (0.1 = small; 0.3 = medium and 0.5 = large).

Chi-square tests for independence were conducted to assess whether organisation size and ownership were associated with the following workplace wellness initiatives (Yes = 1; No = 0): HAWP, HCT and antiretroviral treatment (ART) services and WWP. The phi coefficient effect size statistic was used for two-by-two tables (small effect = 0.01, medium effect = 0.03 and large effect = 0.05) whilst Cramer's *V* was used for larger tables (small effect = 0.01, medium effect = 0.03 and large effect = 0.05). In addition, Mann-Witney *U*-tests were also used to investigate the presence of different HIV and AIDS related initiatives, such as HAWP, HCT and ART services (Yes or No) pertaining to the perceived impact of HIV and AIDS on their production costs (not depicted in any table). Spearman's correlation analysis was done to assess the association between the perceived success of HAWPs and WWPs in addressing organisations' health challenges (not in table).

Results

Company location and characteristics

Most of the questionnaires were completed by company managers (45%; $n = 33$), followed by human resources managers (38%; $n = 28$) and administrative staff (11%; $n = 7$); only a few company CEOs (5%; $n = 4$) completed the questionnaires (missing data for two companies). This designation varied depending on the size and the turnover of the company. Only 25% of companies were multinational whilst the rest were national organisations. More than 50% of the participating companies reported an annual turnover of more than R50 million. With regard to the geographic location of the companies, the provincial distribution showed that the majority (51%) of companies was from the Eastern Cape, followed by Gauteng (22%), Kwazulu-Natal (18%), Western Cape (8%) and North West (1%).

Most participating companies were medium to large companies (43.3%) employing between 200 and 499 people fulltime, followed by micro to small companies (56.7%) employing between 8 and 49 people. Unskilled employees

accounted for 21%, followed by semi-skilled (27.12%), skilled (26.7%) and highly skilled employees (25.10%). The employees of most organisations, irrespective of size, seemed to be semi-skilled and skilled. Slightly more highly skilled employees were employed across all organisations than unskilled employees.

Perceived impact of health influencing factors on production costs

About half of the organisations perceived that most health factors have a small impact on their production costs. Overall, HIV and AIDS and smoking were considered by 34% and 36% of organisations respectively to have a moderate to large influence followed by alcohol use (30%), stress (29%), chronic back and neck ache (25%), tuberculosis (24%), hypertension (21%), diabetes (14%), hypercholesterolemia (7%) and lastly obesity (6%) (not in table).

The Kruskal-Wallis tests (depicted in Table 1), indicated that smaller companies generally perceived most health conditions to have a smaller impact on their production costs than medium to large organisations with the exception of TB and chronic back and neck ache, for which they reported a similar impact to medium-sized organisations. For HIV and AIDS, tuberculosis and alcohol use, medium-sized and large organisations indicated a similar impact on their production costs whilst smoking and hypercholesterolemia were seen more serious by larger organisations in comparison to the others.

With regard to the differences between multinational and national enterprises (not depicted in a table), the Mann-Witney *U*-test showed a significant difference in the perceived impact of HIV and AIDS by multinational ($Md = 3$, $n = 17$) and national ($Md = 2$, $n = 54$) enterprises ($U = 306$, $z = -2.12$, $p = 0.034$). Multinational companies recorded a higher median score for the impact of HIV and AIDS than others. A medium effect was found ($r = 0.25$).

Monitoring efforts of health influencing conditions on production costs

With regard to the monitoring efforts of health conditions in organisations, the data shows that HIV and AIDS is best monitored (56%), followed by alcohol use (52%), tuberculosis (46%) and then hypertension (36%). The health conditions that are least monitored are obesity (48%), hypercholesterolemia (41%) and diabetes (37%) (not in table). A statistically significant difference in the monitoring efforts of health conditions was noted in the Kruskal-Wallis tests between the different sized companies (Table 1). Diabetes, hypertension, HIV and AIDS and TB were generally well monitored by large organisations whilst HIV and AIDS also seems to be better monitored than the other conditions in small and medium-sized organisations. The Mann-Witney *U*-test did not show any significant differences with regard to the monitoring efforts

TABLE 1: The impact, monitoring and successful management of health conditions by company size.

Health management	Health factors ^a	N	X ² (df = 2)	p	Median ^b					
					Small	n	Medium	n	Large	n
Perceived impact of health factors on company's production costs	Diabetes	72	15.95	< 0.001	1	21	2	19	2	32
	Smoking	72	21.95	< 0.001	1	21	2	19	3	32
	Hypercholesterolemia	72	26.53	< 0.001	1	21	2	19	3	32
	HIV and AIDS	71	14.80	0.001	1	20	3	19	3	32
	Alcohol	73	12.14	0.002	1	21	3	19	3	32
	Tuberculosis	73	9.80	0.007	2	21	3	19	3	32
	Obesity	71	9.31	0.009	1	20	2	19	2	32
Back and neck ache	72	8.68	0.013	2	21	2	19	3	32	
Monitoring of health conditions on production costs	Diabetes	73	16.99	< 0.001	1	21	2	19	4	33
	Hypertension	73	12.78	0.002	2	21	2	19	4	33
	HIV and AIDS	72	10.64	0.005	2.5	20	4	19	4	33
	Tuberculosis	72	8.525	0.014	2	21	3	19	4	32
Success in managing the impact of health conditions on production costs	Hypercholesterolemia	71	17.38	< 0.001	1	20	1	18	3	33
	Hypertension	71	24.10	< 0.001	1	20	1	18	4	33
	Diabetes and blood sugar	71	28.40	< 0.001	3	20	3	18	4	33
	HIV and AIDS	72	13.90	0.001	1.5	20	2	19	4	33
	Tuberculosis	71	10.93	0.004	1.5	20	2	18	4	33
	Back and neck ache	72	6.93	0.030	1	20	1	19	3	33
	Smoking	71	6.08	0.004	1	20	2.5	18	3	33
Perceived success of different workplace programmes to manage health conditions	WWP	70	11.77	0.003	2	21	4	18	4	31
	HIV and AIDS Programmes	69	13.42	0.001	2	21	4	16	4	32

^a, Significant results of Kruskal-Wallis tests ($p \leq 0.05$); ^b, Range 1–5.

of health conditions between national and multinational organisations (not shown in a table).

Success in managing the impact of health factors on production costs

HIV and AIDS appears to be the most successfully managed condition as 53% of companies reported moderate to high levels of success, followed by alcohol and TB (46% and 39% respectively) and then hypertension and smoking by 30% of companies. Marginal success was reported by most in the management of smoking (37%), whilst 30% of companies indicated moderate to high levels of success. However, few organisations considered themselves to be successful in addressing obesity and hypercholesterolemia (8% and 18% respectively) amongst their employees (frequencies are not depicted in a table).

The Kruskal-Wallis test results (Table 1) suggest that large organisations are generally more likely to successfully address the impact of various health conditions on their production costs than medium and small enterprises. In particular, great success was reported with hypertension, hypercholesterolemia and chronic back and neck ache followed by HIV and AIDS and TB. The management of smoking and diabetes seemed however to be less effective and the difference from other sized organisations was less enhanced.

The Mann-Witney *U*-test revealed a significant difference in the perceived success in the management of tuberculosis by multinational (Md = 4, $n = 18$) and national (Md = 3, $n = 53$) organisations ($U = 325.5$, $z = -2.06$, $p = 0.04$). Multinational organisations had a higher mean score for the management

of tuberculosis. The effect ($r = 0.244$) can be considered to be a small to medium one (not depicted in a table).

Workplace health promotion initiatives

More than half of the companies (52.1%) reported having workplace wellness programmes irrespective of company size or ownership. Of the companies surveyed, 70.4% indicated having an HIV and AIDS education programme, 57.5% offered HCT services, whilst fewer organisations (21.1%) provided ART services. According to the Chi-square results, organisations that reported having a wellness programme were more likely to indicate also having an HIV and AIDS education programme ($X^2 = 5.035$, $df1$, $p = 0.025$, $\phi = 0.30$) and HCT services ($X^2 = 8.208$, $df1$, $p = 0.004$, $\phi = 0.37$). Larger organisations were also significantly more likely to have HIV and AIDS education programmes ($X^2 = 7.003$, $df2$, $p = 0.03$, Cramer's $V = 0.432$) and HCT services ($X^2 = 13.229$, $df2$, $p = 0.001$; Cramer's $V = 0.432$) than other medium and smaller organisations. No differences were detected for ART services amongst the different sized companies. In addition, the Mann-Witney *U*-test revealed that the mean score for the perceived impact of HIV and AIDS differed between organisations that indicated having an HIV and AIDS education programme (Md = 3, $n = 49$) and those that did not (Md = 2, $n = 20$; $U = 314$, $z = -2.392$, $p = 0.017$, medium effect size: $r = 0.288$). Those that had a HAWP obtained a higher mean score on perceived HIV and AIDS impact. The above results are not depicted in a table.

When investigating the experiences of companies with and without a WWP, it was clear that those that indicated having a WWP seemed better able to monitor the health

TABLE 2: Monitoring and management of health conditions by presence of workplace wellness programmes.

Health management	Health conditions ^a	N	U	z	p	Median ^b				r ^c
						Yes WWPS	n	No WWP	n	
Monitoring of health conditions in presence or absence of WWP	Diabetes	71	407.0	-2.638	0.008	3	37	2	34	0.306
	Hypertension	71	409.5	-2.586	0.010	3	37	2	34	0.300
	Back and neck ache	71	415.0	-2.534	0.011	3	37	2	34	0.294
	Obesity	71	426.5	-2.483	0.013	2	37	1	34	0.288
	Hypercholesterolemia	71	448.5	-2.170	0.030	2	37	1	34	0.252
	HIV and AIDS	70	432.5	-2.155	0.031	4	37	3	33	0.257
	Stress	71	450.0	-2.116	0.340	2	37	1	34	0.246
Perceived success in the management of health conditions in presence or absence of WWP	Obesity	68	369.0	-2.925	0.003	2	37	1	32	0.354
	Stress	70	366.0	-3.013	0.003	3	37	1	33	0.360
	Smoking	69	372.0	-2.745	0.006	3	37	1	32	0.330
	Hypercholesterolemia	69	345.0	-3.151	0.002	3	37	1	32	0.378
	Hypertension	69	343.5	-3.144	0.002	3	37	1	32	0.378
	Diabetes	69	314.5	-3.522	< 0.001	3	37	1	32	0.424
	Back and neck ache	70	346.5	-3.246	0.001	3	37	1	33	0.388
	HIV and AIDS	70	394.5	-2.614	0.009	4	37	3	33	0.312

WWP, workplace wellness programme.

^a, Significant Mann-Whitney *U*-test results ($p \leq 0.05$); ^b, Range 1–5; ^c, Cohen's criteria: 0.1 = small effect; 0.3 = medium effect; 0.5 = large effect.

TABLE 3: Health conditions to address in a workplace wellness programmes.

Health factor ^a	N	X ² (df = 2)	p	Median ^b					
				Small	n	Medium	n	Large	n
Diabetes	71	17.19	< 0.001	2	20	3	19	4	32
Obesity	71	16.72	< 0.001	2	20	3	19	3	32
Hypertension	71	15.96	< 0.001	3	20	4	19	4	32
Stress	71	13.58	0.001	3	20	4	19	4	32
High cholesterol	69	12.31	0.002	2	19	3	19	4	31
Back or neck ache	71	8.67	0.013	3	20	3	19	4	33
Tuberculosis	72	7.66	0.022	3.5	20	5	18	4	32
HIV and AIDS	72	7.41	0.025	3.5	20	5	19	5	33
Smoking	71	6.68	0.035	3	20	4	19	4	32

^a, Significant results of Kruskal-Wallis tests ($p \leq 0.05$); ^b, Range 1–5.

conditions and appeared to be more successful than those without a WWP in managing the impact of the various health conditions on their production costs. The results of the Mann-Whitney *U*-tests (see Table 2) suggest that organisations with a wellness programme were significantly better able to monitor diabetes, hypertension, chronic back and neck ache, obesity, hypercholesterolemia, HIV and AIDS, as well as stress. Similarly, companies with a wellness programme seemed also more successful in managing the impact of obesity, stress, smoking, hypercholesterolemia, hypertension, diabetes chronic back and neck ache as well as HIV and AIDS on their companies' production costs than the others. This was however more enhanced for stress, smoking, hypercholesterolemia, hypertension, diabetes and chronic back and neck ache than for HIV and AIDS.

The Kruskal-Wallis tests showed a significant difference in the mean scores for the small versus medium and large organisations with regard to the perceived success of WWPs ($X^2 = 11.77$, $df=2$, $p = 0.003$), and HAWPs ($X^2 = 13.42$, $df=2$, $p = 0.001$) in addressing their health challenges (Table 1). Smaller organisations were not convinced about the likely success of both these programmes whilst medium and large organisations were more supportive (Md = 2 versus Md = 4 respectively for both WWP and HAWP on a range of 1–5).

Furthermore, a strong positive correlation ($r = 0.796$) was found between perceived success of a comprehensive WWP and HAWP in addressing company health challenges (not depicted in a table).

The above study findings suggest not only the importance of the impact of HIV and AIDS on organisation's production costs, but also that other health influencing factors are of concern. Companies that reacted by implementing WWP instead of HAWP were not only more successful in monitoring the impact but also seemed to be more successful in managing most health conditions.

Health conditions perceived to be an important focus for workplace wellness programmes

The majority of companies believed that a WWP should pay considerable attention to HIV and AIDS (57%), followed by tuberculosis (38%), alcohol use (28%) and stress and smoking (both 25%). In accordance to the outcomes of the Kruskal-Wallis tests as depicted in Table 3, larger organisations seemed to believe that most health factors should receive attention in WWP in comparison to smaller organisations. No significant differences were detected in the Mann-Whitney *U*-tests for multinational and local organisations in this regard (not in table).

Discussion

The organisations that responded to the survey reflect the broad range in the automotive sector spanning from small and medium to large organisations with turnover rates ranging from less than R5 million to more than R50 million. Despite the relatively small sample, when compared to the existing AIDC EC database, the sample does reflect the larger population with regard to size and multinational and national ownership of the organisations in the automotive sector. Representation of different sized organisations is particularly important, as micro and small organisations have not responded adequately to the challenges posed by HIV and AIDS due to limited financial resources and expertise in this regard (Ellis & Terwin, 2005; Vass & Phakathi, 2006).

Perceived impact of health conditions on production costs

The health conditions that are perceived by the organisations to have a moderate to large impact on their production costs are HIV and AIDS, smoking, alcohol use, stress, chronic back and neck ache and tuberculosis. Small organisations generally perceive most conditions to have a smaller impact than larger organisations. The likely interactive relationships between the concerned health conditions are striking. Alcohol use is known to increase the risk for HIV infection due to the likelihood of unprotected sexual activities (Fisher *et al.*, 2007; Rehm *et al.*, 2012). Closely linked to HIV infection is TB; the comorbidity of tuberculosis with HIV is well researched in South Africa (Abdool Karim *et al.*, 2009; Harries *et al.*, 2010; UNAIDS, 2011) and often used as an indirect indicator of HIV prevalence. Stress levels on the other hand have been reported to have a positive and statistically significant association with alcohol consumption and smoking intensity (Azagba & Sharaf, 2011). These health influencing factors are also known risk factors for various chronic diseases (Azagba & Sharaf, 2011; Lucini, Solaro, Lesma, Gillet & Pagani, 2011). Chronic stress has been linked to a wide range of adverse health outcomes such as cardiovascular disease and hypertension (Azagba & Sharaf, 2011; Babu *et al.*, 2014; Chandola *et al.*, 2008; Lucini *et al.*, 2011), as well as back and neck pain (Widanarko *et al.*, 2012). It is thus not surprising that all these health conditions were raised as posing some concern for the organisations surveyed.

The consensus that HIV and AIDS impacts company production costs supports the negative influence of a generalised HIV and AIDS epidemic on the South African economy (Thurlow, Gow & George, 2009; Van Zyl & Lubisi, 2009). It also concurs with the study of Van Zyl and Lubisi (2009) in which HIV and AIDS was found to negatively impact company productivity levels, labour, profit levels, prices and sales. Concerns about alcohol use should be noted as it not only is linked to increased risk for HIV infection, but also has detrimental consequences for organisations (Kirkham *et al.*, 2015; McFarlin & Fals-Stewart, 2002; Osilla *et al.*, 2010). Alcohol use impacts negatively on levels of absenteeism

and productivity, whilst intoxication poses serious safety concerns (Atkinson, 2001, as cited in Elliott & Shelley, 2005). The legal framework for occupational health and safety places a large responsibility on organisations to ensure a safe workplace and necessitates the close monitoring and management of alcohol use in the workplace. Organisations viewed alcohol use and smoking as having an impact on their production costs, possibly linked to a loss of productivity due to alcohol-related absenteeism and multiple smoking breaks amongst smokers (SABCOHA, 2012; Sarna *et al.*, 2009). Substance use might also be more noticeable than other health influencing conditions.

Monitoring and managing of health conditions in the organisation

The perceived impact of health issues on production costs seemed to be linked to the monitoring efforts of health conditions. HIV and AIDS, alcohol use, TB and hypertension were reported to be best monitored by medium to large organisations. Organisations were also more likely to perceive having some success in the management of these conditions. Organisations who perceived HIV and AIDS to have a negative impact were also more likely to have a HAWP, offer HCT and ART services and were thus able to manage HIV and AIDS. The importance of the workplace as a setting for HCT has been highlighted in research (Corbett *et al.*, 2006, 2007). Despite the fact that the greater majority of organisations indicated having a HAWP and showing some commitment to the fight against HIV and AIDS, it was more so for larger than smaller organisations, a finding that is also supported by previous studies (Elliott & Shelley, 2005; Vass & Phakathi, 2006). However, the management success of various health influencing factors was more likely in organisations with WHPs. Similarly, the SABCOHA survey (Ellis & Terwin, 2005) reported that the sectors more profoundly affected by HIV and AIDS tend to have the most mature programmes and many have integrated HAWP into broader WHPs. The results of this study support these findings as companies that had a WHP were significantly better able to monitor HIV and AIDS and appeared to be more successful than those without a WHP in managing the impact of HIV and AIDS on their production costs.

The inability of small organisations to monitor and successfully manage particularly HIV and AIDS, TB and hypertension is likely due to the absence of WHPs. The absence of WHP is possibly a result of limited human and financial resources hampering the implementation of effective interventions as supported in other studies (Connelly & Rosen, 2006; Ellis & Terwin, 2005; Vass & Phakathi, 2006).

Workplace health promotion initiatives

The implementation of WHPs in 52% of the organisations surveyed, irrespective of organisation size, is encouraging and augurs well for enhancing wellness in the workplace. International research indicates that larger organisations are generally more likely to implement health promotion

programmes (holistic WWP) than smaller organisations (Harris, Huang, Hannon & Williams, 2011; Linnan *et al.*, 2008). Similarly to the SABCOHA findings (Ellis & Terwin, 2005), the organisations with a WWP were more likely to perceive HIV and AIDS and other health conditions as having an impact on their production costs, a perception most likely to have contributed to the implementation of a WWP, thereby contributing to greater levels of success in the management of these health influencing factors. These organisations were also more likely to have a HAWP and offer HCT and access to ART. Rosen, Feeley, Connelly and Simon (2007) report that for large organisations, the provision of ART to employees was seen as a good investment whilst small and even medium-sized companies had restricted human and financial capacity to respond in this regard. Efforts to reach out to SMEs in the automotive sector to assist them in capacity building and WWP implementation have been initiated by for example SABCOHA (2012), AIDC EC and development agencies like Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

The attention paid to TB by most companies is encouraging although small companies do not seem to have much success in the management of TB. The capacity in the workplace to monitor the quality of care to employees with TB is of critical importance in efforts to support TB treatment completion. Evidence exists for the cost effectiveness of public-private workplace (PWP) provision of TB treatment in South Africa to reduce costs for the patient, workplace and government (Sinanovic & Kumaranayake, 2006a, 2006b, 2010). As larger organisations were more likely to monitor and report success in the management of TB, successful workplace support for directly observed treatment (DOT), the internationally supported control strategy for TB, would be more likely in organisations with well supported, resourced and comprehensive WWPs.

Most organisations believed that WWPs, and to a lesser extent that HAWPs, would be successful in addressing their health challenges. The support for a more comprehensive WWP is understandable as various other health factors apart from HIV and AIDS were highlighted as impacting negatively on organisations' production costs and therefore as important to address in WWPs, in particular tuberculosis, substance use and stress. These lifestyle factors, as mentioned earlier, have been found to impact negatively on the health and well-being of workforces and thus on organisation effectiveness. Human resources can be considered an organisation's most important resource; employee well-being is therefore a key factor to long-term organisational effectiveness. Research studies have shown positive relationships between employee health and well-being and productivity levels (Bloom, Canning & Sevilla, 2005; Cancelliere *et al.*, 2011; Kuoppala, Lamminpää & Husman, 2008).

However, small organisations were less likely to be convinced about the likely success of both HAWPs and WWPs in addressing their health challenges. This finding helps to explain the reluctance of small companies in the

South African automotive sector to implement HAWPs and possibly also WWPs. This scepticism about the likely effectiveness of health promotion programmes could be linked to the anticipated investment costs required for workplace interventions in relation to the possible benefits as highlighted by George and Quinlan (2009). Furthermore, the limited available human resources in small organisations may account for this view. Hannon *et al.* (2012) recently found that a lack of capacity was a key barrier to the implementation of health promotion programmes in low-wage industries in the US. Apart from a few specific case studies, little research evidence exists for the effectiveness of HAWP in the South African context, whilst WWP in South Africa is still in its infancy. Organisations should be made aware of the importance of monitoring and evaluating HAWPs and WWPs and to share their findings. International evidence exists for the health-enhancing effects and cost effectiveness of workplace wellness programmes (Aldana *et al.*, 2005; Allen, Lewis & Tagliaferro, 2012). However, best evidence suggests that WWP should address both psychosocial and physical factors (Cancelliere *et al.*, 2011; Kuoppala *et al.*, 2008). Successful WWPs thus imply not merely a disease focus, but require a change in an organisation's 'health culture' to ensure a supportive environment for health and well-being, fully integrated into the mission and vision of the organisation (Blake & Lloyd, 2008).

The results of this study contribute to a better understanding of the perceived salient health influencing factors that impact automotive organisations' production costs. But more importantly, the results support the known inter-relationships between the identified health concerns and calls for more holistic wellness programmes. In addition, efforts to facilitate a participatory process amongst relevant stakeholders (e.g. employees, family members and unions) to better understand the health-related needs of the workforce will contribute further to a relevant and nuanced health promotion response.

As companies' competitiveness and growth seem to hinge on the effectiveness of health promotion interventions, the implementation of comprehensive WWPs is therefore a convincing organisational strategy to not only address the concerned health conditions and successfully address the HIV and AIDS pandemic, but also to foster general workplace well-being.

Limitations

Whilst the response rate of 29% is generally low, despite attempts to motivate a higher return rate, the response rate is similar to other electronic mail surveys, ranging between 20% and 24% (Kaplowitz, Hadlock & Levine, 2004). The feedback received indicated that the timing of the survey, just before the yearly Christmas recess with increased production demands, impacted on the response rate. The study findings are limited to perceptions of managers. These perceptions are not necessarily based on objective company policies and therefore some level of bias is possible.

Recommendations

Based on the results of this study, the following recommendations are proposed.

Partnership approach to support workplace wellness programmes

A greater awareness of existing networks should be facilitated using organisations such as SABCOHA, other nongovernmental organisations and the public sector to assist in companies' wellness intervention needs. The facilitation of partnerships with other institutions to assist in HIV and AIDS service provision, including the treatment of other sexually transmitted infections, opportunistic infections (especially TB) and counselling support will be helpful to address organisations' concerns regarding HIV and AIDS. However, the integration of HIV and AIDS interventions within WWPs seems appropriate as HIV and AIDS were not considered by all organisations to have the most severe impact on production costs. Smaller companies in particular need support in the development of tailored and cost-effective interventions, based on needs and risk assessments and directed first at addressing their more immediate health concerns, so that they may reap the benefits of well-designed interventions. Also, more emphasis needs to be placed on monitoring and evaluation of interventions. This process could initiate a necessary attitude change in becoming less sceptical of the likely success of WWP.

Comprehensive workplace wellness programmes

A comprehensive, workplace health promotion approach would provide a cost-effective and sustainable way to address the multitude of health influencing factors apart from HIV and AIDS impacting on both the individual employees and the business alike. Support seems to exist for addressing various health conditions within WWPs and this reiterates the need to strengthen and extend existing efforts to broaden its predominant disease focus. In particular, occupational stress as a risk factor for substance use, cardiovascular diseases and safety should be addressed at both an individual and organisational level.

The existing occupational health and safety initiatives in the workplace could provide opportunities to extend health and well-being programmes. Greater effort is thus required to advocate for a comprehensive approach to health and well-being in the workplace that calls for supportive leadership, relevant policies and systems in the workplace as well as the fostering of an organisational culture to ensure that organisations become supportive environments for health and well-being grounded in ethical principles and values.

In addition, organisations will benefit from a deeper understanding of the views of WHO and ILO pertaining to health promotion's role in the transformation of organisations, as this could form an important foundation for developments in organisational change. The likely direct

and indirect benefits from a holistic approach will not only improve individual employee health and well-being, but is also likely to create a workforce that feels valued and is committed and engaged.

Conclusion

The results of this study enhanced understandings of the perceived salient health influencing factors that impact the production costs of companies in the South African automotive sector. Apart from HIV and AIDS, substance use such as smoking and alcohol use, stress, chronic back and neck ache and tuberculosis, are deemed to pose challenges to the organisations. Importantly, the results point to the known inter-relationships between the identified health concerns and calls for more holistic wellness programmes. Companies' competitiveness and growth seem to hinge on the effectiveness of health promotion interventions; the implementation of comprehensive workplace wellness programmes is therefore a convincing organisational strategy to not only address the concerned health conditions and the HIV and AIDS pandemic, but also to foster general workplace well-being.

The study findings therefore call for the careful development and implementation of theoretically sound and appropriate workplace wellness interventions with cognisance of the holistic health-promoting workplace framework as suggested by the WHO (2015). Furthermore, careful monitoring and proper evaluation should be considered as an integral part of a responsible intervention approach. This will enable the development of scientifically based best evidence, necessary for the fostering of health and well-being in the South African workplace.

Acknowledgements

This work was conducted in 2010–2012 during a project run by the Automotive Industry Development Centre Eastern Cape (AIDC EC) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), a technical development agency owned by the German government. Many thanks to the AIDC EC and GIZ. Many thanks also to the participating companies for permission to publish these findings.

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

A.M.-W. (University of KwaZulu-Natal) was the project leader. M.W. (AIDC EC and GIZ at the time of the study, Human Science Research Council at the time of completion of the work) and F.B.-W. (AIDC EC and GIZ at the time of the study, Nelson Mandela Metropolitan University at the time of completion of the work) were responsible for study design and data collection. Data analysis and calculations

were performed by A.M.-W., who also wrote the manuscript, supported by F.B.-W. and M.W.

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Exploring the current application of professional competencies in human resource management in the South African context

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Dates:

Received: 13 June 2015
Accepted: 29 Sept. 2015
Published: 30 Nov. 2015

How to cite this article:

Schutte, N., Barkhuizen, N., & Van der Sluis, L. (2015). Exploring the current application of professional competencies in human resource management in the South African context. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #724, 9 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.724>

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Orientation: Human resource (HR) practitioners have an important role to play in the sustainability and competitiveness of organisations. Yet their strategic contribution and the value they add remain unrecognised.

Research purpose: The main objective of this research was to explore the extent to which HR practitioners are currently allowed to display HR competencies in the workplace, and whether any significant differences exist between perceived HR competencies, based on the respondents' demographic characteristics.

Motivation for the study: Limited empirical research exists on the extent to which HR practitioners are allowed to display key competencies in the South African workplace.

Research approach, design, and method: A quantitative research approach was followed. A Human Resource Management Professional Competence Questionnaire was administered to HR practitioners and managers ($N = 481$).

Main findings: The results showed that HR competencies are poorly applied in selected South African workplaces. The competencies that were indicated as having the poorest application were talent management, HR metrics, HR business knowledge, and innovation. The white ethnic group experienced a poorer application of all human resource management (HRM) competencies compared to the black African ethnic group.

Practical/managerial implications: The findings of the research highlighted the need for management to evaluate the current application of HR practices in the workplace and also the extent to which HR professionals are involved as strategic business partners.

Contribution/value-add: This research highlights the need for the current application of HR competencies in South African workplaces to be improved.

Introduction

Human resource (HR) practitioners have an important role to play in the sustainability of organisations and the subsequent economic growth of any country through its people (Sikora & Ferris, 2014). The Global Competitiveness Report (2014) consistently gives South Africa poor rankings in terms of people development and HR practices. According to this report, South Africa is ranked 113 out of 144 countries for labour relations practices, 143rd for hiring and firing practices, due to rigidity, and 144th, for labour relations, due to significant tensions (World Economic Forum [WEF], 2014). Similarly, the Global Talent Competitive Index of 2014 ranked South Africa last out of 93 countries for labour-employer co-operation and 74 out of 93 countries for effective hiring practices (Lanvin & Evans, 2014). It therefore appears that the HR profession is slow in making a strategic contribution, and may not be maintaining effectiveness and relevance in the South African context (Boudreau & Lawler, 2014).

The role that HR practitioners should play in organisations is the subject of an on-going debate (O'Brien & Linehan, 2014). In line with the early work of Ulrich (1997), many scholars advocate that HR practitioners should be allowed to play a more strategic role in organisations (see De Nisi, Wilson & Biteman, 2014; Sikora & Ferris, 2014). Boudreau and Lawler (2014, p. 233) highlighted the fact that HR practitioners are not focusing on key strategic challenges in organisations such as 'improving productivity, increasing quality, facilitating mergers and acquisitions, managing knowledge, implementing change, developing business strategies and improving the ability of the organisation to execute strategies'. Moreover, Pohler and Willness (2014, p. 468) have stated that HR is being perceived as a 'low-level, reactive, and cost-focused administrative function

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with little autonomy ... and nothing more than a management control function’.

The available research has emphasised the impact of poor HR practices on both individual-level and organisational-level outcomes in the South African context. Findings show that poor human capital practices have a negative impact on psychological contracts, organisational commitment, work engagement, motivation, job satisfaction, happiness, meaningfulness, well-being and the retention of employees in various settings (Barkhuizen, Mogwere & Schutte, 2014; Diseko, 2015; Kekgonegile, 2015; Magolego, Barkhuizen & Lesenyehlo, 2013; Mtila, Barkhuizen & Mokgele, 2013; Saurombe, 2015; Smit, 2014). Poor HR practices can have a significant impact on employee performance (Magolego *et al.*, 2013; Masale, 2015) and, subsequently, on the quality of service delivery (Barkhuizen, Mogwere & Schutte, 2014; Smit, 2014).

Purpose

In the light of the preceding, the need exists to explore the current application of human resource management (HRM) competencies in the South African workplace. Most of the research in South Africa has focused on the roles, responsibilities, and practices of HR professionals. Given the current criticisms surrounding the HR function, research should focus on exploring the underpinning competencies that are the building blocks of effective HR practices (Abdullah, 2014). The lack of detailed empirical research on HR competencies and functions is widely recognised (Abdullah, 2014; Abdullah, Musa & Ali, 2011; O’Brien & Linehan, 2014). The main objective of this research was to explore the extent to which HR practitioners are currently allowed to display HR competencies in the workplace and whether any significant differences exist between perceived HR competencies, based on the respondents’ demographic characteristics.

The next section of the article highlights some of the limited literature available on the application of HRM competencies in the South African workplace. Thereafter, the research approach and research method of the present study are discussed. The article concludes with a discussion of the research results as well as recommendations for further research.

Literature review

Human resource management role and competency requirements

Most of the literature to date has been dominated by the extent to which HR practitioners are allowed to play a strategic versus an operational role in organisations. Many researchers have tested the original four-factor HR role model of Ulrich (1997) in various settings. According to this model, HR has four major roles to play, namely strategic partner, change agent (strategic roles), administrative expert and employee champion (operational roles). The activities of

a strategic partner are aimed at developing an HR strategy that is aligned with the business strategy of the organisation. As change agents, HR practitioners focus on developing the capability of people and, consequently, the organisation. The role of an administrative expert focuses on the effective design and execution of HR processes, whereas the employee champion function deals with the daily needs and problems of employees.

In the light of the above model, Ulrich and Brockbank (2005) maintained that it is the role of the HR function to create value for investors and customers external to the organisation and to create value for line managers and employees inside the organisation. This value is created through the facilitation of HR practices that focus on:

- ‘the flow of people’ — ensuring the availability of talent to accomplish the organisational strategy;
- ‘the flow of performance management’ — promoting accountability for performance by defining and rewarding it;
- ‘the flow of information’ — ensuring that employees are aware of what is occurring in the organisation and can apply themselves to those things that create value; and
- ‘the flow of work’ — providing the governance processes, accountability, and physical setting that ensure quality results. (Ulrich & Brockbank, 2005, p. 20)

Ulrich, Brockbank, Younger, and Ulrich (2013) recently revised the focus of the traditional model in order to adapt it to the changing business world. According to the revised model, HR practitioners as strategic business partners are ‘high-performing HR professionals’ who should understand the global context. The capacity-building role includes the ability of HR professionals to define and build organisational capabilities. HR, as a change agent, needs to assist organisations with effective change processes and structures, whereas the innovator and integrator roles require HR professionals to integrate HR business practices in order to support change initiatives.

The need for HR competence and professionalism is clearly highlighted in the revised roles proposed by Ulrich, Younger, Brockbank and Ulrich (2012). While the roles of HR have changed, the essential principles that guide HR (such as managing and developing the workforce) have remained unchanged (Boudreau & Lawler, 2014). HR professionals therefore need to move away from traditional HR practices and bring about much-needed change in HR competence, skills, strategic roles, and professionalism to mobilise human capital and help to achieve organisational strategies.

HR practitioners in developing countries are still fulfilling mainly operational roles (i.e. Tessema & Soeters, 2006), whereas most in developed countries are fulfilling more strategic roles (Du Plessis, Paine & Botha, 2012; Thill, Venegas & Groblshegg, 2014). In the South African context, Walters (2006) found that HR practitioners are mostly fulfilling the roles of administrative experts and employee champions, but are perceived as ineffective or incompetent in these roles.

Steyn (2008) found similar results but discerned that some HR practitioners are moving towards fulfilling a more strategic role in organisations. A recent study by Abbott, Goosen and Coetzee (2013), however, pointed out that many HR practitioners in South Africa are still focusing on the role of employee advocate in the workplace without this role being extended.

The available research in the South African context points to a lack of HRM competence and subsequent poor practices being applied in the workplace. Schultz (2010) found that the HR department in a merged South African higher education institution displayed poor personal skills, HR business knowledge, and management skills. A study by van Wyk (2006) highlighted the lack of sufficient business knowledge among HR practitioners regarding a social responsibility issue such as HIV and AIDS. The HR practitioners, however, did acknowledge the importance of educating employees on social responsibility issues.

A study by Louw (2012) indicated that HR practitioners lack experience and competence in evaluating, executing, and reporting on HR interventions. As a result, HR practitioners cannot provide organisations with important data regarding the effectiveness of HR interventions (Field & Louw, 2012; Salie & Slechter, 2012). Furthermore, organisations are of the opinion that the data provided by HR practitioners are unreliable and lack integrity, and can therefore not be used (De Bruyn & Roodt, 2009).

The effective talent management of employees also remains an area of great concern. Several studies pointed out the lack of talent management as evinced by poor training and development opportunities, poor performance management, poor workforce planning and acquisition, and ineffective retention strategies (Barkhuizen, 2015). These findings can be explained by the fact that confusion still prevails as to who should take responsibility for talent management in organisations. Other factors include the lack of management commitment to managing talent, bureaucratic organisational structures, and the non-recognition of HR's potential strategic value in a business partnership (SABPP, 2011).

Schutte (2015) recently developed and validated an HR competency model for the South African context. According to this model, HR professionals should be able to display HR competence in three domains: professional behaviour and leadership, service orientation and execution, and business intelligence. Professional behaviour and leadership refers to the suitability of HR professionals' activities, whether intentionally or unintentionally, in effecting environmental changes or conditions that reflect on the qualities associated with HR leadership and professional responsibilities. HR service orientation and execution involves the ability of HR practitioners to analyse situations or problems, make timely and sound decisions, construct plans, and achieve optimal results in response to the changing demands of

customers. HR business intelligence refers to the ability of HR professionals to position themselves as an essential value-adding department of the organisation through the use of information in order to gain a competitive edge over competitors (see Schutte, 2015). This model is used in this study to assess the current application of HR practices in South African workplaces. In the light of the preceding, the following hypothesis has been set:

- **Hypothesis 1:** HR competencies are poorly applied in the South African context.

Human resource competencies and background variables

Limited research currently exists on the interactive relationships between HR competencies and background variables such as home language, ethnicity, job level, and outlook. Regarding age, research has shown that generation Y (born between 1978 and 1990; (Weingarten, 2009) places emphasis on sound HRM practices regarding compensation and training and development (Barkhuizen, 2014). A study by Du Plessis and Barkhuizen (2012) on the personal-level factors of HR practitioners showed that individuals aged 45 years and older displayed higher levels of hope and confidence than their younger counterparts. Further results showed that the white ethnic group scored higher on hope and confidence than the black ethnic group, whereas the latter group displayed higher levels of resilience. Final results showed that HR practitioners employed at top management level displayed higher levels of psychological capital (i.e. hope, confidence, optimism, and resilience) than those employed at lower levels in the organisation (Du Plessis & Barkhuizen, 2012).

In the light of the preceding the following hypothesis has been set:

- **Hypothesis 2:** Significant differences exist between HR practitioners and managers in the way in which they display HR competencies, based on their demographic characteristics.

Method

Research approach

A non-experimental, cross-sectional survey research strategy of enquiry was used in this study, based on the need for exploratory research on the application HR competencies in the South African workplace (Field, 2009). Cross-sectional research occurs when data are collected from the research participants at a single point in time or during a single, relatively brief period of time (Johnson & Christensen, 2008).

Measures

Sampling

The respondents were HR officers and managers from various organisations in the private and public sectors who had knowledge of HRM processes in the workplace. The study employed purposive convenience sampling in which respondents were chosen based on their availability to

participate and provide the desired information. A total of 800 questionnaires were distributed and 483 were returned. A total of 481 questionnaires were usable for analysis. This represented a 60.13% response rate. The demographic characteristics of the respondents in this sample, reported on in Table 1 below, are as follows: 55.1% were women, 70.5% spoke indigenous languages, and 76.9% were black Africans. A total of 29.5% of the respondents were aged 30–39 years, 35.8% held a bachelor's degree as their highest level of educational qualification, and 31.1% were employed at middle management level. Of the respondents, 37.8% had six to 15 years' work experience, 83.8% had been employed in their job for 0–10 years and 64.0% had been employed by their current organisation for 0–10 years.

Measuring instrument

A Human Resource Management (HRM) Professional Competence Questionnaire (Schutte, 2015) was used in this study. This questionnaire consist of three sections and measures three core HR competency domains, namely, 'professional behaviour and leadership', 'service orientation and execution', and 'business intelligence'. The professional

TABLE 1: Demographic characteristics of the respondents.

Demographic characteristics	Category	Frequency	Percentage
Gender	Male	213	44.3
	Female	265	55.1
Language	English	141	29.3
	Indigenous	339	70.5
Ethnicity	African	370	76.9
	Mixed race	18	3.7
	Asian	11	2.3
	White	77	16.0
Age	20–29	59	12.3
	30–39	142	29.5
	40–49	139	28.9
	50 and more	68	14.1
Qualifications	Certificate	78	16.2
	Diploma	148	30.8
	Bachelor's degree	172	35.8
	Postgraduate qualification	70	14.6
Job level	Senior management	38	7.9
	Middle management	150	31.2
	Lower management	86	17.9
	Supervisory	77	16.0
	Operational	113	23.5
Years' work experience	0–5	75	15.6
	6–10	90	18.7
	11–15	92	19.1
	16–20	58	12.1
	21–25	78	16.2
	26–30	54	11.2
	30 years or more	31	6.4
Years in job	0–10	403	83.8
	11–20	60	12.5
	21–30	17	3.5
Years in organisation	0–10	308	64.0
	11–20	91	18.9
	21–30	79	16.4

behaviour and leadership competency consists of four sub-competencies, namely, leadership and personal credibility (8 items), solution creation (4 items), interpersonal communication (7 items), and innovation (6 items). The service orientation and execution competency consists of four sub-competencies, namely, talent management (9 items), HR risk (5 items), HR metrics (6 items), and HR service delivery (6 items). The business intelligence competency consists of four sub-competencies, namely, strategic impact (11 items), HR business knowledge (10 items), business acumen (6 items), and HR technology (3 items).

Responses were measured on a five-point Likert scale ranging from 'Never' (1) to 'Always' (5). The questionnaire has been validated for the South African context, and showed excellent reliabilities of above 0.90 for the underlying factors (Schutte, 2015).

Research procedure

Permission was obtained from the necessary authorities prior to the administration of the questionnaire. Hard-copy and soft-copy surveys were distributed to the relevant participants. Ethical clearance was obtained prior to the administration of the surveys. Confidentiality was maintained at all times.

Statistical analyses

Data were analysed with the aid of SPSS Inc. (2015). Exploratory factor analyses were used to determine the underlying factor structure. Descriptive statistics (i.e. means, standard deviation, and kurtosis) were used to analyse the data. Multivariate analysis of variance (MANOVA) was used to determine the significance of differences between the dimensions of the HRM Professional Competence Model for the demographic groups. MANOVA tests whether mean differences among groups in a combination of dependent variables are likely to have occurred by chance (Field, 2009). When an effect was significant in MANOVA, one-way Analysis of variance (ANOVA) was used to discover which dependent variables had been affected. T-tests were done to assess the differences between the groups in the sample. For purposes of the present research, we used Cohen's (1988, p. 283) guidelines for the interpretation of effect sizes: 0.0099 constitutes a small effect, 0.0588 a medium effect, and 0.1379 is a large effect.

Results

The KMO analyses showed the following measures of sampling adequacy: professional behaviour and leadership – 0.954, service orientation and execution – 0.936, and business intelligence – 0.950. These results were acceptable according to the guideline of a KMO higher than 0.6 being adequate for factor analysis (Hair, Black, Babin & Anderson, 2010). The results of the factor analyses are reported next.

Factor analyses

Professional behaviour and leadership

Exploratory factor analyses, using principal component analyses, were done on the 25 items of the 'Professional behaviour and leadership' section of the questionnaire. The initial analyses revealed that four factors could be extracted, based on the eigenvalues. A subsequent factor analysis with direct Oblimin rotation revealed four underlying factors, which explained 82.020% of the variance. Four items were deleted because of problematic loadings. The factors were labelled: 'interpersonal communication' (Factor 1), 'leadership and personal credibility' (Factor 2), 'solution creation and implementation' (Factor 3), and 'innovation' (Factor 4). The items showed acceptable loadings.

Service orientation and execution

An exploratory factor analysis, using principal component analyses, was done on the 26 items of the 'Service orientation and execution' section of the questionnaire. The initial analyses revealed that four factors could be extracted, based on the eigenvalues. A subsequent principal component factor analysis, using varimax rotation, was done to specify the four underlying factors. Six items were deleted due to problematic loadings. The four factors explained 81.636% of the variance for the measure. The factors were labelled 'talent management' (Factor 1), 'HR service delivery' (Factor 2),

'HR metrics' (Factor 3), and 'HR risk' (Factor, 4). The items showed acceptable loadings.

Business intelligence

An exploratory factors analysis, using principal component analyses, was done on the 30 items of the 'Business intelligence' section of the questionnaire. The initial analyses revealed that four factors could be extracted, based on the eigenvalues. A subsequent principal component factor analysis, using varimax rotation, was done to specify the four underlying factors. The four factors explained 74.417% of the variance. Two items were deleted because of problematic loadings. The factors were labelled as follows: 'HR business knowledge' (Factor 1), 'strategic impact' (Factor 2), 'business acumen' (Factor 3) and 'HR technology' (Factor 4). The items showed acceptable loadings.

The descriptive statistics of the factors are reported on in Table 2.

The findings, provided in Table 2, showed acceptable to excellent reliabilities for all the dimensions of the HRM Professional Competence Model. The respondents indicated that most of the dimensions are applied moderately. The competencies that were indicated as having the poorest application were talent management, HR metrics, HR business knowledge, and innovation.

TABLE 2: Descriptive statistics of the factors.

HR professional competencies	HR professional sub-competencies	Mean	SD	Skewness	Kurtosis	α
Professional behaviour and leadership	Leadership and personal credibility	3.3059	0.94722	-0.289	-0.042	0.960
	Solution creation	3.2469	0.96972	-0.128	-0.114	0.882
	Interpersonal communication	3.3358	1.03634	-0.075	-0.649	0.959
	Innovation	2.9508	1.04200	0.268	-0.598	0.895
Service orientation and execution	Talent management	2.7914	1.05855	0.098	-0.775	0.942
	HR risk	3.2416	0.92427	0.073	-0.151	0.916
	HR metrics	2.8101	1.05672	0.216	-0.682	0.897
	HR service delivery	3.3714	0.96516	-0.486	-0.109	0.945
Business intelligence	Strategic impact	3.1335	0.81812	-0.115	0.343	0.933
	HR business knowledge	3.4940	0.92866	-0.379	-0.077	0.953
	HR business acumen	2.9567	0.95180	0.203	-0.168	0.944
	HR technology	3.0825	1.00618	-0.260	-0.282	0.915

SD, standard deviation.

TABLE 3: Gap analyses: Current application versus the importance of human resource management competencies.

HR professional competencies	HR professional sub-competencies	Mean importance	Mean current	Difference	<i>p</i>	η^2
Professional behaviour and leadership	Leadership and personal credibility	4.0257	3.3059	0.7198	0.422	0.069
	Solution creation	3.9858	3.2469	0.7389	0.083	0.050
	Interpersonal communication	4.0304	3.3358	0.6946	0.351	0.052
	Innovation	3.9586	2.9508	1.0078	0.387	0.027
Service orientation and execution	Talent management	3.918	2.7914	1.1266	0.368	0.075
	HR risk	3.966	3.2416	0.7244	0.224	0.048
	HR metrics	3.8274	2.8101	1.0173	0.368	0.049
	HR service delivery	3.9184	3.3714	0.547	0.231	0.057
Business intelligence	Strategic Impact	3.9181	3.1335	0.7846	0.287	0.091
	HR business knowledge	4.0582	3.494	0.5642	0.753	0.057
	HR business acumen	3.9716	2.9567	1.0149	0.682	0.023
	HR technology	3.8723	3.0825	0.7898	0.546	0.023

Next, a gap analysis was performed to determine whether significant differences existed between the importance and the current application of the HRM dimensions. The results, provided in Table 3, showed no significant differences between the current applications versus the importance of HRM competencies.

Next, the findings of the MANOVA of the differences between the current application of the HRM professional dimensions (i.e. professional behaviour and leadership; service orientation and delivery; business intelligence) and demographics groups are reported.

Multivariate analysis of variance analyses

Professional behaviour and leadership

The findings in Table 4 show that the respondents differed significantly regarding the current application of HR competencies, according to the variables home language, ethnicity, and job level. Further post hoc analyses showed no significant differences related to the variables home language and ethnicity. The remainder of the findings of the post hoc analyses are reported below.

Wilks's lambda for the variable home language was 0.936 [$F_{(1, 481)} = 8.090$; $p \leq 0.05$]. Analysis of each dependent variable, using a Bonferroni adjusted alpha level of 0.025, showed that the groups differed regarding leadership and personal credibility [$F_{(3, 481)} = 6.565$; $p \leq 0.05$; partial $\eta^2 = 0.026$], solution creation [$F_{(3, 481)} = 16.859$; $p \leq 0.05$; partial $\eta^2 = 0.023$],

interpersonal communication [$F_{(3, 481)} = 3.972$; $p \leq 0.05$; partial $\eta^2 = 0.062$], and innovation [$F_{(3, 481)} = 8.203$; $p \leq 0.05$; partial $\eta^2 = 0.029$]. The English-language group were of the view that HR practitioners display the leadership competencies solution creation, interpersonal communication, and innovation less effectively, compared to respondents from the indigenous languages group. The effects were small.

Wilks's lambda for the variable ethnicity was 0.933 [$F_{(1, 481)} = 2.067$; $p \leq 0.05$]. Analysis of each dependent variable, using a Bonferroni adjusted alpha level of 0.025, showed that the groups differed in terms of leadership and personal credibility [$F_{(3, 481)} = 3.699$; $p \leq 0.05$; partial $\eta^2 = 0.030$], solution creation [$F_{(3, 481)} = 3.783$; $p \leq 0.05$; partial $\eta^2 = 0.031$], and innovation [$F_{(3, 481)} = 3.296$; $p \leq 0.05$; partial $\eta^2 = 0.027$]. The black African ethnic group rated HR practitioners' display of the leadership competencies solution creation and innovation as more effective than the white ethnic group did. The effects were small.

Service orientation and execution

The findings, provided in Table 5, show that the respondents differed significantly regarding the current application of HR competencies, according to the variables home language, age, qualifications, and job level. Further post hoc analyses showed no significant differences according to age and job level. The remainder of the findings of the post hoc analyses is reported below.

Wilks's Lambda for home language was 0.953 [$F_{(1, 481)} = 5.879$; $p \leq 0.05$]. Analysis of each dependent variable, using

TABLE 4: Multivariate analysis of variance analyses – Professional behaviour and leadership and demographic groups.

Demographic characteristics	Value	F	Hypothesis df	Error df	Significance	Partial eta squared
Gender	0.985	1.801	4.000	473.000	0.127	0.015
Home language	0.936	8.090	4.000	475.000	0.000	0.064
Ethnicity	0.933	2.067	16.000	1430.401	0.008	0.017
Age	0.966	1.167	12.000	1061.238	0.302	0.011
Qualification	0.956	1.730	12.000	1219.983	0.055	0.015
Job level	0.943	1.686	16.000	1393.741	0.043	0.015
Years' work experience	0.935	1.138	28.000	1685.215	0.282	0.017
Years in current job	0.972	1.706	8.000	948.000	0.093	0.014
Years in current organisation	0.977	1.374	8.000	944.000	0.204	0.012

Bold indicates significant differences.

TABLE 5: Multivariate analysis of variance analyses – Service orientation and execution and demographic groups.

Demographic characteristics	Value	F	Hypothesis df	Error df	P	Partial eta squared
Gender	0.988	1.454	4.000	473.000	0.215	0.012
Home language	0.953	5.879	4.000	475.000	0.000	0.047
Ethnicity	0.953	1.406	16.000	1430.401	0.130	0.012
Age	0.936	2.255	12.000	1061.238	0.008	0.022
Qualification	0.981	0.745	12.000	1219.983	0.707	0.006
Job level	0.952	1.423	16.000	1393.741	0.122	0.012
Years' work experience	0.920	1.404	28.000	1685.215	0.078	0.021
Years in current job	0.965	2.132	8.000	948.000	0.031	0.018
Years in current organisation	0.976	1.450	8.000	944.000	0.172	0.012

Bold indicates significant differences.

a Bonferroni adjusted alpha level of 0.025, showed that the groups differed regarding talent management [$F_{(3, 481)} = 8.416$; $p \leq 0.05$; partial $\eta^2 = 0.017$], HR risk [$F_{(3, 481)} = 21.816$; $p \leq 0.05$; partial $\eta^2 = 0.044$], HR metrics [$F_{(3, 481)} = 13.836$; $p \leq 0.05$; partial $\eta^2 = 0.028$], and HR service delivery [$F_{(3, 481)} = 6.194$; $p \leq 0.05$; partial $\eta^2 = 0.013$]. The English-language group indicated that HR practitioners display the competencies talent management, HR risk, HR metrics, and HR service delivery less effectively, compared to the indigenous languages group. The effects were small.

Business intelligence

The findings, provided in Table 6, show that the respondents differed significantly regarding the current application of business intelligence, based on the variables home language and age. Further post hoc analyses showed no significant differences according to the variable age. The remainder of the findings of the post hoc analyses is reported below.

Wilks's Lambda for home language was 0.957 [$F_{(3, 481)} = 5.322$; $p \leq 0.05$]. Analysis of each dependent variable, using a Bonferroni adjusted alpha level of 0.025, showed that the groups differed regarding strategic impact [$F_{(3, 481)} = 7.749$; $p \leq 0.05$; partial $\eta^2 = 0.024$], HR business knowledge [$F_{(3, 481)} = 17.002$; $p \leq 0.05$; partial $\eta^2 = 0.041$], business acumen [$F_{(3, 481)} = 8.978$; $p \leq 0.05$; partial $\eta^2 = 0.021$], and HR technology [$F_{(3, 481)} = 8.934$; $p \leq 0.05$; partial $\eta^2 = 0.018$]. The English-language group indicated that HR practitioners display the competencies strategic impact, HR business knowledge, business acumen, and HR technology less effectively, compared to the indigenous languages group. The effects were small.

Discussion

The main objective of this research is to explore the extent to which HR practitioners display HR competencies in public- and private-sector organisations. Secondly, this research aimed to determine whether significant differences exist between the respondents' perceptions of HR competencies, based on their demographic characteristics.

The findings of this research show that HR practitioners are allowed to display the defined HR competencies only to a

low or moderate extent in organisations. More specifically, HR practitioners are limited in applying innovation, talent management, HR metrics, and HR business knowledge. These results concur with those of previous studies which found that HR professionals are still not allowed to play a strategic role in South African organisations and, as a result, HR competencies and practices are poorly applied (see Barkhuizen, 2015; Schultz, 2010; van Wyk, 2006; Walters, 2006).

These findings are concerning, given that the respondents ranked all the measured HR competencies as important. Although the results revealed no significant differences between the current application of HR competencies versus their importance, public-sector organisations should improve their current HR practices to enhance both individual and organisational outcomes.

The findings show that the respondents differed significantly in their perceptions of the current application of HR competencies, based on the variable home language. The predominant finding in this research is that significant differences existed between respondents from the English-language group (representative of the white ethnic group) and respondents from the indigenous languages group (representative of the black African ethnic group). The English-language group were of the view that all HR competencies (i.e. leadership and personal credibility, solution creation, interpersonal communication, innovation, talent management, HR risk, HR metrics, HR service delivery, strategic impact, HR business knowledge, business acumen, and HR technology) are significantly less effectively applied, compared to the view of the indigenous languages group.

These findings are a reflection of the current realities in the South African context. As mentioned previously, the public sector has been subjected to numerous changes since the establishment of the new South African democratic dispensation in 1994, which resulted in various practices to address the past imbalances in the workforce. Affirmative action resulted in numerous white employees being retrenched to ensure employment equity in the government sector. As a result, the remaining minority of members of the white ethnic group may view the application of HR practices

TABLE 6: Multivariate analysis of variance analyses – Business intelligence and demographic groups.

Demographic characteristics	Value	F	Hypothesis df	Error df	p	Partial eta squared
Gender	0.995	0.648	4.000	472.000	0.629	0.005
Home language	0.957	5.322	4.000	474.000	0.000	0.043
Ethnicity	0.950	1.521	16.000	1427.346	0.084	0.013
Age	0.940	2.070	12.000	1058.592	0.016	0.020
Qualification	0.975	0.965	12.000	1217.337	0.480	0.008
Job level	0.955	1.320	16.000	1390.686	0.176	0.011
Years' work experience	0.926	1.303	28.000	1681.609	0.134	0.019
Years in current job	0.983	1.035	8.000	946.000	0.407	0.009
Years in current organisation	0.987	0.748	8.000	942.000	0.649	0.006

Bold indicates significant differences.

as less effective, compared to other ethnic groups. These results, however, need to be interpreted with caution. More research is needed to clarify the significant differences of viewpoint between white and black ethnic groups regarding the application of HR practices. These results confirm that significant differences may exist between respondents in their perceptions of the application of HR competencies and practices in the South African workplace (see Du Plessis & Barkhuizen, 2012).

Practical implications

This research makes important theoretical, methodological, and practical contributions. From a theoretical perspective, it research adds to the body of emerging research on the current status of HRM in South African organisations. Many researchers have debated the application of HR practices in South African workplaces without empirically investigating them. The present research provides sound empirical knowledge on the competency requirements and subsequent effectiveness of HR practitioners in South African workplaces. This research makes an important methodological contribution by demonstrating the utility of a new measure of HR competencies in the South African workplace. This research also adds important practical value by highlighting the problematic areas of HRM in public- and private-sector organisations and by making suggestions for their improvement in order to ensure HR competence in service delivery.

Limitations and recommendations

This research has some limitations. First, the convenience sampling technique used limits the research in terms of generalising its findings to the total population. Second, this research used a cross-sectional design, which limited the diagnosis of cause-and-effect relationships between variables. Future research could benefit from longitudinal studies to predict the cause and effect of findings, especially among different ethnic groups in South Africa. Future research could also benefit from cross-national studies to benchmark HR practices with those of other African countries. Such research would benefit Africa as a developing continent, as sound HR practices play a key role in the competitiveness and sustainability of organisations and countries. Future research could also expand on the current study by including individual-level and organisational-level variables to predict the key outcomes of HR competencies in South African workplaces.

Conclusion

In conclusion, this research highlights the importance of the HR function in the South African workplace context. Organisations can reap the long-term benefits from a strategic partnership with HR in the form of competitiveness and sustainability. The findings of this research reiterate the need for business leaders to take stock of their current HR practices and the extent to which HR practitioners are allowed to play a strategic role in their organisations.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships which may have inappropriately influenced them in writing this article.

Authors' contributions

N.S. (North-West University) is an associate professor and a PhD student. This article, which he compiled, is based on his second PhD. N.B. (North-West University) was the supervisor for this study and L.v.d.S. (Nyenrode Business) the co-supervisor. Both supervisors provided editorial inputs for the article.

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Sense of coherence and burnout in the energy and chemicals industry: The moderating role of age

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Dates:

Received: 14 Apr. 2015

Accepted: 18 Sept. 2015

Published: 30 Nov. 2015

How to cite this article:

Van der Westhuizen, S., Horn, C., & Viljoen, A. (2015). Sense of coherence and burnout in the energy and chemicals industry: The moderating role of age. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #705, 9 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.705>

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Orientation: Organisations are accommodating four different social generations in the working environment. This poses a challenge for Human Resources departments to manage these diverse age cohorts in the workforce, as they are likely to have different needs, values and variables affecting their wellness.

Research purpose: The objective of the present study was to assess whether various age groups differ with regard to their sense of coherence and burnout, and whether age significantly moderates the relationship between sense of coherence and burnout.

Motivation for the study: Although the literature review suggests that age groups may differ with regard to their sense of coherence and burnout, the findings seem to be somewhat inconclusive in this regard. There also seems to be a paucity of research examining the interaction effect between sense of coherence, burnout and age.

Research approach, design and method: A cross-sectional quantitative survey approach was used. A nonprobability convenience sample of adults ($N = 246$) – employed in South Africa by an international integrated energy and chemicals company – participated in the study. Correlation, analysis of variance (ANOVA) and hierarchical multiple regression analyses were performed to achieve the objectives of the study.

Main findings: The results showed that employees between the ages of 51 and 60 years of age experienced higher levels of comprehensibility and lower levels of reduced professional efficacy than their younger counterparts. The relationship between sense of coherence and exhaustion was also stronger for employees between 51 and 60 years old than for younger age categories.

Practical/managerial implications: The results of the study can be useful when planning human resource interventions to enhance the well-being of employees from different age groups.

Contribution: The results of the study add new insights to the well-being literature by showing that employees' age is important to consider when addressing their sense of coherence and burnout levels.

Introduction

Life expectancy and the average age of the population are increasing (Johnson, Holdsworth, Hoel & Zapf, 2013). This demographic change has an impact on the age structures of the working population (Boehm & Kunze, 2015). It seems that organisations need to accommodate four different social generations (the silent generation, baby boomers, generation X and generation Y or millennials) in the working environment (Culpin, Millar & Peters, 2015). It leaves management with unprecedented challenges associated with the diverse age cohorts in the workforce. Starting out in a career may involve stressful experiences that include integrating into the social context at work and still being uncertain about one's knowledge and skills (Virtanen & Koivisto, 2001). Younger employees who start out eagerly in the organisation may become disheartened (e.g. exerting themselves to perform or experiencing transitional shock when starting out) and as a result spiral into burnout (Rothmann & Malan, 2006). Midcareer workers may report work-family conflict as one of their main stressors (Culpin *et al.*, 2015). Mature workers still want to make a contribution to the organisation and society (Dychtwald, Erickson & Morison, 2013), but may have different health needs. It seems that each of these generations or different age categories has their own set of needs, expectations, values, skills and attitudes that needs to be taken into account when ensuring a productive workforce (Culpin *et al.*, 2015).

Mauno, Ruokalainen and Kinnunen (2013) investigated the moderating effect of age between various job stressors and well-being indicators. They found that younger employees seemed to

be better equipped to handle job insecurity in comparison to their older counterparts. Older employees were better able to cope with work–family imbalance and high workload. Haley, Mostert and Els (2013) also found that different job demands and resources seem to predict burnout and work engagement of various age groups. Thus, it seems that in addressing the well-being of employees, a greater understanding of age differences might be needed, whilst different stress management interventions might be needed for older and younger employees. In light of this, the aim of this study is therefore to look at the relationship between age, sense of coherence and burnout of employees, and to determine if age moderates the relationship between sense of coherence and burnout.

Literature review

Age

Studying the effects of age in the workplace is not a new phenomenon. Ageism and the influence of generations at work are well-researched domains (Hansen & Leuty, 2012; Iweins, Desmette, Yzerbyt & Stinglhamber, 2013). But it seems that organisations will soon have to adapt to an even more age diverse workforce. This seems eminent as a result of a number of trends worldwide like low birth rates, increased longevity and the war for talent which forces organisations to hire older workers (Boehm & Khunze, 2015). One of the consequences of these trends is that the number of older workers is likely to increase in the future (Zaniboni, Truxillo & Fraccaroli, 2013). Organisations are faced with the task to create environments that attract and satisfy workers of all ages (Hansen & Leuty, 2012). Since some disagreement exist regarding what birth years define the various generations, this study will look at differences between age groups and not generational differences per se. This approach is also in line with other researchers that have looked at the influence of age on sense of coherence and burnout (Feldt *et al.*, 2011; Haley *et al.*, 2013; Maslach, Schaufeli & Leiter, 2001).

Sense of coherence and age

Antonovsky (1987) initially coined the term salutogenesis and developed the key construct of sense of coherence (SOC) as conceptual anchor to the salutogenic theory. Since then, a steady stream of research has been generated to understand wellbeing and adjustment, also specifically in the workplace (Barnard, 2013). These studies have shown how SOC affects employees' coping with work–life demands and enhance their performance and goal-achieving ability (Barnard, 2013).

Antonovsky (1987) defined SOC as a dispositional life orientation that includes three subcomponents, namely comprehensibility, that enables an individual to see the environment as structured and ordered; manageability, through which individuals perceive that they have adequate resources to manage life demands; and meaningfulness, by which individuals believe that life demands are worth spending energy and effort on.

Antonovsky (1987) originally believed that SOC develops through early adulthood and then stabilises after the age of 30 (this is called the 'age hypothesis'). This development then also takes place during the first years of employment in which young adults establish a sense of identity and form a world view.

Subsequent international studies on SOC stability over 30 years reveal mixed results, with some concurring the 'age hypothesis' (Feldt *et al.*, 2011; Hochwalder & Forsell, 2011), whilst others could not confirm the stability of SOC after the age of 30 years (Eriksson & Lindstrom, 2005; Wainwright *et al.*, 2008). A South African study by Van Schalkwyk and Rothmann (2008) could also not confirm that SOC stabilises after 30 years of age. Instead, they found that SOC steadily increased with 10-year intervals and then levelled off beyond 50 years of age. These findings seem to be in line with the idea that SOC can be associated with 'the progressive and time-related mastering of work and life complexities' (Van Schalkwyk & Rothmann, 2008, p. 37).

Looking purely at the differences between age groups, Feldt *et al.* (2011) found that older adults displayed significantly higher SOC levels in comparison with their younger counterparts. The mean level of SOC did however increase more for the younger adults (Barnard, 2013). More recently, Mattisson, Horstmann and Bogren (2014) also found that SOC increases with age. A South African study by Haley *et al.* (2013) also found that older employees experienced higher levels of SOC. These results guided the researchers to the first research hypothesis to be tested:

- **Hypothesis 1:** SOC levels are higher for older age categories (51–60-year-old age group).

Burnout and age

The incidence of burnout had increased over the past 30 years with dire consequences for organisations' performance and employees' health (Abdool Karrim Ismail, Coetzee, Du Toit, Rudolph & Joubert, 2013). Schaufeli and Enzmann (1998) defined burnout as:

a persistent, negative work-related state of mind in normal individuals that is primarily characterised by exhaustion, which is accompanied by distress, a sense of reduced effectiveness, decreased motivation and the development of dysfunctional attitudes and behaviours at work. (p. 36)

More recently, burnout was described as a multidimensional construct that is evident in employees' 'experiences of physical and psychological exhaustion, depersonalisation, frustration and reduced sense of personal accomplishment' (Abdool Karrim Ismail *et al.*, 2013, p. 452). Burnout is believed to develop as a result of prolonged exposure to stressors or an imbalance between demands and resources to employees' disposal at work (Storm & Rothmann, 2003).

South African research conducted by Smit (2007) indicated age to be the most consistent demographic variable to be linked with burnout. The theory of burnout seems to suggest

that burnout is consistently higher in younger employees than in older employees (Maslach *et al.*, 2001). Due to the relationship between age and work experience, burnout seems to be more of a threat early in an individual's career (Asiwe, Jorgensen & Hill, 2014). Young employees who are new to the profession may be idealistic and eager to perform and progress professionally (Louw, George & Esterhuysen, 2011) and, as a result, may exert themselves or experience some transitional shock when just entering the workplace. As a result of less experience in a working environment, younger employees may also lack the coping skills necessary to deal with everyday stressors (Haley *et al.*, 2013).

Nevertheless, research findings with regard to the relationship between age and burnout have not been consistent. Brewer and Shapard (2004) found a negative relationship between age and burnout in a meta-analytical study. These findings were confirmed by Johnson *et al.* (2013) who found a negative relationship between age on the one hand and emotional exhaustion and cynicism on the other. No relationship was evident between age and reduced professional efficacy. Ben-Porat and Itzhaky (2014) also found older employees to have lower levels of burnout.

South African studies are also in alignment with these international findings and indicated burnout to be more prominent for younger employees (Haley *et al.*, 2013; Jackson & Rothmann, 2005; Rothmann & Barkhuizen, 2008). However, Bezuidenhout and Cilliers (2011) did not find any relationship between age and burnout levels of female academics, whilst Asiwe *et al.* (2014) found that younger employees had lower fatigue levels than older employees. Mousavy and Nimehchisalem (2014) also found that older teachers were more burned out than their younger counterparts.

The results with regard to the relationship between burnout and age therefore seem inconclusive, but since the theory of burnout suggests that burnout might be more of a threat for younger employees, the researchers formulated the second hypothesis to be tested as follows:

- **Hypothesis 2:** Burnout levels are lower for older age categories (51–60-year-old age group).

Relationship between sense of coherence and burnout: Age as a moderator

Research indicates overwhelming support for the mitigating impact of sense of coherence on burnout (Johnston *et al.*, 2013), even across various age categories (Haley *et al.*, 2013). However, there seems to be a paucity of research on the relationship between sense of coherence and burnout, taking the influencing effect of age into account.

In investigating age as a moderator, Johnson *et al.* (2013) found limited support for the moderating effect of age between customer stressors and burnout. They did however find that using emotion-focussed and active coping strategies were more beneficial to prevent burnout for older employees when compared with younger employees using the same

coping strategies. They regarded lack of life experience as a possible explanation for these results.

Zaniboni *et al.* (2013) found that age moderated the relationship between task variety and burnout in that older employees experienced more burnout when task variety increased in comparison to younger employees.

You, Huang, Wang and Bao (2015) found age to be a significant moderator for correlations between exhaustion, depersonalisation and reduced personal accomplishment on the one hand and various personality factors on the other hand.

No research could be found that investigated age as a moderator in the relationship between sense of coherence and burnout.

The purpose of this study is therefore to determine the relationship between age, sense of coherence and burnout and to investigate the moderating effect of age in the relationship between sense of coherence and burnout. The third hypothesis to be tested in this study is as follows:

- **Hypothesis 3:** Age is a moderator in the relationship between SOC and burnout.

Research design

Research approach

A cross-sectional survey design is used to achieve the objectives of this descriptive study. A cross-sectional design is an economical design that allows one to examine different criterion groups at a single point in time (Spector, 2003).

Research method

Participants

An availability sample ($N = 246$) from an international integrated energy and chemicals company in South Africa

TABLE 1: Characteristics of participants in the sample.

Item	Category	Percentage	Frequency
Gender	Male	79.3	195
	Female	20.7	51
Age	18–30	35	86
	31–40	26	64
	41–50	18.3	45
	51–60	18.7	46
Marital status	Single	19.5	48
	Married	67.9	167
	Divorced	5.7	14
	Life partner	2.4	6
	Widowed	0.8	2
Qualification	Grade 11 and lower	0.8	2
	Grade 11 and lower with trade certificate	1.6	4
	Grade 12	7.3	18
	Grade 12 with trade certificate	18.7	46
	Diploma	14.6	36
	Graduate	37	91
	Honours degree	15	37

participated in the study. The characteristics of the sample are summarised in Table 1. The sample group included mostly male participants (79.3%), which is consistent with the predominantly male population in the participating organisations. Participants were between 18 and 60 years of age with most participants falling in the 18–30 year old age category (35%). They were mostly married (67.9%) and 37% of the participants were graduates.

Measuring instruments

A biographical questionnaire was administered to obtain personal information about the participants such as their age, gender, marital status, qualification and job level.

Orientation to Life Questionnaire (OLQ) (Antonovsky, 1987): The OLQ (Antonovsky, 1987) measures sense of coherence as a total score, which is comprised of three dimensions, namely comprehensibility, manageability and meaningfulness. The questionnaire is a self-completion questionnaire, made up of 29 items that are set up using a seven-point Likert scale ranging from 1 to 7. In a South African study to determine the reliability, Strümpfer and Wissing (1998) reported Cronbach alphas ranging from 0.74 to 0.94. The Orientation to Life Questionnaire also shows high test-retest reliability (Cilliers & Kossuth, 2004). Strümpfer and Wissing (1998) established the validity of the questionnaire in a range of South African studies.

Maslach Burnout Indicator – General Survey (MBI-GS) (Maslach, Jackson & Leiter, 1996): The MBI-GS measure the incidence of burnout and can be applied to populations beyond the human services occupations (Maslach & Leiter, 1997). The MBI-GS contains 16 statements divided into three subscales that assess the various aspects of experienced burnout, namely exhaustion, cynicism and lack of professional efficacy. The MBI is a self-administered questionnaire. The respondent is asked to answer statements regarding their job-related feelings on a scale of 0 to 6, where zero represents never having this feeling about one's job and six represents having this feeling every day. The professional efficacy scale is reverse scored so that a high score on the scale shows reduced efficacy. Maslach *et al.* (1996) reported high internal consistencies (reliability) with Cronbach alpha coefficients ranging between 0.87–0.89 for exhaustion; 0.73–0.74 for cynicism, and 0.76–0.84 for professional efficacy. Data on test-retest reliabilities after a period of one year were 0.65 for exhaustion, 0.60 for cynicism and 0.67 for professional

efficacy. In recent studies, Van Jaarsveld (2004) and Viljoen (2013) found high internal consistency (reliability) in all three subscales, with Cronbach alphas ranging between 0.85 and 0.91. Maslach *et al.* (1996) found evidence to support the construct validity of the MBI-GS.

Analysis

The SPSS (version 22.0) program was used for the statistical analysis. Descriptive statistics, alpha coefficients, correlation and ANOVA were calculated to determine the relationship between age, sense of coherence and burnout. Hierarchical multiple regression with the enter method was then used to determine the moderating effects of age on the relationship between sense of coherence and burnout. The data met the standard assumptions with regard to multicollinearity, homoscedasticity and normality of residuals. Predictor, moderator, and outcome variables were z-standardised (Cohen, Cohen, West & Aiken, 2003). Considering that age is a categorical variable, dummy coding was used to enter it in the hierarchical regression. An interaction term was computed by multiplying the moderator by the independent variable in order to test the moderating effects.

The variables were entered in the following order: Step 1 contained sense of coherence as predictor; Step 2 contained sense of coherence and age as predictors; Step 3 contained sense of coherence, age and the interacting terms of the age categories multiplied by SOC as predictors.

Analyses were conducted for the three separate burnout dimensions. Cohen's (1992) f^2 effect sizes were calculated to determine the practical significance of the adjusted R^2 values. Statistical significance was set at 0.05.

Research procedure

Ethical clearance was obtained from Unisa to collect the data. The necessary permission was then obtained from the organisation's senior management as well as Human Resources department to administer the instruments in the organisation. An electronic link to a web-based survey document was distributed via email, as well as an information sheet and an informed consent document. The consent form provided a brief introduction to the intent and background of the survey. Employees were reassured of the anonymity of the questionnaires, as well as the voluntary nature of the research. Participants were informed that the research results of the entire group may be shared with the

TABLE 2: Descriptive statistics, alpha coefficients and Pearson correlations of the measuring instruments.

Scale	Mean	Standard deviation	α	1	2	3	4	5	6
Comprehensibility	47.48	10.51	0.81	-	-	-	-	-	-
Manageability	50.33	8.79	0.78	0.64++	-	-	-	-	-
Meaningfulness	43.33	7.45	0.79	0.44+	0.68++	-	-	-	-
Sense of coherence	141.19	22.77	0.90	0.85++	0.90++	0.79++	-	-	-
Exhaustion	10.60	6.89	0.91	-0.32+	-0.45+	-0.51++	-0.48+	-	-
Cynicism	9.56	6.65	0.79	-0.40+	-0.56++	-0.62++	-0.60++	0.56++	-
Professional efficacy	29.62	5.11	0.76	0.36+	0.33+	0.45+	0.44+	-0.25	-0.40+

All correlations were significant at the 0.01 level.

+, Correlation is practically significant $r \geq 0.30$ (medium effect); ++, Correlation is practically significant $r \geq 0.50$ (large effect).

management of the organisation, but that no individuals would be identified. The survey duration (approximately 30 minutes) and the survey procedure were discussed and the necessary permission documents were included.

Results

Firstly, descriptive statistics, alpha coefficients and correlation were conducted to determine the relationship between sense of coherence and burnout. The results are displayed in Table 2.

From Table 2 it can be seen that all the subscales displayed an acceptable level of reliability ranging from 0.76 (professional efficacy) to 0.91 (exhaustion). According to Pallant (2010), a value of 0.70 is acceptable, with higher values indicating greater reliability. Furthermore, it can be seen that sense of coherence correlated significantly and in the expected

direction with the dimensions of burnout (negatively with exhaustion and cynicism and positively with professional efficacy).

Next, an ANOVA was conducted to determine the degree to which sense of coherence and burnout differed with regard to the various age categories. The results are presented in Table 3.

From Table 3 it can be seen that only comprehensibility displayed a statistically significant difference with regard to the age categories. Post-hoc analysis revealed that comprehensibility was significantly lower for the 18- to 30-year age group than for the 51–60-year age group. Although reduced professional efficacy and cynicism displayed nonsignificant differences with regard to the age categories ($p = 0.05$), post-hoc analysis revealed that the mean difference

TABLE 3: Analysis of variance between age categories, sense of coherence and burnout.

Category	Source of variation	Sum of squares	df	Mean square	F	Significance
Comprehensibility	Between groups	1247.759	3	415.920	4.037	0.01
	Within groups	24314.891	236	103.029	-	-
	Total	25562.650	239	-	-	-
Manageability	Between groups	226.156	3	75.385	0.986	0.40
	Within groups	18051.694	236	76.490	-	-
	Total	18277.850	239	-	-	-
Meaningfulness	Between groups	272.790	3	90.930	1.636	0.18
	Within groups	13173.741	237	55.585	-	-
	Total	13446.531	240	-	-	-
Sense of coherence total	Between groups	3271.724	3	1090.575	2.179	0.09
	Within groups	118112.609	236	500.477	-	-
	Total	121384.333	239	-	-	-
Exhaustion	Between groups	235.023	3	78.341	1.671	0.17
	Within groups	11018.475	235	46.887	-	-
	Total	11253.498	238	-	-	-
Reduced professional efficacy	Between groups	210.195	3	70.065	2.724	0.05
	Within groups	6070.738	236	25.723	-	-
	Total	6280.933	239	-	-	-
Cynicism	Between groups	346.949	3	115.650	2.712	0.05
	Within groups	10108.362	237	42.651	-	-
	Total	10455.311	240	-	-	-

TABLE 4: Moderated multiple regression with exhaustion as the dependent variable.

Model	Variable	Unstandardised coefficients		Standardised coefficients			R	R ²	Adjusted R ²
		B	SE	Beta	T	p			
1	Constant	31.12	2.49	-	12.51	0.00	0.48	0.23	0.22
	Sense of coherence	-0.15	0.02	-0.48	-8.33	0.00*	-	-	-
2	Constant	30.29	2.50	-	12.11	0.00	0.50	0.25	0.23
	Sense of coherence	-0.15	0.02	-0.48	-8.29	0.00*	-	-	-
	Age 31–40	2.30	1.00	0.15	2.31	0.02*	-	-	-
	Age 41–50	0.74	1.18	0.04	0.66	0.51	-	-	-
	Age 51–60	0.71	1.11	0.04	0.64	0.52	-	-	-
3	Constant	29.85	2.46	-	12.16	0.00	0.54	0.29	0.27
	Sense of coherence	-0.14	0.02	-0.47	-8.23	0.00*	-	-	-
	Age 31–40	2.191	0.98	0.14	2.23	0.03*	-	-	-
	Age 41–50	0.25	1.10	0.01	0.23	0.82	-	-	-
	Age 51–60	1.09	1.10	0.06	1.00	0.32	-	-	-
	Sense of coherence x age 31–40	-0.65	0.47	-0.09	-1.39	0.17	-	-	-
	Sense of coherence x age 41–50	0.78	0.46	0.11	1.71	0.09	-	-	-
	Sense of coherence x age 51–60	-0.89	0.43	-0.14	-2.08	0.04*	-	-	-

*, All correlations were significant at the 0.01 level.

between the 51–60-year age group and the 18–30-year age group was significant at the 0.05 level with the 51–60-year-old age group experiencing less reduced professional efficacy. The 31–40-year-old age group displayed statistically significantly higher levels of cynicism when compared with the 41–50- and 51–60-year-old age groups, respectively.

Next, the main and interaction effects of sense of coherence and age on exhaustion, cynicism and professional efficacy were tested. In order to eliminate the possibility of multicollinearity, only the sense of coherence total score was included in the regression model. The results are displayed in Table 4.

Table 4 shows the regression analysis with exhaustion as dependent variable. From the ANOVA analyses, it follows that the regression model significantly predicted exhaustion at every step (Step 1: $F[1.236] = 64.44, p = 0.00$; Step 2: $F[4.233] = 18.89, p = 0.00$; Step 3: $F[7.230] = 13.21, p = 0.00$). The proportion variance explained (R^2) ranged from 0.48 for Step 1 to 0.54 for Step 3 and the adjusted R^2 were 0.22, 0.23 and 0.27 for Steps 1 to 3 respectively.

It is clear from Table 4 that there were statistically significant main effects for sense of coherence and the age category of 31–40 years old. Only one significant interaction term was found between sense of coherence and the age category 51–60 years old. The interaction term accounted for a statistically significant proportion of variance in exhaustion (change in $\Delta R^2 = 0.04; p = 0.00$) and Cohen's (1992) f^2 was found to be 0.04. The moderating effect can therefore be seen as a small practical effect. This significant interaction effect was plotted as indicated in Figure 1.

Figure 1 shows that for a high age group (compared to a lower age group), a low sense of coherence was associated with a higher level of exhaustion. Table 5 presents the possible moderation effect of age on cynicism.

From the ANOVA analyses, it follows that the regression model significantly predicted cynicism at every step (Step 1:

$F[1.238] = 133.52, p = 0.00$; Step 2: $F[4.235] = 35.80, p = 0.00$; Step 3: $F[7.232] = 20.30, p = 0.00$). The proportion variance explained (R^2) were 0.60 for Step 1, 0.62 for Step 2 and 0.62 for Step 3. The adjusted R^2 were 0.36, 0.37 and 0.36 for steps 1 to 3, respectively.

It is clear from Table 5 that there were statistically significant main effects for sense of coherence and the age category of 31 to 40 years old. However, no significant interaction terms were found between sense of coherence and age in predicting cynicism.

Table 6 presents the hierarchical regression analysis with reduced professional efficacy as dependent variable.

From the ANOVA analyses, it follows that the regression model significantly predicted professional efficacy at every step (Step 1: $F[1.238] = 133.52, p = 0.00$; Step 2: $F[4.235] = 35.80, p = 0.00$; Step 3: $F[7.232] = 20.30, p = 0.00$). The proportion variance explained (R^2) were 0.19 for Step 1, 0.20 for Step 2

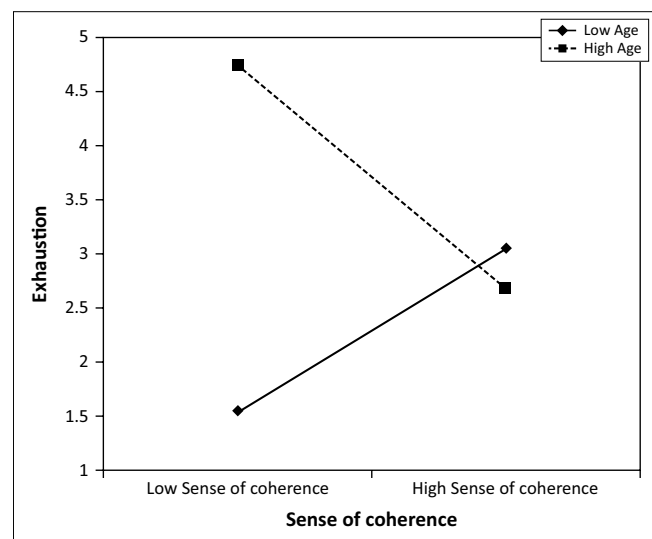


FIGURE 1: Interaction between sense of coherence and age with exhaustion as dependent variable.

TABLE 5: Moderated multiple regression with cynicism as the dependent variable.

Model	Variable	Unstandardised coefficients		Standardised coefficients			R	R ²	Adjusted R ²
		B	SE	Beta	t	p			
1	Constant	34.34	2.17	-	15.85	0.00	0.60	0.36	0.36
	Sense of coherence	-0.18	0.02	-0.60	-11.56	0.00*			
2	Constant	33.40	2.18	-	15.34	0.00	0.62	0.38	0.37
	Sense of coherence	-0.17	0.02	-0.60	-11.41	0.00*			
	Age 31–40	2.23	0.87	0.15	2.58	0.01*			
	Age 41–50	0.40	0.98	0.02	0.41	0.68			
	Age 51–60	0.38	0.97	0.02	0.39	0.70			
3	Constant	33.40	2.20	-	15.21	0.00	0.62	0.38	0.36
	Sense of coherence	-0.17	0.02	-0.60	-11.28	0.00*			
	Age 31–40	2.17	0.88	0.15	2.48	0.01*			
	Age 41–50	0.37	0.99	0.02	0.37	0.71			
	Age 51–60	0.33	0.99	0.02	0.33	0.74			
	Sense of coherence x age 31–40	-0.27	0.42	-0.04	-0.65	0.52			
	Sense of coherence x age 41–50	-0.07	0.41	-0.01	-0.19	0.85			
	Sense of coherence x age 51–60	-0.05	0.39	-0.01	-0.14	0.89			

*, All correlations were significant at the 0.01 level.

TABLE 6: Moderated multiple regression with professional efficacy as the dependent variable.

Model	Variable	Unstandardised coefficients		Standardised coefficients			R	R ²	Adjusted R ²
		B	SE	Beta	t	p			
1	Constant	15.67	1.90	-	8.27	0.00	0.43	0.19	0.19
	Sense of coherence	0.10	0.01	0.43	7.41	0.00*			
2	Constant	15.75	1.92	-	8.21	0.00	0.45	0.20	0.19
	Sense of coherence	0.09	0.01	0.42	7.01	0.00*			
	Age 31–40	0.21	0.77	0.02	0.27	0.79			
	Age 41–50	0.89	0.86	0.07	1.03	0.30			
	Age 51–60	1.50	0.85	0.12	1.75	0.08			
3	Constant	15.48	1.91	-	8.13	0.00	0.48	0.23	0.20
	Sense of coherence	0.10	0.01	0.42	7.19	0.00			
	Age 31–40	0.33	0.76	0.03	0.44	0.66			
	Age 41–50	0.93	0.86	0.07	1.08	0.28			
	Age 51–60	1.81	0.86	0.14	2.12	0.04*			
	Sense of coherence x age31–40	0.59	0.36	0.11	1.65	0.10			
	Sense of coherence x age 41–50	-0.04	0.36	-0.01	-0.11	0.92			
	Sense of coherence x age 51–60	-0.44	0.33	-0.09	-1.32	0.19			

*, All correlations were significant at the 0.01 level.

and 0.23 for Step 3. The adjusted R^2 were 0.19, 0.19 and 0.20 for steps 1–3, respectively.

It is clear from Table 4 that there were statistically significant main effects for sense of coherence and the age category of 51–60 years old at Step 3. However, no significant interaction terms were found between sense of coherence and age in predicting professional efficacy.

Discussion

The purpose of this study was to determine the relationship between age, sense of coherence and burnout and to determine if age moderated the relationship between sense of coherence and burnout.

Hypothesis 1 states that older age categories would have higher SOC levels. The current study's findings partially support Hypothesis 1. Results revealed that employees in the 51–60-year-old age category experienced higher levels of comprehensibility than employees in the 18–30 year old age category. This seems to be in line with the findings of Feldt *et al.* (2011), Haley *et al.* (2013), and Mattisson *et al.* (2014) who also found that SOC increases with age. Comprehensibility refers to employees' perception that their environment is structured and ordered and that this makes it possible to anticipate and find structure in future events (Antonovsky, 1987). Constant experiences form the basis for the comprehensibility dimension and this result in individuals being able to make sense of stressful life experiences on a cognitive level. In making sense of stressors, individuals learn through their own life experiences to cope more effectively with stressors. The results of this study seems to confirm that the mastering of work and life experiences over a period of time contribute to the development of SOC, or comprehensibility specifically in the context of this study. The results also alludes to the fact that younger employees new to the working environment may not be able to make cognitive sense of stressors in their working environment in the same way as older employees who already have a number of years of work experience (Haley *et al.*, 2013).

Hypothesis 2 states that older age categories would have lower levels of burnout. Looking only at the results of the ANOVA, it seems that the findings of this study did not support Hypothesis 2 and appeared to be in alignment with the findings of Bezuidenhout and Cilliers (2011) who also did not find any relationship between age and burnout. However, upon inspection of the rest of the results, it seems that although no statistically significant differences could be found between the various age categories and exhaustion, cynicism and reduced professional efficacy, some age categories could be used as predictors of these dimensions in addition to SOC. The 31–40-year-old age category significantly predicted exhaustion and cynicism, whilst the 51–60-year-old age category significantly predicted reduced professional efficacy. This seems to be more in line with the findings of previous studies (Ben-Porat & Itzhaky, 2014; Brewer & Shapard, 2004; Haley *et al.*, 2013; Jackson & Rothmann, 2005; Johnson *et al.*, 2013; Rothmann & Barkhuizen, 2008) that found significant differences between age groups and their burnout levels. It does however need to be stated that the age categories just seem to add a percentage of explained variance each time in addition to the percentage of variance that is already explained by SOC. Nevertheless, it seem that, apart from an employees' SOC level, being in the 31–40-year-old age category or the 51–60 year old age category, could also be indicative of the degree of burnout that an employee might be experiencing.

Hypothesis 3 states that age moderates the relationship between SOC and burnout. The findings of the current study partially support Hypothesis 3 as only one indirect effect was found. The 51- to 60-year-old age category moderated the relationship between SOC and exhaustion. The interaction showed an enhancing effect. It seems that having a high level of SOC were more beneficial to prevent exhaustion for employees older than 51 years of age when compared to younger employees with the same level of SOC. These results seem to be in alignment with that of Johnson *et al.* (2013) who also found limited support for the moderating effect of

age between coping strategies and burnout. However, the moderating effect was small in practical terms.

Implications and recommendations for the organisation

A practical contribution of this study is an increased understanding of the implications of an age-diverse group of employees when developing and implementing well-being interventions in an organisation. The results of this study seems to confirm that employees that are 51 years and older experience higher levels of well-being and lower levels of burnout than their younger colleagues (Haley *et al.*, 2013). If they do experience levels of exhaustion, it seems that increasing their SOC might be especially helpful in combating this dimension of burnout. These older employees may therefore act as a source of support and as mentors to younger employees. In order to address the comprehensibility of younger employees, organisations may revisit their induction programs. The latter could be specifically focussed on presenting the organisation in a clear, coherent and consistent manner, pointing out resources that are available to their employees and showing the worth of contributing to the organisation's overall performance in a meaningful way. Employees in the 31–40 year old age category could be specifically targeted for interventions that are aimed at reducing burnout, like revisiting the specific job demands and job resources that this age category has to deal with that could predict their levels of burnout (Haley *et al.*, 2013), as well as addressing potential work-family conflict (Culpin *et al.*, 2015) that they might experience.

Limitations of the study and recommendations for further research

The first limitation of the study is that it made use of a cross-sectional design when the data were collected. A longitudinal study could indicate causal relationships regarding age, burnout and SOC. The nonprobability sample size is also quite small and this limits the generalisability of the results. Larger, random samples in other industries could be included in future studies to see if the difference in SOC and burnout could be generalised to other populations as well. Participants were not asked to indicate their job tenure in the study. Because of the relationship between age and work experience, this could have been an important variable to consider in this study and future research could investigate this aspect in more detail.

Conclusion

In conclusion, it seems that employees that are 51 years and older experienced higher levels of comprehensibility, lower levels of reduced professional efficacy and lower levels of exhaustion, especially when coupled with a high SOC. On the other hand, it seems that employees between 31 and 40 years old might be more susceptible to exhaustion and cynicism.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships which may have inappropriately influenced them in writing this article.

Authors' contributions

S.v.d.W. (University of South Africa) conceptualised the research problem of the current study, conducted the statistical analysis and literature review and wrote up the research article. C.H. (SASOL) and A.V. (SASOL) collected the data.

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Achieving excellence in private intensive care units: The effect of transformational leadership and organisational culture on organisational change outcomes

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Dates:
Received: 27 Apr. 2015
Accepted: 04 Sept. 2015
Published: 02 Dec. 2015

How to cite this article:

Jordan, P.J., Werner, A., & Venter, D. (2015). Achieving excellence in private intensive care units: The effect of transformational leadership and organisational culture on organisational change outcomes. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #707, 10 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.707>

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Orientation: Organisational change outcomes in private intensive care units are linked to higher patient satisfaction, improved quality of patient care, family support, cost-effective care practices and an increased level of excellence. Transformational leadership and fostering a positive organisational culture can contribute to these change outcomes.

Research purpose: The study determined whether transformational leadership and a supportive organisational culture were evident in six private intensive care units in the Eastern Cape, South Africa. A conceptual framework to investigate the relationship between transformational leadership, organisational culture, and organisational change outcomes, was proposed and tested.

Motivation for the study: The prevalence of transformational leadership, a positive organisational culture and their effect on organisational change outcomes in private healthcare industries require further research in order to generate appropriate recommendations.

Research design, approach and method: A positivistic, quantitative design was used. A survey was conducted using a questionnaire which, in previous studies, produced scores with Cronbach's alpha coefficients greater than 0.80, to collect data from a sample of 130 professional nurses in private intensive care units.

Main findings: Transformational leadership and a positive organisational culture were evident in the private intensive care units sampled. A strong, positive correlation exists between transformational leadership, organisational culture, and organisational change outcomes. This correlation provides sufficient evidence to accept the postulated research hypotheses. Innovation and intellectual stimulation were identified as the factors in need of improvement.

Practical or managerial implications: The findings of the study may be used by managers in intensive care units to promote organisational change outcomes, linked to transformational leadership and a positive organisational culture.

Contribution: The study provides evidence of the way in which transformational leadership and a positive organisational culture affect organisational change outcomes in the context of private healthcare in South Africa, thereby addressing a research gap in this area.

Introduction

Organisational culture is often seen as either the key issue or the most significant element in organisational change efforts. A positive organisational culture in healthcare industries has a significant impact on the quality of care, patient safety, teamwork, innovation and professional development of healthcare professionals (Alharbi, Olsson, Ekman & Carlström, 2014; Korbangyang & Ussahawanitchakit, 2009; Kwahk & Lee, 2008). Organisational culture should, however, not be viewed in isolation. In fact, organisational culture and leadership are seen as intertwined. The relationship between the two concepts represents an on-going interplay in which the leader shapes the culture and is in turn shaped by the culture. Effective leaders make cultures, and their fundamental role is to affect others and to make changes that increase organisational efficiency and performance (Birinci & Yıldırım, 2013). In healthcare, transformational leadership is identified as the leadership style that can lead to change, guide good clinical decision-making, encourage innovation, enhance patient-centred care and ultimately lead to organisational effectiveness and change.

The South African healthcare industry comprises private and public healthcare institutions. Although the ultimate focus of both types of institution is to be a service provider for patients admitted to and treated at the institutions, the operations of the two sectors differ. Owing to the

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drive for cost-effective care, increased customer satisfaction and the need for financial performance, the private healthcare industry has different objectives, and therefore requires a different leadership style and organisational culture than the public healthcare sector. The first phase of the study focussed on the private healthcare sector, and therefore this article will only report on the findings as derived from the data collected in the private healthcare sector. Data findings from the public sector will follow in a future article.

Healthcare comprises different levels of care, for instance, acute care, rehabilitative care, emergency care or outpatient clinics. Due to the extent of these different units, it was decided to focus only on the intensive care units. The research focused on the prevalence of the relationship between organisational culture, transformational leadership, and organisational change outcomes, in private intensive care units in the Eastern Cape Province.

Literature review

Healthcare in South Africa

The healthcare system globally, as well as in South Africa, is constantly changing, complex and turbulent. Such a climate is characterised by a cost- and time-constrained work environment, a shortage of healthcare workers, increased patient acuity, a quest for evidence and best practices, and the challenge of achieving desired patient outcomes (Casida & Pinto-Zipp, 2008).

Leaders in healthcare must have innovative strategies in order to motivate staff members to go beyond their self-interest for the good of the patients and to improve the organisation and staff performance. These innovative strategies might include the use of clinical practice guidelines, the use of information technology or new policies guiding patient care decisions. Despite these difficulties, these strategies must result in high quality, cost-effective patient care, accompanied by high levels of patient satisfaction. Improvement of patient services is regarded as one of the goals of leadership in a healthcare organisation. Leaders should focus on a leadership style that promotes innovation, where best-demonstrated practices can be adopted to help healthcare practitioners to work smarter, faster and better (Thakur, Hsu & Fontenot, 2012). Utilising a transformational leadership style and having an effective organisational culture are strategies that can assist healthcare managers in achieving these goals, as well as addressing the challenges of the current healthcare climate (Tourangeau & McGilton, 2004).

Private healthcare organisations are continuously adopting new programmes, and changing their existing practices in order to improve effectiveness and efficiency in patient care and service delivery (Mitchell, 2013). If change is not adopted, especially in private healthcare institutions, business performance, competitive advantage, patient care, customer satisfaction, and the attraction and retention of customers, may be negatively influenced and can be detrimental to the

profitability and sustainability of the business (Jandaghi, Martin & Farjarmi, 2009; Korbangyang & Ussahawanitchakit, 2009).

The rising cost of healthcare treatment, shortages of healthcare professionals, advances in healthcare sciences, technology demands, economic pressure, the need for cost-effective and quality care, and the need to harness and maintain the competitive advantage, are factors that encourage leaders to reflect on and change practices where needed in healthcare organisations (Craig & Smyth, 2012; Gilley, McMillian & Gilley, 2009; Mitchell, 2013). In order to achieve excellence in such an environment, leaders continuously need to review their leadership style and the organisational culture (Mitchell, 2013; Parmelli *et al.*, 2011; Wong & Cummings, 2007).

Healthcare systems are being challenged to provide quality and cost-effective care to the population of the world. South Africa is no different, but it has the added problem of a dual healthcare system. The public sector comprises government healthcare institutions which provide free healthcare to a mostly impoverished population, whilst the private sector consists of profit-seeking organisations and individuals who serve a population that can either afford medical insurance or are self-paying (Klopper, Coetzee, Pretorius & Bester, 2012). The private healthcare sectors are large industries, providing employment for many people and facilitating significant economic activity, which affects many more patients and role players directly participating in the use and provision of private health services (Econex, 2013). For these reasons it is important that the organisational culture and leadership are optimised, in order to promote productivity, performance, and change.

There appears to be a paucity of literature available on transformational leadership, organisational culture and change, related to the South African private healthcare industry. It is therefore important to investigate the prevalence of transformational leadership and culture, and whether there is a relationship between these variables and organisational change outcomes in private intensive care units. This study focused on intensive care units, which are specialised areas in a healthcare organisation, where critically ill patients are admitted and cared for (Craig & Smyth, 2012; Robbins & Davidhizar, 2007; Urden, Stacy & Lough, 2014).

Transformational leadership

Transformational leadership is defined as a leadership approach that triggers change in individuals and social systems. In its ideal form, transformational leadership creates valuable and positive change in followers, with the end goal of developing followers into leaders. Transformational leaders expose a new route for improvement and progress by generating new ideas and perspectives. They change their followers, empower them to develop, and create new needs, tendencies and values, which encourage followers to grow, develop and change into a new generation of leaders. In order to optimise transformational leadership, innovation should be the core focus (Bass & Riggio, 2006; Hough, Arthur, Thompson, Strickland & Gamble, 2011; Jandaghi *et al.*, 2009).

According to Bass and Avolio (2000), transformational leadership has four dimensions:

- idealised influence of charisma
- inspirational motivation
- individualised consideration
- intellectual stimulation. Idealised influence of charisma involves the formulation and articulation of visions.

A vision is defined as the future strategic course, or the direction in which the individual or company is heading (Hough *et al.*, 2011). Inspirational motivation is the way that leaders motivate and inspire followers to commit to the vision of the organisation. Leaders with an inspirational motivation foster strong team spirit as a means for leading team members towards achieving the desired goals (Bass & Riggio, 2006). Individualised consideration refers to the leaders paying special attention to each individual's need for achievement and growth by acting as a coach or mentor. Intellectual stimulation refers to the way leaders motivate and inspire their followers to be innovative and creative (Bass & Riggio, 2006).

Transformational leadership should be regarded as an important aspect to transform and change care delivery outcomes in the healthcare industry (Robbins & Davidhizar, 2007). In a study conducted in 1300 hospitals across the United States and Europe, it was found that well-managed hospitals with clinically qualified leaders produced a higher standard of patient care, thus emphasising the importance of good leadership (Dorgan *et al.*, 2010). Workforce surveys amongst healthcare workers in the United Kingdom have shown that the higher the leadership quality of senior managers (as rated by staff), the higher the rate of organisational performance and the lower the number of patient complaints (Care Quality Commission, 2011). Having a transformational leadership style in the healthcare industry is pivotal because it will ultimately contribute to quality patient care and improved organisational outcomes, especially in private healthcare where quality and efficient care are cost drivers (Jandaghi *et al.*, 2009).

Organisational culture

Organisational culture is an important aspect to consider in any organisation. A universally adopted definition provided by Schein (1997) is that organisational culture is a pattern of shared basic assumptions that were learned by a group as it solved its problems of external adaptation and internal integration. Culture can be viewed as a lens through which an organisation can be understood and interpreted (Parmelli *et al.*, 2011). Werner *et al.* (2012) concur in stating that 'organisational culture' refers to a system of shared assumptions or meanings held by members that distinguishes one organisation from others.

Organisational culture in healthcare is important as it helps healthcare professionals to establish a learning environment that promotes professional development and enhances teamwork. The culture in healthcare must promote

teamwork and values, and supports team members and their opinions. Furthermore, excellence and quality patient care is promoted, change enabled, and smoother implementation of change processes are allowed, which are critical for the success of healthcare organisations (Acar & Acar, 2012). A study done by Carney (2011) found that excellence in patient care delivery that is allied to positive value systems and utilising strategic involvement were the most important organisational cultural influences required for optimum effectiveness in quality care delivery. Acar and Acar (2012) observe that organisational culture has increasingly been seen as an important consideration in healthcare reform. They argue that ultimately innovation and organisational change cannot happen unless there is a culture conducive to change. An innovative culture promotes learning, (either by means of in-service learning, or professional development) and encourages innovative care practices, or care practices.

Organisational change outcomes

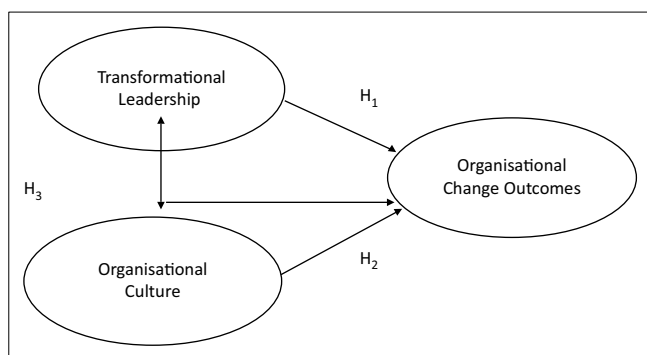
There is a significant relationship between organisational culture and organisational change outcomes, such as increased financial performance, gaining a competitive advantage, organisational performance, improved patient care delivery and satisfaction, more efficient and cost-effective care practices, and enhanced family support (Acar & Acar, 2012).

Organisational change outcomes can include enhanced innovation, engaged employees, increased motivation and confidence, encouragement of employers to think creatively and reflectively, improved problem-solving abilities, and a positive approach to learning innovative practices (Hsiao, Chang & Tu, 2012; Yildirim & Birinci, 2013). Werner *et al.* (2012) indicate quality, efficiency and effectiveness, and customer and employee satisfaction as outcomes of organisational change.

Transformational leadership and organisational culture can assist in pioneering change and establishing positive change outcomes. Caldwell, Chatman, O'Reilly, Ormiston and Lapid (2008) concur that effective leadership that focuses on transformation contributes to positive change outcomes which are linked to higher patient satisfaction and ultimately improved patient care. Effective leadership is also associated with support for change and change readiness. Hence, it can be concluded that transformational leadership and a positive organisational culture contribute to organisational change outcomes that are beneficial for organisations, including those in the healthcare industry.

Proposed conceptual framework and hypothesis formulation

Against the background of the preceding literature, a conceptual framework was developed (Figure 1). The conceptual framework illustrates the relationship between the independent variables, namely transformational leadership and organisational culture, and the dependent variable, namely organisational change outcomes. The model assumes that the two independent variables are positively



Source: P.J. Jordan

FIGURE 1: Theoretical model.

associated with organisational change outcomes. The research hypotheses derived from the model are as follows:

- **Hypothesis 1:** There is a significant positive relationship between transformational leadership and organisational change outcomes.
- **Hypothesis 2:** There is a significant positive relationship between organisational culture and organisational change outcomes.
- **Hypothesis 3:** There is a significant positive relationship between organisational culture, transformational leadership and organisational change outcomes. The hypothesised relationships are depicted in Figure 1.

Method

Research approach

A positivistic, quantitative research design was used in the study.

Sampling and study participants

The research population consisted of 180 professional nurses in the six intensive care units in the private hospitals in the Eastern Cape. A convenience sampling method was used, where the most readily accessible persons were asked to participate in the study (Burns & Grove, 2013). All professional nurses who worked in the adult intensive care units and who were willing to participate in the study, were included. See Table 1 for a layout of the population.

Of the 180 questionnaires distributed, 130 were completed and returned, showing a response rate of 72%.

Measuring instruments

Data was collected by means of a questionnaire, which included open-ended as well as fixed-response items with a 5 point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree*. The questionnaire items, specifically the terminologies related to healthcare were adapted for the purpose of the study. The questionnaire measured the following:

- **Demographic data:** Four items assessed the demographic profile (age, gender, position and years worked in the intensive care unit) of the participants, using nominal and ordinal scales.

TABLE 1: Population of professional nurses in private intensive care units in Nelson Mandela Bay and Buffalo City.

Geographical area	Region	Population	
		N	%
East London	Hospital A	20	11
	Hospital B	12	7
	Hospital C	45	25
Nelson Mandela Bay	Hospital A	48	27
	Hospital B	40	22
	Hospital C	15	8
Total		180	100

- **Organisational culture:** Fourteen items were based on data derived from studies that explored organisational culture in healthcare (Carney, 2011; Hsiao *et al.*, 2012; Scott, Mannion, Davies & Marshall, 2003). The constructs derived from the literature and used in the questionnaire included teamwork, innovation, patient care and professional development and was specifically contextualised to organisational culture in healthcare.
- **Transformational leadership:** A 12-item measurement was based on the transformational leadership model of Bass and Alvoloi (2000). Transformational leadership has four dimensions: (1) idealised influence of charisma; (2) inspirational motivation; (3) individualised consideration; and (4) intellectual stimulation.
- **Organisational change outcomes:** A 15-item measurement based on the frameworks of Ramachandran (2013), Weiner (2009) and Werner *et al.* (2012) was used. Patient, family and staff related issues, as well as organisational care practices were the constructs used in the questionnaire. These constructs were based on the change outcomes that should be evident in healthcare if transformational and organisational cultures are prevalent.

Ethical considerations

Prior to data collection, ethical clearance was granted by the institutional academic ethics committee (H14-BES-HRM-058). In order to ensure that ethical principles were adhered to, ethical clearance was requested. Permission was also granted by the healthcare ethics committees and hospital and unit managers where the study was conducted. Participant consent was obtained prior to commencing with the study.

Data Collection procedure

Questionnaires were distributed by the researcher, with the assistance of three trained fieldworkers, at the beginning of each day and during night shift. Where practically possible, the researcher remained in the unit for 10–15 min at the beginning of the data collection process. The researcher collected the questionnaires, which were placed in a sealed box, at a pre-arranged time and date, by the unit managers. The data collection process continued over a period of 5 weeks, May – July 2014, which enabled the professional nurses on all the shifts to be included in the study.

Reliability and validity of the study

The Cronbach's alpha coefficient was used to calculate the internal consistency of the measuring scales. The results are reported in Table 2. From these results it can be concluded that the scores derived from the instrument were very reliable, as a score of 0.80 or higher was obtained for all the factors, with transformational leadership obtaining the highest score of 0.97.

Validity refers to the extent to which a questionnaire measures what it is supposed to measure, by obtaining data relevant to the constructs being measured. Content validity concerns the representativeness of the questions used in the data instrument (Scott & Mazhindu, 2014). Questionnaires were submitted to four experts in the field of critical care and management in health, and they confirmed that the questionnaire had the required content validity. Face validity was obtained by asking a critical care healthcare practitioner to assess the questions for accuracy. The statistician reviewed the questionnaire in terms of its format, layout, and whether the type of questions were suitable for statistical analysis. A pilot study with five participants was conducted to further ensure the validity and reliability of the questionnaire. No changes to the measuring instrument were indicated by the pilot study participants.

Data analysis

Statistica version 12 was used to analyse the data. Descriptive statistical analyses by means of frequency distributions were used to analyse the demographic data. Pearson's product-moment correlations were calculated to quantify the relationships between the scales and subscales of the dependent and independent variables. Multiple linear regression analysis was done to investigate the relationship between the dependent and independent variables. The statistical analysis tools provided a basis for testing the hypotheses. The required level of statistical significance (α) was set at 0.05.

Results

Demographic characteristics

The sample group consisted of mostly females (94%), between 31 and 50 years of age (63%), with less than ten years' work

TABLE 2: Cronbach's alpha coefficients for the factors or subscales.

Factors	Cronbach's alpha
Transformational Leadership (TL)	0.97
L1 Idealised influence of charisma	0.91
L2 Inspirational motivation	0.94
L3 Individualised consideration	0.81
L4 Intellectual stimulation	0.93
Organisational Culture (OC)	0.86
OC1 Teamwork	0.80
OC2 Innovation	0.84
OC3 Patient care	0.84
OC4 Professional development	0.81
Organisational Change Outcomes (OCO)	0.90
OCO1 Patient and family satisfaction	0.84
OCO2 Innovative and collaborative staff practices	0.93
OCO3 Organisational effectiveness and change	0.90

OC, Organisational Culture; L, Leadership; OCO, Organisational Change Outcomes.

TABLE 3: Demographic profile of the sample group.

Category	Variable	<i>n</i>	Percentage
Gender	Female	122	94
	Male	8	6
Age	< 5 years	5	4
	25–30 years	8	6
	31–40 years	36	28
	41–50 years	45	35
	51–60 years	30	23
	61–65 years	6	5
Years working in the intensive care unit	< 1 year	22	17
	1–4 years	27	21
	5–9 years	35	27
	10–19 years	23	18
	> 20 years	23	18
Position held in the intensive care unit	Permanently employed nurses	109	84
	Agency appointed nurses	21	16

n = 130.

experience in intensive care units (65%) and permanently employed (84%). Table 3 presents the demographic profile of the sample group.

Prevalence of transformational leadership, organisational culture and organisational change outcomes

The findings of the study, as illustrated in Table 4, revealed that organisational culture had the highest mean score ($M = 3.99$; $SD = 0.63$) followed by leadership ($M = 3.86$; $SD = 0.96$) and organisational change outcomes ($M = 3.85$; $SD = 0.61$). The mean scores for these three variables are all in the positive range (3.4–4.2) of the 5-point Likert scale that was utilised in the questionnaire. The results showed that transformational leadership, organisational culture and organisational change outcomes were prevalent in the private intensive care units.

Although the subscales results were positive, it should be noted that the following scored the lowest:

- Innovation ($M = 3.83$; $SD = 0.73$).
- Intellectual stimulation ($M = 3.73$; $SD = 1.00$).
- Organisational effectiveness ($M = 3.74$; $SD = 0.70$).

Pearson correlation analysis

Pearson's product-moment correlations (Table 5) were calculated in order to identify significant relations between scales and subscales for transformational leadership, culture, and organisational change outcomes. Correlations were all significant (both statistically because all $r > 0.172$ and practically because all $r > 0.300$) and positive, ranging from 0.428 to 0.976 with 84 out of 91 correlations (92.3%) being strong correlations ($r > 0.500$). Smallest value is 0.428 with most of the relationships that can be described as strong ($r > 0.50$).

The results suggest a significant and positive relationship between transformational leadership, organisational culture, and organisational change outcomes.

TABLE 4: Measures of central tendency and dispersion – Transformational leadership, organisational culture and change outcomes.

Factors	Items	Mean	S.D.	Minimum	Quartile 1	Median	Quartile 3	Maximum
Transformational leadership	Idealised influence of charisma	3.92	0.97	1.00	3.33	4.00	4.67	5.00
	Inspirational motivation	3.91	1.01	1.00	3.50	4.00	5.00	5.00
	Individualised consideration	3.89	0.99	1.00	3.50	4.00	4.50	5.00
	Intellectual stimulation	3.73	1.00	1.00	3.50	4.00	4.25	5.00
	Transformational Leadership factors combined	3.86	0.96	1.00	3.65	4.00	4.56	5.00
Organisational culture	Teamwork	4.20	0.74	1.33	4.00	4.33	4.67	5.00
	Innovation	3.83	0.73	2.00	3.33	4.00	4.33	5.00
	Patient care	3.96	0.71	2.00	3.60	4.00	4.60	5.00
	Professional development	3.97	0.73	1.50	3.50	4.00	4.50	5.00
	Organisational Culture factors combined	3.99	0.63	2.00	3.62	4.07	4.44	5.00
Change outcomes	Patient and family satisfaction	3.97	0.63	2.00	4.00	4.00	4.00	5.00
	Innovative and collaborative staff practices	3.82	0.65	1.78	3.44	3.78	4.22	5.00
	Organisational effectiveness	3.74	0.70	1.00	3.33	3.67	4.17	5.00
	Change Outcomes factors combined	3.85	0.61	1.59	3.46	3.83	4.24	5.00

Multiple linear regression analysis

Multiple linear regression analysis was conducted to investigate the multivariate relationship between independent variables, namely transformational leadership, organisational culture and dependent variable namely organisational change outcomes in private intensive care units.

The linear regression model tested was:

$OCO = \alpha + \beta_1 OC + \beta_2 TL + \epsilon$ where: OCO is Organisational Change Outcomes; OC is Organisational Culture; and TL is Transformational Leadership. The results are summarised in Table 6.

Table 6 shows that the multiple R^2 of 0.526 indicates that 52.6% of the variation in organisational change outcomes was accounted for by variation in organisational culture and transformational leadership. The relationships were statistically significant as the t -test p values were all less than 0.05. The positive coefficients imply that positive organisational culture and transformational leadership results in positive organisational change outcomes in an organisation. The results provide proof of a significant relationship between organisational culture and transformational leadership, and organisational change outcomes in private intensive care units in the Eastern Cape.

Discussion

Transformational leadership

The findings suggest that transformational leadership is prevalent within private intensive care units in the Eastern Cape. However, it should be noted that the subscale on intellectual stimulation scored the lowest within this domain. Transformational leadership has strong positive correlations with organisational culture ($r = 0.781$; $p < 0.05$) and organisational change outcomes ($r = 0.658$; $p < 0.05$). Transformational leadership is also a statistically significant predictor of organisational change outcomes ($\beta = 0.2624$; $t = 2.67$; $p = 0.008$). The positive and significant correlation

between transformational leadership and organisational change outcomes therefore supports the acceptance of Hypothesis 1 in this study.

Transformational leaders are seen as charismatic, optimistic and open to the viewpoints of others. They help to formulate and articulate the vision of the organisation, they are willing to take risks, and demonstrate high standards of ethical and moral conduct. Transformational leaders have an inspirational motivation that fosters a strong team spirit. These leaders encourage subordinates and acknowledge individual differences in the team, so that team members can take on more responsibility, become empowered and are able to share work-related knowledge. These leaders give supportive leadership and are able to recognise individual achievements. Transformational leaders in healthcare contribute to the quality of patient care delivery, enhanced patient safety, increased patient and family satisfaction and organisational effectiveness (DuBrin, 2013; Eisenbeiss & Boerner, 2013; Garcí'a-Morales, Llore'ns-Montes & Verdú-Jover, 2008; Malloy & Penprase, 2010; Wong & Cummings, 2007). Transformational leadership within intensive care units can thus contribute to achieving excellence in healthcare.

Intellectual stimulation (lowest scored subscale) refers to the way leaders inspire innovation and creativity amongst their followers. Transformational leaders encourage followers to question their assumptions, try out new approaches or methods to solve old problems, and to be innovative in new treatment options, technology or other care modalities (Bass & Riggio, 2006). Based on the findings, it is recommended that leaders should encourage intellectual stimulation amongst the nurses in the intensive care units, as it can strengthen the current leadership present.

Organisational culture

The findings suggest that organisational culture is prevalent within the private intensive care units in the Eastern Cape. However, it should be noted that the subscale on innovation

TABLE 5: Pearson product-moment correlations – Organisational culture (OC), leadership (L) and organisational change outcomes (OCO) subscales and scales.

Items	OC1 Teamwork	OC2 Innovation	OC3 Patient care	OC4 Professional development	OC Organisational culture	L1 Idealised influence of charisma	L2 Inspirational motivation	L3 Individualised consideration	L4 Intellectual stimulation	L Leadership	OCO1 Patient and family related	OCO2 Staff related	OCO3 Organisational care practices	OCO Organisational Change Outcomes
OC1 Teamwork	-	0.590	0.700	0.615	0.836	0.642	0.630	0.632	0.601	0.647	0.428	0.595	0.554	0.576
OC2 Innovation	0.590	-	0.765	0.646	0.861	0.648	0.662	0.681	0.640	0.680	0.457	0.627	0.584	0.608
OC3 Patient care	0.700	0.765	-	0.752	0.921	0.664	0.700	0.684	0.664	0.701	0.568	0.693	0.609	0.681
OC4 Professional development	0.615	0.646	0.752	-	0.865	0.674	0.678	0.695	0.700	0.710	0.445	0.630	0.575	0.602
OC Organisational Culture	0.836	0.861	0.921	0.865	-	0.750	0.762	0.768	0.743	0.781	0.543	0.729	0.666	0.706
L1 Idealised influence of charisma	0.642	0.648	0.664	0.674	0.750	-	0.913	0.893	0.885	0.953	0.488	0.681	0.630	0.656
L2 Inspirational motivation	0.630	0.662	0.700	0.678	0.762	0.913	-	0.944	0.915	0.975	0.501	0.671	0.620	0.653
L3 Individualised consideration	0.632	0.681	0.684	0.695	0.768	0.893	0.944	-	0.939	0.976	0.465	0.639	0.565	0.608
L4 Intellectual stimulation	0.601	0.640	0.664	0.700	0.743	0.885	0.915	0.939	-	0.966	0.467	0.674	0.601	0.635
L Leadership	0.647	0.680	0.701	0.710	0.781	0.953	0.975	0.976	0.966	-	0.496	0.687	0.624	0.658
OCO1 Patient and family related	0.428	0.457	0.568	0.445	0.543	0.488	0.501	0.465	0.467	0.496	-	0.726	0.651	0.859
OCO2 Staff related	0.595	0.627	0.693	0.630	0.729	0.681	0.671	0.639	0.674	0.687	0.726	-	0.896	0.956
OCO3 Organisational care practices	0.554	0.584	0.609	0.575	0.666	0.630	0.620	0.565	0.601	0.624	0.651	0.896	-	0.932
OCO Organisational change outcomes	0.576	0.608	0.681	0.602	0.706	0.656	0.653	0.608	0.635	0.658	0.859	0.956	0.932	-

OC, Organisational Culture; L, Leadership; OCO, Organisational Change Outcomes.

TABLE 6: Multiple linear regression analysis results.

Item	Regression coefficients	Coefficients' std. errors	t(125)	p-value	Values
Intercept	1.2707	0.2425	5.24	< 0.0005	-
Organisational Culture (OC)	0.4835	0.0937	5.16	< 0.0005	-
Leadership (TL)	0.1653	0.0618	2.67	0.008	-
Multiple R	-	-	-	-	0.730
Multiple R ²	-	-	-	-	0.533
Adjusted R ²	-	-	-	-	0.527
Regression test statistic	-	-	-	-	F(2,125) = 71.35
Regression p-value	-	-	-	-	p < 0.0005
Standard error of estimate	-	-	-	-	0.418

n = 128.

Regression formula: OCO = 1.2707 + 0.4835 OC + 0.1653 TL

Regression Model = Dependent Variable: Organisational Change Outcomes (OCO); Independent Variables: Organisational Culture (OC) and Transformational Leadership (TL).

scored the lowest within this domain. A positive correlation ($r = 0.706$; $p < 0.05$) exists between organisational culture and organisational change outcomes. Organisational culture is also a statistically significant predictor of organisational change outcomes ($\beta = 0.5063$; $t = 5.16$; $p = 0.0005$). The positive and significant correlation between organisational culture and organisational change outcomes therefore supports the acceptance of Hypothesis 2 in this study.

Organisational culture is directly linked to increased organisational effectiveness, performance and positive change outcomes (Hough *et al.*, 2011). Furthermore, organisational culture has a direct and indirect influence on patient care delivery, cost-effective care, professionalism and professional development of healthcare professionals. An organisational culture that promotes teamwork, values and supports team members and their opinions and promotes excellence and quality patient care, enables change and allows for the implementation of change processes to be easier (Acar & Acar, 2012). Carney (2011) found that patient care delivery that is aligned with positive value systems and strategic involvement is the most important organisational cultural factor in achieving excellence.

Innovation (the lowest scored subscale) is defined as the ability to develop and apply not only new products, processes or designs, but also new operation and business models (Gündo du, 2012). Innovation is viewed as an integral part of business strategy in boosting operational performance. Strong leadership, shared and clear objectives, task orientation, participative team spirit, increased patient safety, reflective team practices, active internal marketing, motivation and participation of personnel, lack of stress, and sufficient resources (financial, instrumental, and personal) all seem to be positively related to innovation in healthcare organisations (Gunday, Ulusoy, Kilic & Alpkan, 2011).

Although transformational leadership and an organisational culture exist in the private intensive care units, the application of innovation might just enable the organisation to have a competitive advantage. It will attract and retain more customers, increase the business performance, and to become the leading intensive care unit in the country.

Organisational change outcomes

The results signify that organisational change outcomes were prevalent at the sampled intensive care units. The results from the regression analysis confirm the positive, significant relations between organisational culture, transformational leadership and organisational change outcomes ($R = 0.730$; $R^2 = 0.533$; $F = 71.35$; $p < 0.0005$).

Jandaghi *et al.* (2009) found that transformational leadership, in combination with a positive culture, has a definite effect on organisational change, success and performance. They suggest that transformational leadership and culture are important factors in making behavioural and structural changes in an organisation, and are essential for survival in a competitive environment. Weiner (2009) asserts that an organisational culture with transformational leadership that embraces innovation, risk-taking, and learning, supports organisational readiness for change and enhances positive change outcomes. The existence of organisational change outcomes in the sampled intensive care units is viewed as positive, and can contribute towards achieving excellence in private healthcare.

A strong positive correlation was found between organisational culture and organisational change outcomes ($r = 0.706$; $p < 0.05$). Strong positive correlations were also found between transformational leadership and organisational change outcomes ($r = 0.658$; $p < 0.05$) and between organisational culture and transformational leadership ($r = 0.781$; $p < 0.05$). Hypothesis 3 is therefore supported and accepted.

Implications for practice

Based on the results, it is recommended that transformational leaders in the intensive care units encourage intellectual stimulation, as it was the lowest scored domain. Intellectual stimulation can be developed and encouraged amongst team members in order to create an organisational culture of learning and innovation, thus contributing positively to change. The leaders can stimulate team members to think about traditional healthcare practices in a new way. They can also provide team members with new ways of solving challenging patient situations. Reflective discussion on

patient scenarios and other management issues are methods to stimulate intellectual stimulation in the intensive care units. Applying these strategies to enhance intellectual stimulation can contribute towards achieving excellence in private intensive care units.

Innovation, which was the domain with the lowest score, needs to be encouraged and supported by leaders in the intensive care units. Leaders should be encouraged to sharpen and improve an organisational culture, thus avoiding traditional and ritualistic practices, but where innovation is encouraged. Short learning programmes can be developed and presented to managers in order to enhance their skills and knowledge regarding ways to improve innovative care practices. Leaders and managers can be taught how to embrace and facilitate reflective practice sessions in order to discuss care delivery and innovation in healthcare. Managers should introduce innovations, procedures and organisational processes that are new and better than those which are currently accepted or employed in a specific setting. These may include new therapies or diagnostic procedures that have proved their worth in well-designed clinical trials. Innovations may also include the use of clinical practice guidelines based on a systematic review of the scientific literature, a new procedure to prevent medication errors, or a checklist procedure in surgery. Innovation can also include new forms of care management of patients with disease conditions that are common in the intensive care units, for example, the management of blood glucose levels in a critically ill patient. The use of information technology, especially in the intensive care unit where monitoring systems, devices and machines are used, should be introduced as part of innovative practices.

Limitations and recommendations for future research

The geographical location of the intensive care units in the East London area necessitated the use of trained field workers to assist with data collection, which might have influenced the lower response rate from that area. Intensive care units are specialised, and generally deliver a small population size. However, a good overall response rate (72%) was attained.

Similar research can be replicated in intensive care units in the public healthcare industry. Because the research was only conducted in private intensive care units, it is recommended that the study be replicated in public intensive care units and other healthcare units. Based on the results of the study, it is evident that an improvement in all of the investigated factors needs to be encouraged. An intervention study could be undertaken where innovative care practices are implemented and a post-test study is conducted, to explore its impact on organisational change outcomes.

Conclusion

The delivery of quality care in healthcare organisations, especially in intensive care units where critically ill patients are admitted, is of the utmost importance. Quality healthcare

is dependent on continuous improvement and change. Leaders play an important role in creating such a culture of innovation as they create conditions for employees to think critically about existing practices and provide them with the right conditions to improve care practices and the quality of patient care. It is evident that transformational leadership and organisational culture are associated with desired change outcomes through teamwork, professional development, patient care, and innovation.

Acknowledgements

Competing interests

This study was financially supported by the National Research Foundation (NRF) of South Africa for the grant, 87924. Any opinion, finding and conclusion or recommendation(s) expressed in this article is that of the author(s) and the NRF does not accept any liability in this regard.

Authors' contributions

P.J.J. (Nelson Mandela Metropolitan University) was the project leader. P.J.J. was responsible for the project design, collected, analysed and interpreted the data and made the conceptual contributions. A.W. (Nelson Mandela Metropolitan University) was responsible for the design of the questionnaire, and made conceptual contributions. D.V. (Nelson Mandela Metropolitan University) assisted in drafting the questionnaire, conducted the data analyses and assisted in interpreting and presenting the data.

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Peer-to-peer psychological contracts in the South African wine industry

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Dates:

Received: 09 Mar. 2015

Accepted: 10 Sept. 2015

Published: 02 Dec. 2015

How to cite this article:

Penfold, R., & Ronnie, L. (2015). Peer-to-peer psychological contracts in the South African wine industry. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #701, 10 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.701>

Note:

This article is partially based on the Master of Business Administration Degree thesis by Ruth Penfold, supervised by Dr L. Ronnie at Graduate School of Business at the University of Cape Town, December 2009.

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Orientation: Very few studies examine the impact of peer relationships on the psychological contract.

Research purpose: Using the backdrop of wine farm workers in the Western Cape, South Africa, the aim of our study was to explore the nature of peer relationships shaping the psychological contract.

Motivation for the study: The agricultural sector of South Africa, in particular the wine farms in the Western Cape, has undergone radical change in the past decades as a result of labour legislation and changing government structures. It was therefore expected that these changes would influence the psychological contracts held by wine farm workers.

Research approach, design and method: This qualitative study sampled all 24 full-time employees and 2 managers on the Constantia Hills Wine Estate in Cape Town, South Africa. Semi-structured interviews were conducted using the critical incident technique in combination with a series of open questions.

Main findings: Our findings showed support for the existence of peer-to-peer psychological contracts and noted the valuable influence of a suitable conduit individual on the relationship between employees and their employer.

Practical and/or managerial implications: Wine farm workers in South Africa have a strong need to be consulted after a lifetime of having no voice. In addition to ensuring suitable levels of two-way communication, management must understand the inter-peer contract and the nature of the relationships sustaining it.

Contribution: Whilst literature has suggested that management of the psychological contract lies firmly within the domain of the employer, our findings indicated that ensuring harmonious peer-to-peer contracts was also central to good working relationships.

Introduction

Purpose

Various studies have been conducted, using different sample groups, investigating the nature and content of psychological contracts as well as the factors impacting on their formation (Bal, Chiaburu & Diaz, 2011; Conway & Coyle-Shapiro, 2012; Eckerd, Hill, Boyer, Donohue & Ward, 2013; Nadin & Williams, 2012). Most of these studies have been done in developed countries (Hui, Lee & Rousseau, 2004) with very little focus on the nature and form of employment relationships in the developing world (Hipkin, 2000; Lee & Mohamed, 2006). Apart from these studies, there appears to be very little evidence of research on the nature of, and factors influencing, the psychological contract amongst poorly skilled and semi-skilled employees of differing levels of literacy and education. Using the backdrop of wine farm workers in the Constantia Valley, South Africa, this article explores the peer relationships shaping the psychological contract of this group of employees.

Literature review

The South African wine industry

The agricultural sector of South Africa, in particular the wine farms in the Western Cape, has undergone radical change in the past decade as a result of labour legislation, changing government structures and increasing feminisation of the labour force (Du Toit, Kruger & Ponte, 2008; McEwan & Bek, 2006). Historically, the South African wine industry has employed predominantly local, mixed race labourers who have lived and worked on the farm, often under poor conditions, for low wages and in the shadow of a paternalistic culture (Ewert & Du Toit, 2005; Ewert & Hamman, 1999; Williams, 2005). Apartheid restricted these workers'

access to decent education and forced them to be reliant on white farmers for their basic needs such as housing, water and transport. These factors shaped a social identity of dependence, poor self-esteem and powerlessness (Ewert & Du Toit, 2005).

The paternalistic culture, in conjunction with these factors, resulted in an exchange of employee submission for employer protection. This paternalistic relationship could therefore be seen as the generic psychological contract within the South African wine industry of the past. This type of employment relationship is unique to the agricultural industry and, surprisingly, was sustained by both parties (Du Toit, 1993). This is evidenced by the low levels of unionisation in the agricultural industry compared to that of other industries (Ewert & Hamman, 1999). This also suggests the possibility that not much has changed in the area of the psychological contract amongst mixed race wine farm workers and their traditionally white male bosses, despite the transformation efforts of the government.

This article contributes to existing literature on the psychological contract through capturing the nuances and influences of relationships within the workplace. It specifically focusses on the nature of peer relationships shaping the psychological contract as well as on the role and impact of those relationships on the formation of the contract. The study promotes an understanding of the unique nature of this contract amongst wine farm workers and establishes key factors that affect and hold sway over it. This brings insight into potential effective people management strategies that would improve employee engagement and enhance business performance.

The psychological contract

Originally, the psychological contract per se was not defined. Instead, it was seen as the mutual expectations existing between the employee and the employer (Argyris, 1960). It later became recognised as characterising the expectations of both the employees and employers regarding their symbiotic relationship (Hui *et al.*, 2004). Rousseau (1989, p. 123) defines the psychological contract as 'an individual's beliefs regarding the terms and conditions of a reciprocal exchange agreement between the focal person and another party', whilst McLean Parks, Kidder and Gallagher (1998, p. 698) refer to it as 'the idiosyncratic set of reciprocal expectations held by employees concerning their obligations [what they will do for the employer] and their entitlements [what they expect to receive in return]'. A central feature of this contract

is the voluntary assent of the individual to make and accept certain promises as he or she understands them (Rousseau, 2011). There is a perception of mutualism and agreement even if the understanding of that agreement is not in fact the same for both parties. This idiosyncrasy of the psychological contract is an important aspect to be aware of as it makes it difficult to manage (Guest, Isaksson & De Witte, 2010).

The psychological contract has been used to describe the diverse range of contemporary employment relationships (Millward & Brewerton, 2000; Zhao, Wayne, Glibkowski & Bravo, 2007), as well as to predict employees' attitudes and well-being (De Cuyper, Rigotti, De Witte & Mohr, 2008). The key issue emerging from Rousseau's (1989) research is that the psychological contract is dependent upon the belief that a promise, either implicit or explicit, has been made and that a consideration has been made in exchange for it. This binds the two parties to a set of reciprocal obligations. Seeing the psychological contract as merely the expectations of the employee does not capture the fuller, promise-based, reciprocal nature of the psychological contract (Coyle-Shapiro & Kessler, 2002; Nadin & Williams, 2012).

Types of contracts

There are four main types of contracts that impact organisations and fall under the umbrella of social exchange theory: psychological, normative, implied, and social contracts. They are summarised in Table 1.

The significance of the normative contract in relation to wine farm workers and their individually held psychological contracts is that 'belief in a shared set of obligations can create social pressures to adhere to those commitments, institutionalising the contract as part of the shared culture of the organisation' (Rousseau, 1995, p. 11). The psychological contract is also perceived as part of the set of normative beliefs that are associated with organisational culture and rewards (Coyle-Shapiro, Shore, Taylor & Tetrick, 2004; Guest *et al.*, 2010). This has implications for the wine industry as, when a normative contract exists, employees associate themselves in comparable ways with both the organisation and with each other (Rousseau, 1995).

On most South African wine farms, cellar and farm workers will traditionally work in teams that may hold collective beliefs around the organisation's commitments to them and their obligations to the organisation. These beliefs are most likely to stem from the subjective internalisation of the meaning of the paternalism system described earlier. This may, in turn, shape the entire team's behaviour, impacting

TABLE 1: Types of contracts.

Perspective	Individual	Group
Within the contracting parties	Psychological Contract: Beliefs that individuals hold regarding promises made, accepted, and relied on between themselves and another (employee, client, manager, organisation)	Normative Contract: The shared psychological contract that emerges when members of a social group, organisation, or work unit hold common beliefs
Outside the contracting parties	Implied Contract: Interpretations that third parties (witnesses, potential employees) make regarding contractual terms	Social Contract: Broad beliefs in obligations associated with a society's culture (e.g. reliance on handshakes)

Source: Rousseau, D.M. (1995). *Psychological contracts in organizations: Understanding written and unwritten agreements*. Thousand Oaks, CA: Sage, p. 9

the organisation positively or negatively depending on the nature of those beliefs and the degree to which the organisation is perceived to have accepted the normative contract. It would also seem that such normative contracts may impact the organisational culture, thus influencing performance and motivation.

The role of social cues and social influence

Social cues influence predominantly the psychological contract through social information processing. This is the process whereby employees adopt the attitudes and behaviours of those around them through information obtained from co-workers by direct interaction, observation or both (Conway & Briner, 2005; Ho & Levesque, 2005). Rousseau (1995) sees this information from co-workers as the most powerful source of organisational information. Social cues provide messages for contract creation, impart social pressure, and influence how the messages are decoded. Of particular interest in the context of wine farm workers is the role that social cues play in conveying social pressure to conform to the group's interpretation of terms. Reliance on a team to complete activities is a characteristic of the job of wine farm workers. Social pressure is thus likely to be an important factor influencing the shaping of their psychological contract (Guest *et al.*, 2010; Tomprou & Nikolaou, 2011).

Social influence has been found to occur even when objective information is available (Klein, 1997). Employees are primarily influenced by two sets of social referents. The first is termed 'relational others', that is, those persons with whom an employee has direct contact and social proximity. The second group is 'positionally similar others'. This group may be used as a benchmark for the employee to make judgments around fairness, contract fulfilments and job-specific entitlements (Ho & Levesque, 2005). The implication is that employees will continually re-assess their psychological contract in order to moderate it relative to the cues of their social referents, making it more similar to theirs over time. In addition, having just a general sense of the content of the existing psychological contract amongst some key employees will provide managers with enough information to make reasonable judgments about the expectations of referent others (Ho & Levesque, 2005). This in turn will aid the understanding and fulfilment of their psychological contract.

In the light of this, the aim of our study was to gain insight into the relationships with others that affect the shaping of the psychological contract of wine farm workers as well as the impact of these relationships on the formation of the contract. In investigating these relationships, the research adds to the existing body of knowledge that sheds light on the multiple contract makers in the formation of the psychological contract, the ways in which employees respond and relate to their organisations, and the role of management in becoming more perceptive in their observation of employee interactions and the social hierarchies that exist in organisations if they wish to understand and manage the psychological contract.

Method

The research context

The study was conducted at the Constantia Hills Wine Estate in the Constantia Valley, South Africa. It is well-established as a wine brand both locally and internationally. Constantia Hills has been producing wine since 1689 and the area is considered to be a key producer of quality wines (Van Zyl, 2013). Sixty eight percent of the employees at Constantia Hills have been employed on the farm in excess of 10 years in various roles, with 28% exceeding the 15 year service mark. This ensured that the impact of the historical employee-employer relationship was captured in the data collected during the study. The profile of the research participants, all full-time employees at Constantia Hills, reflected the composition typically found on wine farms in South Africa during apartheid: the senior management team and owner were white males, while the entire labour force was mixed race. Of the employees, 60% were male and 40% female, with 64% having close relatives also working on the farm. Furthermore, 92% of all employees lived in the same township, in houses built for them by Constantia Hills. This township was also home to many of the employees of the surrounding wine farms. The farm and packaging departments employed the majority of the staff. Seventy two percent of all the wine farm workers were 36 years of age and older. Thus, most of the employees on Constantia Hills have had work experience within the old paternalistic employment relationship that characterised agriculture in the apartheid era

Data gathering

All full-time employees and two managers were interviewed. This meant that the entire population of all the farm workers (including cellar staff, packaging staff, general labourers, and farm labourers) was represented and so no issues of representativeness could arise in the data. The management views were sought to gain their overall impression of the existing relationship between themselves and the employees. The employee sample consisted of 19 long-standing and five recently employed permanent staff. Almost half the employee participants had no more than a Grade 7 education with 20% being illiterate. These indicators are a product of the legacy of apartheid in South Africa and clearly reflect the predominance of the older generation amongst the workers of Constantia Hills. Only one employee had completed her formal schooling, and none had completed tertiary education. This was in stark contrast to the two members of the management team who held tertiary qualifications.

Ethical considerations

There were two major ethical concerns in the study. The first was that several of the respondents had low levels of literacy. This made them vulnerable to external influence and possible misunderstanding regarding the use of the data they provided. In addition, they traditionally came from

an employment relationship where the power differential between them and the employer may be considered very large. It was therefore important to provide full assurance of anonymity and give a comprehensive explanation of the nature and scope of the study verbally, in their home language, prior to the data collection. Full assurance of their right to withdraw from the research at any time was also given verbally and their informed consent acquired. Secondly, confidentiality issues around the data needed to be addressed with the organisation prior to the data collection. The names of the respondents and the organisation have therefore all been disguised in the study.

Measures

Demographic indicators such as age, tenure, job level, race, education and levels of literacy were gathered from the administration officer at Constantia Hills in order to contextualise the case. Semi-structured interviews of between 30 min to an hour were conducted using the critical incident technique in combination with a series of open questions in order to elicit the perceived obligations of each party, rather than rely on those imposed a priori. The critical incident technique is based on work done by Flanagan (1954, cited in Bryman & Bell, 2007) and relies on respondents sharing stories, about a specific situation, that are significant ('critical') to them. Using four key questions, research participants were asked to recall an incident(s) where an employee or the organisation went beyond or fell short of what could reasonably be expected of them in their treatment of the other party. Herriot, Manning and Kidd (1997, p. 154) reasoned that 'few employees or managers would be able to provide useful information if asked directly about the implicit obligations governing their employment relationship'.

Data organisation, coding, and analysis

Creswell (2013) describes a data analysis spiral that was applicable to qualitative studies and which helped to direct the data handling and analysis process. The first step of organising the data involved transcribing it. The consent of the participants to record the interviews was obtained beforehand and the first author also took brief notes during each interview. The advantage of recording the interview was that the researchers could listen to the interviews afterwards to clarify any language uncertainties. This ensured an accurate, unbiased record. The second and third steps in Creswell's (2013) spiral involved the researchers reading through the interviews, making preliminary notes and observations, and then beginning the coding process.

Each transcribed interview was copied into Excel and, using thematic content analysis, the critical incidents were identified along with keywords that were reflective of the themes existing in the literature. Thereafter, the researchers reread the transcripts. This repetitive studying of the data allowed a vast bank of information to be whittled down into smaller chunks of useful information and surfaced the

multiple meanings hidden within the data. Themes that we used in the coding of the critical incidents were adapted from previous studies (Herriot *et al.*, 1997; Hipkin, 2000; Lee & Mohamed, 2006). Emerging themes were discussed by the researchers and revised until consensus was reached. This procedure also improved the validity of the process and contributed to establishing confidence in the findings.

Drawing a clear line between expectations, obligations and promises was difficult. Rousseau and Schalk (2000) have previously raised the issue of the feasibility of this process. The key aspects of the psychological contract were identified by first highlighting all the critical incidents shared, applying the aforementioned themes to the relevant critical incidents, and categorising the incident as an employee or organisational obligation. Thereafter, the number of each critical occurrence was counted and represented as a proportion of the whole. After screening for conformance and criticality as recommended by Butterfield, Borgen, Amundson and Maglio (2005), a total of 302 critical incidents were considered usable. Although there is no established rule in this regard, Flanagan (1954, cited in Bryman & Bell, 2007) considered saturation to have been reached when no new categories emerged from the data. Our conclusion is that this study met those parameters and the number of critical incidents can be considered sufficient to establish coverage of the psychological contract of Constantia Hills employees. At this point, interpretation, the fourth step of Creswell's (2013) data analysis spiral could take place.

Table 2 reflects the overall number and type of critical incidents regarding the perceived employee obligations, i.e. what the employees considered their obligations to Constantia Hills were and, in turn, what the managers perceived the employees' obligations to be. Seventy three critical incidents were collected from the employee grouping and 29 from the two employer representatives.

Our interviews yielded a number of core themes regarding employee obligations including work, responsibility, relationships and hours. Organisational obligations are shown in Table 3 where the perceptions of the employee and employer about the importance of each of those obligations are presented. There were 172 critical incidents from the employees and 28 from the two managers.

TABLE 2: Employee obligations that emerged as critical incidents.

Critical themes	Employee		Employer	
	Number of incidents	%	Number of incidents	%
Work	25	34.25	12	41.38
Responsibility	16	21.92	11	37.93
Relationships	14	19.18	1	3.45
Hours	9	12.33	2	6.90
Flexibility	5	6.85	0	0.00
Honesty/Integrity	3	4.11	1	3.45
Loyalty	1	1.37	1	3.45
Self-presentation	0	0.00	1	3.45
<i>n</i>	73	100	29	100

TABLE 3: Organisational obligations that emerged as critical incidents.

Critical themes	Employee		Employer	
	Number of incidents	%	Number of incidents	%
Environment	37	21.51	2	7.14
Relationships	34	19.77	8	28.57
Pay	25	14.53	3	10.71
Development	18	10.47	7	25.00
Fairness	16	9.30	1	3.57
Recognition	13	7.56	4	14.29
Consultation	13	7.56	3	10.71
Benefits	6	3.49	0	0.00
Workload	6	3.49	0	0.00
Hours	3	1.74	0	0.00
Security	1	0.58	0	0.00
<i>n</i>	172	100	28	100

TABLE 4: Explanation of main critical themes.

Critical themes	Description
Work	To do a good job in terms of quality, quantity and to the best of your ability
Responsibility	Taking initiative, owning mistakes and being accountable
Relationships	The norms regarding personal interactions, support at work, protection against managerial discipline and work ethic within the team
Hours	Leave, length of working day, length of working week, and breaks
Environment	Provision of a safe, secure, and congenial workplace
Pay	The actual monthly amount paid as well as the increases and bonuses granted by Constantia Hills
Development	Training, learning and self-improvement through acquiring new skills and having opportunities for promotion

The main organisational obligation themes included the environment, relationships, pay and development. These were aspects both parties considered to be the duty and responsibility of Constantia Hills. Both sets of themes are not so very different from those found in similar studies amongst blue-collar workers in South Africa (Hipkin, 2000; Lee & Mohamed, 2006). However, whilst broad psychological contract themes may exist amongst this class of employee, it can be argued that the unique components of these are likely to differ. Table 4 provides an explanation of the major critical themes identified in the analysis.

The theme of relationships represented the obligation of the employee to build positive peer relationships that were supportive and generated a positive employee-employee psychological contract. It also incorporated obligations such as respect for management and recognition of their support. The importance of 'relationships' was clearly highlighted in the employees' perceptions of both their own obligations ($n = 14$) and that of the organisation ($n = 34$). Given the paucity of research regarding the role of relationships in shaping the psychological contract, the researchers deemed it pertinent to explore the data more explicitly in this regard.

Findings

We report on the findings of our study in three sections: support for the existence of peer-to-peer psychological contracts; the influence of peer-to-peer relationships on the psychological contract; and finally, the influence of a facilitated relationship between the employee and the employer.

Support for the existence of peer-to-peer psychological contracts

Various types of employee-employee support surfaced in this study that indicated that support and co-operation were important elements in the work lives of all the farm workers at Constantia Hills. Amongst employees, a pervading sense existed that their colleagues were responsible for meeting a certain accepted level of agreed behaviours and obligations, including a minimum expectation surrounding work quality and load. The following quote observing the problem of employees coming to work hung-over on a Monday illustrates these expectations:

'You can't trust those people to do the work properly; some [other employees] have to work harder as a result. You get paid to be here, you should pull your weight as far as I am concerned.' (Barbara, female, employee, 42)

Workers therefore perceived commitment to relationships to have been breached when co-workers did not arrive for work or did not put in a full day's effort. There also seemed to be a tacit agreement amongst workers that they would protect each other from getting into trouble and self-regulate as a team. This sense was validated through the story of the contract worker who 'went to the toilet and slept'. Denzel described his feelings around the incident as follows:

'It is a struggle between us because we feel that everyone must do their duty and that man is not doing his duty. He doesn't earn as much as you but we must all finish the work; it does not matter how much you are paid, you ought to pull your weight.' (Denzel, male, employee, 51)

The incident was never reported even though the permanent employees felt that the contract worker had violated their sense of work ethic. Other inferences to the existence of a self-regulatory system amongst the workers are evidenced in these quotes:

'As we work in the vineyards we regulate each other saying "Look you are being lazy"; we must help each other.' (Mark, male, employee, 43)

'We all work hard at work, support each other, and help each other. We must support each other, work as a group.' (Quinton, male, employee, 36)

'We won't take daily problems to management; we try to sort them out ourselves.' (Shereen, female, employee, 30)

Thus it emerges that the psychological contract in the employment setting is more than managing just the expectations between employee and employer. The evidence points towards an employee-employee psychological contract that, when violated, can impact the productivity, happiness and engagement levels of workers. Conversely, understanding this inter-peer contract, and the nature of the relationships sustaining it, could allow the organisation to realise important changes to the psychological contract. This includes understanding how key individuals within the group create group expectations that are in line with the organisation's expectations of their employees.

The influence of peer-to-peer relationships on the psychological contract

It is the researchers' belief that the organisational environment provides the context in which the other content elements of the contract are experienced. As such, the context of 'family', implying high commitment, high integration and relational interdependency, can realistically be considered an important shaper of the psychological contract at Constantia Hills. Furthermore, the relationships between colleagues were long-standing with the majority of workers at Constantia Hills having been employed by the organisation for a lengthy period and 90% of employees living next door to each other. Rousseau (2001) found that the extent to which individuals have formed stable psychological contracts is related to length of employment and this influences their understanding of the employment relationship. It is her assertion that veterans have psychological contracts that are more difficult to alter. The impact of these long-standing relationships and close domestic proximity is thus likely to be entrenched in the psychological contract and be more resistant to change than in organisations where average tenure is much shorter. The following quote supports this theory:

'You can see that some of the workers stick to themselves, they cannot adjust to the system, but it goes much better with the new generation. They fit in easier than the old generation.' (John, male, employee, 28)

The high proportion of family living together and working together, as well as the social community in which employees lived, directly impacted the levels of engagement and productivity of employees based on their observation and understanding of the organisation's treatment of their social referents and family, as this comment from employee Freda highlights:

'The thing that is unhealthy is that if one member of the family is unhappy it gets discussed at home and they form their own perception; and maybe you will work here with a very brilliant worker but he is unhappy about something that happened to his sister's husband that also works here.' (Freda, female, employee, 44)

Employees are primarily influenced by two sets of social referents. The first is termed 'relational others', that is, those with whom there is direct contact and strong social proximity; the second group is 'positionally similar others' in the informal social structure (Ho & Levesque, 2005, p. 276). Pay, recognition and perceptions of fairness were found to be particularly influenced by referent others and social setting. Pay was moderated by the knowledge of positionally similar referents' wages at neighbouring farms whose employees also resided in the same residential area. For those whose referent others earned less, positive feelings towards the organisation's fulfilment of the financial aspect of the psychological contract was experienced. However, those who appeared to earn less than their referent others were less positive and more inclined to raise their expectations in the light of their observations. Thus relationships external to

the organisation can also be seen as important mediators of the expectations of employees regarding the organisation's specific obligations.

Perceptions of fairness or procedural justice had a significant influence on motivation for those working in a large team where each member's contribution was vital to achieving the team goals and performance. The following quote underscores this:

'They are not stupid, they know, they see it. It just takes one incident and then everything is not good. For instance, there is a permanent [employee] in the vineyards that is never at work on a Monday so he just doesn't get paid but he should actually be dealt with but he hasn't been. This sends out a massive message to the others. It just demotivates you, "Why am I here if the work that you do doesn't get seen?"' (Fred, male, employee, 53)

Where organisational support was perceived to be lacking, there was a suspension of communication with the organisation and a shift to increased peer communication. As Noel (male, employee, 26) notes, 'they did nothing about this. We don't complain anymore because nothing happens'. When employees stop communicating with the organisation, the psychological contract is negatively affected over time as employees are left to fill in the missing information about the intents and purposes of the organisations' future actions and obligations for themselves (Bal *et al.*, 2011; Coyle-Shapiro & Kessler, 2002). Much of this information is then supplied by social referents whose information may be inaccurate and biased, leading to the entrenchment of a 'group' psychological contract that is not understood by management but is embraced by the work team. This group contract would incorporate the employee-employee obligations of the inter-peer psychological contract expounded earlier as well as the perceptions regarding organisational and employee obligations. Once formed, the psychological contract resists change making it critical that the organisation take responsibility for creating an environment where concerns are heard and acted upon, thus ensuring consistent, accurate, two-way communication and healthy relationships all round.

The large team nature of the work environment at Constantia Hills influenced the degree to which certain aspects of the psychological contract were embraced by individuals within the team, as well as the degree to which the employer could effectively fulfil his or her obligation of recognition. The ability to foster responsibility was particularly hindered by these large group interactions as members were shielded by others, or conversely gained no recognition for individual efforts as a blanket approach of 'what I do for one I must do for the other' often had to be adopted to ensure perceptions of fairness were maintained. Equally so, the employer acknowledged that high individual responsibility within a large group was probably an unrealistic expectation as Jack, stated:

'You can't make one guy responsible in a group of twenty. It is impossible because they will never take responsibility like that.' (Jack, male, manager, 35)

Furthermore, the degree of acceptance within the group of one member being elevated to a superior position was strongly mediated by the length of the relationships in the group, levels of trust amongst the group members, perceptions of relative worth and contribution and the procedural justice of such an appointment:

'You see they [*the organisation*] come and look and see if we finished doing our work as a team, but they don't see what that one [*has done*] and what I have done.' (Sara, female, employee, 49)

Likewise Tammy felt unrecognised through the 'employee of the year' competition, as this account revealed:

'Last year we all worked together and then the boss came to say he is going to give a certificate to the one who works hard, and then there was some unhappiness because we felt that we all work hard, so why should just one person get a prize?' (Tammy, female, employee, 32)

These accounts suggest that monetary reward in terms of good pay rises was a general expectation that Constantia Hills seemed to exceed. However, more subtle issues – such as a person's sense of the value they contributed, a comparative sense of how hard they worked – influenced the degree to which employees seemed to feel that Constantia Hills was fair with regards to the manner in which it gave recognition. Here, how much, to whom and for what reason recognition was given was important. Tammy's feelings emphasised that the organisation had to be sensitive about using 'employee of the year' type competitions to motivate and raise performance standards. It was perceived as demotivating for those employees who had put in a lot of effort but did not win and so did not have their contribution recognised. This was especially felt in departments where performance was contingent on teamwork. This feeling pervaded despite these competitions being voted on by fellow employees. Both maintaining high levels of procedural justice as well as structuring smaller work groups appeared to be key tools in ensuring trustful relationships between colleagues as well as with the organisation:

'I would just like to have smaller teams ... it changes everything ... you can have more of a conversation.' (Lydia, female, employee, 34)

This, in turn, allows for more open communication within these two sets of relationships, leading to greater opportunity to maintain a positive contract and/or bring about desired change to that contract. Guest and Conway (2002) support this idea, having found that job related communication had a steady positive relationship with explicit contracts that in turn increase fairness and trust. Thus, the level of expectation for pay, increases and benefits is still likely to be strongly influenced by a positionally similar referent. Concomitantly, greater trust and communication amongst peers may lead to a strengthening of the inter-employee psychological contract presented earlier. This could assist in entrenching desired aspects such as mutual responsibility and high levels of workmanship as well as slowly creating a forum for the team acknowledgement of high performing members.

Social hierarchies and peer relationships

Beyond the supervisor versus subordinate dynamic, an array of inter-employee relationships in the form of social hierarchies emerged in this study, including permanent versus contract employee relationships, men versus women, young versus old employees. The following extracts highlight these hierarchies:

'There is a system down there of domination that you don't see. The permanent worker will sit and eat her lunch but the contractors are not allowed to go into the [*eating area*] and eat with the permanents.' (Rod, male, employee, 32)

'The women just take orders, they really are the bottom of the rung ... you still have, "the men are better than the women."' (Kate, female, employee, 47)

'The older ones are more dominant. There is a lot of "I have been here for 25 years; you are new, sit back please". There are little gangs; it is like a "mafia".' (Sara, female, employee, 23)

These social hierarchies influenced the nature of the relationships amongst employees on the farm and thus also the behaviour and views of referent others used by the farm workers to assess different situations. In turn, the expectations of employees regarding elements of the psychological contract were moderated. In the case of contract employees, they were perceived to be inferior and lazy, definitely occupying a lower social rung on the farm in the minds of the permanent employees. The relationship was one of superiority and entitlement. The permanent staff appeared to use the concessions granted to contract employees as a measuring stick against which to assess their own entitlements, which involved more benefits than the contractors as they (the permanent employees) perceived themselves to be reciprocating with a greater work ethic – expressed as doing the work properly, and to the best of their ability – than the contractors. It was also the researchers' sense that increasingly integrating contract workers into the norms and rituals of Constantia Hills may have been perceived by permanent employees as a breach of their psychological contract, which included the expectation of employment security. An example of this was the unwillingness of permanent farm workers to give their old rain clothes to the contract workers as described in this story told by Doreen:

'Work clothes are given every year to the permanent farm people. Jack asked them to bring their old rain clothes back so that he could give them to the contract workers. Many refused.' (Doreen, female, employee, 51)

This action highlighted permanent workers' reluctance to allow their superior relationship with the contractors to be diminished by this group assuming the same entitlements as them.

Reaction to social pressure within these hierarchies appeared to be mediated by the value the employee placed on a particular exchange. In one instance Marie, placed high value on learning and having the ability to take on a greater variety

of tasks. As such, she chose to offer her trustworthiness and work ethic as a reciprocal commitment in return for training, rather than adhere to the team norm for work that is, she exceeded the norm in terms of quantity and open communication with the organisation. This can be seen by her comment:

'[My employer] trusts me. I don't listen to other people. I go and tell him when my work is finished and then he sends me to do more work elsewhere.' (Marie, female, employee, 32)

It would appear from this that whilst social cues and peer pressure are usually factors that shape the psychological contract of the workers, when a reciprocal obligation exists between an employee and the employer around an issue of great value to that employee, they are more likely to disregard the influence of social referents. This supports Aggarwal, Datta and Bhargava's (2007) claim that employees filter information according to their personal goals and values and may explain some of the more idiosyncratic elements of the psychological contract.

The influence of a facilitated relationship between employee and employer

It was apparent that certain aspects such as environment, development and recognition present particularly powerful elements that, if fulfilled by the employer, could bring about desired changes in the attitudes of employees towards responsibility and workmanship. This suggests that an important factor in maintaining the psychological contract, or even re-negotiating it over time, is the degree to which specific, highly salient elements of the contract are satisfactorily fulfilled. The question then arises as to how the employer is to ensure that his or her perceptions of the obligations existent between the organisation and the employee are congruent with those of the employee? Having a conduit to the employees, in the form of Doreen, a long-serving and senior employee, was identified as critical to understanding how the employees understood the terms of the psychological contract and how that understanding changed or remained constant:

'It is very important that you have a strong leader who can open up to you, like Doreen for instance. They will talk to Doreen and that information will come to you; it might be a week later but it will get to you. It is important that you get that information to keep your working force up otherwise nothing will happen out there.' (Dirk, male, manager, 39)

This single individual relationship impacted both groups party to the psychological contract as the employees identified with her as one of them: 'they see me as their representative' (Doreen, female, employee, 51). In this case Doreen represented someone who had the same background as the employees and so shared an understanding of their cognitive styles and concerns, but also corresponded closely enough with management in terms of her cognitive style to act as a conduit between the two. That Doreen is very involved in all the employee committees and forums on the farm is likely to be a significant reason that so few stories of contract

violation in the past few years were experienced by the employees. The quality of information to the employee and from the employee had improved as a result of this conduit relationship; this last being important in the maintenance of the psychological contract (Guest *et al.*, 2010; Rousseau, 2001; Tomprou & Nikolaou, 2011).

Discussion

To a large extent, most of the perceptions of employees at Constantia Hills were formed by the negative impact of the paternalistic system of the past. These past behaviours shaped their mental models and so today their psychological contract tends to resist change, making developing a culture of responsibility and empowerment potentially difficult and slow. The role of relationships immediately gains greater significance than being only a content element of the psychological contract when the idea of a peer-to-peer psychological contract is entertained. Constantia Hills' workforce reflected the traditional composition found on most wine farms in South Africa. Age, organisational tenure and education all have a unique influence on the existing psychological contract and suggest that difficulties may arise in changing the contract of long-time employees as the farm continues to transform itself into a model more empowered than the historical paternalistic system. The existence of a large proportion of poorly skilled contract labourers seemed to have a moderating impact on the psychological contract of the existing employees and so should not be overlooked as an important factor influencing the formation of the psychological contract of the permanent staff at Constantia Hills.

Evidence of an employee-employee psychological contract was found in this study and suggests the importance of management understanding social hierarchies and peer relationships. Having a conduit through one significant leader amongst peers may be a highly effective way of ensuring that messages and obligations are both clearly and consistently communicated. Where this person has similar cognitive styles of thinking to management with an understanding of the cognitive styles of employees, the chance for incongruence in expectations is greatly reduced. Constant, clear communication that does not conflict with actions and reveals the intent of management is critical to the maintenance of the psychological contract. Employees at Constantia Hills have a high need to be consulted after a lifetime of having no 'voice' and thus two-way communication is important.

The contract maker is definitely a very powerful factor shaping the psychological contract of employees and has the greatest potential to bring about changes in their current psychological contract. This is due to the personalised communication and ability to build trust and invoke ownership and commitment through relationship. Thus working in smaller groups could greatly help to maintain the psychological contract. Suazo, Turnley and Mai-Dalton (2008) found that the more similar the cognitive schemata of the contract maker and the person with whom he or she

interacts, the more likely that the psychological contract obligations will be understood in a similar manner. This similarity provides a common frame of reference that promotes the mutual understanding of the terms and conditions of the psychological contract.

This study is particularly significant given recent and ongoing events within the farming communities of the Western Cape in South Africa. Tensions between farmers and their workforce resulted in the death of three workers and millions of rands of insurance claims (Davis, 2013). Although Constantia Hills was unaffected by the farm workers' industrial action and has made tremendous strides in attempting to bring about more equitable working conditions for their employees, they may not always remain immune unless they attend to the psychological contracts of their employees. However, whilst literature has suggested that management of the psychological contract lies firmly within the domain of the employer (Coyle-Shapiro *et al.*, 2004; Nadin & Williams, 2012), our findings indicate that ensuring harmonious peer-to-peer contracts is also central to good working relationships, thus creating a more productive experience for all. This is particularly pertinent within the volatile South African agricultural sector where the historical imbalances created by the apartheid past need urgent redress.

Conclusion

This study provides an encouraging insight into the role of the relationships shaping the psychological contract of wine farm workers, an area relatively under-explored to date. The findings suggest that inter-peer relationships play a meaningful role in influencing this contract. Wine farm workers in South Africa are in the process of attempting to restructure and renegotiate their employment relationships. This empirical study highlights the importance of understanding the needs and expectations of this group of employees. Given that the wine industry is a people-intensive one, the findings reiterate the need for farm management to create an environment that generates trust, builds self-worth, and enables ownership.

Future research and limitations

A limitation to this study relates to the context of the investigation. This study focuses on a single, privately owned wine farm in the Constantia Valley and thus findings cannot be generalised beyond this particular organisation to a broader population. A further limitation of the investigation may be the replicability of the study. The South African wine industry is going through a period of legislative change and transformation that may result in different findings emerging from the same organisation at some point in the future.

There is scope for further research around the psychological contract of contracting labourers on wine farms. This study focused on permanent employees only. However, many of the contract employees on Constantia Hills had been employed for 7–8 years, raising the question of whether

they have, over time, adopted the psychological contracts characteristic of permanent employees. The impact of contract employees on the expectations and entitlements that permanent employees perceive is a further topic that has yet to be explored.

In the context of South Africa, additional research is needed on the role of apartheid in the formation of the psychological contract across racial groups at various employment levels, including previously advantaged as well as disadvantaged groups. Examining generational differences in the psychological contract may well aid this. Finally, more in-depth research on the impact of different management styles and the personality of the contract maker on the psychological contract would enable organisations to develop managers able to elicit positive employee behaviours through managing psychological contract formation and continuance.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships which may have inappropriately influenced them in writing this article.

Authors' contributions

R.P. (University of Cape Town) was the main researcher and was responsible for conducting fieldwork, as well as writing up the research. L.R. (University of Cape Town) supervised the research and made conceptual contributions to the study.

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The relationship between work locus of control and psychological capital amongst middle managers in the recruitment industry of South Africa

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Dates:

Received: 11 Dec. 2013

Accepted: 14 Apr. 2015

Published: 15 Dec. 2015

How to cite this article:

Shaik, Z., & Buitendach, J.H. (2015). The relationship between work locus of control and psychological capital amongst middle managers in the recruitment industry of South Africa. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #615, 12 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.615>

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Orientation: The role of traits as a determinant of states has resulted in researchers closely examining their potential for enhancing work behaviour. This is achieved through the examination of the trait and state perspectives.

Research purpose: This research sought to determine the relationship between work locus of control (WLOC) and psychological capital (PsyCap), with the objective of increasing alertness on the trait and state approach.

Motivation for the study: The current study investigated the role of traits and states in contributing to the positive psychology arena within the recruitment industry.

Research approach, design and method: This longitudinal research design involved 425 middle managers at Time 1 (T1), at both supervisory and specialist levels, and 190 middle managers at supervisory levels at Time 2 (T2). This longitudinal study used a biographical, WLOC and PsyCap questionnaires.

Main findings: The findings indicated that WLOC has predictive value for PsyCap: a statistically significant and practical relationship was established between WLOC and PsyCap at T1 and T2. However, the multiple regression analysis results were not consistently demonstrated over time.

Practical managerial implications: Understanding the role of personality traits and psychological states can provide managers with additional means of increasing employee efficiency through improving work processes such as recruitment and selection.

Contributions/value-add: The recruitment and other industries are encouraged to utilise a strength-based approach to enhance work performance through selection processes that incorporate traits and states to further increase organisational competitiveness.

Introduction

For the most part, personalities in the workplace play a significant role. Spector (1982, p. 482) notes that 'major theories in organisational psychology assume that the same basic processes account for behaviour across all individuals and that situational characteristics cause predictable behaviour across all individuals'. Youssef and Luthans (2009) note that traits and trait-like characteristics have been consistently shown to have a significant relationship to work-related outcomes. Moreover, psychological states of psychological capital (PsyCap), such as self-efficacy, hope, optimism and resilience, have been found to be a baseline for development and create a causal relationship with traits. This has implications for utilising traits as a predictor of positive work states, which can be further developed to improve organisational effectiveness. In addition, this study demonstrated the usefulness of work locus of control (WLOC) as a trait in predicting the positive psychological state of PsyCap amongst middle managers in the recruitment industry of South Africa. Hence, understanding of the trait versus the state approach in relation to enhancing positivity in the workplace can ensure that individuals' working lives are more fulfilling. Based on these statements the current study adopted a strength-based outlook in examining work.

It is also further noted that the South African recruitment industry is a unique industry, facing its own set of challenges. The recruitment process itself is directed by people who need to understand the cross-cultural issues and applicability of legislations such as Affirmative Action policies, the *Labour Legislations Act* (No. 66 of 1995), based on South Africa's view of human dignity, and the *Employment Equity Act* (No. 55 of 1998), amongst others. These influence the industry to adopt practices that present unique challenges, and the applicability and understanding of the trait versus the state approach in enhancing work performance within the recruitment industry

would thus be relevant. The introduction article comprises a systematic discussion of a review of the literature on the proposed constructs and creates an understanding of the theoretical framework.

Literature review

In the review of literature the researcher provided reviews of themes emerging from previous research findings, as well as reviewing existing approaches towards how these constructs are conceptualised in literature. The literature review begins with the examination of the work locus of control construct.

Work locus of control

There is extensive support that personality differences or understanding individual differences has a significant impact in the work place (e.g. Chaplin, John & Goldberg, 1988; Wang, Bowling & Eschleman, 2010). Over several decades psychological research has focused on locus of control (LOC), which is a personality trait that represents the extent to which people believe that the rewards they receive in life can be controlled by their own personal actions (Lefcourt, 1984; Rotter, 1966). Van der Sluis, Van Praag and Van Witteloostuijn (2004) describe WLOC in relation to a personality construct. Researchers such as Spector, Sanchez, Siu, Salgado and Ma (2004) have defined WLOC as a perception that one can personally affect particular outcomes.

The WLOC is further divided into two sub-constructs, which oppose each other. Adas (1999) highlights the importance of the internal and external WLOC and refers to these constructs as the perceived source of control over behaviour. As summarised by Bilgin (2007):

people with a high internal locus of control (internals) believe that the promotions or penalties they get at work are due to their own actions and performance. On the other hand, people with a high external locus of control (externals) believe that those events at work are beyond their control and are the result of fate, chance, luck or decisions made by the authority. (p. 40)

Thomas, Sorensen and Eby's (2006) perspective of WLOC has important research implications: they indicate that the WLOC is related to various organisational elements and thus future research should not minimise the contributions made. Research has consistently demonstrated the importance of traits in achieving organisational objectives; for example, based on a study conducted by Thomas *et al.* (2006), it was found that internal LOC was positively associated with desirable work outcomes, such as greater job motivation. However, Thomas *et al.* (p. 1057) highlight that the increased attention given to the role of personality at work is often limited to certain traits such as the 'Big Five personality traits of extraversion, neuroticism, conscientiousness, agreeableness, and openness to experience' and those 'personality traits outside of the Big Five taxonomy often receive less research attention, such as the work locus of control' (Thomas *et al.*, 2006, p. 1057).

There is extensive support that personality differences or understanding individual differences has a significant impact in the workplace (e.g. Wang *et al.*, 2010). For example, it has been found that WLOC is related to various important work-related outcomes including psychological capital (Babalola, 2009), happiness (e.g. Carrim, Basson & Coetzee, 2006), job satisfaction (e.g. Salazar, Hubbard & Salazar, 2002), organisational citizenship behaviour (e.g. O'Brein, 2004), turnover intentions (e.g. Lu, Kao, Cooper & Spector, 2000) and job performance (e.g. Chen & Silverthorne, 2008). Thus, WLOC has been related to positive outcomes and a positive strength-based approach. Furthermore, literature dating back to Phares (1976) notes that internals are more sensitive than externals to information relevant to self-worth. The 'stronger expectancy of the effort-outcome relationship for internals should be associated with those variables in the work domain that reflect one's work motivation, such as motivation to learn and sense of empowerment' (Thomas *et al.*, 2006, p. 1072).

Bosman, Buitendach and Rothman (2005) note that:

it is evident that the locus of control construct is based on the cause and consequence relationship and therefore future expectations (for example, anticipation of redundancy) can be construed in terms of current behaviour. (p. 18)

The LOC certainly has implications within a work setting as indicated by a study in the call centre environment in South Africa: Carrim (2006) notes that internals tend to exert increased control as compared to externals in certain work settings, for example work flow, operating procedures, task accomplishment, operating procedures, working conditions, work assignments and relationships. It is thus noted that the LOC has relevance to a variety of positive relationships within the workplace. Furthermore, Maram and Miller (1998) indicate a strong relationship between WLOC and work behaviour such as leader member exchange and organisational commitment. Hence, personalities are an important aspect of organisational behaviour and continue to have strong implications for organisational growth and outcomes. Thus, there is evidence that WLOC positively influences work behaviour. This study assists in broadening the knowledge base on these important areas.

It is noted, in the 1980s researchers critiqued the unidimensional nature of the construct (e.g. Krampen, 1985; Lefcourt, 1982; Levenson, 1981). Krampen (1985) notes that a unidimensional nature of the construct is too simplistic. Later, Furnham and Steele (1993) note critiques of the WLOC and indicate that internality is not always associated with positivity, as internals are likely to experience lower levels of self-esteem when faced with failure as they more easily demonstrate accountability for their actions and may relate their failure to their actions. Thus, the WLOC construct is not without its critique and future research can offer clarity on these dilemmas outlined.

There are several practical implications for studying the impact of the WLOC in the organisational setting. For

example, Harris, Harris and Eplion (2007) indicate through the identification of personality traits that are associated with desired individual and organisational outcomes, decision-makers can increase the effectiveness of selection devices when hiring employees. Harris *et al.* (2007, p. 104) found 'an internal locus of control, need for power, and self-esteem are all associated with positive consequences'. Thus, an easy and efficient way to improve job outcomes may be to better select those candidates with desired characteristics in the recruitment process. In terms of the current study the outcomes have important implications for organisations' selection and recruitment model, in relation to the impact of the WLOC on positive psychological states. This study further demonstrated the usefulness of WLOC in explaining human behaviour, and not only focused on WLOC as a dispositional trait but also examined it as a predictor of positive psychological states. Hence, literature has indicated that the personality trait of WLOC is relatively stable and linked to positive work outcomes. Next, the discussion outlines the positive psychological state of PsyCap.

Psychological capital

PsyCap was derived from positive psychology and has been 'conceptualised, measured, and developed in terms of a state-like positive core construct, to which each of the individual resources of efficacy, hope, optimism, and resiliency synergistically contributes' (Avey, Luthans & Youssef, 2008, p. 9). PsyCap has been defined by various researchers as the key psychological elements of individuals' general positive nature, which is specifically represented as the state of mind to comply with the standards of positive organisation performance (e.g. Avey, Nimnicht & Pigeon, 2010; Luthans, Avey & Patera, 2008; Youssef & Luthans, 2007). Youssef and Luthans (2007) recognise that although this recent positive emphasis in organisational behaviour is based on traditional theory-building processes and research methodologies, there is an attempt to study new or at least relatively unique aspects to the workplace, namely positive psychological resource capacities. Various researchers have also noted that PsyCap moves beyond human and social capital and enables individuals to obtain competitive advantages through targeted input and development (Luthans, Avolio, Walumbwa & Li, 2005; Luthans, Luthans & Luthans, 2004; Luthans & Youssef, 2004). The developmental nature of PsyCap can be further demonstrated by Luthans, Avey, Avolio, Norman and Combs's (2006) study in which they aimed to present a micro-intervention to develop PsyCap.

Thus, psychological capital is defined as being:

an individual's positive psychological state of development characterised by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals, and when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success. (Luthans, Youssef & Avolio, 2007, p. 3)

Research has also indicated that the positive psychological state of PsyCap may be particularly attractive to organisations because of its durable nature (Luthans *et al.*, 2006). It is not as volatile as a true state, such as mood, yet is still capable of change, unlike fixed traits, such as personality (Conley, 1984). Allen and Potkay, (1981) importantly note that the state versus trait debate has long been discussed in the psychology literature. Conley (1984) conducted a longitudinal study to determine and compare the test-retest reliabilities between intelligence, personality and self-opinion constructs (e.g. life satisfaction and self-esteem). Conley's study found that self-opinion constructs such as PsyCap were more likely to change over time than trait-like predictors such as intelligence. Such research and analysis provide support for the notion of a continuum of stability of positive constructs. In addition, Luthans, Avolio, Avey and Norman (2007) found that PsyCap was less stable than the Big Five personality traits and more stable than positive emotions. Thus, it is noted that there is still much to learn about the properties and characteristics of PsyCap.

Furthermore, evidence has shown that each of the four sub-constructs of PsyCap (self-efficacy, hope, optimism and resilience), as well as the construct as a whole, are relatively stable over time, but also responsive to focused intervention (Avey, Luthans & Mhatre, 2008; Bandura, 1997; Masten & Reed, 2002; Seligman, 1998; Snyder & Lopez, 2002). The view and research established by Conley (1984) is supportive of the current studies view that PsyCap has a state-like nature, which is relatively stable over time and is open to change and development. Within the South African context, Herbert (2011) contends that although PsyCap has been shown to be relatively stable over time, its malleability allows it to be open to development. Several studies in the South African arena have also shown the importance of PsyCap in relation to positive organisational outcomes (e.g. Appollis, 2010; Beal, Stavros & Cole, 2013; Du Plessis & Barkhuizen, 2011).

Therefore, the current study attempted to provide further evidence of the important role that PsyCap may play as a potential contributor to an organisation's competitive advantage. Since PsyCap is 'state-like' and there is at least preliminary evidence that it can be developed (e.g. Luthans *et al.*, 2006), 'investing in and developing employees' psychological capital may be an example of the new thinking and new approaches that are needed for today's organisations and their leaders' (Luthans, Norman, Avolio & Avey, 2008, p. 235). Next, the literature elaborated on the relationship between WLOC and PsyCap.

Relationship between the constructs of work locus of control and psychological capital

Importantly, Brandt, Gomes and Boyanova (2011, p. 264) note the link between 'psychological capital and personality is somehow implicit in academic writing'. PsyCap does converge with several more established and relevant traits such as WLOC. Important contributions have been made in terms of studies of PsyCap in relation to WLOC. For

example, Avey *et al.* (2010, p. 388) indicated that 'optimism is differentiated from hope based on high external locus of control where a person may not be optimistic while still being hopeful'. Carifio and Rhodes (2002) further highlight that the reverse would also be applicable with individuals with lower levels of hope but still displaying optimism: they are likely to display higher external LOC.

Babalola's (2009, p. 184) study was amongst female entrepreneurs from Nigeria and an investigation was instituted to determine the influence of PsyCap on women entrepreneurs' innovative behaviour; the result indicated that 'women with high self-efficacy and internal locus of control scored higher on entrepreneurial innovative behaviour than women with low self-efficacy and external locus of control'. Further relationships have also been established between PsyCap and WLOC (e.g. Luthans, Norman, Avolio & Avey, 2008). In addition, Goldsmith, Veum and Darity's (1997) study found that PsyCap affects an individual's real wage directly through self-esteem and indirectly through LOC. However, further studies should explore these relationships.

Schreuder and Coetzee (2010) provide an overview of industrial as well as organisational psychology research in South Africa and highlight that a positive psychological paradigm should be directed towards the facilitation of positive PsyCap in organisations and employees to ensure positive outcomes such as resilience and health. Bergh (2009) notes that South African research has focused on encouraging factors such as an internal LOC, personal hardiness, sense of coherence, positive emotions, self-efficacy, hope and optimism. Although literature in South Africa has indicated relationships between WLOC or LOC and positive work outcomes (e.g. April, Dharani, & Peters, 2012), the researcher notes that research has not directly examined the relationship between WLOC (trait) and PsyCap (state). Over time, WLOC and PsyCap could be integrated within a larger framework of organisational strategy, structure and culture. As for establishing a causal relationship between WLOC and PsyCap, longitudinal studies can contribute. Sheldon, Kashdan and Steger (2011) also note more PsyCap longitudinal and experimental designed research is needed for the future. The current research attempted to address this gap.

Nevertheless, researchers in South Africa are actively placing focus on the investigation of intervention effectiveness that can assist in the facilitation of wellness (Viviers & Coetzee, 2007). However, the implementation of the WLOC and positive psychology principles and strategies in professional recruitment setting is still limited in South Africa. The current study attempted to further contribute to the body of knowledge in psychology in the hope that further research would be stimulated in relation to the current study. The researcher created further understanding of the WLOC and PsyCap by providing an outline of the theoretical framework utilised in the study.

Theoretical framework or paradigm

The researcher elaborates further in terms of theoretical basis for the study.

Frederickson's broaden-and-build theory

Frederickson's (1998, 2001) broaden-and-build theory has relevance to the current study due to its focus on positive emotions and its emphasis on understanding the underlying factors in relation to positive emotions, as well as its contributions to attaining desirable work-related organisational outcomes. Positive emotions' state-like quality have been demonstrated through empirical studies in which positive emotions are enhanced despite adversity (e.g. Tugade, Frederickson & Barrett, 2004). Frederickson, (2001, p. 220) further notes that 'the personal resources accrued during states of positive emotions are conceptualised as durable'. It would follow that these psychological resources generated by employees experiencing positive emotions would encourage positive work-related outcomes within the recruitment industry. This would include higher levels of state-like PsyCap as well as internal WLOC due to positive emotions' association with greater work success resulting from internality.

Rotter's social learning theory

The social learning theory offers a relevant approach to effectively applying learning processes to achieve organisational objectives. According to Weiner (1992), the social learning theory is concerned primarily with the choices that individuals make when confronted with a number of possible alternative manners of behaving. Rotter (1954) also assumes that on the basis of variety of learning experiences, general belief systems develop that influence behaviour in any specific situation (Lazarus & Folkman, 1984). It is proposed that those with an internal LOC within the recruitment industry may demonstrate behaviour that is conducive to promoting desirable work behaviour based on the expectancy of positive reinforcement, such as incentives within a context that values performance-driven behaviour.

The research objectives for this study are outlined below.

Research objectives

- To determine the relationship between WLOC and PsyCap.
- To establish if WLOC has predictive value for PsyCap.

What follows

The following sections explain the research design, which is comprised of the research approach, research method, research participants, measuring instruments, research procedure and statistical analysis. Thereafter, the results are discussed.

Research design

An integral part of the research process is the research design (McCall, 1994), which is elaborated on in the proceeding discussion.

Method

Research approach

A quantitative approach was utilised in the current study. Neuman (1997, p. 106) defines the quantitative approach as 'a language of variables, hypothesis units of analysis, and casual explanations'. Longitudinal research was utilised as an aspect of the research design as it demonstrated relevance towards measurement of differences or changes, which allows for development of stronger causal outcomes. For the purpose of this study, a conceptual model has been utilised. In the research study the prospective panel design was utilised as it allowed for data to be collected at two or more distinct periods on the same set of cases and variables. The reason for using the longitudinal research design is that the researcher then has great flexibility in the research design, which allows for the identification of sequential patterns in the data. In this regard the variation or stability of results over time and the interaction of the variables with time to determine the influence of time over the variables interactions is examined. The sampling design utilised in the study was the probability sampling design and the systematic sampling technique was utilised.

Research participants

The sample was selected from an emerging recruitment company that has been in operation for approximately 9 years and operates in four different geographic locations in South Africa. The sample population comprised 425 employees of which 190 were in middle management based at supervisory level and 235 were in middle management based at specialist levels. The reason for selecting employees in the middle management levels was to ensure contribution of literature in understanding the effects of the proposed constructs on individuals working in more supervisory orientated categories of employment.

The majority of the sample group at Time 1 (T1) was between the ages of 25 and 35 years (49.2%), belonged to the African race group (57.6%), had one to 5 years of tenure (53.2%) and was female (67.3%). In relation to Time 2 (T2), the majority of the population group was between the ages of 36 and 45 (58.9%), belonged to the African race group (60%), had 6–10 years of tenure (67.9%) and was female (66.3%).

Measuring instruments

Three questionnaires were administered.

Biographical questionnaire

This questionnaire was designed by the researcher to gather relevant information from the subjects on their age, gender, race, tenure and qualifications.

The work locus of control

The WLOC scale (Spector, 1988) comprised 16 items in a Likert scale format with response categories ranging from 1 (disagree very much) to 5 (agree very much). A sample item is 'A job is what you make of it' (Spector, 1988). The validity of the questionnaire has been demonstrated with the WLOC scale and LOC measures as well as organisational variables (e.g. Hoff-Macan, Trusty & Trimble, 1996; Spector, 1988). Spector (1988) reported reliability coefficient alphas ranging from 0.75 to 0.85 for the instrument. Within a South African setting it is noted that a study by Bosman *et al.* (2005) reported a Cronbach's alpha of 0.85.

Psychological Capital Questionnaire

The 24-item Psychological Capital Questionnaire (PCQ) was published by Luthans, Youssef and Avolio (2007, pp. 237–238) and items for each subscale include self-efficacy ('I feel confident representing my work area in meetings with management'), hope ('At the present time I am energetically pursuing my goals'), resilience ('I usually take stressful things at work in stride') and optimism ('I am optimistic about what will happen to me in the future as it pertains to work'). The questionnaire followed a Likert-type format with 24 questions ranging from 1 (strongly disagree) to 6 (strongly agree); the emphasis in the instruction to the participants is to provide responses based on 'how you think about yourself right now'. The PCQ has demonstrated acceptable psychometric properties as well as support for its construct validity (Luthans, Avolio, Avey & Norman, 2007). Herbert (2011) found the Cronbach's alpha reliabilities for self-efficacy, hope, resilience and optimism to be 0.83, 0.81, 0.69 and 0.67 respectively.

Research procedure

Approval for this study was obtained from the Chief Executive Officer of the organisation. Participating employees were required to sign consent forms. Participants were informed about the voluntary nature of participation and assured of confidentiality in the handling of data. The self-administered questionnaires were distributed (to be returned anonymously). This occurred at two separate times: the first time was April 2012 (T1) and the second time was October 2012 (T2). The questionnaires were distributed through an appointed employee who was willing to assist, as well as electronically, and they were collected within a few weeks.

Statistical analysis

The data were analysed using the Statistical Package for Social Sciences version 21. Descriptive statistics comprised frequency distributions, measures of central tendency and measures of dispersion, as well as Cronbach's alpha coefficients. Inferential statistics comprised the Pearson momentum correlation and multiple regression analysis. Descriptive statistics such as mean, standard deviations, minimum and maximum scores, kurtosis and skewness of the results were utilised to describe the distribution of scores for WLOC and PsyCap. In addition, the Cronbach's alpha

coefficients were computed for the WLOC and PsyCap; Nunnally and Bernstein's (1994) acceptable reliability threshold of 0.70 was considered. Pearson momentum correlations were conducted to determine relationships between WLOC and PsyCap. Furthermore, multiple regression analysis was conducted to assess whether WLOC predicted PsyCap.

Results

Descriptive statistics for Time 1 and Time 2

In reference to Table 2 for T1 and T2, the Cronbach's alpha coefficients for all measuring instruments are considered to be acceptable compared to the guideline of values greater than or equal to 0.70 (Nunnally & Bernstein, 1994). In reference to Table 1 for T1 the Cronbach's alpha coefficient for external and internal WLOC was 0.972 and 0.964, respectively. The Cronbach's alpha coefficient for the PsyCap scale was 0.964. The Cronbach's alpha coefficients for the sub-constructs of PsyCap, namely self-efficacy, hope, resilience and optimism, were 0.876, 0.874, 0.891 and 0.875, respectively. In reference to Table 1 for T2, The Cronbach's alpha coefficient for external and internal WLOC was 0.955 and 0.954, respectively. The Cronbach's alpha coefficient for the PsyCap scale was 0.936. The Cronbach's alpha coefficients for the sub-constructs of

PsyCap, namely self-efficacy, resilience, hope and optimism, were 0.788, 0.802, 0.796 and 0.809, respectively.

An evaluation of the skewness and kurtosis for T1 and T2 showed that the majority of the scores were lower than 1 and therefore it could be concluded that the majority of the scores were normally distributed. However, certain variables demonstrated skewness and kurtosis above 1 as reflected in Table 1 for T1 and T2. However, Kline (2005) asserts that cut-off scores below 3 are generally accepted for skewness and scores below 10 are generally accepted for kurtosis. Hence, the scores are still within an acceptable range. In addition, the Kolmogorov-Smirnov statistics on the total WLOC and PsyCap showed significant values of less than 0.05, suggesting a violation of the assumption of normality. In this instance the significance values (p) were less than 0.001. However, Pallant (2013) notes that this is quite common in larger samples.

Pearson momentum correlations for T1 and T2

In reference to Table 3, for both T1 and T2, a negative relationship was found between external WLOC and PsyCap, as indicated at T1 ($r = -0.645$) and T2 ($r = -0.598$), which is statistically significant ($p \leq 0.01$) and practically significant (large effect > 0.50). In addition, a positive relationship was found between internal WLOC and PsyCap, as indicated at T1 ($r = 0.657$) and T2 ($r = 0.590$), which is statistically significant ($p \leq 0.01$) and practically significant (large effect > 0.50).

Test of association between variables

A chi-square test was conducted to see if there was a significant difference between the first and second sample in terms of gender. A chi-square test for independence (with Yates continuity correlation) indicated no significant differences in proportion of gender at both T1 and T2 [$\chi^2(1, n = 615) = 0.02, p = 0.88, phi = 0.01$]. Therefore the proportion of female or male participants at both time points was not significantly different and no association existed between gender and time points. Using Cohen's (1988) criteria of 0.10 for small effect, 0.30 for medium effect and 0.50 for large effect, the

TABLE 1: Characteristics of Time 1 participants and Time 2 participants.

Item	Category	Frequency		Percentage	
		Time 1	Time 2	Time 1	Time 2
Age	< 25	10	1	2.4	0.5
	25–35	209	71	49.2	37.4
	36–45	197	112	46.4	58.9
	46–55	8	5	1.9	2.6
	56+	1	1	0.2	0.5
Race	African	245	114	57.6	60.0
	Indian	98	39	23.1	20.5
	White	34	19	8.0	10.0
	Mixed	48	18	11.3	9.5
Tenure	1–5 years	226	61	53.2	32.1
	6–10 years	199	129	46.8	67.9
Gender	Male	139	64	32.7	33.7
	Female	286	126	67.3	66.3

Time 1 participants $N = 425$; Time 2 participants $N = 190$.

TABLE 2: Descriptive statistics.

Time	Variables	N	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis	Cronbach's alpha
Time 1	External WLOC	425	9	46	21.21	11.696	1.203	-0.327	0.972
	Internal WLOC	425	8	41	32.17	10.122	-1.337	0.004	0.964
	Computed PsyCap	425	49	132	110.80	20.337	-2.055	2.699	0.964
	Self-efficacy	425	19	60	49.36	9.029	-1.716	2.020	0.876
	Hope	425	4	24	18.77	4.387	-1.649	2.125	0.874
	Resilience	425	10	42	32.84	6.486	-1.722	2.258	0.891
	Optimism	425	2	12	9.82	2.311	-1.327	1.125	0.875
Time 2	External WLOC	190	10	54	19.63	10.454	2.283	3.786	0.955
	Internal WLOC	190	9	48	40.44	9.33	-2.395	4.263	0.954
	Computed PsyCap	190	41	134	116.98	16.477	-3.632	12.583	0.936
	Self-efficacy	190	17	62	52.96	8.093	-3.102	10.040	0.788
	Hope	190	4	24	19.70	3.393	-2.664	8.343	0.802
	Resilience	190	13	40	34.13	4.916	-2.506	7.303	0.796
	Optimism	190	3	12	10.19	1.807	-2.2	5.829	0.809

PsyCap, Psychological Capital; WLOC, Work locus of control.

phi coefficient is considered a very small effect, indicating weaker association between the variables.

Assessing differences in age of the participants at the two time points

An independent sample *t*-test was conducted between the two groups to see if there was a significant difference in age of the participants at the two time points. Participants indicated their age using the following categories under 25 years, 25–35 years, 36–45 years, 46–55 years and 56 years or older. As illustrated in Table 5, there was a significant difference in age of the participants at T1 ($M = 2.48$, $SD = 0.591$) and T2 [$M = 2.65$, $SD = 0.568$; $t(613) = -3.294$, $p = 0.001$, two-tailed]. The magnitude of mean difference for age of the participants at the two time points (mean difference = -0.17 , 95% CI: -2.68 to -0.068), calculated using eta-squared as per the guidelines provided by Cohen (1988, p. 284), was 0.02.

Multiple regression analysis for T1 and T2

At T1, in reference to Table 4, the model uses external and internal WLOC to predict PsyCap ($t = 7.434$, $R^2 = 0.436$, $F = 162.939$, $p < 0.001$). This means that external and internal WLOC accounts for 43.6% of the variance in PsyCap. The *F*-test assesses the null hypothesis that all the coefficients

of the independent variables are equal to zero ($\beta_1 = \beta_2 = 0$) against the alternative hypothesis that at least one coefficient is not equal to zero. If the *p* value of the *F*-test is less than 0.05, then the model is considered significantly better than would be expected by chance. Table 3 indicates a *p* value of 0.000, indicating that there is indeed a linear relationship between PsyCap and internal and external WLOC for T1.

The unstandardised beta coefficient (β) associated with external WLOC ($\beta = -0.357$) is negative; this implied that there is an inverse relationship between PsyCap and external work locus of control. That is higher external WLOC ratings are associated with low PsyCap rating. On the other hand, the beta coefficient for internal WLOC ($\beta = 0.928$) is positive; this implied as PsyCap increases as internal WLOC increases. The standardised beta coefficients give a measure of the impact of each variable on the model. A large standardised beta coefficient is an indication that a unit change in this independent variable would lead to a large change in the dependent variable. The *t* and the *p* value test the null hypothesis that the individual beta coefficient is equal to zero (variable has no impact on the dependent variable) against the alternative hypothesis that the independent variable has an impact on the prediction of the dependent variable. A *p* value (significance level) less than 0.05 is an indication

TABLE 3: Pearson correlations between the scales and factors for Time 1 and Time 2.

Time	Factor	1	2	3	4	5	6	7
Time 1	1. External WLOC	1	-	-	-	-	-	-
	2. Internal WLOC	-0.951***	1	-	-	-	-	-
	3. Computed PsyCap	-0.645***	0.657***	1	-	-	-	-
	4. Self-efficacy	-0.591***	0.599***	0.949***	1	-	-	-
	5. Hope	-0.624***	0.638***	0.870***	0.756***	1	-	-
	6. Resilience	-0.576***	0.595***	0.925***	0.811***	0.739***	1	-
	7. Optimism	-0.561***	0.562***	0.843***	0.736***	0.734***	0.766***	1
Time 2	1. External WLOC	1	-	-	-	-	-	-
	2. Internal WLOC	-0.957***	1	-	-	-	-	-
	3. Computed PsyCap	-0.598***	0.590***	1	-	-	-	-
	4. Self-efficacy	-0.557***	0.554***	0.953***	1	-	-	-
	5. Hope	-0.572***	0.559***	0.843***	0.724***	1	-	-
	6. Resilience	-0.529***	0.525***	0.901***	0.784***	0.687***	1	-
	7. Optimism	-0.442***	0.416***	0.815***	0.721***	0.696***	0.696***	1

PsyCap, Psychological Capital; WLOC, Work locus of control.

*, $p \leq 0.05$; **, $p \leq 0.01$; correlation is significant at the 0.01 level (two-tailed); +, $r \geq 0.30$ – Practically significant relationship (Medium effect); ++, $r \geq 0.50$ – Practically significant relationship (Large effect).

TABLE 4: Chi-square tests for independence.

Chi-Square Tests	Value	df	Asymptotic significance (two-sided)	Exact significance (two-sided)	Exact significance (one-sided)
Pearson chi-square	0.057 ^a	1	0.812	-	-
Continuity correction ^b	0.021	1	0.884	-	-
Likelihood ratio	0.057	1	0.812	-	-
Fisher's exact test	-	-	-	0.853	0.441
Linear-by-linear association	0.057	1	0.812	-	-
Number of valid cases	615	-	-	-	-

^a, 0 cells (0.0%) have expected count less than 5. The minimum expected count is 62.72.

^b, Computed only for a 2x2 table.

TABLE 5: Independent samples test for differences in age of the participants at the two time points.

Item	Time 1 (N = 425)		Time 2 (N = 190)		df	t	p
	Mean	Standard deviation	Mean	Standard deviation			
Age	2.48	0.591	2.65	0.568	613	-3.294	0.001

*, Statistical significance at $p \leq 0.05$; **, Statistical significance at $p \leq 0.01$; ***, Statistical significance at $p \leq 0.000$.

that the variable is significant. Hence, for external LOC the standardised beta coefficient was -0.205 and internal LOC was 0.462. The p values indicate that the internal WLOC was significant in predicting PsyCap ($p = 0.000 < 0.05$) and external WLOC was not significant ($p = 0.084 > 0.05$).

In Table 4 for T2 the model uses external and internal WLOC to predict PsyCap ($t = 5.580$, $R^2 = 0.361$, $F = 52.777$, $p < 0.001$). This means that external and internal WLOC account for 36.1% variance in PsyCap. Table 4 indicates a p value of 0.000. This is an indication that there is indeed a linear relationship between PsyCap and internal and external WLOC.

The unstandardised beta coefficient associated with external work locus of control ($\beta = -0.626$) is negative; this implies that there is an inverse relationship between PsyCap and external WLOC. That is, higher external WLOC ratings are associated with low PsyCap rating. On the other hand, the beta coefficient for internal WLOC ($\beta = 0.369$) is positive; this implies PsyCap increases as internal WLOC increases. The standardised beta coefficients for external LOC was -0.397 and for internal LOC was 0.209. The p values for both the external and internal WLOC were not significant in predicting PsyCap: 0.050 (> 0.05) and 0.301 (> 0.05) respectively. Thus, since the p value is over 0.05, the external and internal WLOC were not significant in predicting PsyCap.

Discussion

Overall, the general objective of this research was to conceptualise the constructs of WLOC (internal and external WLOC) from literature and identify its relationship to PsyCap (hope, optimism, self-efficacy and resilience) in a South African sample group within the recruitment industry. This study attempted to establish a standard for the recruitment industry to utilise personality traits and psychological states to improve the selection of their candidates and improve the overall recruitment process. It is also proposed that selection of individuals with these desirable traits and states would also contribute to the recruitment industry competitiveness, effectiveness and efficiency. Youssef and Luthans (2009) also state that traits demonstrate complex interactions and relationships. They further note that there are a limited number of studies that demonstrate their joint contribution in relation to various workplace variables. The current study proposed to increase the knowledge base within positive organisational psychology and knowledge of the recruitment industry in South Africa.

Thus, the empirical results of T1 and T2 were examined through the use of descriptive statistics, Cronbach's alpha coefficients, Pearson momentum correlations and multiple regression analysis. Firstly, in the examination of T1, the Cronbach's alpha coefficients for external and internal WLOC were 0.972 and 0.964, respectively and the descriptive statistic pertaining to PsyCap was 0.964. At T2 the Cronbach's alpha coefficients for external and internal WLOC, as well as PsyCap, were 0.955, 0.954 and 0.936, respectively. This is an indication of high Cronbach's alpha coefficients,

demonstrating greater reliability of the constructs as well as good internal consistency of the items that were tested at both T1 and T2.

Furthermore, in relation to the inferential statistics of the Pearson momentum correlation, the results based on the positive relationship between the variables was supported by the results of the Pearson momentum correlation as, firstly, at T1 a negative relationship was found between external WLOC and PsyCap ($r = -0.645$), which is statistically significant ($p \leq 0.01$) and practically significant (large effect > 0.50). In addition, a positive relationship was found between internal WLOC and PsyCap ($r = 0.657$), which is statistically significant ($p \leq 0.01$) and practically significant (large effect > 0.50). Whereas at T2, a negative and practically significant relationship existed between external WLOC and PsyCap ($r = -0.598$), which is statistically significant ($p \leq 0.01$) and practically significant (large effect > 0.50). In addition, a positive relationship was found between internal WLOC and PsyCap ($r = 0.590$), which is statistically significant ($p \leq 0.01$) and practically significant (large effect > 0.50). T2's result is similar to T1 as the relationships also demonstrated a large effect and practical significance, although there was slight variation in results due to decrease in the Pearson momentum correlations as a function of time. This level of significance explained that middle managers who believe that their work situation is determined by their own behaviour are likely to demonstrate higher levels of PsyCap and middle managers who believe that their work situation is beyond their control displayed lower levels of PsyCap.

However, based on multiple regression analysis conducted in T1 the p values indicates that the internal WLOC was significant in predicting PsyCap ($p = 0.000$) and external WLOC was not significant (p value = 0.084 > 0.05). Hence, based on the regression analysis internal WLOC at T1 had significant predictive value for PsyCap. Whereas, in the T2 multiple regression analysis, p values for both the internal and external WLOC were not significant in predicting PsyCap ($p = 0.301$ & 0.05). Hence, the regression analysis indicated that neither external nor internal WLOC was a significant predictor of PsyCap. This result is in contrast to the results at T1 for the regression analysis, which indicated that internal WLOC has predictive value for PsyCap.

This outcome is significant and makes one consider the interesting implications for these significant changes over time as there was no interventions that could have resulted in the differences in the results. Firstly, the results have been supported by empirical research, which has indicated that the Cronbach's alpha coefficient for the WLOC was greater than 0.70 (e.g. Bosman *et al.*, 2005; Botha & Pienaar, 2006; Rothmann & Van Rensburg, 2002; Spector, 1988). In addition, the researcher referred to the literature review on the relationships between WLOC and PsyCap which has consistently shown a positive correlation, prediction and relationship between these variables. For example, the importance of well-being at work in relation to WLOC was

TABLE 6: Multiple regression analysis of PsyCap, external and internal WLOC for Time 1 and Time 2.

Time	Model	Unstandardised coefficients		Standardised coefficients: Beta	<i>t</i>	<i>p</i>	<i>R</i> ²	<i>F</i>
		B	Standard error					
Time 1	(Constant)	88.509	11.906	-	7.434	0.000***	0.436+	162.939
	External WLOC	-0.357	0.206	-0.205	1.733	0.084	-	-
	Internal WLOC	0.928	0.238	0.462	3.901	0.000***	-	-
Time 2	(Constant)	114.341	20.490	-	5.580	0.000***	0.361+	52.777
	External WLOC	-0.626	0.318	-0.397	1.969	0.050	-	-
	Internal WLOC	0.369	0.356	0.209	1.036	0.301	-	-

*, Statistical significance at $p \leq 0.05$; **, Statistical significance at $p \leq 0.01$; ***, Statistical significance at $p \leq 0.001$.
+, $r \geq 0.30$ – Practically significant relationship (Medium effect).

illustrated in a study by Spector *et al.* (2002), who highlight that the effects of perceived control on well-being are universal, which is supported by the relationships between WLOC and work well-being in 24 geopolitical entities. A wealth of literature supports this relationship between traits such as WLOC and states such as PsyCap (e.g. Avey *et al.*, 2010; Babalola, 2009; Carifio & Rhodes, 2002). In the South African context the study by Maram and Miller (1998) indicated that WLOC predicts positive work behaviour in relation to WLOC although the behaviour was related to leader member exchange and organisational commitment. In sum, research supports the notion that internality is associated with positive well-being and in this study internality was positively associated with PsyCap and externality was negatively associated with PsyCap.

Furthermore in reference to Table 4 and Table 5, with regard to the sample size in T2, besides the issue of dropouts, two other limiting problems possibly explain the lower sample size ($N = 190$) at T2. Firstly, failure to locate exactly all the respondents who participated at T1: in the space of the 6 months between T1 and T2, some people moved and addresses, phone numbers and email addresses were no longer valid. Secondly, failure to obtain maximum cooperation from the response unit at T2. Maximum effort in careful planning and design approach was done to reduce non-response at T2. However, as survey fatigue amongst potential respondent increases, researchers (e.g. De Leeuw, 2005; Wolke *et al.*, 2009) generally agree that absolute thresholds representing 'adequate' survey response rates become less than the numbers recruited initially. In this regard, De Leeuw (2005) still emphasises that surveys may still accurately represent the attitudes of the target population even if response rates are less than at the initial wave, but cautions that careful cognisance must be taken before generalising the findings beyond the target population.

To determine whether participant dropout was random or systematic, the previous (T1) sample was compared with the T2 sample in terms of age and gender, previously shown to be strong confounding variables predicting work-related outcomes. Interestingly, the short-term random attrition, however, did not alter the association between gender and the two time points; also, although there were significant differences in age of the participants at the two time points, the magnitude of mean difference for age of the participants at the two time points as depicted by the eta-squared value

was very small (0.02), enough to warrant simultaneous adjustment for age. The effect sizes have been identified being good indicators of bias in the parameter estimates (Field, 2013). Also the outcome of the Pearson's product moment correlations show that the differences in age slightly influenced the practical effect size of the relationship between optimism and external WLOC from large to medium effect at T2, most likely because slightly more older people participated on the study at T1 (as reflected by the higher T2 mean age in Table 5). However, it should be noted that the effect of the mean differences in age at the two time points was very small; it was significant enough to influence the predictive value of both external WLOC and internal WLOC towards PsyCap at T2 (see Table 6).

The current research results also drew on principles of Fredrickson's (1998, 2001) broaden-and-build theory, which highlights that positive emotions broaden thought and action repertoire-building positive psychological resources. In the current study it is noted that internals are more likely drawing from a higher level of positive emotions or resources resulting in higher positive psychological resources as well as strengthening of their positive psychological resources, which results in displays of higher levels of positive psychological states as compared to employees with an external LOC.

This relationship identified in the current study was also supported by the social learning theory. According to Rotter's (1954) social learning theory, behaviour potential is equivalent to expectancy of reward and reward value of the goal. The results of the current study are explained through the social learning theory as WLOC reinforces the potential value of utilising learning in a manner that can be developed positively. Hence, the research has highlighted that managers or leaders with a higher level of internality are more likely to utilise the principles of social learning displaying a higher level of PsyCap. Overall, this research supports positive traits, positive states and positive work-related outcomes, leading to increased effectiveness in the workplace due to broadening and building of positive emotions and linking of expectancies and reinforcements to positive work outcomes.

Conclusion and implications

For the purpose of this study WLOC was conceptualised as containing two sub-constructs, namely internal and external WLOC. Internal LOC was conceptualised as individuals who are inclined to be more action orientated, take responsibility

for the behaviour, take personal control for their actions, as well as are motivated by internal reinforcements such as success at a task, achievement and so on. Hence, these individuals were conceptualised as having greater success and their internal orientation as well as subsequent behaviour patterns are likely to result in greater amount of positive work-related outcomes. In contrast, in the current study external WLOC was conceptualised as individuals displaying behaviour that was orientated towards their external environment; with these types of individuals the reinforcement value is external, such as attribute outcomes to luck, chance or others and hence they do not take personal control of the outcomes.

For the purposes of the current research study PsyCap has been construed as comprising four positive psychological capacities: self-efficacy, hope, resilience and optimism. PsyCap also has been conceptualised as having a nature that is state-like and as such open to development. The developmental nature of PsyCap's conceptualisation is relatively important as the combination of the four positive psychological resources can be developed and strengthened to ensure maximal work performance. In the conceptualisation of PsyCap the researcher was interested in viewing how the entire construct impacted on work behaviour and specifically conceptualised PsyCap with the notion of the 'whole is greater than sum of its part'. Research has indicated that PsyCap as a global construct has had a positive relationship on work outcomes. For example, Luthans, Avolio, Avey and Norman (2007) note that when:

combined with each other, the cognitive and motivational processes are expected to be enhanced ... theoretically considering and operationalising each construct as facets of overall PsyCap (i.e., a latent factor with four facets as indicators) allows for broader and potentially more impactful cognitive and motivational processes to be engaged in work performance. (p. 550)

The empirical results of the study clearly indicated that at both T1 and T2 WLOC was found to have a statistically and practically significant relationship with PsyCap. Firstly, at both T1 and T2 external WLOC was found to have a statistical and practical significant negative relationship with PsyCap with p less than 0.01 and a large effect. In relation to the internal WLOC both T1 and T2 indicated that internal WLOC had a statistical and practical significant positive relationship with PsyCap with p less than 0.01 and a large effect. This implied that as internal WLOC increased middle managers were more likely to demonstrate a higher level of PsyCap due to their internal orientation whilst middle managers with an external orientation who tend to attribute situations to external factors are more likely to experience lower levels of PsyCap. However, it is noted that there were variations in terms of a decrease in the Pearson correlation at T2.

Furthermore, the results demonstrated significant and interesting relationships based on the regression analysis of both T1 and T2. T1 indicated that internal WLOC was a

significant predictor of PsyCap (p value < 0.05; β = 0.462), whereas external was not a significant predictor of PsyCap (p value > 0.05; β = -0.205). However, these results were not reflected in T2 as the regression analysis noted that the p values were greater than 0.05, for both the internal (β = 0.209) and external (β = -0.397) WLOC, which were not significant in predicting PsyCap. This would have interesting research implications as to the variance of empirical results due to time and further research should be instituted to investigate the variances in research findings based on time differences. However, based on the empirical results of the study it can be concluded that WLOC was a predictor of PsyCap but not consistently over time. In relation to other empirical studies conducted, there has been significant support for the positive relationship between WLOC and PsyCap (e.g. Avey *et al.*, 2010; Babalola, 2009; Carifio & Rhodes, 2002). Thus, further empirical research can specifically examine the predictive value of WLOC on PsyCap to give clarity to certain variances found in the current empirical results.

Limitation of the study

A limitation of the study is the sample distribution, as the sample was not equally representative of all race groups and there appears to be a dominance of the African race groups. This could imply that the results could have been biased towards the views of the dominant cultural group. Stratified random sampling might have delivered a more balanced study population. Another limitation is in terms of the research design; future studies that employ longitudinal research design could explore the population group over a period of a few years, rather than the short time gap of 6 months utilised in the current study. This would help to establish a more reliable cause and effect relationship. Furthermore, the sample group was limited to the recruitment industry only, which questions the generalisability of the results to other industries. It is proposed that the current research be duplicated or extended to examining the proposed variables in different industries to provide comparability of the results on different categories of employment. Further limitations pertain to the sample size at T2, in which there was dropouts partly attributed to the time period. It is noted that high response rate are desirable for precision and power (De Leeuw, 2005). Furthermore, it is noted that there was difference of age groups at the two time points, which can be further addressed through future research to ensure equal representation of age groups.

Suggestion for future research

Future research can expand the findings of the current research, which is necessary to determine further associations amongst WLOC and positive psychological states. Future research should be extended to other organisations to generalise the results. The results should also be replicated in different organisations and sectors of the South African industry. Management should focus on the development and implementation of initiatives aimed at enhancing the components of positive organisational behaviour, as

research evidence has shown that the enhancement of the positive resources may improve well-being (Avey *et al.*, 2010; Avey, Wernsing & Mhatre, 2011). Future research should also focus on other personality variables in relation to PsyCap, for example examining traits such as sense of coherence and neuroticism as predictors of psychological states, which can have varying and interesting implications for organisational processes. WLOC is frequently cited as an important contribution to organisational effectiveness (e.g. Spector, 1982). This study further supports this relationship. It would therefore be useful to determine if WLOC can be trained in order to encourage PsyCap within a workplace. Although LOC is usually considered a trait and therefore relatively stable, clinical psychology has had a great deal of success with teaching coping skills. This type of intervention might encourage a pattern of internal attributions, leading to a more internal LOC. Overall, the researcher encourages future research to examine the role of traits and states within the organisational behavioural literature.

Contribution of the study

The current study has contributions to offer not only to the field of psychology in general but also to practitioners in various categories that apply human resource principles to further enhance work-related outcomes, thus reinforcing the notion of positivity in the workplace. Furthermore, the outcomes of the study highlighted specific relevance of high levels of PsyCap and internal WLOC to positive organisational outcomes, thus highlighting a key area of further research focus and possible interventions such as training, introduction of policies encouraging positive work behaviour and so on, which is likely to lead to increases in organisational success and effectiveness.

In addition, the organisation can introduce several approaches designed towards promotion of personality traits and psychological states through reinforcing the value of positive work behaviour and creating the association or expectancy that positive work behaviour would be rewarded (social learning theory); thus, these principles can be linked to the organisations reward systems, change management strategy and training interventions. Furthermore, the trait and state approach can be linked to a strength-based approach as the current empirical results indicated that individuals who demonstrated higher levels of the internal WLOC and PsyCap are more inclined to demonstrate higher levels of positive work-related outcomes. Based on this statement, organisations can utilise the trait and state approach in combination rather than opposition with each other to further ensure strategic alignment of organisational goals. For example, increasing the probability of job success through redefining the recruitment and selection process to be inclusive of assessing the traits and states of potential candidates to avoid job mismatch, reduce turnover and increase the probability of job success. In conclusion, personalities and positive psychological states are an integral part of organisational behaviour and continue to have strong implications for organisational growth and outcomes.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

Z.S. (University of KwaZulu-Natal) was the doctoral student. J.H.B. (University of KwaZulu-Natal) was the supervisor for the research project.

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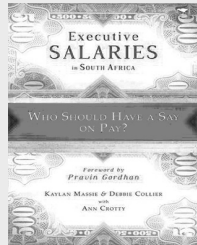
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Review of *Executive salaries in South Africa*

Book Title:

Executive salaries in South Africa: Who should have a say on pay?

Book Cover:



Authors:

Kaylan Massie
Debbie Collier
Ann Crotty

ISBN:

978-1-4314-1012-5

Publisher:

Jacana Media (Pty) Ltd, 2014, R239*

*Book price at time of review

Review Title:

Review of *Executive salaries in South Africa*

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Introduction

In this book chief executive officer (CEO) remuneration pay packages (during 2012) of 50 major South African listed companies are analysed. Included in the study are four state-owned entities (SOEs) as well as a semi-privatised SOE.

This book is a follow-up to a study by Crotty and Bonorchis (2006) in which they anticipated that without government intervention, executive remuneration packages would continue to increase. Disappointingly, these forecasts have come true, despite employment equity measures and changes to corporate governance requirements in the King III Code of Governance Principles (2009).

This book reveals that the average cash and benefits packages of the 50 CEOs studied amounted to approximately R13.1 million during 2012. After gains made on investing and exercise of share incentives are included, the amount rises to almost R49 million. During 2005, on average, executives received more than R15 million in guaranteed package, bonuses and gains on share options, all included.

Unlike in the 2005 study, the figures reported in the 2012 study take account of restraint-of-trade and termination-related payments. Termination-related payments are an important element of executive remuneration and account for a small portion of the increase. For example, once termination and restraint-of-trade payments were left out of the equation, the average cash and benefits package of the 50 CEOs came to over R12.3 million instead of the R13.1 million mentioned above.

The authors also mention some improvements from the 2005 study. In the 2005 study, all the CEOs whose remuneration packages were studied were male. In the 2012 study, seven of the 50 were female and almost a quarter of the CEOs were black. However, the substantial packages revealed in this book are still paid to white males.

Written with the South African context in mind, *Executive salaries in South Africa* provides a clear and detailed account of especially executive remuneration and income equality in South Africa. This text also touches on international perspectives regarding executive remuneration. It looks at possible ineffectiveness and growth-limiting characteristics of excessive executive remuneration and the size of the disparity between the pay of affluent executives and that of the salaried underprivileged.

South Africa's increasing income inequality and its history of discrimination, poverty and social unrest call for something more that needs to be done to reverse this trend. In this book, the authors consider the following questions:

- What will it take for companies to restrain excessive executive remuneration?
- How do we increase the shareholders' say on pay to ensure that the board of directors responsible for determining pay take into account various stakeholder interests?
- Should a court of law, the Department of Labour, employees, income tax or the remaining 99% of the public have a say on what the 1% are being paid?
- How do we amend corporate governance standards, the tax code and labour legislation to achieve these goals?
- How do we turn shareholders into activists and empower the workforce?
- Is change only possible if a more important modification in attitudes is achieved?

How to cite this book review: Bezuidenhout, M.L. (2015). Review of *Executive salaries in South Africa*. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 13(1), Art. #698, 4 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.698>

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The authors address these ongoing matters and consider likely methods to curb excessive executive remuneration. The authors are of the opinion that without these interventions, South Africa will remain on a path of unpredictability and unrest, whilst the 'rich get richer and the poor become poorer'.

Although the authors titled their book *Executive Salaries*, they are concerned not only about executive salaries, but with all forms of executive remuneration (or executive pay). They also offer several probable solutions towards a more equal salary structure throughout South Africa. These include using the King III Code's (2009) directive to remunerate directors 'fairly and responsibly'. The authors moreover present a convincing case for a national minimum wage as 'a basic floor at subsistence level to prevent the exploitation of labour'.

General overview

This book follows an eight-chapter structure and starts with a foreword by Pravin Gordhan, the Minister of Finance in 2014. Mr Gordhan calls for a new business culture rooted in empathy and one that goes the extra mile 'to enhance the lives of the poor and contribute to the transformation of our economy and society' (p. vx). Mr Gordhan expresses his opinion that the private sector has an enormous role to play in the rebalancing of access to opportunities (Ensor, 2014).

In Chapter 1, the authors consider the different components of remuneration packages paid to the 50 executives examined in the book. They examine the top 15 executives and the diverse forms of remuneration the CEOs receive. What makes this study unique is that the authors investigate the highest value of share incentives agreed to during the year, revealing the top 15 long-term incentive packages awarded in 2012. In addition, the authors compare the packages of executives in SOEs to those of other JSE-listed companies. They also study the size of the increase in cash and benefits packages paid between 2005 and 2012, as well as the extent of wage differentials within these companies. The conclusion in Chapter 1 is that for many of the companies studied in this book, there is some link between pay and performance. On the other hand, for a number of companies, no such link exists. The authors, nonetheless, caution that the existence of this link 'does not and cannot justify the overall levels of pay being doled out to most company CEOs' (p. 29).

In Chapter 2 both the global and local perspectives on shareholder value creation are explored. The global perspective focuses primarily on the United States and the United Kingdom. This chapter also explores the question of whether present remuneration structures provide exorbitant incentives to executives to take part in value-destructing behaviour. The South African practice of 'share buy-backs' is also discussed. Share buy-backs are a practice where companies buy back their own shares from shareholders with the intention to grow the share price. This is regularly performed at a time when executives are selling their own

shares on the market. Chapter 2 covers solutions to these problems, as well as suggestions for reform.

The next chapter deals with the prevailing South African corporate governance perspective associated with executive remuneration. This includes corporate law and the 2009 King III Code. The measures that are in place to align the interests of boards, executives and shareholders when it comes to the issues of executive remuneration are considered. Moreover, the following are discussed:

- The obligations of directors to act in the best interest of the organisation.
- The amount and type of disclosure on remuneration required by law.
- The accessibility and value of the shareholders' say on pay through the non-binding shareholders advisory vote on a company's remuneration policy.
- A number of court proceedings that could be used by shareholders to impose these corporate governance standards.

The conclusion in this chapter is that regardless of all of the regulations in place within South Africa, executive pay levels have continued to climb sharply. The authors conclude that it is clear that regulation by itself is not sufficient to overcome the agency problems discussed in this chapter. They maintain that executives still retain power over the board to influence pay decisions and that board members still lack motivation to ensure that the decisions they make are in the best interests of shareholders.

In Chapter 4, the global landscape is reviewed. The purpose here is to ascertain which corporate governance practices overseas could give direction towards improving South Africa's corporate governance standards. The authors discuss trends from the United States, the European Union, the United Kingdom, Australia and Switzerland associated with the objectivity and role of remuneration committees, remuneration disclosure standards and shareholders' say on pay. The effectiveness of these regulations at linking executive remuneration to executive performance is also discussed. This chapter finishes off with a concise summary of developments in Switzerland.

Chapter 5 provides ideas on how to enhance South Africa's corporate governance criteria of executive remuneration. These recommendations are based on lessons that can be learned from the international governing experience. With regard to paying executives and linking pay to performance, the authors suggest that South Africa could make various amendments to the JSE listing requirements, the *Companies Act* (Act No. 71 of 2008) as well as the King III Code (2009). The authors believe that these amendments would be beneficial in many ways. For example, it would increase disclosure relating to remuneration by companies in their annual reports, improve the independence and role of remuneration committees as well as improve shareholders' say on pay. This chapter concludes with the finding that

South Africa's corporate governance regulations trail behind their global peers when it comes to pay practices.

Chapter 6 covers the different remuneration practices in SOEs. The numerous pieces of legislation, regulations and government policies linked to executive remuneration in SOEs are explained. The authors go on to discuss corporate governance and remuneration practices in SOEs and briefly touch on the findings of the Presidential Review Committee on SOEs. In this chapter the authors point out that part of the problem with executive remuneration is the 'fragmented regulatory framework for SOEs and non-compliance with existing protocol and guidelines' (p. 133). Areas are suggested where government policy could be reformed and made uniform. This is first of all to ensure that SOE executives are remunerated consistently across SOEs and secondly to consider the vital role that SOEs have in transforming South African society. The authors further recommend that legislative provision be made for 'the establishment of a central remuneration authority, which will set guidelines and standards for remuneration of boards and executives in SOEs' (p. 133). This recommendation is in line with the recommendations from the Presidential Review Committee on State-Owned Entities (2013).

The influence of South African tax regulations on executive remuneration is discussed in Chapter 7. Of particular interest in this chapter is the discussion on how executives and companies are currently taxed in South Africa on executive remuneration packages. In the latter part of Chapter 7, the authors consider whether any of the regulations applied abroad should be adopted in South Africa to ensure that tax laws are used as a more effective method of regulating executives' take-home pay. This chapter concludes with suggestions for reforming the South African tax landscape. The objective thereof is, for example, to reduce after-tax income inequality in South Africa.

Chapter 8 explores features of South Africa's existing labour law that govern income inequality and excessive executive remuneration. Also discussed is the principle of equal pay for work of equal value. The company's responsibility to report and address income differentials that maintain historical discrimination is also discussed. This chapter furthermore explores opportunities that exist to provide employees with a say on pay, including collective bargaining. Suggestions are also made on how to improve the say on pay granted to employees at all levels of the company. Chapter 8 ends with a summary of potential forms of regulatory intervention.

The authors conclude their book with a chapter called 'Conclusion: A way forward'. They begin the chapter with a brief summary of the archetypal executive remuneration practices, more specifically how executive remuneration is structured. The rest of the chapter focuses on the formulation of practical policy interventions. In essence, this final chapter provides an outline of possible forms

of regulatory interventions that may move South African society a step closer toward the goal of an objective sharing of returns.

The authors quite rightly state (p. xix) that:

it is important that analysis of executive pay takes place. Companies play a critical role in society, providing not only goods and services to society but also income to employees and investors. Economic growth depends on company activity. (p. xix)

Overall impression and conclusion

Massie and Colliers' discussions throughout the book are appropriately supported with empirical findings on executive pay and income equality in South Africa. Throughout the book the authors make suggestions that could help rein in excessive levels of remuneration. The aim of their suggestions are also to promote unbiased and responsible remuneration policies.

What sets this book apart from various other studies is that it includes share-based payments. The book reveals that the value of an annual remuneration package can be overshadowed by gains on share options awarded in long-term incentives (Crotty, 2014). Although it is normal practice in South Africa to avoid share-based payments, the exclusion of share awards not only understates the level of generosity, but also makes comparisons misleading, especially with international figures (Crotty, 2014).

This book is a value-add and delivers a comprehensive study of executive remuneration in South Africa. It is a worthwhile read for all human resource professionals, organisations, remuneration committee members and shareholders that are concerned about executive remuneration. This is especially true considering the fact that the link between pay and performance has for some time now come under increased scrutiny, not only in the popular press, but also from an academic perspective (Crafford, 2012; Nicely, 2009).

Although this is not a textbook for students, it may act as additional reading for postgraduate students and researchers in the field of human resource management, labour economics and finance. It is also highly recommended for business leaders and shareholders alike who want to demonstrate good leadership, responsibility and fairness in developing remuneration policies. Moreover, the book is considered valuable to researchers as they will be able to build on the research presented in this book.

The *Business Report* describes Crotty and Bonorchis's book of 2006, *Executive pay in South Africa: Who gets what and why?*, as:

A probing study of executive pay in South Africa. ... It sets out to understand the reasons behind the rapid increase of executive remuneration levels over the past few years and to provide an insight into the facts, figures and issues around the subject. In a country desperate to overcome the inequalities of the past, this

book is important for what it reveals and for what it suggests might be done to better deal with remunerating chief executives. (n.p.)

I concur with the above statement when it comes to Massie and Collier's *Executive salaries in South Africa: Who should have a say on pay?* These words are as relevant today as they were in 2006.

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