

# Work-life balance, job satisfaction and turnover intention amongst information technology employees

R.M. Oosthuizen, M. Coetzee & Z. Munro

## ABSTRACT

Talent retention is of particular concern in the information technology (IT) sector owing to globalisation, the skills shortage and rapidly advancing technology. Employee turnover has significant costs and negative consequences for organisations. The objective of this study was to explore the association between employees' experiences of work-life balance (as measured by the Survey Work-Home Interaction-Nijmegen), job satisfaction (as measured by the Minnesota Satisfaction Questionnaire) and their turnover intention (as measured by the Turnover Intention Scale). A random sample of 79 permanently employed salaried employees in a South African IT company participated in the study. The participants were represented by predominantly white and married people between the ages of 26 and 45 and people with more than 10 years' tenure. Regression analysis showed that experiences of negative work-home interaction and positive work-home interaction significantly predicted job satisfaction and turnover intention. Job satisfaction also significantly predicted turnover intention. However, no interaction effect was observed between overall work-life balance and job satisfaction in predicting turnover intention. White employees had significantly stronger experiences of job satisfaction and negative home-work interface, while black employees had significantly stronger positive experiences of home-work interface and lower levels of job satisfaction. White and black employees, marital status and tenure groups differed significantly regarding their job satisfaction. Talent retention strategies should consider the relationships between work-life balance, job satisfaction and turnover intention.

**Key words:** Knowledge workers, IT employees, work-life balance, job satisfaction, turnover intention, talent management, talent retention

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## Introduction

Against the background of globalisation, the skills shortage and the “talent war”, it is evident that talent retention is a strategic issue for an organisation’s survival, adaptation and competitive advantage (Martins & Coetzee 2007; Munro 2015; Takawira, Coetzee & Schreuder 2014; Van Dyk & Coetzee 2012). The knowledge economy has led to increased competition for those employees with scarce and desirable skills, knowledge and experience. In the knowledge economy, the skills and knowledge (human and intellectual capital) of employees are often the main enablers for organisations to leverage a competitive advantage (Botha, Bussin & De Swardt 2011; Van Staden & Du Toit 2011). An organisation’s success depends on the mental ability of a relatively small number of highly skilled knowledge workers (Ramsey & Barkhuizen 2011). When knowledge workers leave, the organisation loses the knowledge they take with them and cannot sustain its competitive advantage (Ramsey & Barkhuizen 2011). The challenge for organisations in the knowledge economy is to optimise, create, transfer, assemble, protect and exploit knowledge assets that underpin organisational competencies, which in turn underscore their products and services (Ramsey & Barkhuizen 2011).

Talent retention in the IT sector is of particular concern because the global labour market provides increased career opportunities for IT professionals who have strong tendencies to leave their organisations (Munro 2015; Van Dyk & Coetzee 2012). IT professionals are regarded as key knowledge workers (Lumley, Coetzee, Tladinyane & Ferreira 2011) who have specialised knowledge and skills that are difficult to replace (McKnight, Philips & Hardgrave 2009). The increasing demand for skilled IT professionals has forced organisations to start devising retention strategies aimed at retaining IT employees with critical skills and experience (Mohlala, Goldman & Goosen 2012). The retention of IT employees is critical to an organisation, as they hold tacit knowledge about the interface between systems and key business processes (McKnight et al. 2009). Employee turnover has significant costs and negative consequences for any organisation (Bothma 2011; Du Plooy & Roodt 2010; 2013; Takawira et al. 2014) including impaired organisational functioning, service delivery and administration (Bothma & Roodt 2012; 2013).

## Objectives of the study

Research has shown that the experiences of work-life balance and job satisfaction and their turnover intention are important to consider in the retention of knowledge workers (Döckel, Basson & Coetzee 2006; Van Dyk & Coetzee 2012). The retention of highly skilled professional employees such as IT staff becomes more complex

when considering the multi-culturally diverse workplace represented by South African organisations (Munro 2015). The aim of this study was therefore to explore the association between a sample of IT staff's experiences of work-life balance, job satisfaction and turnover intention, and whether individuals from different age, gender, ethnicity, marital status and tenure groups differed significantly in relation to these variables. Knowledge of the association between employees' work-life balance, job satisfaction and turnover intentions and how diverse groups of IT employees differ in relation to these variables, could potentially help to inform strategies aimed at improving employee ("talent") retention in the IT sector.

### Work-life balance

The concept of work-life balance has been growing in interest amongst academics and practitioners and is at the core of issues central to human resource development (Sturges & Guest 2004). Work-life balance is defined as the degree to which an individual is engaged in and equally satisfied with his or her work role and family role consisting of the following three dimensions of work-family balance: time balance, involvement balance and satisfaction balance (Greenhaus, Collins & Shaw 2003). Time balance involves devoting equal time to work and family. Involvement balance entails equal involvement in work and family (Greenhaus et al. 2003). Satisfaction balance means equal satisfaction with work and family (Greenhaus et al. 2003; Chimote & Srivastava 2013).

Sturges and Guest (2004) posit that work-life balance denotes a balance not only between work and family, but also between work and the rest of one's life activities. According to Koekemoer and Mostert (2010), various researchers in the work-family literature have classified previously researched antecedents of work-life balance into the following three main categories: demographic and personal characteristics, family or non-work characteristics and work- or job-related characteristics. Demographic and personal characteristics include gender, age, family status, negative affectivity and personality (Koekemoer & Mostert 2010). Family or non-work characteristics include social support, parental stressors, family role ambiguity and family stressors (Koekemoer & Mostert 2010). Work- or job-related characteristics include work stressors, work demands, hours spent at work, job stress, job support and flexibility at work (Koekemoer & Mostert 2010).

The literature suggests many positive implications of experiences of work-life balance, including the following: Work-home interaction (WHI) functions as an important intervening pathway between potential stressors in the work and home domains and psychological health (Geurts, Rutte & Peeters 1999); WHI mediates

the impact of workload on workers' well-being (Geurts et al. 2003); work experiences and family experiences can have additive effects on well-being (Voydanoff 2001); and participating in multiple roles can have beneficial effects on both physical and psychological well-being (Barnett & Hyde 2001; Demerouti & Geurts 2004; Geurts et al. 1999; Geurts & Demerouti 2003; Voydanoff 2001). Furthermore, participating in multiple roles protects individuals from the effects of negative experiences in any one role (Barnett & Hyde 2001). In addition, work-family balance is considered to promote well-being (Greenhaus et al. 2003). However, the findings of Frone, Russell and Cooper (1997) suggest that both time- and strain-based WHI may compromise opportunities to recover from work demands, which in turn increases the chances that the demands of work will erode affective well-being and subjective health.

The South African socio-economic, political and societal circumstances influence employees' experiences of work-life balance differently in comparison with other countries. This is because of employment equity, where previously disadvantaged individuals become part of the workforce and are influenced by Westernisation that could potentially transform traditional, culture-specific family roles (Brink & De la Rey 2001). Little is known about how different resource characteristics such as race and culture shape the work-family experience (Potgieter & Barnard 2010). Mostert and Oldfield (2009) found significant differences in the work-home interaction amongst different socio-demographic groups (including ethnicity) and recommended further research of work-life balance differences in different socio-demographic groups.

An employee's age has an influence on his or her attitude to work, as job involvement becomes more stable with an employee's age, mainly because of job conditions becoming more stable (Lorence & Mortimer 1985). Sturges and Guest (2004) suggest that the relationship between work and non-work is more important to young employees than it is to other groups of workers, as young employees wish to develop and manage their own careers on their own terms, with a key focus being the achievement of balance between the work and non-work aspects of their lives.

## Job satisfaction

Job satisfaction refers to the intrinsic-extrinsic definition of job satisfaction of Weiss, Dawis, England and Lofquist (1967). Intrinsic satisfaction is derived from performing work and consequently experiencing the feelings of accomplishment, self-actualisation and identity with the work (Martin & Roodt 2008). Extrinsic satisfaction results from satisfaction with the work environment (Weiss et al. 1967) and is derived from the rewards the individual receives from peers, managers or the

organisation, which can take the form of advancement compensation or recognition (Martin & Roodt 2008).

The satisfaction level of employees plays a critical role in retaining employees, particularly those regarded as core employees or knowledge workers (Döckel et al 2006; Martins & Coetzee 2007). Organisations are attempting to understand why people leave and what strategies can be implemented to retain those employees (Martins & Coetzee 2007). The optimal functioning of an organisation depends in part on the level of job satisfaction of employees, as their full potential is needed at all levels of the organisation (Rothmann & Coetzer 2002). Employees seek congruence with the organisation, which can be described in terms of employees fulfilling the requirements of the organisation and the organisation fulfilling the requirements of its employees (Rothmann & Coetzer 2002). Employees will experience job satisfaction if they perceive that their capacities, experience and values can be utilised at work and that their work offers them opportunities and rewards (Rothmann & Coetzer 2002). Information on job satisfaction is valuable to an organisation, as satisfied employees experience physical and psychological well-being, while dissatisfied employees are more likely to be associated with absenteeism, psychological withdrawal and employee turnover (Rothmann & Coetzer 2002).

Job satisfaction involves employees' affective or emotional feelings and has major consequences for their lives (Sempane, Rieger & Roodt 2002). Information on the job satisfaction of employees is valuable to organisations (Rothmann & Coetzer 2002). Numerous research studies have been conducted to assess the effects of job satisfaction on employee productivity, absenteeism and turnover (Robbins 2001). Roznowski and Hulin (1992) found that job dissatisfaction is related to absenteeism, trade union activities and psychological withdrawal. If an organisation does not create conditions for minimal levels of job satisfaction, this may result in deterioration in productivity, increased employee turnover and absenteeism and a decline in morale (McKenna 2000).

Job satisfaction tends to be associated with a number of individual and organisational variables that include gender, age, education, hours of work and the size of the establishment (Blyton & Jenkins 2007). Research has shown that demographic factors such as gender, age, tenure and race are associated with job satisfaction (Ghazzawi 2008; Martin & Roodt 2008; Spector 1997). Research indicates an inconsistency in results comparing gender (Ghazzawi 2008; Spector 1997; 2008) and racial groups (Martin & Roodt 2008). Also, a positive linear relationship has been reported between employee age and job satisfaction, showing that employees become more satisfied with their job as their chronological age progresses (Martin & Roodt 2008). According to Bretz and Judge (1994), job tenure is the most basic

indicator of person-environment fit. An employee will remain in an environment he or she prefers (satisfaction), while the environment too finds the person acceptable (satisfactoriness). Employees seek to achieve and maintain correspondence with their environment (Weiss et al. 1967).

## Turnover intention

Turnover intention is defined as “the conscious and deliberate wilfulness to leave the organisation” (Tett & Meyer 1993: 262). In other words, it is the extent to which an employee plans to leave or stay with the organisation (Bothma & Roodt 2013; Jacobs & Roodt 2011). According to Tett and Meyer (1993), the intention to leave the organisation is the final step in a series of withdrawal cognitions leading to actual turnover. Job satisfaction and turnover intentions were found to be precursors in the withdrawal process which predict voluntary employee turnover (Du Plooy & Roodt 2010).

Employee turnover has significant costs and negative consequences for any organisation (Bothma 2011). The loss of highly skilled employees may have disruptive implications, which may include impaired organisational functioning, service delivery and administration (Bothma & Roodt 2012; 2013). Additionally, the loss of highly skilled employees may carry increased costs of rehiring and retraining employees (Bothma & Roodt 2012; 2013). These consequences provide a sound rationale for the study of turnover intention. Jacobs’ (2005) turnover intention model proposes that positive or negative perceptions of organisational culture (predictors) are related to turnover intentions (criterion). Variables such as job satisfaction, organisational citizenship behaviour, organisational commitment and knowledge sharing mediate this relationship (Bothma & Roodt 2013). Research by Igarria, Meredith and Smith (1994) found that organisational commitment and job satisfaction are the most immediate predictors of intention to stay with the organisation.

According to Kennedy (2006), although there is no single identifiable variable that can be identified as the primary cause of turnover intention, it has been positively correlated with age, years of employment, education, caseload complexity, self-esteem, organisational culture and job satisfaction. Research by Quan and Cha (2010) concluded that past turnover behaviour is a strong predictor of future turnover intentions, and that age, education, work experience, salary, past turnover behaviour and work hours are functional in formulating turnover intentions.

According to Ding and Lin (2006), career satisfaction and job satisfaction have the most significant effects on turnover intentions, with organisational commitment mediating the relationship. Research by Pienaar, Sieberhagen and Mostert (2007)

indicates that job satisfaction is the most significant predictor of turnover intention and is significantly and negatively correlated with turnover intention. Tian-Foreman (2009) found strong support for the hypothesised negative relationship between employee turnover intention and job satisfaction. Wheeler, Gallagher, Brouer and Sablinski's (2007) research, however, revealed statistical support for the fact that person-organisation misfit and job dissatisfaction do not necessarily lead to turnover intention.

Identifying the key factors that may be related to turnover intention could enable organisations and researchers to proactively identify the key determinants of turnover and develop and manage strategies to reduce voluntary turnover (Mitchell, Holtom & Lee 2001; Pienaar et al. 2007). Employee turnover has significant costs and negative consequences for any organisation (Bothma 2011; Du Plooy & Roodt 2010, 2013; Takawira et al. 2014), which may have disruptive implications, including impaired organisational functioning, service delivery and administration and increased costs of rehiring and retraining employees (Bothma & Roodt 2012; 2013). Research on turnover intention can be used to manage the turnover process and help develop strategies or interventions aimed at reducing employee turnover and its associated costs (Du Plooy & Roodt 2010; Tuzun & Kalemci 2012).

Various research studies have found no significant relationship between gender and turnover intention (Joseph, Ng, Koh & Ang 2007; Martin & Roodt 2008). Race is a poor and inconsistent variable when used as a predictor of turnover intention (Martin & Roodt 2008). However, Du Plooy and Roodt (2013) found that race moderates the prediction of turnover intention. Research indicates a significant relationship between the age of an employee and his or her turnover intention, with turnover intentions decreasing as age increases (Chawla & Sondhi 2011; Ferres, Travaglione & Firms 2003; Martin & Roodt 2008). Du Plooy and Roodt (2013) found that age moderates the prediction of turnover intention. A significant relationship exists between job tenure and turnover intention (Mkavga & Onyishi 2012).

Empirical research has shown positive associations between work-life balance and job satisfaction (Virick, Lily & Casper 2007). An Australian study by Fox and Fallon (2003) suggested that positive experiences of work-life balance significantly increased levels of job satisfaction and decreased turnover intentions. It appears from their study that turnover intention could be reduced by improving employees' job satisfaction through successful work-life balance. Noor (2011) also found significant associations between employees' work-life balance, job satisfaction and intentions to leave the organisation. However, the nature of the association between these three constructs and the way in which various biographical groups (age, gender, ethnicity, marital status and tenure) differ regarding these constructs in the South African IT

environment are not well known. In the light of increasing concerns about retaining valuable South African IT staff, the present study is deemed to be timely and important. More specifically, the study aimed to answer the following three research questions:

- What is the magnitude and direction of the association between individuals' age, gender, ethnicity, marital status, tenure, work-life balance, job satisfaction and turnover intention?
- Do individuals' experiences of work-life balance have an interaction (moderating) effect with their job satisfaction in predicting their turnover intention?
- Do individuals from various age, gender, ethnicity, marital status and tenure groups differ significantly regarding their experiences of work-life balance, job satisfaction and turnover intention?

## Method

### Participants and procedure

A quantitative cross-sectional survey-based research design was applied in this study. The population for this empirical research comprised all the employees of an IT organisation in South Africa with IT skills and experience ( $N = 440$ ). A stratified random sample of 260 ( $n = 260$ ) was invited to participate voluntarily. A final sample of 79 respondents ( $n = 79$ ) completed the surveys, yielding a response rate of 30.38%. The participants were represented by predominantly white (68%) and black (African, coloured and Indian: 32%) people. Married (66%) and unmarried (single and divorced: 34%) people between the ages of 26 and 45 (46%), and people with more than 10 years' tenure (62%) were representative of the sample.

### Measuring instruments

A biographical questionnaire was compiled and used in order to gather information pertaining to the participants' age, gender, ethnicity, marital status and tenure. The Survey Work-Home Interaction-Nijmegen (SWING) instrument was used to measure work-life balance (Geurts, Taris, Kompier, Dijkers, Van Hooff & Kinnunen 2005). This instrument distinguishes between four types of home-work-interaction, namely negative home-work-interaction (NHWI); positive home-work-interaction (PHWI); negative work-home-interaction (NWHI); and positive work-home-interaction (PWHI) (Geurts et al. 2005; Marais, Mostert, Geurts & Taris 2009). The items were answered on a four-response format varying from 0 (never) to 3

(always). The following reliabilities have been found in South Africa: NWHI 0.85 – 0.90; PWHI 0.67 – 0.79; NHWI 0.78 – 0.79; PHWI 0.77 – 0.79 (Marais et al. 2009). In the present study, the Cronbach alpha coefficients for the SWING and its sub-dimensions were greater or equal to 0.74 (high internal consistency reliability).

The Minnesota Satisfaction Questionnaire (MSQ20) (Weiss et al. 1967) was used to measure job satisfaction. The MSQ measures both the intrinsic and extrinsic dimensions of job satisfaction (Foxcroft & Roodt 2010). This study used the short form of the MSQ, namely the MSQ20. The MSQ20 consists of 20 items and uses a five-point Likert-type response format. Reliabilities in the South African context have been reported, with alphas ranging from 0.79 to 0.85 (Buitendach & Rothmann 2009). In the present study, the Cronbach alpha coefficients for the MSQ20 and its sub-dimensions were greater or equal to 0.89 (high internal consistency reliability).

Turnover intentions were measured with a six-item Turnover Intention Scale (TIS-6) (Bothma & Roodt 2013). The response scale was scored on a five-item Likert scale, varying between poles of intensity with 1 (never) to 5 (always) (Du Plooy & Roodt 2010). A Cronbach alpha reliability coefficient of 0.80 has been reported for the TIS-6 (Bothma & Roodt 2013). For the current study, the Cronbach alpha coefficient for the TIS-6 was 0.88, indicating high internal consistency reliability.

## Procedure and ethical considerations

Ethical clearance to conduct the study was obtained from the Research Ethics Committee of the institution, while permission to conduct the research was obtained in writing from the directors of the organisation. All the participants received in electronic format an information leaflet from the researcher informing them of the nature of, reason for, confidentiality, ethical procedures and voluntary nature of the study, together with a letter from the managing director of the organisation informing participants of the benefits and value of the study for the organisation, and encouraging their participation. The electronic leaflet provided each participant with a URL link which directed him or her to the survey. Owing to the possible sensitive nature of the study, participants were requested to complete the survey anonymously. The data was collected over a two-week period. The researcher maintained confidentiality, respected the participants' privacy and kept the completed questionnaires secure. No harm was done to the participants during the study.

## Statistical analysis

The SPSS (Statistical Package for the Social Sciences Version 23 1989; 2015) and the SAS (Statistical Analysis System Version 9.4 2002; 2012) programs were used

to analyse the data. Descriptive statistics summarised the means, deviations and Cronbach alphas. Correlation coefficients were calculated to indicate the correlations between the different biographical groups and between the variables. It was decided to set the significance value at a 95% confidence interval level ( $p \leq 0.05$ ), in order to counter the probability of a Type I error (Tredoux & Durrheim 2009). For the purposes of this study,  $r$  values larger than 0.30 (medium effect) were regarded as practically significant (Cohen 1992). Regression analysis was conducted to assess whether the biographical variables and the work-life balance and job satisfaction variables significantly predicted turnover intention and whether work-life balance had a significant interaction effect with job satisfaction in predicting turnover intention. The value of the adjusted  $R^2$  was used to interpret the results, as a number of independent variables had to be considered, with  $R^2$  values larger than 0.13 (medium effect) regarded as practically significant (Cohen 1992). The significance value for interpreting the results was set at  $Fp \leq .05$ .

Independent samples T-tests determined whether there were significant mean differences between the various biographical groups in relation to the respective variables. Levene's test for equality of variances was performed to determine variances between the biographical groups. The significance value for interpreting the results was set at  $p \leq .05$ . One-sample Kolmogorov-Smirnov tests were conducted to test for normality and determine whether the data was normally or non-normally distributed. The results revealed a normal distribution of the data. Harman's factor analysis was conducted in order to measure common bias variance and determine whether the majority of the variance could be explained by a single factor. No evidence of common method bias was identified.

## Results

Table 1 indicates that the total mean average score of overall work-life balance was ( $M = 2.21$ ;  $SD = 0.37$ ), indicating a relatively low level of work-life balance. The participants obtained the highest mean score on the positive home-work interaction (PHWI) sub-scale ( $M = 2.60$ ;  $SD = 0.72$ ), indicating above-average levels of positive influence from home to work, while the lowest mean score was for negative home-work interaction (NHWI) ( $M = 1.58$ ;  $SD = .49$ ), indicating very low levels of negative influence from home to work. Furthermore, the total mean average score of overall job satisfaction was ( $M = 3.65$ ;  $SD = 0.72$ ), indicating a relatively high level of job satisfaction. The total mean average score of turnover intention was ( $M = 2.86$ ;  $SD = 1.08$ ), indicating moderate levels of turnover intentions.

*Research question 1: What is the magnitude and direction of the association between individuals' age, gender, ethnicity, marital status, tenure, work-life balance, job satisfaction and turnover intention?*

Table 1 shows that negative work-home interaction (NWHI) had a significant negative association with job satisfaction ( $r = -.39$ ;  $p \leq .001$ ; moderate practical effect size) and a positive association with turnover intention ( $r = .51$ ;  $p \leq .001$ ; large practical effect size). On the opposite scale, positive work-home interaction (PWHI) had a significant positive association with job satisfaction ( $r = .48$ ;  $p \leq .001$ ; moderate practical effect size) and a negative association with turnover intention ( $r = -.43$ ;  $p \leq .001$ ; moderate practical effect size). Overall job satisfaction had a significant negative association with turnover intention ( $r = -.77$ ;  $p \leq .001$ ; large practical effect size). The  $r$  values were below the concerns for possible multicollinearity ( $r \leq .80$ ).

In terms of the biographical variables, negative work-home interaction (NWHI) had a negative correlation with age ( $r = -.25$ ;  $p \leq .03$ ; small practical effect size) indicating that NWHI decreased with age. Positive work-home interaction (PWHI) had a positive correlation with age ( $r = .31$ ;  $p \leq .01$ ; medium practical effect size) and a positive correlation with tenure ( $r = .24$ ;  $p \leq .03$ ; small practical effect size), indicating that PWHI increased with age and tenure. Negative home-work interaction (NHWI) had a positive correlation with ethnicity ( $r = .31$ ;  $p \leq .01$ ; medium practical effect size), while positive home-work interaction (PHWI) had a negative correlation with ethnicity ( $r = -.29$ ;  $p \leq .01$ ; small practical effect size).

Job satisfaction had a positive significant correlation with age ( $r = .40$ ;  $p \leq .05$ ; medium practical effect size), tenure ( $r = .41$ ;  $p \leq .05$ ; medium practical effect size) and ethnicity ( $r = .23$ ;  $p \leq .04$ ; small practical effect size), but a negative correlation with marital status ( $r = -.22$ ;  $p \leq .05$ ; small practical effect size). Turnover intention had a negative correlation with age ( $r = -.43$ ;  $p \leq .05$ ; medium practical effect size), indicating that an increase in age would lead to a decrease in turnover intention. Turnover intention also had a negative correlation with tenure ( $r = -.29$ ;  $p \leq .01$ ; small practical effect size).

*Research question 2: Do individuals' experiences of work-life balance have an interaction (moderating) effect with their job satisfaction in predicting their turnover intention?*

Two regression models were computed to explore (1) whether the biographical variables and the work-life balance variables significantly predict overall job satisfaction, and (2) the main effects of the biographical variables, the work-life balance variables and overall job satisfaction in predicting turnover intention and

the interaction (moderating) effect between overall work-life balance and job satisfaction in predicting turnover intention. Dummy variables were created for the biographical variables: age: < 35 years = 0; > 36 years = 1; gender: male = 0; female = 1; marital status: single/divorced = 0; married = 1; tenure: < 10 years = 0; > 10 years = 1.

Table 2 shows that in terms of job satisfaction, the regression model was significant (job satisfaction as the dependent variable;  $F = 6.78$ ;  $p \leq .0001$ ). The model explained 40% ( $R^2 = .40$ ; large practical effect) of the variance in job satisfaction. Ethnicity ( $\beta = .26$ ;  $p \leq .05$ ;  $sr^2 = .04$ ; moderate practical effect in terms of incremental variance explained) and positive work-home interaction (PWHI:  $\beta = .42$ ;  $p \leq .01$ ;  $sr^2 = .08$ ; moderate practical effect in terms of incremental variance explained) contributed positively and significantly in explaining the variance in job satisfaction, while negative work-home interaction (NWHI:  $\beta = -.24$ ;  $p \leq .05$ ;  $sr^2 = .04$ ; moderate practical effect in terms of incremental variance explained) contributed significantly and negatively in explaining the variance in job satisfaction. The semi-partial values showed that positive work-home interaction contributed the most in terms of the incremental variance explained in job satisfaction.

In terms of turnover intention, Table 2 shows that the regression model was significant (turnover intention as the dependent variable;  $F = 13.75$ ;  $p \leq .0001$ ). The model explained 65% ( $R^2 = .65$ ; large practical effect) of the variance in turnover intention. Gender ( $\beta = .16$ ;  $p \leq .05$ ;  $sr^2 = .02$ ; moderate practical effect in terms of incremental variance explained) and negative work-home interaction (NWHI:  $\beta = .32$ ;  $p \leq .001$ ;  $sr^2 = .06$ ; moderate practical effect in terms of incremental variance explained) contributed positively and significantly in explaining the variance in turnover intention. Job satisfaction had a major and negative significant effect in predicting turnover intention ( $\beta = -.65$ ;  $p \leq .001$ ;  $sr^2 = .22$ ; large practical effect in terms of incremental variance explained). The semi-partial values showed that job satisfaction contributed the most in terms of the incremental variance explained in turnover intention. No significant interaction effect between work-life balance and job satisfaction in predicting turnover intention was observed.

**Table 1:** Descriptive statistics: Means, standard deviations, internal consistency reliability coefficients and correlation coefficients between the biographical and construct variables

Variables	Mean	SD	$\alpha$	1	2	3	4	5	6	7	8	9	10	11	12
1 Age	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 Gender	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3 Ethnicity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 Marital status	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 Tenure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 NWHI	2.12	.61	.89	-.25*	.11	-.05	-.05	-.09	-	-	-	-	-	-	-
7 PWHI	2.35	.65	.74	.31**	-.06	.04	-.21	.24	-.21	-	-	-	-	-	-
8 NHWI	1.58	.49	.85	-.03	-.08	.31**	-.09	-.01	.30**	.13	-	-	-	-	-
9 PHWI	2.60	.72	.74	.18	-.09	-.28**	.01	-.01	.03	.62***	.00	-	-	-	-
10 Overall work-life balance	2.21	.37	.80	.11	-.05	-.12	-.12	.08	.60***	.58***	.46***	.71***	-	-	-
11 Overall job satisfaction	3.65	.72	.94	.40***	.10	.23*	-.22*	.41***	-.39***	.48***	-.08	.15	.00	-	-
12 Turnover intention	2.86	1.08	.88	-.43***	-.18	-.11	.16	-.28**	.51***	-.43***	.06	-.11	.10	-.77***	-

Notes: N = 79. \*\*\*  $p \leq .001$ ; \*\*  $p \leq .01$ ; \*  $p \leq .05$  (two-tailed). NWHI: negative work-home interaction; PWHI: positive work-home interaction; NHWI: negative home-work interaction; PHWI: positive home-work interaction

**Table 2:** Regression analysis results

Predictor	Job satisfaction			Turnover intention		
	$\beta$	t	$s^2$	$\beta$	t	$s^2$
Age	.03	.33		-.10	-1.30	
Gender	-.13	-1.35		.16	2.06*	.02
Ethnicity	.26	2.38*	.04	.06	.67	
Marital status	.13	-1.34		-.01	-.16	
Tenure	.11	1.002		.09	1.10	
NWHI	-.24	-2.35*	.04	.32	3.78***	.06
PWHI	.42	3.19**	.08	-.71	.48	
NHWI	-.14	-1.35		.12	-1.42	
PHWI	-.01	-.05		.01	.13	
Overall work-life balance	-.002	-.02		.100	.87	
Overall job satisfaction				-.65	-6.97***	.22
Overall job satisfaction x Overall work-life balance				.10	1.35	
<b>Model</b>						
$F_p$	6.78***			13.75***		
Adjusted $R^2$	.40			.65		

Notes: N = 79. \*\*\*  $p \leq .001$ ; \*\*  $p \leq .01$ ; \*  $p \leq .05$ . NWHI: negative work-home interaction; PWHI: positive work-home interaction; NHWI: negative home-work interaction; PHWI: positive home-work interaction.

*Research question 3: Do individuals from various age, gender, ethnicity, marital status and tenure groups differ significantly regarding their experiences of work-life balance, job satisfaction and turnover intention?*

Table 3 summarises only the significant differences that were observed for the biographical groups in terms of their work-life balance, job satisfaction and turnover intention levels. In terms of work-life balance, the white participants had significantly stronger experiences (mean: 1.68 vs 1.37;  $p \leq .01$ ;  $d = .69$ , moderate practical effect) of negative home-work interaction (NHWI) and overall job satisfaction (mean: 3.77 vs 3.38;  $p \leq .01$ ;  $d = .52$ , moderate practical effect) than their black counterparts. The black participants had significantly stronger experiences (mean: 2.99 vs 2.41;  $p \leq .001$ ;  $d = .86$ , large practical effect) of positive home-work interaction (PHWI) than their white counterparts.

The married participants had significantly higher levels of job satisfaction (mean: 3.80 vs 3.36;  $p \leq .01$ ;  $d = .61$ , moderate practical effect) than their unmarried counterparts. Participants with less than 10 years' tenure had significantly lower levels of job satisfaction (mean: 3.32 vs 3.85;  $p \leq .001$ ;  $d = .78$ , moderate practical effect) and higher turnover intention (mean: 3.18 vs 2.66;  $p \leq .05$ ;  $d = .50$ , moderate practical effect) than those with more than 10 years' tenure.

**Table 3:** Independent samples t-tests for significant mean differences

					Levene's test for equality of variance	T-test for equality of means		Cohen d	
Variable	Biographical group		N	Mean	SD	Fp	t	df	
NHWI	Ethnicity	White	54	1.68	.49	1.87	-2.70**	77	.69
		Black (African, coloured, Indian)	25	1.37	.40				
PHWI	Ethnicity	White	54	2.41	.68	.06	3.55***	77	.86
		Black (African, coloured, Indian)	25	2.99	.67				
Overall job satisfaction	Ethnicity	White	54	3.77	.62	3.97*	-2.29*	77	.52
		Black (African, coloured, Indian)	25	3.38	.86				
Overall job satisfaction	Marital status	Married	52	3.80	.64	1.01	2.65**	77	.61
		Other (single/divorced)	27	3.36	.79				
Overall job satisfaction	Tenure	<10 years	30	3.32	.68	.01	-3.38***	77	.78
		>10 years	49	3.85	.68				
Turnover intention	Tenure	<10 years	30	3.18	.95	2.35	2.15*	77	.50
		>10 years	49	2.66	1.11				

Notes: N = 79. Significant differences only are reported. \*\*\*  $p \leq .001$ ; \*\*  $p \leq .01$ ; \*  $p \leq .05$ . NWHI: negative work-home interaction; PWHI: positive work-home interaction; NHWI: negative home-work interaction; PHWI: positive home-work interaction

## Discussion

Overall, the results corroborated research indicating significant associations between individuals' work-life balance, job satisfaction and turnover intention (Fox & Fallon 2003; Noor 2011). In agreement with previous research, low levels of job satisfaction significantly predicted high levels of turnover intention (Fox & Fallon

2003; Martin & Roodt 2008; Tian-Foreman 2009). Similar to research by Virick et al. (2007), work-life balance was positively associated with job satisfaction. More specifically, the present study suggested that experiences of positive work-home interface (i.e. balance) may be associated with higher levels of job satisfaction and experiences of negative work-home interface (imbalance) with lower levels of job satisfaction. In line with this, it appears from the results that high levels of negative work-home interaction are likely to result in higher levels of turnover intention. Fox and Fallon (2003) also found that achieving work-life balance resulted in increased levels of job satisfaction and decreased turnover intention. According to Downes and Koekemoer (2011), organisations that invest heavily in work-life balance report lower employee turnover. Muteswa and Ortlepp (2011) also recommended that organisations create an environment conducive to maintaining work-life balance in an attempt to retain staff. Organisations that fail to create conditions for minimal levels of job satisfaction may suffer increased employee turnover (McKenna 2000).

However, no interaction effect was observed between overall work-life balance and job satisfaction in predicting turnover intention. According to Pienaar et al. (2007), job satisfaction generally tends to be the most significant predictor of turnover intention. The results pertaining to tenure support Martin and Roodt's (2008) findings that, overall, job satisfaction increases as an employee's years of experience increase (Martin & Roodt 2008). The results of the present study further showed that the same principle applied in terms of turnover intention, confirming the link between high levels of job satisfaction and lower turnover intention. In terms of ethnicity, the study corroborates the findings of previous studies indicating that white participants tend to report higher levels of job satisfaction than black participants (Davis 1985; O'Reilly & Roberts 1973; Tuch & Martin 1991). White employees had significantly stronger experiences of job satisfaction and negative home-work interface, while black employees had significantly stronger positive experiences of home-work interface and lower levels of job satisfaction. Married people also appeared to experience higher levels of job satisfaction than their counterparts.

Overall, it can be concluded that managers and human resources practitioners should consider the ways in which work-life balance and job satisfaction relate to the turnover intentions of IT employees as part of their talent retention strategies. In addition, ethnicity significantly explains and predicts the variance in the job satisfaction of IT employees, while gender explains the variance in the turnover intentions of IT employees. The results indicated job satisfaction as a significant predictor of turnover intention, suggesting that IT employees who are satisfied with their jobs are less likely to have intentions to leave their organisations. Managers and human resource practitioners should consider work-life balance initiatives aimed

at improving the work-home interaction and job satisfaction of IT employees, thus reducing their turnover intentions.

### Limitations of the study and future research

Considering the relatively small sample size, the results might not truly reflect the demographics of South African IT organisations, and researchers should beware of generalising the findings as being representative of all IT employees. Future research with larger populations is recommended in order to generalise the findings of this study. Since the current study was restricted to participants employed in the IT sector, the findings cannot be generalised to other occupational contexts. Furthermore, despite the use of a stratified sampling technique, the sample was not entirely representative of the demographics of the organisation, as well as that of the South African population, owing to the high response rate of white respondents compared to that of black and Indian respondents. This limits the ability to draw inferences from this study to the greater South African population as well as the IT sector. Despite these limitations, the results of this empirical study indicated a linear relationship between job satisfaction and turnover intention. In addition, the study indicated relationships between various sub-dimensions of work-life balance and job satisfaction amongst IT employees that could be explored in future research. This study could be used as a basis for future research seeking to understand these relationships in order to inform the talent retention strategies in the IT sector. It is recommended that future research be conducted to examine the impact of talent retention strategies and practices on the work-life balance, job satisfaction and turnover intentions of IT employees over a period of time using a longitudinal study.

### References

- Barnett, R.C. & Hyde, J.S. 2001. 'Women, men, work, and family', *American Psychologist*, 56 (10): 781–796. <http://dx.doi.org/10.1037//0003-066X.56.10.781>
- Blyton, P. & Jenkins, J. 2007. *Key concepts in work*. London: Sage.
- Botha, A., Bussin, M. & De Swardt, L. 2011. 'An employer brand predictive model for talent attraction and retention', *SA Journal of Human Resource Management*, 9(1): 1–12. <http://dx.doi.org/10.4102/sajhrm.v9i1.388>
- Bothma, F.C. 2011. The consequences of employees' work-based identity. Unpublished doctoral thesis. University of Johannesburg, Johannesburg, South Africa.
- Bothma, F.C. & Roodt, G. 2012. 'Work-based identity and work engagement as potential antecedents of task performance and turnover intention: Unravelling a complex relationship', *SA Journal of Industrial Psychology*, 38(1): 1–17. <http://dx.doi.org/10.4102/sajip.v38i1.893>

- Bothma, F.C. & Roodt, G. 2013. 'The validation of the turnover intention scale', *SA Journal of Human Resource Management*, 11(1): 507–519. <http://dx.doi.org/10.4102/sajhrm.v11i1.507>
- Bretz, R.D. & Judge, T.A. 1994. 'Person-organization fit and the theory of work adjustment: Implications for satisfaction, tenure, and career success', *Journal of Vocational Behaviours*, 44: 32–54.
- Brink, B. & De la Rey, C. 2001. 'Work-family interaction strain: Coping strategies used by successful women in the public, corporate and self-employed sectors of the economy', *SA Journal of Psychology*, 31(4): 55–61.
- Buitendach, J.H. & Rothmann, S. 2009. 'The validation of the Minnesota Job Satisfaction Questionnaire in selected organisations in South Africa', *SA Journal of Human Resource Management*, 7(1): 1–8. <http://dx.doi:10.4102/sajhrm.v7i1.183>
- Chawla, D. & Sondhi, N. 2011. 'Assessing the role of organizational and personal factors in predicting turnover intentions: A case of school teachers and BPO employees', *Decision*, 38(2): 5–33.
- Chimote, N.K. & Srivastava, V.N. 2013. 'Work-life balance benefits: From the perspective of organizations and employees', *IUP Journal of Management Research*, 12(1): 62–73.
- Cohen, J. 1992. 'Quantitative methods in psychology: A power primer', *Psychological Bulletin*, 112(1): 153–159.
- Davis, L.E. 1985. 'Black and white social work faculty: Perceptions of respect, satisfaction and job performance', *Journal of Sociology and Social Welfare*, 12(1): 79–94.
- Demerouti, E. & Geurts, S. 2004. 'Toward a typology of work-home interaction', *Community, Work and Family*, 7(3): 285–309.
- Ding, C.G. & Lin, C. 2006. 'Comparing the effects of determinants of turnover intentions between Taiwanese and US hospital employees', *Human Resource Development Quarterly*, 17(4): 403–421.
- Döckel, A., Basson, J.S. & Coetzee, M. 2006. 'The effect of retention factors on organizational commitment: An investigation of high technology employees', *SA Journal of Human Resource Management*, 4(2): 20–28.
- Downes, C. & Koekemoer, E. 2011. 'Work-life balance policies: Challenges and benefits associated with implementing flexitime', *SA Journal of Human Resource Management*, 9(1): 1–13. <http://dx.doi:10.4102/sajhrm.v9i1.382>
- Du Plooy, J. & Roodt, G. 2010. 'Work engagement, burnout and related constructs as predictions of turnover intentions', *SA Journal of Industrial Psychology*, 36(1): 1–13. <http://dx.doi:10.4102/sajip.v36i1.910>
- Du Plooy, J. & Roodt, G. 2013. 'Biographical and demographical variables as moderators in the prediction of turnover intentions', *SA Journal of Industrial Psychology*, 39(1): 1–12. <http://dx.doi.org/10.4102/sajip.v39i1.1070>
- Ferres, N., Travaglione, A. & Firms, I. 2003. 'Attitudinal differences between generation-x and older employees', *International Journal of Organisational Behaviour*, 6(3): 320–333.
- Fox, S.R. & Fallon, B.J. 2003. *Modelling the effect of work/life balance on job satisfaction and turnover intentions*. Symposium paper presented at the 5th Australian Industrial and Organisational Psychology Conference, Melbourne, Australia.

- Foxcroft, C. & Roodt, G. 2010. *Introduction to psychological assessment in the South African context*. 3<sup>rd</sup> edition. Cape Town: Oxford University Press.
- Frone, M.R. 2003. Work-family balance. In J.C. Quick & L.E. Tetrick (Eds.) *Handbook of occupational health psychology* (pp. 143–162). Washington, DC: American Psychological Association.
- Frone, M.R., Russell, M. & Cooper, M.L. 1997. 'Relation of work–family conflict to health outcomes: A four-year longitudinal study of employed parents', *Journal of Occupational and Organizational Psychology*, 70(4): 325–335. <http://dx.doi:10.1111/j.2044-8325.1997.tb00652.x>
- Geurts, S.A.E. & Demerouti, E. 2003. Work/non-work interface: A review of theories and findings. In M.J. Schabracq, J.A.M. Winnubst & C.L. Cooper (Eds.) *The handbook of work and health psychology* (pp. 279–312). Chichester, UK: Wiley.
- Geurts, S.A.E., Demerouti, E. & Kompier, M. 2004. 'Towards a typology of work-home interaction', *Community, Work and Family*, 7(3): 285–309.
- Geurts, S.A.E., Rutte, C. & Peeters, M. 1999. 'Antecedents and consequences of work-home interference among medical residents', *Social Science and Medicine*, 48: 1135–1148.
- Geurts, S.A.E., Taris, T.W., Kompier, M.A., Dikkers, J.S., Van Hooff, M.L. & Kinnunen, U.M. 2005. 'Work–home interaction from a work psychological perspective: Development and validation of a new questionnaire, the SWING', *Work and Stress*, 19: 319–339.
- Ghazzawi, I. 2008. 'Job satisfaction antecedents and consequences: A new conceptual framework and research agenda', *Business Review*, 11(2): 1–10.
- Greenhaus J.H., Collins K.M. & Shaw J.D. 2003. 'The relation between work-family balance and quality of life', *Journal of Vocational Behavior*, 63(3): 510–531.
- Igbaria, M., Meredith, G. & Smith, D. S. 1994. 'Predictors of intention of IS professionals to stay with the organization in South Africa', *Information and Management*, 26(5): 245–256.
- Jacobs, E.J. 2005. The development of a predictive model of turnover intentions of professional nurses. Unpublished doctoral thesis. University of Johannesburg, Johannesburg, South Africa.
- Jacobs, E.J. & Roodt, G. 2011. The mediating effect of knowledge sharing between organisational culture and turnover intentions of professional nurses, *SA Journal of Information Management*, 13(1): 1–6. DOI: 10.4102/sajim.v13i1.425
- Joseph, D., Ng, K., Koh, C. & Ang, S. 2007. 'Turnover of information technology professionals: A narrative review, meta-analytic structural equation modelling, and model development', *MIS Quarterly*, 31(3): 547–577.
- Kennedy, S.A. 2006. Intention to leave and organizational commitment among child welfare workers. Unpublished doctoral thesis. University of Tennessee, Knoxville, Tennessee.
- Koekemoer, E. & Mostert, K. 2010. 'An exploratory study of the interaction between work and personal life: Experiences of South African employees', *SA Journal of Industrial Psychology*, 36(1): 1–15. <http://dx.doi:10.4102/sajip.v36i1.801>
- Lorence, J.B. & Mortimer, J.T. 1985. 'Job involvement through the life course: A panel study of three age groups', *American Sociological Review*, 50: 618–638.

- Lumley, E.J., Coetzee, M., Tladinyane, R. & Ferreira, N. 2011. 'Exploring the job satisfaction and organisational commitment of employees in the information technology environment', *Southern African Business Review*, 15: 100–118.
- Luthans, F. 2008. *Organizational behaviour*. 11<sup>th</sup> edition.. Boston, MA: McGraw-Hill.
- Marais, C., Mostert, K., Geurts, S. & Taris, T. 2009. 'The psychometric properties of a translated version of the Survey Work-Home Interaction – Nijmegen (SWING) instrument', *SA Journal of Psychology*, 39(2): 202–219.
- Martin, A. & Roodt, G. 2008. 'Perceptions of organisational commitment, job satisfaction and turnover intentions in a post-merger South African tertiary institution', *SA Journal of Industrial Psychology*, 34(1): 23–31.
- Martins, N. & Coetzee, M. 2007. 'Organisational culture, employee satisfaction, perceived leader emotional competency and personality type: An exploratory study in a South African engineering company', *SA Journal of Human Resource Management*, 5(2): 20–32.
- Martins, N. & Coetzee, M. 2011. 'Staff perceptions of organisational values in a large South African manufacturing company: Exploring socio-demographic differences', *SA Journal of Industrial Psychology*, 37(1): 1–11. <http://dx.doi.org/10.4102/sajip.v37i1.967>
- McKenna, A.H. 2000. *Business psychology and organizational behaviour: A student's handbook*. 3<sup>rd</sup> edition. Hove, UK: Psychology Press.
- McKnight, D.H., Philips, B. & Hardgrave, B.C. 2009. 'Which reduces IT turnover intention the most: Workplace characteristics or job characteristics?' *Information and Management*, 46(3): 167–174. <http://dx.doi.org/10.1016/j.im.2009.01.002>
- Mitchell, T.R., Holtom, B.C. & Lee, T.W. 2001. 'How to keep your best employees: Developing an effective retention policy', *Academy of Management Executive*, 15(4): 96–109.
- Mkavga, A.U. & Onyishi, I.E. 2012. 'Job satisfaction, gender, tenure and turnover intention among civil servants in Benue State', *Interdisciplinary Journal of Contemporary Business*, 3(11): 378–387.
- Mohlala, J., Goldman, G.A. & Goosen, X. 2012. 'Employee retention within the information technology division of a South African bank', *SA Journal of Human Resource Management*, 10(2): 1–11. <http://dx.doi.org/10.4102/sajhrm.v10i2.438>
- Mostert, K. & Oldfield, G.R. 2009. 'Work-home interaction of employees in the mining industry', *SA Journal of Economic and Management Sciences*, 12(1): 81–99.
- Munro, Z. 2015. Work-life balance, job satisfaction and turnover intention amongst information technology employees. Unpublished master's dissertation, University of South Africa, Pretoria.
- Muteswa, R. & Ortlepp, K. 2011. 'Contributing factors to potential turnover in a sample of South African management-level employees', *Acta Commercii*, 11: 13–29.
- Noor, K.M. 2011. 'Work-life balance and intention to leave among academics in Malaysian public higher education institutions', *International Journal of Business and Social Science*, 2(11): 240–248.

- O'Reilly, C.A. & Roberts, K.H. 1973. 'Job satisfaction among whites and non-whites: A cross-cultural approach', *Journal of Applied Psychology*, 65: 295–299.
- Pienaar, J., Sieberhagen, C.F. & Mostert, K. 2007. 'Investigating turnover intentions by role overload, job satisfaction and social support moderation', *SA Journal of Industrial Psychology*, 33(2): 62–67.
- Potgieter, S.C.B. & Barnard, A. 2010. 'The construction of work–life balance: The experience of black employees in a call-centre environment', *SA Journal of Industrial Psychology*, 36(1): 1–8. <http://dx.doi:10.4102/sajip.v36i1.892>
- Quan, J. & Cha, H. 2010. 'IT certifications, outsourcing and information systems personnel turnover', *Information Technology and People*, 23(4): 330–351.
- Ramsey, M. & Barkhuizen, N. 2011. 'Organisational design elements and competencies for optimising the expertise of knowledge workers in a shared services centre'. *SA Journal of Human Resource Management*, 9(1): 1–15. <http://dx.doi:10.4102/sajhrm.v9i1.307>
- Robbins, S.P. 1993. *Organizational behavior: Concepts, controversies, and applications*. 6<sup>th</sup> edition. Upper Saddle River, NJ: Prentice-Hall.
- Robbins, S.P. 2001. *Organizational behaviour*. 9<sup>th</sup> edition. Upper Saddle River, NJ: Prentice-Hall.
- Rothmann, S. & Coetzer, E.P. 2002. 'The relationship between personality dimensions and job satisfaction', *Business Dynamics*, 11(1): 29–42.
- Rothmann, I.I. & Cooper, C. 2008. *Organizational psychology*. London: Sage.
- Roznowski, M. & Hulin, C. 1992. The scientific merit of valid measures of general constructs with special reference to job satisfaction and job withdrawal. In C.J. Cranny, P.J. Smith & E.F. Stone (Eds.) *Job satisfaction: How people feel about their jobs and how it affects their performance*. New York: Lexington Books.
- SAS. 2002, 2012. *Statistical Analysis System* (Version 9.4). Cary, NC: SAS Institute Inc.
- Sempane, M., Rieger, H. & Roodt, G. 2002. 'Job satisfaction in relation to organisational culture', *SA Journal of Industrial Psychology*, 28(2): 23–30.
- Spector, P.E. 1997. *Job satisfaction: Application, assessment, causes and consequences*. London: Sage.
- Spector, P.E. 2008. *Industrial and organisational behaviour*. 5<sup>th</sup> edition. Hoboken, NJ: Wiley.
- SPSS. 1989, 2015. *Statistical Package for the Social Sciences* (Version 23). Armonk, NY: IBM Corporation.
- Sturges, J. & Guest, D. 2004. 'Working to live or living to work? Work/life balance early in the career', *Human Resource Management Journal*, 14(4): 5–20.
- Takawira, N., Coetzee, M. & Schreuder, D. 2014. 'Job embeddedness, work engagement and turnover intention of staff in a higher education institution: An exploratory study', *SA Journal of Human Resource Management*, 12(1): 1–10. <http://dx.doi.org/10.4102/sajhrm.v12i1.524>.
- Tett, R.P. & Meyer, J.P. 1993. 'Job satisfaction, organisational commitment, turnover intention and turnover: Path analyses based on meta-analytic findings', *Personnel Psychology*, 46(2): 259–293. <http://dx.doi.org/10.1111/j.1744-6570.1993.tb00874.x>

- Tian-Foreman, W. 2009. 'Job satisfaction and turnover in the Chinese retail industry', *Chinese Management Studies*, 3(4): 356–378.
- Tredoux, C. & Durrheim, K. 2009. *Numbers, hypotheses and conclusions: A course in statistics for the social sciences*. Cape Town: University of Cape Town Press.
- Tuch, S.A. & Martin, J.K. 1991. 'Race in the workplace: Black white differences in the sources of job satisfaction', *Sociological Quarterly*, 32(1): 103–116.
- Tuzun, I.K. & Kalemci, R.A. 2012. 'Organizational and supervisory support in relation to employee turnover intentions', *Journal of Managerial Psychology*, 27(5): 518–534
- Van Dyk, J. & Coetzee, M. 2012. 'Retention factors in relation to organisational commitment in medical and information technology services', *SA Journal of Human Resources Management*, 10(2): 1–11. <http://dx.doi.org/10.4102/sajhrm.v10i2.433>
- Van Staden, R. & Du Toit, A. 2011. 'Career development of South African knowledge workers'. *SAJEMS*, 14(1): 80–91.
- Virick, M., Lily, J.D. & Casper, W.J. 2007. 'Doing more with less: An analysis of work-life balance among layoff survivors', *Career Development International*, 12(5): 463–480.
- Voydanoff, P. 2001. 'Incorporating community into work and family research: A review of basic relationships', *Human Relations*, 54: 1609–1637.
- Weiss, D.J., Dawis, R.V., England, G.W. & Lofquist, L.H. 1967. *Manual for Minnesota Satisfaction Questionnaire*. Minneapolis, MN: University of Minnesota.
- Wheeler, A.R., Gallagher, V.C., Brouer, R.L. & Sablinski, C.J. 2007. 'When person-organisation (mis)fit and (dis)satisfaction lead to turnover. The moderating role of perceived job mobility', *Journal of Management Psychology*, 22(2): 203–219. <http://dx.doi.org/10.1108/02683940710726447>