Conflict between work and nonwork roles of employees in the mining industry: Prevalence and differences between demographic groups

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Orientation: International researchers have increasingly recognised the interaction between work and nonwork roles as an interesting and important topic.

Research purpose: The purpose of this study was to investigate the prevalence of different work–nonwork conflict subscales and differences between demographic groups in work–nonwork conflict.

Motivation for the study: Several studies have shown that demographic groups differ in their experiences of the interaction between work and family life. This may also be true of conflict between work and nonwork roles. The prevalence of work–nonwork conflict and nonwork–work conflict is also very important for organisations that may find the results very valuable for developing organisational and individual interventions and performance management in organisations.

Research design, approach and method: The researchers chose a random sample of mining employees ($n = 245$) from a platinum mine in Rustenburg. The researchers used self-developed items similar to items developed in the Work–nonwork Interference Scale of Koekemoer, Mostert and Rothmann (2010) to measure conflict between work and various nonwork roles. The researchers used descriptive statistics, paired-sample *t*-tests, multivariate analysis of variance and one-way analysis of variance to analyse the data.

Main findings: Work–nonwork conflict was more prevalent than nonwork–work conflict. Work–family conflict was more prevalent than work–domestic conflict and work–religion/spirituality conflict. The researchers found significant differences for marital status and language groups about work–nonwork conflict. Results showed that participants who spoke African languages experienced higher levels of private–work conflict.

Practical/managerial implications: Organisations need to recognise the negative interference or conflict between work and nonwork roles for different demographic groups and address the prevalent work–nonwork conflicts in their organisations.

Contribution/value-add: Organisations are able to focus interventions and programmes that specifically address the problem of work–nonwork conflict in specific roles and for different demographic groups.

Introduction

There is growing evidence that workers have faced increased pressures at work and in their personal lives during the past few years (Brink & De la Rey, 2001; Geurts & Demerouti, 2003). According to Geurts, Rutte, and Peeters (1999), the interdependence between these domains is increasingly recognised. This shows that, apart from work demands, workers also face increasing demands in their family or private lives (also called 'nonwork' domains).

This is mainly because of the demographic and structural changes in family and workforce structures, both nationally in transformation and technological developments as well as high unemployment rates (Cavaleros, Van Vuuren & Visser, 2002) and internationally (Geurts *et al.*, 1999; Geurts & Demerouti, 2003). As a result, there is an increase in the number of women and dual-earner families entering the workforce (Greenhaus & Parasuraman, 1999; Stevens, Minnotte, Mannon & Kiger, 2007). As a result, increasing demands in their work and nonwork domains confront more and more employees and many of their daily work difficulties become incompatible with their private responsibilities (Jansen, Peeters, De Jonge, Houkes & Tummers, 2004).

Consequently, the potential for interference or conflict occurring between a worker's work and personal life, also known as work–family conflict (WFC), is increasing (Byron, 2005; Eby, Casper, Lockwood, Bordeaux & Brinley, 2005; Greenhaus & Beutell, 1985; Greenhaus & Powell, 2003; Mesmer-Magnus & Viswesvaran, 2005). However, according to Westman and Piotrkowski (1999), as well as Premeaux, Adkins and Mossholder (2007), one can only reach an adequate understanding of the interaction between work and personal life when one views it in the context of multiple roles outside work. These are also called nonwork roles, like domestic or home roles and religious or spiritual roles.

Having several roles can make life even more complex (Tingey, Kiger & Riley, 1996). Workers have to address several demands that could conflict (Geurts & Demerouti, 2003; Nordemark, 2002; Premeaux *et al*., 2007; Small & Riley, 1990). Therefore, the involvement of workers in several roles can be very stressful. With few exceptions, the more one exhibits the behaviours particular roles expect, the more conflicting demands can arise from these roles. They could lead to work–nonwork interference or conflict (Carlson, Kacmar & Williams, 2000; Katz & Kahn, 1978; Olson-Buchanan & Boswell, 2005; Premaux *et al*., 2007; Tingey *et al*., 1996).

Most research and empirical studies on the interaction between work and personal life has shown that the interference or conflict that arises in the work domain is more prevalent than the interference or conflict that arises in the family or home domain (Bond, Galinksy & Swanberg, 1998; Eagles, Miles & Icenogle, 1997; Eby *et al*., 2005; Frone, 2003; Frone, Russel & Cooper, 1992; Geurts & Demerouti, 2003; Grzywacz & Marks, 2000; Gutek, Klepa & Searle, 1991; Mesmer-Magnus & Viswesvaran, 2005; Rost & Mostert, 2007).

These researchers suggest that workers are more likely to give preference to work-related matters. This results in less involvement in their home or family domains (Frone, 2003). This might mean that their work domains are less flexible than the home or family domains or that employees might perceive their work roles as more important (Carlson & Kacmar, 2000; Day & Chamberlain, 2006; Greenhaus & Powell, 2003). Consequently, employees might invest more emotion and time in their work. This could result in less investment in their private lives or nonwork domains and cause interference or conflict between their work and nonwork domains, known as work–nonwork conflict (Carlson *et al*., 2000; Premeaux *et al*., 2007).

In addition, their experiences of the conflict between the different nonwork roles might differ. The work domain may interfere more with the more important nonwork roles (like those of parents or spouses). Work–family conflict may be more prevalent than work–domestic conflict because of the importance of the family (Frone, Russell & Cooper, 1992; Luchetta, 1995; McClellan & Uys, 2009).

Alternatively, the prevalence of work–family or home conflict (or work–nonwork conflict) may suggest that the interference or conflict arising in the work domain is also more prevalent than the interference or conflict arising in the different nonwork roles (family, religion or spirituality and home or domestic). This might result in more work–nonwork conflict than nonwork–work conflict.

In addition to the possible prevalence of work–nonwork conflict and nonwork–work conflict, several studies have shown that demographic groups may differ in their experiences of the interaction between work and family (De Klerk & Mostert, 2010; Donald & Linington, 2008; Geurts & Demerouti, 2003; Greenhaus & Parasuraman, 1999; Grzywacz & Marks, 2000; Matthews & Power, 2002; Oldfield & Mostert, 2005; Pieterse & Mostert, 2005; Rost & Mostert, 2007; Van Tonder, 2005). Workers from different demographic groups have different working environments. They are also involved in different nonwork domains that they may experience differently (Keene & Reynolds, 2005; Greenhaus & Powell, 2003; Nikandrou, Panayotopoulou & Apospori, 2008).

There might be various reasons why workers from different demographic groups (gender, age, language, qualifications, marital and parental status) have different experiences of work–nonwork conflict (Baca Zinn, 1990; Desrochers, Andreassi & Thompson, 2002; Donald & Linington, 2008; Duxbury & Higgins, 2001; Greenhaus & Parasuraman, 1999; Grzywacz & Marks, 2000; Kreiner, 2006; Nasurdin & Hsia, 2008; Wallis & Prince, 2003).

Some could be individual preferences, individual personal or traditional roles, personal goals, or personal home or household situations (Day & Chamberlain, 2006; Matthews & Power, 2002; Nikandrou *et al*., 2008; Schulteiss, 2006). Because the importance and meaning (also called 'saliency') that workers attach to certain roles in their private lives differ from person to person, the interaction between work and nonwork roles might also differ between workers from different demographic groups (Frone, 2003; Geurts & Demerouti, 2003).

The general objectives of this study were to investigate:

- the prevalence of different work–nonwork conflicts and nonwork–work conflicts and their subscales
- demographic differences (gender, age, language, and qualifications, marital and parental status) in work–nonwork conflict in a sample of mining employees.

Trends from the literature

Work–nonwork conflict

Greenhaus and Beutell (1985) initially defined WFC as:

> a form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible – in such way that participation in the work (or family) role is made more difficult by virtue of participation in the family (or work) role.
>
> (Greenhaus & Beutell, 1985, p. 77)

This definition suggests a bidirectional dimension in which the work domain can interfere with the family domain and the family domain can interfere with the work domain. Although this definition is widely accepted, this broad definition does not differentiate between the interaction or conflict between work and nonwork roles. Kirchmeyer (1992) elaborated on this issue by stating that researchers need to accept people as parents, spouses or members of the community and not just as workers. Many workers, and especially employed parents, struggle to combine their obligations to the work domain with those to the nonwork or personal domains (Bailyn & Harrington, 2004; Byron, 2005; Geurts & Demerouti, 2003).

The general demands of each role comprise the responsibilities, requirements, duties, commitments and expectations related to performance in a given domain or role (Bulger, Matthews & Hoffman, 2007; Netemeyer, Boles & Mcmurrian, 1996; McClellan & Uys, 2009; Voydanoff, 2007). According to Greenhaus and Beutell (1985), the type of WFC could result from the role characteristics that affect the time involvement, strain or behaviour in one domain, but which are incompatible with the role characteristics of the other (work vs. home).

The three forms of work–family conflict or family–work conflict the literature identifies mainly are (Greenhaus & Beutell, 1985):

- strain-based conflict
- behaviour-based conflict
- time-based conflict.

Since the initial definition of Greenhaus and Beutell (1985), research on the interaction between work and family life has progressed substantially. It has introduced newer terms like work–life integration, work–family interaction, work–home interaction, work–life interference, work–nonwork interface and work–family integration (Bailyn & Harrington, 2004; Carlson & Frone, 2003; Curbow, McDonnell, Spratt, Griffen & Agnew, 2003; Desrochers, Hilton & Larwood, 2005; Eby *et al*., 2005; Geurts & Dikkers, 2002; Geurts *et al*., 2005; Lewis & Cooper, 2005; Olson-Buchanan & Boswell, 2006; Premeaux *et al*., 2007; Thompson & Bunderson, 2001).

Although researchers have studied all these terms well, the main limitation of the terms is that they exclude nonwork roles other than family or home life that may interact or interfere with the work domain (Bellavia & Frone, 2005; Frone, 2003; Geurts & Demerouti, 2003; Tetrick & Buffardi, 2006).

Multiple roles and role identity theory as theoretical frameworks

A very important aspect in work–nonwork conflict research is the different roles people have to participate in or perform in their personal lives (their nonwork roles).

According to Barnett and Baruch (1985), role conflict might occur when the demands from two or more roles are such that adequate performance in one role jeopardises adequate performance in the other. The restricted resources people have to fulfil these role demands are often in a state of imbalance. This leads to conflict between domains (Greenhaus & Beutell, 1985).

This relates to identity theory. It suggests that a particular situation evokes a particular identity (that also relates to roles) and the commitment of the person to the different identities or roles that make up the self-concept determines that identity (Stryker, 1987). Therefore, people or workers can engage in a variety of roles or identities (parental, spousal, domestic and religious) outside their work.

Thoits (1991) also stated that people who participate in different roles have various identities that are organised in a hierarchy of centrality. People derive more meaning and purpose from participating in a more salient role (Thoits, 1991). Therefore, they will invest more time or emotion in that identity or role (Stryker & Serpe, 1994).

According to Wiley (1991), people could experience stress when performing the behaviours and confirm the salient identity as poor. Therefore, inter-role strain or conflict will arise when people perceive conflicting and competing expectancies from the two or more roles they perform (Holahan & Gilbert, 1979). It makes work–nonwork conflict possible.

Prevalence of work–nonwork conflict and nonwork–work conflict

Various research and empirical studies have shown that the negative interference of work to home is more prevalent than the negative interference of home to work (Bond *et al*., 1998; Frone, 2003; Frone *et al*., 1992; Geurts & Demerouti, 2003; Grzywacz & Marks, 2000; Rost & Mostert, 2007). Because of the forced structure and obligatory nature of work, workers are more likely to emphasise work over private and family matters. This reduces the amount of effort they invest at home rather than at work (Frone *et al*., 1992; Gutek *et al*., 1991).

Geurts *et al*. (2005) support this; they suggest that the home domain may offer more opportunity to adjust one's behaviour to one's present needs than the work domain does. This might also be the cause of the conflict between the work and various nonwork roles.

From the perspective of identity theory, it is possible that, because of the saliency of the work role over other nonwork roles, people will invest more time and effort in their work. This might interfere, or conflict with, some nonwork roles (Carlson & Kacmar, 2000; Day & Chamberlain, 2006; Greenhause & Powell, 2003; Perrone, Webb & Jackson, 2007; Wiley, 1991).

For example, people might attach high saliency to roles like parenting, religion or spirituality. However, because their work is so demanding and because there are inadequate opportunities to engage in these personal roles, specific

work–nonwork conflict may arise and be more apparent or prevalent than others (like work–parent conflict and work–spirituality conflict). For some people, some nonwork roles might be more prevalent or salient and lead to more specific work–nonwork conflict than other nonwork roles do.

Based on the theoretical framework and literature review on the prevalence of work–nonwork conflict, the researchers formulated two hypotheses:

- the direction of work–nonwork conflict is more prevalent than nonwork–work conflict (Hypothesis 1a)
- within each direction of conflict (work–nonwork conflict and nonwork–work conflict), some specific subscales of conflict are more prevalent than others and depend on the saliency of the nonwork roles (Hypothesis 1b).

Demographic differences and work–nonwork conflict

There is considerable literature on WFC and the differences in work–nonwork conflict between demographic groups (gender, age, language, qualifications as well as marital and parental status [See the overview in Frone, 2003]).

The evidence of gender differences in WFC is mixed (De Klerk & Mostert, 2010; Frone, 2003; Geurts & Demerouti, 2003; Nasurdin & Hsia, 2008; Nordenmark, 2002). Some research has shown that men and women generally report similar levels of WFC and family–work conflict, or FWC (Carnicer, Sánchez, Pérez & Jiménez, 2004; Demerouti *et al*., 2004; Frone, 2003). Other researchers have found that women experience more WFC than men do (Frone *et al*., 1992; Hammer *et al*., 1997). On the other hand, Oldfield and Mostert (2005), as well as Rost and Mostert (2007), observed that men experienced higher levels of WFC than women did. In addition, Pieterse and Mostert (2005) found a significant difference between men and women on WFC. This shows that men reported a higher level of WFC than was the case with women.

One might attribute these differences in the experience of WFC for men and women to the traditional roles of people. Previously, women had more of a parenting role and rarely participated in work roles (Greenhaus & Parasuraman, 1999). However, more women are now entering the workforce. This might cause clashes between their more traditional parenting roles and their work roles and lead to WFC (Day & Chamberlain, 2006; Doumas, Margolin & John, 2008; Plaisier *et al*., 2008).

In addition, more working fathers are now taking over some parenting responsibilities and helping to care for their children. This might also lead to conflicting role demands (Daly & Palkovitz, 2004; Heraty *et al*., 2008; Lingard & Francis, 2005; Root & Wooten, 2008). Furthermore, according to Baxter (2007), the roles associated with men and fathers became multifaceted. Men fulfil the role of breadwinners, must spend time with their families and must support and assist their spouses. Fathers are now more involved in nurturing and rearing their children as well as providing emotional support instead of only being breadwinners (Hand & Lewis, 2002; Kaufman & Uhlenberg, 2000; Root & Wooten, 2008).

Once again, the saliency people attach to these roles becomes relevant. It is possible that the saliency of family roles has changed amongst fathers, possibly leading to more work–family conflict. In addition, fathers might value specific nonwork roles, like religion or spirituality, more than women do and, because of their demanding work, are unable to attend to these roles. This might lead to specific work–nonwork conflict. Therefore, it makes sense that there might be differences in the interaction between work and other specific nonwork roles for men and women.

Most studies found no relationship between WFC and different age groups (Frone *et al*., 1997; Kinnunen & Mauno, 1998; Pieterse & Mostert, 2005; Van Tonder, 2005). However, Oldfield and Mostert (2005) found that older people (those between the ages of 50 and 69) experienced statistically significant lower levels of WFC than their younger counterparts (those between the ages of 22 and 39) did. The younger group seems to experience the highest level of WFC. Furthermore, Duxbury and Higgins (2001) reported that participants between 36 and 55 experienced more work–home conflict. Rost and Mostert (2007) found that younger employees (between the ages of 26 and 35 years of age) experienced statistically significant lower levels of positive work–home interference than older employees (between 46 and 65 years of age) did, whilst older employees experienced statistically significant lower levels of work–home conflict than younger employees did. Grzywacz and Marks (2000) also found more family–work conflict in younger men than in older men, whilst younger women reported less WFC than older women.

This discrepancy in results between age groups might be attributed to the saliency of roles for specific age groups. Some older employees might feel that their family or personal roles are becoming more important to them because they already have achieved their career goals or positions. Alternatively, younger employees might still feel the need to prove themselves in their work and personal lives. Therefore, it is possible that people from different age groups also differ in their experiences of the influences of other nonwork and work roles.

As far as differences between language and ethnic groups are concerned, Rost and Mostert (2007) found that English-speaking participants experienced higher levels of work–home conflict than speakers of Afrikaans and African languages did. Grzcywacz and Marks (2000) and Van Tonder (2005) also found that White and African groups have higher levels of work–home conflict than coloured and Indian participants do.

These findings contradict the findings of Kinnunen and Mauno (1998); Frone *et al*. (1997) and Pieterse and Mostert (2005). They found no differences in work–home conflict and

language groups. However, because household and family situations differ so much in the different cultural or language groups, differences in the experiences of the interaction or interference between work and family or home are possible.

Furthermore, the saliency that people from different language groups attach to their different nonwork roles might differ. It is possible that the work role is more important than the family roles or vice versa for specific language groups. This will influence the interaction between these roles.

The research of Frone *et al*. (1997) and Pieterse and Mostert (2005) found no significant relationships between qualifications and work–home conflict. However, Rost and Mostert (2007) found that employees with tertiary qualifications experienced significantly higher levels of positive work–nonwork interference than employees with postgraduate degrees did. Oldfield and Mostert (2005) also found that people with tertiary qualifications appear to experience lower levels of negative work–home conflict and home–work conflict than those with secondary education. It can be assumed that people with higher qualifications attach more value to their work role, seek higher qualifications and therefore do not accept interference with their work role.

WFC research that considered marital status as a demographic variable found that single men and women report less WFC than married men and women. However, it also found that being unmarried was strongly associated with less positive spill over from home to work (Grzywacz & Marks, 2000). This supports the findings of Herman and Gyllstrom (1977) that married people experienced more work–family conflict than unmarried people did.

Demerouti *et al*. (2004) found that people who lived alone have more work–family conflict than those who lived with a spouse. However, Oldfield and Mostert (2005) reported no significant differences between married and unmarried people. The reasons for the differences could be people's perceptions of marriage and the value, or meaning, that they attach to their spouses or partners and their perceptions of their responsibilities in a marriage (Day & Chamberlain, 2006). These might differ from person to person and it is possible that married people view their marriages as relationships that entail additional demands. Alternatively, single people might feel that, because they do not have a partner or spouse to help them at home, they experience more strain and demands and, ultimately, more work–family conflict.

With regard to parental status, employees with families often miss career opportunities when they need to put their family responsibilities before their work (Rothbard & Edwards, 2003). This suggests parent–work conflict. There are also indications that women with children experience more conflict between work and family compared to childless women and men (Crouter, 1984; Grzywacz & Marks, 2000). The saliency that people attach to their parenting roles is important here.

Furthermore, one can view the responsibilities of parenting (caring for children) as added demands on people (Day & Chamberlain, 2006). Oldfield and Mostert (2005) reported that working parents appear to have higher levels of WFC than married people without children do. Grzywacz, Almeida and McDonald (2002) found that having a child (aged between 6 and 18) was associated with less positive spill over from family to work compared to being childless. Couples without children can act independently as they do not have children to look after (Duxbury & Higgins, 2001). Therefore, it seems that the parental status of people will influence the degree of work–nonwork conflict they experience.

The researchers formulated one hypothesis based on the differences between demographic groups. It is that there are differences in work–nonwork conflict for demographic groups based on gender, age, language, qualifications, marital status and parental status (Hypothesis 2).

The potential value of the study

Work–nonwork conflict is an important topic of research amongst various occupational and demographic groups. It can also play a significant role in a mining environment, which is widely acknowledged as very stressful and demanding (Singer, 2002).

Because of its important contribution to the economy of South Africa, various companies in the mining industry need to maintain competitive advantage whilst complying with the demands of change. They consequently impose various forms of stressors on their employees.

Amongst the present stressors are the consequences of a demanding work environment that tend to spill over into people's personal lives and could negatively influence their well-being (Brough, 2003). In a stressful mining environment, the different roles employees may have outside work (those of parents, spouses, religion or spirituality, and home or domestic) could interfere with their work and vice versa.

When there is work–nonwork conflict, organisations need to focus more specifically on programmes and interventions to address the problem. More specifically, organisations need to know which forms of work–nonwork conflict cause problems to their employees and which specific nonwork roles are very demanding for them. Šverko, Arambašić, and Galešić (2002) stated that more and more companies have adopted various family-responsive policies and other programmes to support their employees (like paid maternity leave) to address the issue.

Organisations, that know which nonwork roles and nonwork–work conflict are more prevalent, will also be able to attend to the problems better.

Research design

Research approach

This was a quantitative study in which the researchers used a cross-sectional survey design to achieve their research

objectives. Cross-sectional research designs involve measuring all variables for all cases within a narrow time span so that the measurements are contemporaneous. The researchers collected data at only one point in time and compared different participants (Du Plooy, 2001). They collected the primary data through surveys.

Research method

Research participants and sampling

The researchers took random samples (n = 245) of employees working in a platinum mine in the Rustenburg area. The response rate was 49%. According to DeVellis (2003), samples should be large enough to eliminate subject variance as a significant concern. Researchers usually regard a sample of 300 as adequate. However, scales have been successfully developed and used with smaller samples.

In order to identify and establish the sample population, the researchers obtained lists of all workers from middle managers in the human resource department of the mining company.

The researchers asked workers in Patterson grade levels C1–D4 (middle management) to participate in the study and gave them questionnaires to complete. They chose workers from these Patterson levels only because workers from these grade levels in a mining environment are literate and could complete the questionnaires.

Table 1 gives the characteristics of the participants.

Most of the participants were women (55.1%), Afrikaans-speaking or English-speaking (63.7%) and between the ages of 20 and 39 years (30.6%). Most were either White (54.3%) or African (38.8%). Of the participants, 55.5% had tertiary education qualifications. Most of the participants were married (61.2%) and had children (58.4%). The sample included employees from different Patterson grade levels (C1–D4). Of the participants, 18.4% were on a C Upper (C4) level whilst 18% were on a C Lower (C1) level.

TABLE 1: Characteristics of participants (n = 245).

Item	Category	f	%
Gender	Male	110	44.9
	Female	135	55.1
Age	20–29 years	74	30.2
	30–39 years	75	30.6
	40–49 years	55	22.4
	50 years and older	38	15.5
	Missing values	3	1.2
Race or ethnicity	White	133	54.3
	African	95	38.8
	Coloured	13	5.3
	Indian	4	1.6
Language	Afrikaans and English	156	63.7
	African language	89	36.3
Qualifications	Secondary education	109	44.5
	Tertiary education	136	55.5
Level of position (Patterson grading scale)	C1 — supervisory level	44	18
	C2 – supervisory level	36	14.7
	C3 – supervisory level	23	9.4
	C4 – supervisory level	45	18.4
	C5 – middle management	24	9.8
	D1 – middle management	25	10.2
	D2 – middle management	27	11
	D3 – middle management	9	3.7
	D4 – middle management	12	4.9
Marital status	Single	92	37.6
	Married	150	61.2
	Missing values	3	1.2
Parental status	With children	143	58.4
	Without children	99	40.4
	Missing values	3	1.2

C1–D4, patterson grade levels.
f, frequency.

Measuring instruments

The researchers used the following measuring instruments in the empirical study.

Items to measure work–nonwork conflict: The researchers used self-developed items to measure the conflict between work and various nonwork roles. These items were similar to preliminary items used in developing the Work–nonwork Interference Scale of Koekemoer, Mostert, and Rothmann (2010).

These items measure conflict in both directions, namely work-to-nonwork and nonwork-to-work. The researchers phrased all the items 'How often does it happen that …' and used a 4-point scale that ranged from 0 ('never') to 3 ('always'). The researchers developed 24 items to measure conflict between work and various nonwork roles (like spousal, parental, religious or spiritual and home or domestic roles) and 24 items to measure conflict between nonwork roles (spousal, parental, religious or spiritual and domestic) and work.

More specifically, the researchers developed six items for each proposed subscale in both directions: work–nonwork conflict and nonwork–work conflict; work–spouse conflict ('… your work interferes with your relationship with your spouse or partner'); work–parent conflict ('… your job makes it hard for you to have a good relationship with your child[ren]'); work–religion or spirituality conflict ('… your work environment does not encourage your religious or spiritual beliefs'); work–domestic conflict ('… your job interferes with your domestic responsibilities at home'); spouse–work conflict ('… your relationship with your spouse or partner interferes with your work'); parent–work conflict ('… your work suffers because you need to take care of your child[ren]'); religion or spirituality–work conflict ('… your religious or spiritual commitments interfere with your work schedule'); and domestic–work conflict ('… you have to rearrange your work schedule because of your domestic responsibilities').

The results section reports the construct validity of these items as preliminary analyses.

A biographical questionnaire: The biographical characteristics the researchers measured were age, race, educational level, household situation (marital status and/or having children or not) and type of position. With the biographical information the researchers obtained, they were able to compare the differences in work–nonwork conflict and nonwork–work conflict for the different biographical groups in the platinum mine.

Research procedure

The researchers gave the HR manager a research protocol letter explaining the research procedure and requesting participation before the start of the study. After the researchers obtained approval for the project, the participants were voluntarily involved in the research process.

The researchers distributed questionnaires. The questionnaires included letters that explained the goal and importance of the study as well as a list of contact persons for enquiries. The letters also informed participants about the confidentiality and anonymity of their participation.

The researchers kept all the data confidential. Only the researchers involved in the study could capture or analyse the data. The researchers protected the completed questionnaires at all times and kept them in a safe and secure location (locked cupboards in the office of the main researcher).

The researchers released no personal information that could lead to the identification of participants. Booklets were completed anonymously and only included numbers for record-keeping purposes.

The researchers also informed the participants that, if they participated in the research and completed the questionnaire, they were giving consent to the researchers to use the data for research purposes only.

The researchers gave participants three weeks to complete the questionnaires. Afterwards the researchers collected the questionnaires personally on an arranged date.

Statistical analysis

The researchers performed the statistical analysis with the SPSS program (SPSS Inc., 2005). In the preliminary analyses, the researchers performed exploratory factor analyses to determine the construct validity of the self-developed items that measured work–nonwork conflict. Here they used Cronbach alpha coefficients to assess the reliability of the instruments.

The researchers also used descriptive statistics (means, standard deviations, skewness and kurtosis) and inferential statistics to analyse the data.

In order to determine the prevalence of the work–nonwork conflict and nonwork–work conflict subscales, the researchers used paired-sample *t*-tests. Paired-sample *t*-tests assess whether the means of two groups are statistically different from each other.

The researchers used multivariate analysis of variance (MANOVA) to determine the significance of the differences between the work-nonwork conflict scales of different demographic groups. MANOVA is the counterpart of analysis of variance (ANOVA). It covers cases where more than one dependent variable occurs and where one cannot simply combine the dependent variables.

The researchers used Wilk's Lambda to test whether the population mean vectors for all groups were likely to be identical to those of the sample mean vectors for the different groups (Field, 2005; Tabachnick & Fidell, 2007).

When an effect was significant ($p \leq 0.05$) in MANOVA, the researchers used one-way analysis of variance to discover which dependent variables had been affected. ANOVA expresses the tests of interests as estimates of variance (Muller & Fetterman, 2002).

Results

Preliminary analysis

Before analysing the data, the researchers used two exploratory factor analyses to determine the construct validity of the self-developed items that measure work–nonwork conflict. The researchers analysed the items that measure the two directions of conflict (work–nonwork conflict items and nonwork–work conflict items) separately with exploratory factor analyses where they applied an oblique rotation method.

Exploratory factor analyses on the 24 items that measure work–nonwork conflict

Firstly, the researchers performed exploratory factor analyses on the 24 items that measure work–nonwork conflict. For this initial factor analysis on the work–nonwork conflict items, the researchers used multiple criteria to determine the number of factors.

The initial specific criteria the researchers used to determine the number of factors were factors with eigenvalues greater than 1 (Kaiser's criterion), cumulative percentages of variance, communalities and a scree plot of the factor eigenvalues.

Using these initial criteria, three factors emerged from these items. The researchers labelled these factors 'work–family interference', 'work–domestic interference' and 'work–religion or spirituality interference'.

In order to refine the results from this initial factor analysis, the researchers used additional criteria to determine the number of items to retain for the work–nonwork conflict scale. They retained items with loadings greater than 0.45 on at least one factor (Stephens & Sommer, 1996). In addition, according to Netemeyer, Boles, and Mcmurrian (1996) and

Bagozzi and Yi (1988), it is not advisable to retain items with extremely high factor loadings (> 0.9). One should check them for redundancy in the item wording that could result in within-factor correlated measurement errors.

Based on these criteria, the researchers excluded three items from the additional factor analyses that followed. These were work–spouse item 1, work–spouse item 2 and work–religion/spirituality item 6.

Table 2 (factor analysis on 21 items) gives the final factor analysis for the items that measure work–nonwork conflict. It reports only the final items that the researchers retained. Table 2 does not include the three items that the researchers excluded. Nevertheless, three factors still emerged and measured the same three scales as before: work–family conflict, work–domestic conflict and work–religion/spirituality conflict.

Secondly, the researchers analysed the 24 items that measure nonwork–work conflict using an additional and separate exploratory factor analysis. Table 3 gives the factor loadings and percentage of variance for these 24 nonwork–work conflict items. Two factors emerged from the nonwork–work conflict items. The researchers labelled them 'family–work conflict' and 'private–work conflict' (see Table 3). The researchers obtained high factor loadings and communalities for all the items. Although the researchers used the same criteria as they did for the work–nonwork conflict items, they retained all 24 items. They developed the final two scales for nonwork–work conflict.

Descriptive statistics

After the preliminary analyses, the researchers estimated the descriptive statistics and Cronbach alpha coefficients for the work–nonwork conflict and nonwork–work conflict subscales (see Table 4).

Table 4 shows that the researchers obtained acceptable Cronbach alpha coefficients for all the subscales compared to the guideline of $\alpha > 0.7$ (Nunnally & Bernstein, 1994).

Prevalence

In order to determine the prevalence of the work–nonwork conflict and nonwork–work conflict subscales, the researchers performed separate prevalence analyses.

Firstly, it was important to establish which direction of conflict is more prevalent (work–nonwork conflict or nonwork–work conflict by testing Hypothesis 1a).

Secondly, it was important to establish, within each direction of conflict, which specific work–nonwork roles and which specific nonwork–work roles were more prevalent by testing Hypothesis 1b.

Table 5 gives the results of the different paired-sample *t*-tests to:

TABLE 2: Factor loadings, communalities and percentage variance for the work to nonwork conflict scale items (final factor analysis on 21 items).

Items	Factor labels			Communalities
	F_1	F_2	F_3	
Work–spouse item 3	0.52	0.33	0.08	0.74
Work–spouse item 4	0.87	0.09	-0.07	0.77
Work–spouse item 5	0.55	0.22	0.08	0.69
Work–spouse item 6	0.67	0.08	0.07	0.72
Work–parent item 1	0.45	0.21	0.21	0.72
Work–parent item 2	0.53	0.05	0.27	0.73
Work–parent item 3	0.82	-0.07	0.07	0.7
Work–parent item 4	0.74	0.19	-0.02	0.75
Work–parent item 5	0.92	-0.11	0.01	0.76
Work–parent item 6	0.58	0.03	0.16	0.58
Work–domestic item 1	-0.05	0.03	0.92	0.78
Work–domestic item 2	0.03	0.02	0.87	0.81
Work–domestic item 3	0	-0.01	0.86	0.75
Work–domestic item 4	0.24	0.19	0.42	0.66
Work–domestic item 5	0.05	0.14	0.71	0.75
Work–domestic item 6	0.28	-0.07	0.61	0.66
Work–religion or spirituality item 1	-0.06	0.74	0.12	0.61
Work–religion or spirituality item 2	0.18	0.68	0.04	0.76
Work–religion or spirituality item 3	-0.12	0.94	0.1	0.79
Work–religion or spirituality item 4	0.21	0.58	0.05	0.68
Work–religion or spirituality item 5	0.19	0.75	-0.11	0.69
Percentage variance	59.4	5.42	3.77	-

F_1, work–family conflict; F_2, work–domestic conflict; F_3, work–religion/spirituality conflict.

TABLE 3: Factor loadings, communalities, percentage variance for the nonwork to work conflict scale items.

Items	Factor labels		Communalities
	F_1	F_2	
Spouse–work item 1	0.75	0.1	0.79
Spouse–work item 2	0.97	-0.11	0.81
Spouse–work item 3	0.67	0.13	0.75
Spouse–work item 4	0.71	0.14	0.73
Spouse–work item 5	0.77	0.17	0.88
Spouse–work item 6	0.83	0.03	0.83
Parent–work item 1	0.9	-0.08	0.72
Parent–work item 2	0.81	0.06	0.81
Parent–work item 3	0.83	-0.05	0.69
Parent–work item 4	0.69	0.22	0.84
Parent–work item 5	0.89	-0.03	0.88
Parent–work item 6	0.85	0.03	0.82
Domestic–work item 1	0.31	0.5	0.71
Domestic–work item 2	0.17	0.68	0.76
Domestic–work item 3	0.18	0.69	0.76
Domestic–work item 4	0.2	0.57	0.77
Domestic–work item 5	0.19	0.67	0.79
Domestic–work item 6	0.24	0.66	0.82
Religion or spirituality–work item 1	-0.01	0.89	0.86
Religion or spirituality–work item 2	-0.07	0.9	0.83
Religion or spirituality–work item 3	-0.11	0.89	0.74
Religion or spirituality–work item 4	0	0.88	0.84
Religion or spirituality–work item 5	-0.06	0.95	0.99
Religion or spirituality–work item 6	0.02	0.85	0.8
Percentage variance	66.42	5.05	-

F_1, family–work conflict; F_2, private–work conflict.

TABLE 4: Descriptive statistics and Cronbach alpha coefficients of the work–nonwork conflict and nonwork–work conflict subscales (n = 245).

Item	Mean	SD	Cronbach alpha
Work–nonwork conflict subscales			
Work–family conflict scale	1	0.72	0.95
Work–domestic conflict scale	1.99	0.68	0.93
Work–religion or spirituality conflict scale	0.82	0.76	0.91
Nonwork–work conflict subscales			
Family–work conflict scale	0.8	0.7	0.93
Private–work conflict scale	0.58	0.68	0.92

SD, standard deviation.

- establish which direction of conflict is more prevalent
- obtain the results of the paired-sample *t*-tests to indicate specifically, within the direction of conflict, which work–nonwork roles and which nonwork–work roles are more prevalent.

With regard to the prevalent direction of conflict (work–nonwork conflict and nonwork–work conflict), paired-sample *t*-tests revealed that employees reported more work–family conflict (M = 1) than family–work conflict (M = 0.8, $t(500) = 5.12$, $p < 0.01$). The results also showed that workers experienced significantly more work–domestic conflict (M = 0.99) than private–work conflict (M = 0.58, $t(500) = -9.79$, $p < 0.01$) and more work–religion or spirituality conflict (M = 0.82) than private–work conflict (M = 0.58, $t(500) = -5.17$, $p < 0.01$). These results support Hypothesis 1a.

With regard to the prevalence of the different specific work–nonwork conflict subscales, workers experienced more work–family conflict (M = 1) than work–religion or spirituality conflict (M = 0.81, $t(500) = 5.44$, $p < 0.01$) and more work–domestic (M = 0.99) than work–religion or spirituality (M = 0.82, $t(500) = 4.75$ $p < 0.01$). The researchers found no significant differences in the prevalence of work–family conflict (M = 1) and work–domestic conflict (M = 1, $t(500) = 0.04$, $p > 0.01$). With regard to the prevalence of the two nonwork–work conflict subscales, results indicated more family–work conflict (M = 0.8) than private–work conflict (M = 0.59, $t(500) = 7.05$, $p < 0.01$). Therefore, these results support Hypothesis 1b.

TABLE 5: Paired-sample *t*-tests for the prevalence of the direction of conflict (work–nonwork conflict and nonwork–work conflict) and the prevalence of specific work–nonwork conflict and specific nonwork–work conflict.

Item	*t*	*df*	Significance
Prevalence of the direction of conflict (work–nonwork conflict and nonwork–work conflict)			
Work–family (M = 1.01) vs. family–work (M = 0.8)	5.12	198	0*
Work–domestic (M = 0.99) vs. private–work (M = 0.58)	-9.79	244	0*
Work–religion/spirituality (M = 0.82) vs. private–work (M = 0.58)	-5.17	244	0*
Prevalence of specific work–nonwork conflict and specific nonwork–work conflict subscales			
Work–family (M = 1) vs. work–domestic (M = 1)	0.04	200	0.97
Work–family (M = 1) vs. work–religion (M = 0.81)	5.44	200	0*
Work–domestic (M = 0.99) vs. work–religion (M = 0.82)	4.75	244	0*
Family–work (M = 0.8) vs. private–work (M = 0.59)	7.05	198	0*

M, mean value; t, t-value; df, degree of freedom.
*, $p \leq 0.05$ denotes statistically significant.

Differences between demographic groups

After the analyses of prevalence, the researchers used MANOVA (multivariate analysis of variance) statistics to determine the differences between demographic groups with regard to work–nonwork conflict and nonwork–work conflict. The demographic groups that the researchers compared were gender, age, language, qualifications, marital and parental status.

The researchers analysed the results for statistical significance using Wilk's Lambda statistics (Field, 2005; Tabachnick & Fidell, 2007).

Table 6 gives the results of the MANOVA analyses.

The analysis of the Wilk's Lambda values showed no statistically significant differences ($p < 0.05$) in work–nonwork conflict between the gender, age, qualifications or parental status of the employees. However, the researchers found statistically significant differences ($p < 0.05$) with language groups and marital status. The researchers used ANOVA to analyse further the relationship between work–nonwork conflict and the demographic variable levels that showed a statistically significant difference.

Table 7 gives the results of the ANOVA based on language.

Table 7 showed statistically significant differences between levels of private–work conflict. African-speaking participants experienced higher levels of private–work conflict compared to Afrikaans-speaking and English-speaking participants.
Table 8 gives the results of the ANOVA based on marital status.

Table 8 showed statistically significant differences between levels of private–work conflict. Single participants' experienced higher levels of private–work conflict compared to married ones.

These results provide partial support for Hypothesis 2. They show differences for work–nonwork conflict for some of the proposed demographic groups (marital status and language groups).

TABLE 6: MANOVA – differences in work–nonwork conflict of demographic groups[a].

Variable	Wilk's Lambda values	*F*	*df*	*p*	Partial Eta squared
Gender	0.97	1.01	5	0.41	0.03
Age	0.92	1.06	15	0.39	0.03
Language	0.92	3.52	5	0.01*	0.08
Qualification	0.96	1.58	5	0.17	0.04
Marital status	0.89	4.7	5	0*	0.11
Parental status	0.98	0.93	5	0.46	0.02

MANOVA, multivariate analysis of variance; F, F-value; df, degree of freedom; Eta, describes the ratio of variance explained in the dependent variable by a predictor whilst controlling for other predictors.
[a], The term 'work–nonwork conflict' is used here as a global concept in the MANOVA analyses, and incorporates 'nonwork–work conflict'.
*, $p \leq 0.05$ denotes statistically significant.

Discussion

The general objective was to investigate the prevalence and demographic differences in work–nonwork conflict in a mining environment.

The first specific objective related to the overall and specific prevalence of work–nonwork conflict and nonwork–work conflict and their subscales. The results showed that mining employees reported more work–nonwork conflict than nonwork–work conflict.

One might attribute the prevalent direction of conflict (work–nonwork over nonwork–work) to the mandatory nature of work so that employees tend to prioritise work over family or nonwork matters (Frone *et al.*, 1992; Gutek *et al.*, 1991). Miners also work in severely stressful situations and are exposed to various demands like shift work, unplanned overtime, suffering and death, job pressures and emotional stressors (Singer, 2002). They might feel that they are unable to change any of these factors. Consequently, the interference or conflict from their work domain is more prevalent and supports Hypothesis 1a.

An alternative explanation might be that, for employees in this study, the work domain might be more salient than the nonwork domains. As a result, employees might invest more time and energy in their work domain. This might affect their time and investment in nonwork domains.

Burke and Reitzes (1981) stated that the saliency people attach to their identities or roles influences how much effort they put into each role and how well they perform in each. According to Stryker (1968), the various identities that make up the self exist in a hierarchy of salience. People are most likely to call upon the identities they rank highest in situations that involve different aspects of the self.

In this study, the workers probably rated their family identities highest. Therefore, work interferes most negatively on family life. More specifically, employees in this study experienced more work–family conflict than work–domestic conflict and work–religion or spirituality conflict.

However, employees also experienced more work–domestic conflict than work–religion or spirituality conflict. This shows that the work environment conflicts most with the family domain and least with religion or spirituality. This might indicate that employees value their family lives and domestic roles more than their religious or spiritual ones. Therefore, because they are unable to participate in these domains because of their high workloads or the mandatory nature of the mining work environment, the conflict in these domains is more prevalent.

These findings seem to be consistent with other empirical studies, which showed that interference from the work domain is more prevalent than interference from the home domain (Bond *et al.*, 1998; Frone, 2003; Geurts & Demerouti, 2003; Grzywacz & Marks, 2000; Rost & Mostert, 2007). In addition, work–family conflict might be more prevalent than work–domestic conflict because of the family salience that employees have (Frone, Russell & Cooper, 1992; Luchetta, 1995; McClellan & Uys, 2009).

TABLE 7: ANOVA – differences in work–nonwork conflict based on language.

Item	Mean values Afrikaans and English	Mean values African languages	*p*	Partial Eta squared
Work–family conflict	0.97	1.08	0.28	0.01
Work–domestic conflict	1.02	0.98	0.68	0
Work–religion conflict	0.74	0.95	0.06	0.02
Family–work conflict	0.75	0.89	0.16	0.01
Private–work conflict	0.5	0.73	0.02*	0.03

ANOVA, analysis of variance; Eta squared, describes the ratio of variance explained in the dependent variable by a predictor whilst controlling for other predictors.
*, $p \leq 0.05$ denotes statistically significant.

TABLE 8: ANOVA – differences in work–nonwork conflict based on marital status.

Item	Mean values single	Mean values married	*p*	Partial Eta squared
Work–family conflict	1.09	0.98	0.34	0.01
Work–domestic conflict	0.97	1.02	0.62	0
Work–religion conflict	0.99	0.77	0.07	0.2
Family–work conflict	0.96	0.74	0.06	0.02
Private–work conflict	0.85	0.51	0*	0.05

ANOVA, analysis of variance; Eta squared, describes the ratio of variance explained in the dependent variable by a predictor whilst controlling for other predictors.
*, $p \leq 0.05$ denotes statistically significant.

Although work–nonwork conflict was more prevalent amongst mining employees, the results also showed the prevalence of the specific subscales of nonwork–work conflict. Conflict that originates from family roles (including parental and spousal roles) was higher than the conflict that originates from the private ones (including religious and domestic roles). Therefore, family roles are more likely to interfere with employees' work than their domestic responsibilities or their religious or spiritual roles do.

An explanation for this might be that, unlike with domestic roles, persons with family roles are not always able to plan according to a schedule because some unplanned situations may occur in these family roles. Parents, for example, may not always foresee their children becoming ill. This might force employees to turn up late for work or to apply for family responsibility leave.

In addition, according to the *Employment Equity Act, Act 55 of 1998* (EEA), persons may not be unfairly discriminated against on the grounds of their religions (Venter, 2004). Therefore, employees might feel that they can practise their religions at work without prejudice and this might reduced their conflict.

These results, on the prevalence of the specific subscales of work–nonwork conflict and nonwork–work conflict, support hypotheses 1b.

The second specific objective of this study related to the possible differences between work–nonwork conflict and

nonwork–work conflict for various demographic groups (gender, age, language, qualifications, marital and parental status) in the mining industry. Overall, the results showed significant differences in work–nonwork conflict based on employees' language and marital status. Therefore, they support Hypothesis 2 partially.

Although the researchers expected differences for gender, age, qualifications and parental status, based on previous studies (Oldfield & Mostert, 2005; Rost & Mostert, 2007; Van Tonder, 2005), they found no statistically significant differences.

One could suggest various reasons to explain the lack of differences in the different demographic groups. These could include the homogeneity of the sample (the distribution of demographic groups was not always equal) and the structure of the work environment (all participants were from the same Patterson levels and possibly age groups). In addition, the possible perceptions of women in the work domain (women are working in a 'male environment') and because more fathers are becoming more active in family matters (Daly & Palkovitz, 2004; Heraty *et al*., 2008; Lingard & Francis, 2005; Root & Wooten, 2008) might explain the lack of differences.

Although the researchers found no differences for some demographic groups, the differences based on language showed that participants who spoke African languages experienced higher levels of private–work conflict compared to Afrikaans-speaking and English-speaking participants.

A possible reason for this may be that each cultural or language group has different characteristics that influence how it understands conditions and situations. Rost and Mostert (2007) also stated that the cultural differences and backgrounds might influence the way workers perceive the working environment.

People who speak African languages are more orientated towards society and more often merge the boundaries between work and home. As a result, they experience more conflict between private and work life (Rost & Mostert, 2007).

For example, Oldfield and Mostert (2005) stated that it is considered disrespectful in the African culture not to attend family and/or community funerals. Therefore, they have more family demands to address. In addition, a higher percentage of African children live with their grandparents (Amoateng, Heaton & Kalule-Sabiti, 2007). They usually live in different provinces to the parents, compared to other race groups. This may mean that the parents miss birthdays, sporting events or parent-teacher meetings. This, in turn, may cause higher levels of conflict between private and work life.

Affirmative action policies have also led to more women and dual-earning families entering the workforce, thereby changing the traditional role of men who speak African languages (Brink & De la Rey, 2001; Schreuder & Theron, 2001). They are usually very traditional and do not always want to adapt to changes in their way of life, thus causing African men to struggle to accept this new lifestyle. For example, it might be difficult for some African men to accept that their wives want to follow careers when their own mothers and grandmothers never worked. This can also explain why there are high levels of private–work conflict.

These differences contradict the findings of Frone *et al*. (1997), and Pieterse and Mostert (2005). They found no differences in work–home interaction between different language groups, even though they had small and economically homogeneous samples.

Unmarried workers experienced higher levels of private–work conflict than married ones. Grzywacz and Marks (2000) also showed that unmarried people tend to experience less positive work–family interaction. According to Ross, Mirowsky and Goldsteen (1990), unmarried people have higher levels of depression, anxiety and other forms of psychological distress than married people do.

A person who lives alone may be isolated from important social and economic ties (Mirowsky & Ross, 1989). These ties may help to create security, belonging and direction. Without them, a person may feel lonely and unprotected. A partner or spouse who helps with domestic tasks, family matters or gives emotional support might provide a buffer against private–work conflict.

Unmarried people also have to handle their responsibilities and conflict without the support of spouses and can consequently experience higher levels of private–work conflict. Unmarried people will most probably have family identities that are lower in their salience hierarchy. This means that the saliency unmarried people attach to their family roles is not as high as the saliency married people attach to their family roles. Therefore, unmarried workers' commitment to their family roles, and the effort they put into them, might be less.

Alternatively, married employees may occasionally miss career opportunities when they need to put their marital responsibilities ahead of their work. For example, when employers offer promotions that will cause employees to be away from home from time to time, unmarried people will be more motivated to take the promotion. On the other hand, married employees might reject promotions in order to maintain favourable relationships with their families.

Furthermore, married employees share responsibilities and decide how to handle conflict together. Married people also have higher household incomes (Bianchi & Spain, 1986). This may mean that marital quality or spousal support is an important buffer to job-related stress (Barnett, 1996) and can have an effect on levels of private–work conflict. In addition, Grzywacz and Marks (2000) stated that family-related social support correlated positively with home–work interaction.

Implications for managers

This study yielded promising and valuable findings that organisations and their managers could use. Some recommendations that emerged from this study include that the mining industry should:

- provide support in terms of resources
- effectively manage work–nonwork conflicts that are conducive to helping employees align their work and nonwork domains.

Training people to use the most effective ways of coping with demands in their work environments may reduce their work–family conflicts.

The mining industry must be aware that the work domain is interfering with the different roles employees fulfil outside work (parental, spousal, religious or spiritual and home or domestic) and vice versa.

More specifically, managers and supervisors must be aware that the negative interference between work and family roles are more prevalent than that between work and other life roles. Therefore, managers should focus on interventions and programmes that address this problem specifically. These interventions and programmes will help to prevent crises and to help with the everyday management of employees.

For example, organisations can offer flexible working hours, childcare facilities or parental leave. Another example of an intervention to address the problem of private–work conflict may be extra family responsibility leave specifically for family and/or community funerals. Workers will experience less stress and less work–nonwork conflict if they know there are programmes to address these issues.

These specific interventions will result in the long-term well-being of employees and make organisations more successful.

Limitations of the study

Although this current study yielded promising results, it has limitations.

The main limitation is the cross-sectional design of the study. Cross-sectional studies mean that one can make no concrete decisions about the cause-and-effect relationship between the variables (Field, 2005).

The second limitation of this study is the use of self-report questionnaires. This may cause different kinds of problems. It includes that participants may not understand the questions or the phenomenon commonly called 'method-variance' or 'nuisance' (Dollard & Winefield, 1998; Semmer, Zapf & Greif, 1996; Spector, 1992; Wall, Jackson, Mullarkey & Parker, 1996).

The size of the sample ($n = 245$) and it homogeneity is another limitation. The sample included only mining employees. Therefore, it is difficult to generalise the results to other occupational groups. It could also explain why there are few statistically significant differences between the different demographic groups in work–nonwork role conflict.

Even though the instrument is valid and reliable, it can be a limitation because it is new and should be tested in different environments.

Suggestions for future research

The researchers recommend larger sample sizes and that questionnaires are administered to various occupational groups in South Africa.

Future studies could also investigate the possible positive interaction between work and other life roles of people. Studies of interference could also be combined with certain antecedents and consequences.

Finally, the researchers recommend that longitudinal research designs are used in work–nonwork conflict research because, for many people, work–nonwork conflict undoubtedly fluctuates over time.

Conclusion

In conclusion, these results suggest that there are different work–nonwork conflicts. They also suggest that people experience interference between life roles (family, parental, spousal, religious or spiritual and home or domestic) differently.

The results also showed that different demographic groups differ in their experiences of work–nonwork conflict and nonwork–work conflict. Work–nonwork conflict is more prevalent than nonwork-conflict and some specific work–nonwork role conflicts are more common. For example, work–family conflict is more prevalent than work–domestic conflict and work–domestic conflict is more common than work–religion conflict.

The experiences of nonwork–work conflict differ for different language groups. Participants who speak African languages experience more private–work conflict than family–work conflict.

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