

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, Fredrickson & Barrett, 2004). Fredrickson, (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
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 2×2 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 ; $\beta = 0.462$), whereas external was not a significant predictor of PsyCap (p value > 0.05 ; $\beta = -0.205$). 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 ($\beta = 0.209$) and external ($\beta = -0.397$) 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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