

Meaningful work, work engagement and organisational commitment

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Orientation: Meaningful work can yield benefits for organisations and lead to positive work outcomes such as satisfied, engaged and committed employees, individual and organisational fulfilment, productivity, retention and loyalty.

Research purpose: The aim of the study was to investigate the relationships amongst psychological meaningfulness, work engagement and organisational commitment and to test for a possible mediation effect of work engagement on the relationship between psychological meaningfulness and organisational commitment.

Motivation for the study: Managers have to rethink ways of improving productivity and performance at work, due to the diverse, and in some instances escalating, needs of employees (e.g. financial support) to uphold their interest in and enjoyment of working.

Research approach, design and method: A quantitative approach was employed to gather the data for the study, utilising a cross-sectional survey design. The sample ($n = 415$) consisted of working employees from various companies and positions in Gauteng, South Africa.

Main findings: The results confirmed a positive relationship between psychological meaningfulness, work engagement and organisational commitment. Further, psychological meaningfulness predicts work engagement, whilst psychological meaningfulness and work engagement predict organisational commitment.

Practical/managerial implications: Employers identifying their employees' commitment patterns and mapping out strategies for enhancing those that are relevant to organisational goals will yield positive work outcomes (e.g. employees who are creative, seek growth or challenges for themselves).

Contribution/value-add: This study contributes to the literature through highlighting the impact that meaningful work has on sustaining employee commitment to the organisation.

Introduction

Background

Employees consider jobs that are more interesting, emit feelings of accomplishment, promote helpfulness and contribute to people's lives to be critical in achieving meaningful work (Bibby, 2001). More recently, fulfilment, autonomy, satisfaction, engagement, working relations and learning have been identified as important in a meaningful job (cf. Cartwright & Holmes, 2006; Chalofsky, 2003; Rosso, Dekas & Wrzesniewski, 2010; Seligman, 2008; Steger & Dik, 2010). The interest in meaningful work is teamed with positive individual and organisational consequences with regard to work (Rosso *et al.*, 2010). The above highlights a necessity for an investigation into meaningful work and the role it plays in contributing towards positive work outcomes. If employees yearn for meaningful work, organisations would benefit in accommodating for this. This study investigated the positive effect that meaningful work has on promoting work engagement and organisational commitment.

There has been a steady increase in research into meaningfulness, engagement and commitment at work (cf. Dik & Duffy, 2008; Hult, 2005; Schaufeli & Bakker, 2004). This increased interest may be due to employees being better educated (Kompier, 2005) and increasingly questioning the nature and meaning of their work (Cartwright & Holmes, 2006). Since people spend many hours at work (Meyers, 2007; Van Zyl, Deacon & Rothmann, 2010), it becomes the environment in which they engage in goal-orientated activities, and aim to find meaning (Cameron, Dutton & Quinn, 2003). In addition, evidence has been brought forward to suggest that money is losing its power as a central motivator, partially due to the general population realising that above a minimum level necessary for survival, money adds little to their subjective well-being (Seligman, 2002). People have come to define themselves and be socially defined by their work (Casey, 1995);

hence, understanding alternate sources of meaning in work becomes a natural outgrowth for organisational systems valuing human thriving and a contribution to the greater good (Wrzesniewski, 2003).

The above alludes to a dynamic in which both the individual and organisation act together to determine the experience of meaning. Frankl (1984) proclaims that a man's search for meaning is a primary force in his life; it's unique and specific in that it must and can be fulfilled only by himself alone. The underlying premise is that the individual is fully aware of his own responsibility 'and therefore it must leave to him the option for what, to what or to whom, he understands himself to be responsible' (Frankl, 1984, p. 111). This self-determined behaviour has important consequences for the quality of experience in all domains of behaviour (Brown & Ryan, 2004). Positive outcomes for individuals within the work domain specifically include greater persistence in and effectiveness of behaviour and enhanced well-being (Deci *et al.*, 2001).

The self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000) presupposes that the motivational orientations that guide behaviour have important consequences for healthy behavioural regulation and psychological well-being. It distinguishes between the various types of motivation (intrinsic or extrinsic) based on the reasons or goals that drive the behaviour. Autonomous individuals are self-endorsed, volitional and self-determined, whereas behaviour lacking autonomy is motivated by perceived controls, restriction and pressures arising from the social context or internal forces (Deci & Ryan, 1985; Ryan & Deci, 2000). Searching for meaning is a self-determined behaviour and not only is it important to the individual, but it is also seen as a primary need that promotes positive outcomes in varied cultural contexts (Chirkov, Ryan, Kim & Kaplan, 2003).

Positive work outcomes, such as work engagement and organisational commitment, have long-term benefits for organisations who attempt to foster initiatives that promote meaningfulness at work. Work engagement is driven by job characteristics such as providing skill variety, task identity, task significance, autonomy and feedback on results (Saks, 2006). The work tasks themselves have been directly related to meaningfulness (Kahn, 1990). When workers experience meaning in their work, there is improvement in organisational performance (e.g. productivity) (Neck & Milliman, 1994), retention of top talent, effective change management, greater commitment and engagement (Holbeche & Springett, 2004; Milliman, Czaplewski & Ferguson, 2003).

Organisational commitment appears to have strategic importance for employers because of potential financial returns in the long term (Chambers, 1998). Loyal and engaged employees tend to generate high-performance business outcomes as measured by increased sales, improved productivity, profitability and enhanced employee retention (Rogers, 2001). When commitment strategies are put in place by organisations, desired employee behaviour is created

through forging psychological links between the organisation and employee goals (Eisenhardt, 1985). Employees with a high level of commitment tend to make greater effort to perform and invest their resources in the organisation (Saal & Knight, 1987). It has also been determined that high affective commitment by employees also leads to a degree of autonomy (Mathieu & Zajac, 1990). Hence, it is inferred that if an employee finds their work meaningful they will be more autonomous in their work, provided that the organisation incorporates commitment strategies that foster positive employee commitment.

Although meaning, engagement and commitment at work are crucial for the individual, organisational and societal development, the problem persists as the study of meaningful work lacks integration into the work context (cf. Rosso *et al.*, 2010; Steger, Dik & Duffy, 2012), including the South African context. This could potentially intensify the difficulty in obtaining organisational commitment. The meaning attached to work, experiences of meaningful work (Pratt & Ashforth, 2003), work engagement (Olivier & Rothmann, 2007) and organisational commitment (Yu & Egri, 2005) can predict important work outcomes.

From this, the aim of this study is to investigate the relationships between meaningful work, work engagement and organisational commitment.

Meaningful work

Meaning is a concept that is unavoidably linked to one's existence (positive or negative) and encompasses the workplace as an inevitable part of one's existence. Defining the concept of meaning constitutes varying viewpoints. Meaning, according to Seligman (2002), allows individuals to transcend, either through promoting positive social relationships or connecting to a higher power. Additionally, individuals are bound to find meaning in their lives when they view their lives as purposeful, significant and understandable (Steger, Oishi & Kashdan, 2009). In his attempt to define meaning, Csikszentmihalyi (1990) acknowledges and warns of the difficulty of capturing the construct into a common phrase. At best, Csikszentmihalyi suggests that meaning refers to a purpose or significance, and the intentions a person holds.

Meaning in life is more likely to constitute positive aspects; meaningfulness is often described as what individuals lack in their life, what they yearn for and what they seek to find (Wolf, 2010). Wolf (2010) further opines that it is a rarity that academic philosophers talk about and research meaningfulness in life; the term is more likely to be used by therapists or theologians. Frankl (1984) furthers that meaningfulness is a determinant of psychological well-being and therefore it is important for individuals to find meaning in life.

As part of meaning in life, the concept of meaningfulness highlights two facets, namely that of the (1) meaning of work (meaningful work) (Carvalho, 2005) and that of (2)

psychological meaningfulness (Olivier & Rothmann, 2007). Meaningful work is defined by Rosso *et al.* (2010) and Steger *et al.* (2012) as the significance of work to people (meaning); both have significance and are positive in valence (meaningfulness). Further, Hackman and Oldham (1975, p. 162), define meaningful work as 'the degree to which the employee experiences the job as one which is generally meaningful, valuable, and worthwhile'. Psychological meaningfulness is defined as the 'the value of a work goal or purpose, judged in relation to an individual's own ideals or standards' (May, Gilson & Harter, 2004, p. 14).

In South Africa, research indicates paucity in studies pertaining to meaningfulness in both its facets. The meaning attached to work, as well as experiences of psychological meaningfulness, lead to positive work outcomes (cf. Pratt & Ashforth, 2003; Wrzesniewski, 2003; Wrzesniewski & Dutton, 2003) and specifically work engagement (May *et al.*, 2004; Olivier & Rothmann, 2007).

The relationship between an employee and an organisation presumes that a degree of meaning exists at work. This study asserts that, with the presence of psychological meaningfulness and work engagement, organisational commitment will be achieved.

Work engagement

Work engagement has been extensively researched in different psychological sub-fields. According to Lockwood (2007), work engagement is acknowledged as the business initiative associated with organisational success. Work engagement is defined as 'a positive, fulfilling, work-related state of mind, most commonly characterised by vigour, dedication and absorption' (Schaufeli, Salanova, González-Romá & Bakker, 2002, p. 74). In this instance, the concepts of vigour, dedication and absorption constitute three different components of work engagement, namely physical, emotional and cognitive.

Drawing attention to the physical component of work engagement, which is *vigour*, Chughtai and Buckley (2008) postulate that higher levels of vigour suggest an individual's increased readiness to devote effort within their work by not becoming easily fatigued, and developing the tendency to remain resolute in the face of task difficulty or failure. *Dedication* constitutes the emotional component of work engagement, and is often characterised as putting one's heart into the job (Schaufeli *et al.*, 2002). Furthermore, it typifies an individual's strong sense of identification with their work (Chughtai & Buckley, 2008), and also encompasses feelings of enthusiasm, passion, pride and challenge (Schaufeli *et al.*, 2002). Moreover, *dedication* indicates individuals' psychological involvement in their work, combined with a sense of significance (Geldenhuis, 2009; Schaufeli *et al.*, 2002).

Lastly, the cognitive component of work engagement, which is often interchangeable with the *absorption* dimension, is characterised by individuals who are completely immersed

in their work so that time appears to pass so rapidly that they forget everything else that is around them (Chughtai & Buckley, 2008; Schaufeli *et al.*, 2002). This component of work engagement refers to the full concentration, satisfaction and engrossment that individuals receive from performing their job-related tasks (also referred to as the eudaimonic approach, thus deriving pleasure from work). Such individuals often find it difficult to disengage or detach themselves from their work (Schaufeli *et al.*, 2002).

Previous studies indicate that positive attitudes toward work, such as job satisfaction, job involvement, organisational commitment and low turnover intention, appear to be related to work engagement (Schaufeli & Bakker, 2004). Outcomes of this study show that individuals are not only attracted to aspect of work that provide meaningfulness but that they actively seek it in their work as a means of remaining committed to the organisation.

Psychological meaningfulness, work engagement and organisational commitment

Engagement is important for managers to cultivate given that disengagement, or alienation, is central to the problem of workers' lack of commitment (Aktouf, 1992). Bakker and Demerouti (2008) and Field and Buitendach (2011) are in agreement that work engagement leads to positive work outcomes such as organisational commitment.

Commitment in the workplace has evolved to encompass a broad range of types, such as engagement, attachment, commitment and involvement (Martin & Roodt, 2008; Roodt, 2004). Numerous studies on commitment have been undertaken in the disciplines of behavioural, attitudinal and motivational sciences, within three broad research streams, through sociological, industrial and organisational psychology and health psychology (Roodt, 2004); all emphasise the importance of commitment in the workplace. It has been the subject of excessive research and empirical attention, as a consequence and an antecedent of other work-related variables (Martin & Roodt, 2008) and has been linked to workplace outcomes (Field & Buitendach, 2011).

Wiener (1982, p. 418) defines organisational commitment as 'the totality of internalized [*sic*] normative pressure to act in a way that meets organisational interests', and is supported by Porter, Steers, Mowday and Boulian (1974) who suggest that organisational commitment involves the willingness of employees to apply higher efforts on behalf of the organisation, a desire to stay with the organisation and acceptance of the goals and values of the organisation. It constitutes the bond between the employee and the organisation (Martin & Roodt, 2008). Mowday, Steers, and Porter (1979), as well as Mowday, Porter and Steers (1982), further add to the concept by characterising three factors associated with organisational commitment, namely (1) having a strong belief in, and acceptance of the organisation's goals and values, (2) having a willingness to exert considerable effort on behalf of the organisation and (3) having a strong desire to remain in the organisation.

Meyer and Allen (1991) propose a three-component model of organisational commitment. The three-component model distinguishes between affective, continuance and normative commitment. Affective commitment is the emotional attachment to and involvement in the job, whereas continuance commitment is the awareness of the cost involved for the organisation. Lastly, normative commitment is the obligation to continue commitment (Meyer & Allen, 1991; Meyer, Allen & Smith, 1993). The importance of affective commitment lies in the belief that it shows the strongest positive relationship with desirable outcomes (Eisenberger, Huntington, Hutchison & Sowa, 1986), such as meaningful work.

Organisational commitment can also be described as the employee's feelings of obligation to remain with the organisation. These feelings result from the normative pressures that employees experience (Allen & Meyer, 1990; Field & Buitendach, 2011; Viljoen & Rothmann, 2009). Organisational commitment is also increased by higher levels of work engagement (Hakenen, Bakker & Schaufeli, 2006; Llorens, Bakker, Schaufeli & Salanova, 2006; Simpson, 2008). Once an employee is engaged in work and committed to the organisation, it is proposed that meaningful work can ensue as a result.

Research has shown that there is a link between work engagement and organisational commitment in the workplace (Field & Buitendach, 2011; Van Zyl *et al.*, 2010). Whereas organisational commitment highlights the individual's identification and involvement with an organisation (Mowday *et al.*, 1979), work engagement entails the involvement in the work role or the work itself (Schaufeli & Bakker, 2010). Statistically, organisational commitment is a separate latent factor that correlates moderately with work engagement (Schaufeli & Bakker, 2010). Research shows that work engagement resulted in 40% variance in organisational commitment (Field & Buitendach, 2011). This study expects that by adding meaningfulness to its interaction with work engagement, the variance in organisational commitment will increase.

Furthermore, employees will be loyal to their organisation if their organisation values and appreciates them (cf. Fuller, Barnett, Hester & Relyea, 2003). Organisations that are devoted to the development of employees, their well-being and their need for actualisation tend to have employees with high levels of commitment (Dessler, 1999). A crucial challenge for organisations currently is to fit the person to the organisation (Hult, 2005), by creating experiences of meaningfulness. Based on the work of these authors, this study was conducted to empirically investigate the effects of fostering meaningful work to obtain engagement and commitment at work. Furthermore, meaningful work leads to employees functioning better and hence to increased levels of engagement and commitment (Steger & Dik, 2009; Steger *et al.*, 2012).

Jackson, Rothmann and Van de Vijver (2006) state that employees who are engaged in their work will be more committed towards their work and organisation. Furthermore, employees who experience meaningful work and who serve some greater good are better adjusted psychologically and possess qualities desirable to organisations (cf. Steger *et al.*, 2012), such as commitment at work. Employees who experience meaningful work will experience greater well-being (e.g. engagement at work) (cf. Arnold, Turner, Barling, Kelloway & McKee, 2007; Steger *et al.*, 2012); they will view their work as important (cf. Harpaz & Fu, 2002; Steger *et al.*, 2012), place higher value on work (cf. Nord, Brief, Atieh & Doherty, 1990; Steger *et al.*, 2012) and will have an obligation to stay at their work (Hakenen *et al.*, 2006). In addition, well-being, including work engagement, has been proven to be crucial for organisational commitment (Field & Buitendach, 2011; Llorens *et al.*, 2006; Simpson, 2008). From the above, hypothesis 1 and hypothesis 2 are formulated as:

Hypothesis 1: Psychological meaningfulness, work engagement and organisational commitment are positively related.

Hypothesis 2: Psychological meaningfulness has an indirect effect on organisational commitment via work engagement.

In summary, this study focuses on the importance of how meaningful work contributes towards effective workplace functioning. It highlights the importance of employees experiencing meaningfulness, and hence being positively engaged, and promoting commitment at work.

Research design

Research approach

A cross-sectional research design utilising a quantitative research method was used to pursue the aim of this study (Gravetter & Forzano, 2009). The participants were employees selected from various corporate companies at different organisational levels within Gauteng, South Africa.

Research method

Research participants

Participation was voluntary and confidentiality was maintained. The random sample consisted of 415 of the initial target population of 600. A response rate of 69% was thus obtained. There were no additional requirements for the sample population other than participants being employed and holding the current employment for at least one year. Therefore, any working employee from random organisations in random sectors (e.g. finance, trade, retail, academia, etc.) in Gauteng, South Africa, could voluntarily have participated in this study. The participants held different level of jobs ranging from administration, sales, clerk to management.

Men made up 43% of the sample, whilst women made up 56.8%. The majority of participants were single (46%), in a relationship or engaged (30.1%) or married (20%). With

regard to language, most participants were English speaking (34.5%) and Afrikaans speaking (22.4) speaking, whilst 11.8% were isiZulu speaking. The average age of the participants was between 18 and 30 years (76.4%), whereas 12% were between the ages of 31 and 40 years. Most of the participants held a basic high school qualification (41%), whilst 20.2% had a four-year degree, 17.8% had a three-year bachelor's degree and 16.9% had a five-year to seven-year degree (e.g. medical degree).

Measuring instruments

A *biographical questionnaire* was administered to participants and comprised basic information regarding gender, marital status, language, age and level of education.

The *Utrecht work engagement scale* (UWES-9 item) was used to measure work engagement levels of employees (Schaufeli & Bakker, 2004). The UWES consists of nine items. The items are scored on a seven-point frequency scale ranging from 0 (never) to 6 (always). The work engagement scale is further divided into three sub-scales, namely vigour, dedication and absorption. Examples of statements include 'I am bursting with energy every day in my work', and 'Time flies when I am at work' (see Rothmann & Rothmann, 2010). Van Zyl *et al.* (2010) found high alpha coefficients for the three dimensions of work engagement (vigour, 0.78; dedication, 0.89 and absorption, 0.78). The nine-item scale was used to eliminate potential item overlap with psychological meaningfulness.

The *psychological meaningfulness scale* (PMS) (Spreitzer, 1995) was used to measure psychological meaningfulness by averaging six items. For all items, a five-point Likert scale varying from 1 (totally agree) to 5 (totally disagree) was used. These items measure the degree of meaning that individuals discover in their work-related activities (e.g. 'The work I do on this job is very important to me'). May *et al.* (2004) found a Cronbach's alpha coefficient of 0.90 for the PMS in a large insurance company, whilst Olivier and Rothmann (2007) reported a Cronbach's alpha coefficient of 0.92.

The *organisational commitment questionnaire* (OCQ) (Porter, Crampton & Smith, 1976; Porter *et al.*, 1974) was used to measure commitment in organisations. The OCQ consists of 15 items, measuring the general affective reaction towards the organisation. The OCQ further measures three dimensions, namely (1) a strong belief in, and acceptance of, the organisation's goals and values, (2) a readiness to exert considerable effort on behalf of the organisation and (3) a strong desire to remain a member of the organisation. The OCQ displays good psychometric properties and has been used with a wide range of job categories (Mowday *et al.*, 1979). A Cronbach's alpha coefficient of 0.90 has been obtained (He, 2008).

Research procedure

Departmental managers from various organisations were approached. The purpose and objective of the research was explained as well as the data analysis procedure. Further,

how the data was to be used was discussed. Upon their consent a generic email was sent to the relevant departmental manager (the person responsible for forwarding the email to the participants) explaining: the objectives, importance and outcomes envisioned for the study, the data collection procedure, that participation is voluntary and anonymity is assured and that the research project will adhere to ethical principles as outlined by the University of Johannesburg.

The email included a link to a secure webpage where participants could complete the biographical questionnaire, UWES, PMS, and the OCQ. Clear instructions accompanied this email and the necessary contact information for the researchers was made available to the participants to deal with problems or explain in the event of uncertainty. By using the link, the participants accepted the terms of the research, which were also explained to them. This included awareness of the research purpose of the study, and a promise that the information would not be used in a harmful manner. Upon completion, the answers are automatically downloaded into an Excel spreadsheet.

Statistical analysis

The statistical analysis was carried out with the use of Mplus version 7.0. All the variables were defined as continuous variables and maximum likelihood (ML) was used as the estimator. The following indexes produced by Mplus were used in this study: (1) absolute fit indices, including the Chi-square statistic, which is the test of absolute fit of the model, the standardised root mean residual (SRMR) and the root means square error of approximation (RMSEA) and (2) incremental fit indices, including the Tucker-Lewis index (TLI) and the comparative fit index (CFI) (Hair, Black, Babin & Andersen, 2010). TLI and CFI values higher than 0.90 are considered acceptable. RMSEA values lower than 0.08 and an SRMR lower than 0.08 indicate a close fit between the model and the data.

Results

Confirmatory factor analyses

In order to address hypothesis 1, confirmatory factor analysis (CFA) was used to test four different measurement models. Model 1 was distinguished and compared to three alternative models to test its relevance. Model 1 consisted of three latent variables, namely (1) psychological meaningfulness, (2) work engagement and (3) organisational commitment, consisting of two latent variables, namely positive organisational commitment (a strong belief in, and acceptance of, the organisation's goals and values and a readiness to exert considerable effort on behalf of the organisation) and negative organisational commitment (a strong desire to stay with the organisation). All the latent variables in model 1 were allowed to correlate. Similarly to model 1, model 2, model 3 and model 4 were constructed. Model 2 consisted of three latent variables, (1) psychological meaningfulness (2) work engagement with three latent variables, namely vigour, dedication and absorption and

(3) organisational commitment with two latent variables, namely positive organisational commitment and negative organisational commitment. Model 3 was stipulated with three latent variables: (1) psychological meaningfulness (2) work engagement and (3) organisational commitment with no specified latent variables. Lastly, model 4 consisted of one latent variable, termed well-being, consisting of 29 observed items.

During the analysis, one item of the organisational commitment measure was removed ('I feel very little loyalty to this organisation') because of its statistically insignificant factor loading on the scale. Factor loadings for all the latent variables ranged from 0.4 to 0.90. Each latent variable and its observed item indicated a statistically significant relationship ($p < 0.01$). Table 1 presents fit statistics for the test of the various models.

Hypothesis 1 was accepted, as the results indicate that the latent variables are correlated. The results further suggest that model 1 fit the data best. Model 2 indicated an insignificant finding, which resulted in the model being poorly defined. Compared to model 3 and model 4, model 1 obtained the best comparative fit indices, namely the Akaike information criterion (AIC) and the Bayes information criterion (BIC). The AIC is a comparative fit and is meaningful when comparing different measurement models, whilst the BIC provides an indication of model parsimony (Kline, 2010). Therefore, model 1 had an acceptable fit and obtained a χ^2 value of 919.39 ($df = 371$) for the hypothesised measurement model. The fit statistics on the four fit indices were acceptable: TLI = 0.93, CFI = 0.94, RMSEA = 0.06 and SRMR = 0.07.

Table 2 indicates the correlational relationships between the latent variables.

Table 2 further indicates that psychological meaningfulness positively correlates with work engagement and positive organisational commitment; similarly, work engagement correlates with positive organisational commitment. Negative organisational commitment correlates negatively with positive organisational commitment. With regard to scale reliability, Cronbach's alpha does not provide a sufficient indication. In the case of structural equation modelling (SEM), tau equivalence is not always confirmed and alternative measures to establish scale reliability are needed (Wang & Wang, 2010). The disadvantage of Cronbach's alpha can be overcome using CFA. With measurement error not correlated, CFA-based reliability is useful (Wang & Wang, 2010). The CFA-based reliability scores for the latent variables ranged between 0.69 and 0.95; hence, the scales used in this study were reliable.

TABLE 1: Fit statistics of competing measurement models.

Model	χ^2	df	TLI	CFI	RMSEA	SRMR	AIC	BIC
Model 1	919.39	371	0.93	0.94	0.06	0.07	36 454.25	36 828.66
Model 2	907.05	368	0.93	0.94	0.06	0.07	36 447.92	36 834.40
Model 3	1201.99	374	0.90	0.90	0.07	0.06	36 730.86	37 093.19
Model 4	3624.64	377	0.59	0.62	0.14	0.11	39 147.51	39 497.76

χ^2 , chi-square; df , degrees of freedom; TLI, Tucker-Lewis index; CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardised root mean residual; AIC, Akaike information criterion; BIC, Bayes information criterion.

Testing the structural model

Hypothesis 2 indicated that work engagement mediates the relationship between psychological meaningfulness and organisational commitment. Upon investigation of the correlational relationships between the variables, indirect effects were tested. Table 3 and Table 4 show the direct and indirect effects of psychological meaningfulness and work engagement on organisational commitment.

Table 3 shows that psychological meaningfulness has a significant effect on work engagement. Psychological meaningfulness and work engagement have a significant effect on positive organisational commitment.

Table 4 shows the indirect effects of psychological meaningfulness on positive organisational commitment. The 95% confidence intervals of work engagement did not include zero. Therefore, psychological meaningfulness had indirect effect on positive organisational commitment via work engagement.

The structural model is depicted in Figure 1.

The results indicated a good fit of the hypothesised model (model 1) to the data: $\chi^2_{(371)} = 919.39$, $p < 0.001$, CFI = 0.94,

TABLE 2: Correlation coefficients of the latent variables.

Item	1	2	3	4
1. Psychological meaningfulness	-	-	-	-
2. Work engagement	0.64*	-	-	-
3. Negative organisational commitment	-0.118	-0.10	-	-
4. Positive organisational commitment	0.54*	0.68*	-0.303*	-

*, $p < 0.001$

TABLE 3: Standardised regression coefficients of the variables.

Variable	Estimate	SE	Est/SE	p
Work engagement				
Psychological meaning	0.65	0.03	20.67	0.001**
Organisational commitment				
Psychological meaningfulness	0.17	0.05	3.13	0.001**
Work engagement	0.58	0.05	11.90	0.000**
Negative commitment				
Psychological meaningfulness	-0.10	0.08	-1.225	0.22
Work engagement	-0.04	0.08	-0.45	0.65

SE, standard error; Est/SE, estimate divided by standard error; p , obtained significance value.

** , $p < 0.001$

TABLE 4: Indirect effects of psychological meaningfulness on commitment via work engagement.

Variable	Estimate	95% BC CI	
		LLCI	ULCI
Sum of indirect effects	0.37	0.25	0.49
Psychological meaningfulness	0.37	0.25	0.49

95% BC CI, 95% bias-corrected confidence interval; LLCI, lower limit of confidence interval; ULCI, upper limit of confidence interval.

TLI = 0.93, RMSEA = 0.06, SRMR = 0.07, AIC = 36454.25 and BIC = 36828.66. Figure 1 and Table 3 show the standardised path coefficients estimated by Mplus for the hypothesised model.

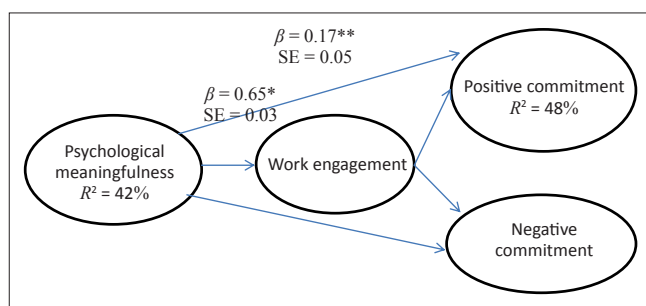
Due to the cross-sectional nature of the data, four competing structural models were also tested. Based on model 1a, paths were established from psychological meaningfulness to work engagement and from psychological meaningfulness and work engagement to positive organisational commitment and negative organisational commitment respectively. For model 1b, the above model was estimated, but in the path from psychological meaningfulness to work engagement, psychological meaningfulness was constrained to zero. In the model 1c path from psychological meaningfulness and work engagement to positive organisational commitment, psychological meaningfulness was constrained to zero. In model 1d, both psychological meaningfulness and work engagement were constrained to zero. In the last model, model 1e, both psychological meaningfulness and work engagement in their path to negative organisational commitment were constrained to zero.

The fit statistics for the models are shown in Table 5.

Discussion

The aim of this study was to investigate the effects of meaningful work and work engagement on commitment at work. From this, the study hypothesised that: (1) psychological meaningfulness, work engagement and organisational commitment are correlated and (2) psychological meaningfulness has a full or partial indirect effect on organisational commitment via work engagement.

The descriptive findings show high internal consistency for all the scales. The Cronbach's alpha coefficients range between 0.80 and 0.96. The results of this study confirm that psychological meaningfulness, work engagement



*, $p < 0.05$; **, $p < 0.001$

FIGURE 1: Structural model of meaningful work.

TABLE 5: Fit statistics for the four competing structural models.

Model	$\chi^2_{(372)}$	p	CFI	TLI	RMSEA	SRMR	AIC	BIC
Model 1b	1115.42	< 0.001	0.91	0.91	0.07	0.18	36 648.29	37 018.67
Model 1c	928.93	< 0.001	0.94	0.93	0.06	0.07	36 461.79	36 832.17
Model 1d	1153.97	< 0.001	0.91	0.90	0.07	0.07	36 684.83	37 051.19
Model 1e	919.39	< 0.001	0.94	0.93	0.06	0.07	36 454.58	36 820.93

χ^2 , chi-square; p , obtained significance value; CFI, comparative fit index; TLI, Tucker-Lewis index; RMSEA, root mean square error of approximation; SRMR, standardised root mean residual; AIC, Akaike information criterion; BIC, Bayes information criterion.

and organisational commitment have a correlational relationship, and previous research from a theoretical and empirical perspective supports the findings of this study (cf. Chalofsky & Krishna, 2009; Field & Buitendach, 2011; Olivier & Rothmann, 2007; Steger *et al.*, 2012; Van Zyl *et al.*, 2010).

High levels of work engagement, psychological meaningfulness and organisational commitment are paired with lower levels of negative commitment. On the acceptance of hypothesis 1, SEM was used to test the suitable measurement and structural model. Four measurement models were tested to determine the model that showed the best fit to the data according to the correlational relationships. Measurement model 1 (consisting of three latent variables: (1) psychological meaningfulness, (2) work engagement and (3) organisational commitment, consisting of two latent variables, namely positive organisational commitment and negative organisational commitment) indicated the best fit in terms of comparative fit and model parsimony.

Hypothesis 2 stated that work engagement would mediate the relationship between psychological meaningfulness and organisational commitment. Hypothesis 2 was partially accepted. The structural model indicated that engaged employees will experience more positive commitment; however, engagement will have no effect on negative commitment. Similarly, if employees experience their work as psychologically meaningful, their levels of positive commitment increase. Psychological meaningfulness does not influence negative commitment. The SEM results confirmed that psychological meaningfulness indirectly influences positive organisational commitment via work engagement. Both work engagement and psychological meaningfulness had no effect on negative organisational commitment.

Olivier and Rothmann (2007) and Van Zyl *et al.* (2010) attest to the relationship between psychological meaningfulness and work engagement, whilst Steger and Dik (2009; 2010) suggest a link between work engagement, organisational commitment and psychological meaningfulness. Further, Rosso *et al.* (2010) explain the importance of considering all aspects of meaningful work and not just the antecedents thereof. The self-determined behaviour of the employee to intentionally seek meaningfulness at work will promote their experience of engagement and commitment within their work environment. By the same token, if the organisation provides a platform for experiencing meaningfulness, positive work outcomes for both the individual and the organisation will be achieved.

More specifically, meaningfulness will result in positive work outcomes such as organisational commitment (cf. Steger *et al.*,

2012), which supports the findings and shows the importance of considering meaningful work as a topic of interest for better workplace functioning. Furthermore, Cartwright and Holmes (2006) are of the opinion that meaningful connections result in outcomes such as commitment and engagement at work. They also add that enhancing meaningfulness leads to more motivated employees.

In addition, Bakker and Demerouti (2008) and Field and Buitendach (2011) posit that work engagement has a correlational and predictive relationship with organisational commitment. Organisational commitment is an important workplace outcome (Field & Buitendach, 2011) and work engagement is strongly related to it. It is also evident that work engagement mediates the relationship between antecedents or characteristics of the job and positive work outcomes such as organisational commitment (Hakonen *et al.*, 2006; Llorens *et al.*, 2006; Saks, 2006; Simpson, 2008).

An explanation for the non-significant relationship between psychological meaningfulness, work engagement and negative organisational commitment is that the inherent psychological meaningfulness and work engagement that people perceive is related to their work as a purpose or a calling and linked to the organisation. Research links work as a calling with the experience of meaningfulness and not necessarily the experience of meaningfulness and an organisation (cf. Steger & Dik, 2009). Previous research on meaningful work is limited (Steger *et al.*, 2012).

Meaningful work is important and is related to work engagement and organisational commitment at work. Meaning, engagement and commitment are crucial for optimal workplace functioning, and emphasise the role of work as a motivator (Chalofsky & Krishna, 2009). Since work is where people develop (cf. Steger & Dik, 2009), is where they spend most of their time (cf. Van Zyl *et al.*, 2010), affects how they engage (cf. Cameron *et al.*, 2003) and is a domain that affects meaning in life (cf. Steger *et al.*, 2009), work is an important environment in which people can be positively influenced and in which meaningful work becomes worth investigating.

This study yielded important results that underpin the practical, theoretical and methodological contribution towards meaningful work for the individual, the organisation and research in general. Practically, the effects of psychological meaningfulness on work engagement and organisational commitment imply paucity in attempts to employ or increase meaningful work. In this regard focusing on antecedents to engagement and commitment is relevant and necessary to individuals, organisations and research. This study has positive implications for both the workplace and the individual. Methodologically, this study supports the positivist view of quantitative research in finding facts and further contributes to its status as a research method. Theoretically, the study can contribute in expanding knowledge on meaningful work in the workplace for organisations in general and the field of industrial and

organisational psychology in particular. This in return can contribute to management studies and organisational dynamics, helping them to rise to the challenge to transform organisations to accommodate different generations, with a specific focus on current-day technological advancements, and answer to these employees' need for meaningful work.

Limitations

Whilst this study uncovered positive experiences in workplace behaviour and the effect thereof on commitment for individuals and organisations, it had some limitations. The sample size is too small to generalise the findings to the larger population. A cross-sectional sample was used, which resulted in the possibility of people overthinking their answers on items in the questionnaires. Relatively little research has been done on meaningful work in South Africa, which makes it difficult to relate the findings back to the South African context. This study only focused on psychological meaningfulness, constituting only a small part of the current body of knowledge on meaningful work.

Recommendations

To overcome the limitation, a greater number of participants should be sampled to enhance the reliability and validity of studies. A longitudinal research design and diary method (gathering data on a daily basis for a period of time) should be considered to gain better insight through making causal attributions into meaningful work. Understanding of the benefits that meaningful work can have on optimal functioning in the workplace on a global level attests to the advantages South Africa may experience by investing in meaningful work. Lastly, it is recommended that alternative constructs relating to meaningful work (e.g. calling, meaning in life, satisfaction) be investigated to establish a broader knowledge base for South African workplaces. Additionally, it is recommended that research efforts should be enhanced and encouraged in order to address the paucity in studies on the phenomenon of meaningful work in the work context.

Implications

Meaningful work can lead to more engaged and committed employees. Therefore, additional research is needed to fully understand the impact of meaningful work on all aspects of organisational benefits functioning. By gaining further insight into psychological meaningfulness, work engagement and organisational commitment in the workplace and how they relate to each other, an understanding of the values of meaning in work and meaning at work can be achieved. As suggested by Chalofsky (2003), people tend to accept or reject certain techniques for improving work environments. As previously mentioned, employees who enter the workplace are in search of meaning in their work. Therefore, employees and organisations are beginning to realise the importance of meaningful work. If employees are in a mindset of optimising meaningfulness at work (Kompier, 2005) organisations should seize the opportunity to introduce means benefiting both the individual and the organisation (cf. Chalofsky, 2003).

Future research

Future research is needed to fully understand the impact of meaningful work on all aspects of organisational functioning. Based on the work of Steger *et al.* (2012), research in the workplace is necessary in order to determine whether meaningful work results from workers who are attracted to an organisation or whether meaningful work results as an outcome of an organisation providing a work environment fostering meaningful work. Research efforts should be enhanced and encouraged in order to address the paucity in studies on the phenomenon of meaningful work in the work context.

Conclusion

The relationship between meaningful work, organisational commitment and work engagement can be viewed as advantageous to human resource development practitioners and managers, enabling them firstly to develop workplace strategies and secondly to contribute towards improving positive workplace outcomes (e.g. employee satisfaction, fulfilment, productivity, retention and loyalty) (cf. Chalofsky & Krishna, 2009). It is evident that meaningful work can lead to more engaged and committed employees. Psychological meaningfulness, work engagement and organisational commitment need further research within the South African workplace to specifically understand how they relate to each other and how an understanding of these phenomena can contribute to employees achieving meaning in work and at work, contributing to optimal organisational functioning and positive meaning in life.

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Competing interests

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Authors' contributions

M.G. (University of Johannesburg) was responsible for the methodology and reporting of the results. K.L. (University of Johannesburg) was responsible for the write-up of the background and literature review. C.M.V. (University of Johannesburg) was responsible for language and editing.

References

- Aktouf, O. (1992). Management and theories of organizations in the 1990s: Toward a critical radical humanism. *Academy of Management Review*, 17, 407–431. <http://dx.doi.org/10.2307/258717>
- Allen, N.J., & Meyer, J.P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organisation. *Journal of Occupational Psychology*, 63, 1–18. <http://dx.doi.org/10.1111/j.2044-8325.1990.tb00506.x>
- Arnold, K.A., Turner, N., Barling, J., Kelloway, E.K., & McKee, M.C. (2007). Transformational leadership and psychological well-being: The mediating role of meaningful work. *Journal of Occupational Health Psychology*, 12, 193–203. <http://dx.doi.org/10.1037/1076-8998.12.3.193>
- Bakker, A.B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, 13, 209–223.
- Bibby, R.W. (2001). *Canada's teens: Today, yesterday and tomorrow*. Toronto: Stoddart. <http://dx.doi.org/10.1108/13620430810870476>
- Brown, K.W., & Ryan, R.M. (2004). Fostering healthy self-regulation from within and without: A self-determination theory perspective. In P.A. Linley, & S. Joseph (Eds.), *Positive psychology in practice* (pp. 105–124). Hoboken, NJ: John Wiley & Sons.
- Cameron, S., Dutton, J., & Quinn, R. (2003). *Positive organizational scholarship: Foundations of a new discipline*. San Francisco: Berrett-Koehler Publishers.
- Cartwright, S., & Holmes, N. (2006). The meaning of work: The challenge of regaining employee engagement and reducing cynicism. *Human Resource Management Review*, 16, 199–208. <http://dx.doi.org/10.1016/j.hrmmr.2006.03.012>
- Carvalho, A. (2005). *Meaning of work and life role salience in a South African context: A cross-cultural comparison*. Unpublished master's dissertation, University of Johannesburg, South Africa.
- Casey, C. (1995). *Work, self and society: After industrialism*. London: Routledge.
- Chalofsky, N. (2003). An emerging construct for meaningful work. *Human Resource Development International*, 6, 69–83. <http://dx.doi.org/10.1080/1367886022000016785>
- Chalofsky, N., & Krishna, V. (2009). Meaningfulness, commitment and engagement: The intersection of a deeper level of intrinsic motivation. *Advances in Developing Human Resources*, 11, 189–204. <http://dx.doi.org/10.1177/1523422309333147>
- Chambers, E.G. (1998). Win the war for top talent. *Workforce*, 77(12), 50–56.
- Chirkov, V., Ryan, R.M., Kim, Y., & Kaplan, U. (2003). Differentiating autonomy from individualism and independence: A self-determination theory perspective on internalization of cultural orientations and well-being. *Journal of Personality and Social Psychology*, 84, 97–109. <http://dx.doi.org/10.1037/0022-3514.84.1.97>
- Chughtai, A.A., & Buckley, F. (2008). Work engagement and its relationship with state and trait trust: A conceptual analysis. *Institute of Behavioural and Applied Management*, 1, 47–71.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper Perennial.
- Deci, E.L., & Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behaviour*. New York: Plenum Press. <http://dx.doi.org/10.1177/0146167201278002>
- Deci, E.L., Ryan, R.M., Gagné, M., Leone, D.R., Usunov, J., & Kornazheva, B.P. (2001). Need satisfaction, motivation, and well-being in the work organizations of a former Eastern bloc country: A cross-cultural study of self-determination. *Personality and Social Psychology Bulletin*, 27, 930–942.
- Dessler, G. (1999). How to earn your employees' commitment. *Academy of Management Executive*, 13, 58–67. <http://dx.doi.org/10.1177/0146167201278002>
- Dik, B.J., & Duffy, R.D. (2008). Calling and vocation at work: Definitions and prospects for research practice. *The Counselling Psychologist*, 8, 48–61.
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71, 500–507. <http://dx.doi.org/10.1037/0021-9010.71.3.500>
- Eisenhardt, K.M. (1985). Control: organisational and economic approaches. *Management Science*, 31, 134–149. <http://dx.doi.org/10.1287/mnsc.31.2.134>
- Field, L. K., & Buitendach, J. H. (2011). Happiness, work engagement and organisational commitment of support staff at a tertiary education institution in South Africa. *South African Journal of Industrial Psychology*, 37, 68–77.
- Frankl, V.E. (1984). *Man's search for meaning*. (3rd edn.). New York: Pocket Books.
- Fuller, J.B., Barnett, T., Hester, K., & Relyea, C. (2003). A social identity perspective on the relationship between perceived organizational support and organizational commitment. *Journal of Social Psychology*, 143, 789–791. <http://dx.doi.org/10.1080/00224540309600432>
- Geldenhuis, M. (2009). *Job demands, job resources and work engagement in a higher education institution: A diary study*. Unpublished doctoral dissertation, North-West University, Potchefstroom, South Africa.
- Gravetter, F.J., & Forzano, L.B. (2009). *Research methods in the behavioural sciences*. Belmont, CA: Wadsworth Cengage Learning.
- Hackman, J.R., & Oldham, G.R. (1975). Development of job diagnostic survey. *Journal of Applied Psychology*, 60, 159–170. <http://dx.doi.org/10.1037/h0076546>
- Hair, J.F., Black, W.C., Babin, B.J., & Andersen, R.E. (2010). *Multivariate data analysis: A global perspective*. Upper Saddle River, NJ: Pearson. <http://dx.doi.org/10.1016/j.jmva.2009.12.014>
- Hakenen, J.J., Bakker, A.B., Schaufeli, W.B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology*, 43, 495–513. <http://dx.doi.org/10.1016/j.jsp.2005.11.001>
- Harpaz, I., & Fu, X. (2002). The structure of the meaning of work: A relative stability amidst change. *Human Relations*, 55, 639–667. <http://dx.doi.org/10.1177/0018726702556002>
- He, P. (2008). *An investigation of the antecedents and consequences of affective commitment in a U.S. hospitality organization*. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, USA.
- Holbeche, L., & Springett, N. (2004). *In search of meaning in the workplace*. UK: Roffey Park Institute.
- Hult, C. (2005). Organisational commitment and person-environment fit in six Western countries. *Organisation Studies*, 26(2), 249–270. <http://dx.doi.org/10.1177/0170840605049800>
- Jackson, L.T.B., Rothmann, S., & Van de Vijver, F.J.R. (2006). A model of work-related well-being for educators in South Africa. *Stress and Health*, 22, 263–274. <http://dx.doi.org/10.1002/smi.1098>
- Kahn, W.A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33, 692–724. <http://dx.doi.org/10.2307/256287>

- Kline, R.B. (2010). *Principles and practice of structural equation modeling*. New York: Guilford Press.
- Kompier, M.A.J. (2005). Dealing with workplace stress. In C.L. Cooper (Ed.), *Handbook of stress medicine and health* (pp. 349–374). London: CRC Press.
- Llorens, S., Bakker, A.B., Schaufeli, W.B., Salanova, M., (2006). Testing the robustness of the job demands–resources model. *International Journal of Stress Management*, 13, 378–391. <http://dx.doi.org/10.1037/1072-5245.13.3.378>
- Lockwood, N.R. (2007). *Leveraging employee engagement for competitive advantage: HR's strategic role (SHRM Research Quarterly Report)*. Alexandria, VA: Society for Human Resource Management.
- Martin, A., & Roodt, G. (2008). Perceptions of organisational commitment, job satisfaction and turnover intentions in a post-merger South African tertiary institution. *South African Journal of Industrial Psychology*, 34, 23–31.
- Mathieu, J.E., & Zajac, D.M. (1990). A review and meta-analysis of the antecedents, correlates and consequences of organisational commitment. *Psychological Bulletin*, 108(2), 171–194. <http://dx.doi.org/10.1037/0033-2909.108.2.171>
- May, D.R., Gilson, R. L., & Harter, L.M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology*, 77, 11–37. <http://dx.doi.org/10.1348/096317904322915892>
- Meyer, J.P., & Allen, N.J. (1991). A three-component conceptualization of organisational commitment. *Human Resource Management Review*, 1(1), 61–89. [http://dx.doi.org/10.1016/1053-4822\(91\)90011-2](http://dx.doi.org/10.1016/1053-4822(91)90011-2)
- Meyer, J.P., Allen, N.J., & Smith, C.A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology*, 78, 4, 538–552. <http://dx.doi.org/10.1037/0021-9010.78.4.538>
- Meyers, C. (2007). *Industrial psychology*. New York: Garnsey Press.
- Milliman, J., Czaplewski, A.J., & Ferguson, J. (2003). Workplace spirituality and employee work attitudes: An exploratory empirical assessment. *Journal of Organizational Change Management*, 16, 426–447. <http://dx.doi.org/10.1108/09534810310484172>
- Mowday, R.T., Porter, L.W., & Steers, R.M. (1982). Employee-organizational linkage: The psychology of commitment, absenteeism, and turnover. In P. Warr (Ed.), *Organizational and occupational psychology* (pp. 219–229). New York: Academic Press, Inc.
- Mowday, R.T., Steers, R.M., & Porter, L.W. (1979). The measurement of organizational commitment. *Journal of Vocational Behaviour*, 14, 224–247. [http://dx.doi.org/10.1016/0001-8791\(79\)90072-1](http://dx.doi.org/10.1016/0001-8791(79)90072-1)
- Mplus version 7.0 [Computer software] (1998–2012). Los Angeles: Muthen & Muthen.
- Neck, C.P., & Milliman, J.F. (1994). Thought self-leadership: Finding spiritual fulfillment in organizational life. *Journal of Managerial Psychology*, 9, 9–16. <http://dx.doi.org/10.1108/02683949410070151>
- Nord, W.R., Brief, A.P., Atieh, J.M., & Doherty, E.M. (1990). Studying meanings of work: The case of work values. In A. Brief & W. Nord (Eds.), *Meanings of occupational work: A collection of essays* (pp. 21–64). Lexington, MA: Lexington Books.
- Olivier, A.L., & Rothmann, S. (2007). Antecedents of work engagement in a multinational oil company. *South African Journal of Industrial Psychology*, 33(3), 49–56.
- Porter, L.W., Crampon, W.J. & Smith, F.J. (1976). Organizational commitment and managerial turnover. *Organizational Behavior and Human Performance*, 15, 87–98. [http://dx.doi.org/10.1016/0030-5073\(76\)90030-1](http://dx.doi.org/10.1016/0030-5073(76)90030-1)
- Porter, L.W., Steers, R.M., Mowday, R.T., & Boulian, P.V. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology*, 59(5), 603–609. [http://dx.doi.org/10.1016/0030-5073\(76\)90030-1](http://dx.doi.org/10.1016/0030-5073(76)90030-1)
- Pratt, M.G., & Ashforth, B.E. (2003). Fostering meaningfulness in working and at work. In K. Cameron, J.E. Dutton, & R.E. Quinn (Eds.), *Positive organizational scholarship*, (pp. 309–327). San Francisco: Berrett-Koehler.
- Rogers, E.W. (2001). A theoretical look at firm performance in high technology organisations: What does existing theory tell us? *Journal of High Technology Management Research*, 12, 39–61. [http://dx.doi.org/10.1016/S1047-8310\(00\)00038-9](http://dx.doi.org/10.1016/S1047-8310(00)00038-9)
- Roodt, G. (2004). Concept redundancy and contamination in employee commitment research: Current problems and future directions. *SA Journal of Industrial Psychology*, 30(1), 82–90. <http://dx.doi.org/10.4102/sajip.v30i1.135>
- Rosso, B.D., Dekas, K.H., & Wrzesniewski, A. (2010). On the meaning of work: A theoretical integration and review. *Research in Organizational Behavior*, 30, 91–127. <http://dx.doi.org/10.1016/j.riob.2010.09.001>
- Rothmann, S., & Rothmann, S. Jr. (2010). Factors associated with employee engagement in South Africa. *South African Journal of Industrial Psychology*, 36, 27–38.
- Ryan, R.M., & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic, motivation, social development, and well-being. *American Psychologist*, 55, 68–78. <http://dx.doi.org/10.1037/0003-066X.55.1.68>
- Saal, F.E., & Knight, P.A. (1987). *Industrial-organizational psychology: Science and practice*. Pacific Grove, CA: Brooks/Cole.
- Saks, A.M. (2006). Antecedents and consequences of work engagement. *Journal of Managerial Psychology*, 21, 600–619. <http://dx.doi.org/10.1108/02683940610690169>
- Schaufeli, W.B., & Bakker, A.B. (2004). Job demands, job resources and their relationship with burnout and engagement: A multi sample study. *Journal of Organisational Behavior*, 25, 293–315. <http://dx.doi.org/10.1002/job.248>
- Schaufeli, W.B., & Bakker, A.B. (2010). *The conceptualization and measurement of work engagement: A review*. In A.B. Bakker, & M.P. Leiter (Eds.), *Work engagement: A handbook of essential theory and research* (pp. 10–24). New York: Psychology Press.
- Schaufeli, W.B., Salanova, M., González-Romá, V., & Bakker, A.B. (2002). The measurement of engagement and burnout: A confirmative analysis approach. *Journal of Happiness Studies*, 3(1), 71–92. <http://dx.doi.org/10.1023/A:1015630930326>
- Seligman, M.E.P. (2002). *Authentic happiness*. New York: Free Press.
- Seligman, M.E.P. (2008). Positive health. *Applied Psychology: An International Review*, 57, 3–18. <http://dx.doi.org/10.1111/j.1464-0597.2008.00351.x>
- Simpson, M. (2008). Engagement at work: A review of the literature. *International Journal of Nursing Studies*, 46, 1012–1024. <http://dx.doi.org/10.1016/j.ijnurstu.2008.05.003>
- Spreitzer, G. (1995). Psychological empowerment in the workplace: Dimensions, measurement and validation. *Academy of Management Journal*, 38(5), 1442–1465. <http://dx.doi.org/10.2307/256865>
- Steger, M.F., & Dik, B.J. (2009). If one is looking for meaning in life, does it help to find meaning at work? *Applied Psychology: Health and Wellbeing*, 1, 303–320.
- Steger, M.F., & Dik, B.J. (2010). Work as meaning. In P.A. Linley, S. Harrington, & N. Page (Eds.), *Oxford handbook of positive psychology and work* (pp. 131–142). Oxford: Oxford University Press.
- Steger, M.F., Dik, B.J., & Duffy, R.D. (2012). Measuring meaningful work: The work and meaning inventory. *Journal of Career Assessment*, 20, 322–337. <http://dx.doi.org/10.1177/1069072711436160>
- Steger, M.F., Oishi, S., & Kashdan, T.B. (2009). Meaning in life across the life span: Levels and correlates of meaning in life from emerging adulthood to older adulthood. *Journal of Positive Psychology*, 4, 43–52. <http://dx.doi.org/10.1080/17439760802303127>
- Van Zyl, L.E., Deacon, E., & Rothmann, S. (2010). Towards happiness: Experience of work-role fit, meaningfulness, and work engagement of industrial/organisational psychologists in South Africa. *South African Journal of Industrial Psychology*, 36, 1–10.
- Viljoen, J.P., & Rothmann, S. (2009). Occupational stress, ill health and organisational commitment of employees at a university of technology. *South African Journal of Industrial Psychology*, 35, 1–11.
- Wang, J., & Wang, X. (2012). *Structural equation modelling: Applications using Mplus*. West Sussex: John Wiley and Sons Limited. <http://dx.doi.org/10.1002/9781118356258>
- Wiener, Y. (1982). Commitment in organisations: A normative view. *The Academy of Management Review*, 7(3), 418–428. <http://dx.doi.org/10.2307/257334>
- Wolf, S. (2010). *Meaning in life and why it matters*. Princeton, NJ: Princeton University Press.
- Wrzesniewski, A. (2003). Finding positive meaning at work. In K. Cameron, J.E. Dutton, & R.E. Quinn (Eds.), *Positive organizational scholarship*, (pp. 296–308). San Francisco: Berrett-Koehler.
- Wrzesniewski, A., & Dutton, J.E. (2003). Crafting a job: Revisioning employees as active crafters of their work. *Academy of Management Review*, 26, 179–201. <http://dx.doi.org/10.5465/AMR.2001.4378011>
- Yu, B.B., & Egri, C. P. (2005). Human resource management practices and affective organizational commitment: A comparison of Chinese employees in a state-owned enterprise and a joint venture. *Asia Pacific Journal of Human Resources*, 43(3), 332–360. <http://dx.doi.org/10.1177/1038411105058706>