

WELL-BEING OF TEACHERS IN SECONDARY SCHOOLS

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MA

Thesis submitted for the degree Doctor of Philosophy in
Industrial Psychology at the Vaal Triangle Campus of the
North-West University

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Vanderbijlpark

November 2015

Dit begin alles hier TM



NORTH-WEST UNIVERSITY
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PREFACE AND DECLARATION

The article format was chosen for the current study. The researcher, Elmari Fouché, conducted the research and wrote the manuscripts. Prof. Sebastiaan Rothmann acted as promoter, and Dr C.P. van der Vyver acted as assistant promoter. Three manuscripts were written and/or submitted for publication.

The references as well as the editorial style as prescribed by the *Publication Manual* (6th edition) of the American Psychological Association (APA) were followed in this thesis. Chapter 1 use the decimal style acceptable in South Africa, while the manuscripts were prepared in line with the APA conventions on the use of decimals. Also, English (USA) was used in some manuscripts, while United Kingdom English was used some chapters.

I declare that “Well-being of teachers in secondary schools” is my work and that all the sources that I have used or quoted are indicated and acknowledged using complete references.

This study is dedicated to my Mother, the best teacher I know. Not only did she share and taught her subject knowledge, she had a calling which made a difference in so many lives!

ACKNOWLEDGEMENTS

“There is no gain without struggle”.

-Martin Luther King Jnr.

The journey I embarked upon to complete this degree was a very personal one. It was difficult and challenging and required extreme persistence and self-discipline. The journey would have been impossible, had it not been for the following people who supported me in ways that I cannot even begin to describe:

- My Father in Heaven and my Source of Strength who every day blesses me in abundance with health, courage, inspiration, persistence and supportive family and friends. My Saviour – for blessing me richly with opportunities and a stable, happy life! Without You I am nothing.
- Prof. Ian Rothmann, my promoter. Thank you for helping me to understand the word growth in all its dimensions. For directing my thoughts; for sharing your intensive subject knowledge and wisdom with me; for your calmness during stressful times; but most of all, thank you for your integrity and especially for the way you approach your students – showing respect for me as a person and giving me constructive feedback, always giving credit where deserved, and good advice and structure! I honour you as my promoter and as a person.
- Dr CP van der Vyver, my assistant promoter. Thank you for your support and interest in my study. For your constructive feedback and focus on detail and educational applicability of this study. For also communicating with me in a respectful manner. It is appreciated.
- Dr Elsabe Diedericks, my dearest friend. Thank you for your unwavering support, for believing in me. For constantly encouraging me; being there all the time! I appreciate you as an academic but most of all as a true friend.
- Dr James Varughese, my colleague. Thank you for your interest in my study. For always being willing to look at my work with a critical eye and for your valuable feedback on my proposal.
- Dr Lindie du Plessis. Academic in another discipline. For your time and interest in my study – specifically for being a critical reader on my proposal.

- Dr Suria Ellis, Statistical Consultation Services at the Potchefstroom Campus. Thank you for your friendly support and help with the capturing of my raw data and descriptive statistics.
- Dr. Annemarie Loubser, for standing in for contact sessions on my behalf, to enable me to reach my research objectives. You are dearly appreciated!
- All secondary school teachers for participating in this study – without you this study would not be possible! This study is for each one of you! Teachers who WANT to make a difference!
- Mr H. Motara – Director of the Kenneth Kaunda District, North West Province, for your permission to conduct this study. Especially for your immediate response to my request to conduct my study, and the support I received from your office.
- The three Area Managers within the Kenneth Kaunda district for your permission and support with my study: Mrs S. Yssel (Tlokwe); Mr A.J. Engelbrecht (Maquassi); Mr S.S. Mogotsi (Matlosana).
- Mr Hendry Oosthuizen and Chester – Institutional Office, Research Support: for your valuable support with the collection of my data in the Kenneth Kaunda District. Without your competent support this study would not have been possible!
- The friendly, competent personnel from the Educational Library on the Potchefstroom campus: Mrs Martha van der Walt; Mr Kirchner van Deventer; Mr Lucas van Den Heever. For your speedy response to my e-mail requests and your friendly, competent service – you are dearly appreciated!
- Mrs Cecilia van der Walt for her professional language editing of this thesis. But especially for being such an accommodating and wonderful person!
- Mrs Susan van Biljon for the technical care of this thesis and helping to turn the final document into a professional product!
- Mrs. Wendy Barrow, for the editing of my bibliographic and reference lists.
- Mrs Marinda Neethling, my colleague and good friend. For accompanying me on my journey as a fellow sister – for always being there with a warm hug and genuine support!
- My dearest parents: Francois and Albertje Fouché. For always being there for me. For your love, support and belief in me! For helping me with my children. Words fail me to express my gratitude and love for you! The podium is yours, not mine.

- Lastly but not the least – my children, Martiens and FC Venter, for understanding when I needed to work and for your love and encouragement. I love you dearly. Your sacrifice was huge.

SUMMARY

Topic: Well-being of teachers in secondary schools

Keywords: Leadership, supervisor support, self-determination, psychological need satisfaction, engagement, intention to leave, meaningful work; work beliefs; work design, performance, burnout; psychological well-being, organizational practices, virtuousness, secondary schools, teachers.

Schools worldwide are experiencing challenges in terms of ensuring quality education and good retention of its teaching staff. The highly stressful nature of the teaching profession as well as the high demands placed on teachers with the constant changes in curriculum, not enough resources and insufficient support from supervisors, cause secondary school teachers to show high turnover intention rates and high attrition rates which are extremely costly and detrimental to the success of the school. The well-being of the teacher is mostly overlooked within a highly stressful environment where the focus is on results. Demands on schools and teachers are becoming increasingly complex. Teacher issues are discussed on policy agendas as a result of concerns raised by teachers themselves about the future of their profession and whether they are sufficiently rewarded and supported in their work. The morale and motivation of teachers are important for future teacher retention. Teachers are now expected to have much broader roles, taking into account the development of the learner, the handling of teaching processes in the classroom, the focus of the entire school as a “community-in-action” and the relations with the larger community and the world of teaching in general. Thus expectations are higher and demands are more – but the well-being of the teacher does not seem to be a priority within the larger school environment and global teaching picture. Efforts to improve the psychological well-being and optimal functioning of secondary school teachers will affect individual and organizational outcomes. A teacher who functions well is more likely to stay in the profession and will be more motivated than one who is not engaged and demotivated. Investments in the well-being of teachers will lay the basis for positive school outcomes such better retention, better performance and job satisfaction.

The aim of this study was to investigate the psychological well-being of a sample of secondary school teachers in North West Province and to determine the antecedents and outcomes thereof. A cross-sectional survey design was used to gather data regarding the well-

being of secondary school teachers and its outcomes. A stratified sample ($N = 513$) was taken of secondary school teachers in North West Province in South Africa. The measuring instruments used were the Supervisor Behaviour Scale, Work-Related Basic Need Satisfaction Scale, Balanced Measure of Psychological Needs, Work Engagement Scale, Turnover Intention Scale, Work-Life Questionnaire, Revised Job Diagnostic Survey, Co-Worker Relations Scale, Work and Meaning Inventory, Personal Resources Scale, Self-Rated Performance Scale, and Positive Practices Questionnaire.

The results of study 1 showed that supervisor support (for autonomy, competence, and relatedness) was positively related to employees' psychological need satisfaction and engagement and negatively related to intention to leave. Supervisor support affected engagement positively and intention to leave negatively via employees' autonomy satisfaction. The findings suggest that supervisor support and psychological need satisfaction play a significant role in the engagement and retention of employees.

The results of study 2 showed that a calling orientation, job design, and co-worker relations explained a large percentage of the variance in experiences of meaningful work. A low calling orientation and poor co-worker relations predicted a moderate percentage of the variance in burnout. A calling orientation, a well-designed job, good co-worker relations, and meaningful work predicted work engagement. Job design was moderately associated with self-ratings of performance. The absence of a calling orientation predicted teachers' intentions to leave the organisation.

The results of study 3 showed that teachers with the highest levels of psychological functioning derived the most meaning from their work. These teachers are renewed by the work they are doing. Positive organizational practices predicted positive outcomes such as meaning, engagement and self-determined behaviour. Psychologically-well and healthy teachers are more likely to focus on the meaningfulness of the work they are doing. It seems that the most important positive practices in the pathway to better psychological well-being at work are those of meaningful work and inspiration.

Recommendations for future research were made.

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CHAPTER 1

INTRODUCTION

This thesis investigates the well-being of secondary school teachers in a district in North West Province in South Africa.

Chapter 1 contains the problem statement, research objectives, research method and the chapter layout.

1.1 BACKGROUND AND MOTIVATION OF THE RESEARCH

South Africa has a high-cost, low-performance education system that does not compare well with education systems in other developing countries (Prew, 2011). Education in South Africa faces various challenges. First, teachers in South Africa are often under-qualified, and they do not perform well. Poor teacher performance results in poor learner standards and a lack of classroom discipline. Second, teachers do not have sufficient resources to deliver high-quality education. Third, difficulties in the educational system have been caused by a failure of appropriate inspection and monitoring, and confusion associated with changing curricula. These factors resulted in demoralisation and disillusionment among teachers and a negative and worsening perception of the teaching profession. It has been argued that the South-African school education is suffering from a quality problem (Gonzales et al., 2004; Mullis, Martin, Kennedy, & Fay, 2007). These factors are alarming because school education can be regarded as the key to the economic, social, moral, and political and value reconstruction of society (Wolhuter, 2010a).

Teacher performance, the quality of school leadership (the supervisor) and organisational practices are the most important factors in South Africa's poor school results (Cameron, Mora, Leutscher, & Calarco, 2011; National Planning Commission, 2011). In-depth studies on factors that contribute to poor school outcomes for learners in South Africa conclude that teachers spend too little time in contact with learners, possess inadequate subject knowledge and lack basic pedagogical ability, especially in subjects such as languages, science and mathematics. Furthermore, teachers are poorly supported by the administration within

education departments. Their task is made more trying by the sporadic provision of books and other learning materials. Several efforts to upgrade teachers' skills have been largely ineffective (National Planning Commission, 2011).

Strike action, occasionally unofficial, lead to a loss of teaching time. More time is lost because union meetings often take place within school time. Holding union meetings during school time is often the norm in township schools. Also, procedures for dismissing teachers for misconduct are complex and time-consuming. School districts and the Department of Education (2013) have not provided adequate means for addressing allegations of extreme misconduct involving teachers. These concerns cannot be managed effectively without the active participation and engagement of teachers, their unions and parents (Van der Berg et al., 2011).

To achieve educational progress, South Africa needs an institutional structure (including fair teacher pay, bursary programmes and interventions targeting teachers) that attracts and retains the best teachers and promotes good teaching. Barber and Mourshed (2007) concluded that the quality of a school system cannot exceed the quality of its teaching force. Low teacher effort is often considered one of the most serious problems in South African schooling, perhaps even bigger than poor teacher content knowledge and pedagogical skills to successfully teach the curriculum (Van der Berg et al., 2011).

Teachers are the nation's human capital, and every endeavour possible needs to be made to ensure they are functioning well at work. Teacher stress and burnout have received recognition as a widespread problem and global concern in recent years (Borg, 1990; Boyle, Borg, Falzon, & Baglioni, 1995; Jackson & Rothmann, 2006). Studies showed that education is the fifth most stressful profession (Kyriacou, 2001), and that teaching in a secondary school is one of the top 10 tough jobs (Hayward, 2009). Jackson and Rothmann (2006) found that teachers' job characteristics (specifically close monitoring of performance and a lack of growth opportunities) contributed strongly to their stress. Teachers face various challenges and must cope with work overload, lack of resources and constant change (Jackson & Rothmann, 2006). Research has shown that teachers are unhappy about several issues relating to their profession (Kallaway, 2007; Roper, 2007). In the United States of America, 30% of

beginner teachers leave the profession within the first three years of teaching, and almost 50% by their fifth year of teaching (Kysilka, 2010).

In South Africa, the attrition rate of teachers is higher than the replenishing rate (Crouch, 2002; Steyn, 2006). De Beer (2004) showed that the morale of South African teachers is low. Steyn, Wolhuter, and de Waal (2004) found that, on average, 1.7% of the teachers at historically white schools and 15.5% (rising to 25.5% in some cases) of teachers at historically black schools are absent on any given day (Hamlyn, 2009).

In studying the functioning of teachers in secondary schools in South Africa, the emphasis could be on containing the damage and fixing weaknesses from a *disease* (negativity) model or a *positivity* model (Youssef-Morgan & Bockorny, 2014). Negatively oriented research and practice is limited in its ability to provide a better understanding of optimal functioning of teachers and actualising their potential because positivity and negativity represent distinct continuums, rather than the opposite side of the same continuum. For example, freedom of stress and burnout at work is not the same as flourishing and optimal functioning. Similarly, an “adequate” job is not the same as a “great” job. According to Youssef-Morgan and Bockorny (2014), positive psychology, positive organisational scholarship and positive organisational behaviour are examples of positive paradigms that can be applied to understand and promote flourishing of individuals in the work context. However, the importance and credibility of the three fields partly depend on the relationships between organisational practices and individual and organisational outcomes (Cameron et al., 2011). This study focuses on the well-being of teachers in secondary schools in South Africa.

1.2. PROBLEM STATEMENT

“Teachers are workers; teaching is work; and the school is a workplace” (Connell, 1985, p. 69). This statement stands central in this research: to determine to what extent the school as a workplace influences teachers’ well-being. According to Weller-Ferris (1999), human resources are most central to the operation of schools. Good teaching environments and the resources afforded to teachers are central to teachers’ effective and efficient teaching in schools (Weller-Ferris, 1999). The quality of teachers is essential for obtaining positive learning outcomes. Therefore the education system should attract and retain well-functioning

teachers and support them in their work environment. This requires schools to be positive institutions. Teachers have to be assisted in their pursuit of better, healthier, more meaningful lives (Ryff & Singer, 1998). Given the stressors the teacher have to deal with, it would be important to develop a strategy that would help teachers to negotiate, resolve and grow in the face of life's stressors and challenges. Well-being is also important because of its consequences for teachers and schools. Teachers experiencing poor well-being in the workplace may be less productive, make poor decisions, be more prone to be absent from work (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2006), and do not contribute to the effective functioning of the schools (Price & Hooijberg, 1992). Hence the need to investigate teachers' work experiences is becoming crucial. If one knows what factors contribute to teachers functioning well, it will contribute to teachers reaching their full potential.

Positive institutions are characterised by flourishing employees, a strengths-focused approach, and the use of positive institutional and human resource practices (Dutton & Glynn, 2008; Rothmann, 2013, 2014). Flourishing can be defined as the appraisals individuals make regarding the quality of their lives as expressed in terms of multidimensional indicators of well-being (Keyes & Annas, 2009; Rothmann, 2013). Given that all the teachers have to face similar conditions in the school environment, the question which comes to mind is why some of them seem to function well while others do not. Employees function well when they experience psychological need satisfaction and psychological meaningfulness at work and when they engage in their work (Rothmann, 2013). Studies performed by Diedericks and Rothmann (2014), Rothmann (2013) and Swart (2012) showed that individual (e.g. job satisfaction) and organisational outcomes (e.g. performance and intention to leave) are strongly predicted by individuals' level of well-being in work contexts.

Psychological Need Satisfaction

The central premise of Self-determination Theory (SDT) is that individuals have innate tendencies towards personal growth and vitality which are either satisfied or thwarted by their immediate environment. According to Deci and Ryan (2000), the three essential elements of SDT are: a) Humans are inherently proactive with their potential and mastering their inner forces. b) Humans have an inherent tendency towards growth, development and integrated

functioning). c) Optimal development and actions are inherent in humans but do not happen automatically. SDT explains the “what”, the “why” and the “how” of behaviour.

The “why” of behaviour evolves from interplay between intrinsic and extrinsic motivation; the “what” of behaviour is evident from the motivational influences, and both derive from the degree of need satisfaction (van den Broeck, Vansteenkiste, & de Witte, 2008), which explains the “how” of behaviour. Contrary to other motivational theories, the motivational distinction is not external versus internal motivation but is concerned with whether the behaviour was motivated autonomously or controlled. SDT states that motivation for behaviour lies on a continuum between autonomous and controlled. Individuals’ psychological needs (for competence, relatedness and autonomy) their innate tendencies to function optimally. The degree to which individuals experience a sense of ability, social connectedness and choice in settings significant to them (Deci & Ryan, 2000). When the psychological needs are fully satisfied, they exhibit motivation and well-being. Conversely, when these needs are thwarted, individuals experience deficits of both motivation and well-being.

According to SDT, needs are innate, but can be developed in a social context. Some individuals will develop stronger needs than others, creating individual differences. However, individual differences in the theory focus on concepts resulting from the degree to which needs have been satisfied (Deci & Ryan, 2000). It is of extreme importance to investigate those factors that might contribute to an increase in the intrinsic motivational levels of the teacher in secondary schools. Personal well-being and social development are optimised when a person’s needs for competence, belongingness and autonomy are met. The satisfaction of these basic psychological needs energises and directs behaviour (Van den Broeck et al., 2008). Whether people’s psychological needs are satisfied depends both on the environments in which they live and on the behaviours in which they engage. The satisfaction of people’s needs for autonomy and competence depends on their experiences in their social and cultural environments. When significant others listen to their opinions and support their choices, people have greater need satisfaction (and well-being) than when significant people are more psychologically controlling (Deci & Ryan, 2002).

Autonomy refers to the inherent desire to act with a sense of volition and choice. Competence entails the need to feel capable of mastering the environment and bring about the desired outcomes. Relatedness the need to feel connected to others (Deci & Vansteenkiste, 2004). These innate psychological needs describe the fuel an individual needs for psychological growth, integrity and well-being. Contrary to other motivational theories, the strength of the need or the hierarchical value of the need is not important. The balance in the satisfaction of the needs is important. Between two persons with the same sum score for well-being, the one with the better balance between the three needs of autonomy, relatedness and competence, reports greater well-being (Sheldon & Niemiec, 2006). Under these circumstances, persons are intrinsically motivated, able to fulfil their potentialities and able to seek greater challenges (Seligman & Csikszentmihalyi, 2000). The degree to which people can satisfy their fundamental needs is the most significant predictor of optimal functioning (Deci & Ryan, 2000).

Meaningful Work

Psychological meaningfulness is the significance one attaches to one's existence and encompasses the value one places on the existence of life and the course of his/her life (Taubman-Ben-Ari & Weintraub, 2008). According to Frankl (1985), individuals have the freedom to find meaning in their lives and have the freedom to choose and detect meaning in even the most basic of life's moments. Individuals experience psychological meaningfulness at work when they experience that they are receiving a return on investment of the self in a currency of physical, emotional, and/or cognitive rewards. In an organisation, people are most likely to experience psychological meaningfulness when they feel they are useful, valuable and worthwhile (Kahn, 1990; May, Gilson, & Harter, 2004). Teachers, like the majority of employed people (Wrzesniewski, McCauley, Rozin, & Schwartz, 1997), spend a large part of their day at work and more than 88% of this working time is spent in interactions with others. Therefore it is important for the researcher to determine to what extent the teachers' school environments impact on their experience of meaningfulness at work.

According to Rosso, Dekas, and Wrzesniewski (2010), there are two terms relevant to meaningful work, namely, meaning and meaningfulness. "Psychological meaningfulness" entails the amount of significance a job has for the individual. "Meaning" refers to the type of

meaning (rather than the significance) a job has e.g. work as a calling (Rosso et al., 2010). Positive work-related outcomes follow experiences of psychological meaningfulness (May et al., 2004; Olivier & Rothmann, 2007; Wrzesniewski, 2012).

Matuska and Christiansen (2008) posit that meaningful work is highly relevant for resilience under stressful conditions. Individuals more engaged in meaningful work are intrinsically more motivated than individuals that experience their jobs to be meaningless (Treadgold, 1999). It is even possible to construct meaning in repetitive work (Isaksen, 2000). Steger, Littman-Ovadia, Miller, Menger, and Rothmann (2013) found that meaningful work is a stronger predictor of work engagement than affective disposition. Among individuals that found little meaning in their work, those that experience more positive affect were more likely to be engaged than those who experience negative affect. Fostering meaningful work and allowing the expression of their innate positive disposition may enhance the engagement of positive workers. Among workers with a negative disposition, focusing on meaningful work may be a pathway to positive work outcomes.

Work Engagement

Work engagement has been defined from two perspectives, namely engagement as an extension of the self to a role (Kahn, 1990), and employees' work activities as a reference for engagement (Bakker, Schaufeli, Leiter, & Taris, 2008; Schaufeli & Bakker, 2004). Kahn (1990 p. 694) defines work engagement as the harnessing of members' selves, in the organisation, to their work roles so "... that they employ and express themselves physically, cognitively, mentally and emotionally during role performance". When people display their preferred selves at work, it can be said that they display their real thoughts, feelings and identity. Schaufeli, Salanova, Gonzalez-Roma, and Bakker (2002, p. 74) define work engagement as "a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication and absorption".

Based on the perspectives of Kahn (1990) and Schaufeli and Bakker (2004), it can be concluded that work engagement comprises three dimensions, namely a physical component (being physically involved in a task and showing vigour and a positive affective state), a cognitive component (being alert at work and experiencing absorption and involvement), and

an emotional component (being connected to job/others while working and showing dedication and commitment).

Studies (e.g. Bakker, Demerouti, & Schaufeli, 2005; Hakanen, Bakker, & Schaufeli, 2006; Harter, Schmidt, & Hayes, 2002; Schaufeli & Bakker, 2004) confirmed the relationship between work engagement and organisational outcomes (e.g. organisational commitment, turnover intention, productivity, motivation, job resources and burnout). According to Sirgy and Wu (2009), engagement is grounded in desire theory (Griffin, 1986), which focuses on need gratification rather than the pursuit of pleasure to increase happiness. Gratification follows engagement in activities that generate flow experience (Csikszentmihalyi, 1999), which typifies the cognitive component of engagement (i.e. absorption).

Psychological Well-being of Teachers

The school environment in which teachers are imbedded plays a significant role in their well-being. According to SDT, three specific factors contribute to psychological need satisfaction, namely providing a meaningful rationale for doing a task, acknowledgement that employees might not find an activity interesting, and an emphasis on choice rather than control (Deci & Ryan, 2011; Rothmann, 2013). Therefore psychological need satisfaction is strongly affected by the behaviour of the leader (Rothmann, Diedericks, & Swart, 2013), social-contextual events such as feedback, communications, and rewards, and rewarding interpersonal interaction with co-workers (Deci & Ryan, 2011).

Psychological meaningfulness at work result because of four factors, namely work role fit, the task characteristics, co-worker relations and work beliefs (Rothmann, 2013; Steger & Dik, 2010). Work role fit refers to individuals' expressions of their real selves at work. Participating in activities that are congruent with an individual's values (Waterman, 1993) and/or strengths (Peterson & Seligman, 2004) contributes to the experience of psychological meaningfulness and work engagement (May et al., 2004). Meaning of work is the set of beliefs individuals holds about work, which might result in experiences of psychological meaningfulness. According to Bellah, Madsen, Sullivan, Swidler, and Tipton (1985), individuals view their work as a career, or a job or a calling. Employers would like to foster a

calling orientation to work because it results in positive work behaviour and outcomes (Wrzesniewski et al., 1997).

A calling has been defined as a “meaningful beckoning toward activities that are morally, socially and personally significant” (Wrzesniewski, Dekas, & Rosso, 2009, p. 181). Rothmann and Hamukang’andu (2013) found that 26.7% of a sample of Zambian teachers reported a strong calling orientation to their work, while 48.6% of the teachers did not feel a strong calling. Callings should be regarded as an antecedent to psychological meaningfulness at work because a calling provides a person with a sense of purpose in his or her work (Hirschi, 2012).

Research regarding the antecedents of work engagement can be conducted from the perspectives of the Job Demands-Resources model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Schaufeli & Bakker, 2004). According to the *Job Demands-Resources* (JD-R) model (Demerouti et al., 2001), every occupation has specific characteristics (job demands and job resources) associated with well-being. There is a growing realization that good teaching environments and the resources afforded to teachers are central to teachers’ effective and efficient teaching in schools. The workplace must offer opportunities for teachers to experience professional independence and to have input on instructional decisions that influence the learning of their pupils. If a teacher wishes to improve intrinsic motivation, they need nurturing from their environment. If this happens there are positive consequences (e.g. well-being and growth) but if not, there are negative consequences (e.g. disengagement and demotivation).

Given that an organisation (school in this regard) serves as a source of socio-emotional resources, including respect, satisfactory wages, and medical benefits, perceived organisational support contributes to the satisfaction of employees’ needs for approval, esteem, and affiliation (Rothmann & Welsh, 2013). Kahn and Heapy (2014) take a relational perspective on engagement. Based on the personal engagement theory of Kahn (1990), they argue that relational contexts shape engagement through three psychological conditions, namely psychological meaningfulness, psychological safety and psychological availability. Relationships shape experienced meaningfulness by deepening individuals’ experiences or the purposes of their work (in teams, in leader-follower situations and in relations with

beneficiaries) and by heightening their sense of belongingness (social identification) at work. Experienced safety is shaped through containment, empathic acknowledgement and an enabling perspective. Relationships shape availability through energizing interactions and emotional relief.

Positive Organizational Practices

The organisational practices (which reflect the culture of an organisation), affect the well-being and performance of people (Gittell, Cameron, Lim, & Rivas, 2006) and the performance of organisations (Cameron et al., 2011). Three connotations around positive organisations are evident from the literature, namely positive deviance, virtuous practice and an affirmative bias (Cameron, Bright, & Caza, 2004).

- *Positively deviant behaviour* refers to extraordinary positive performance, i.e. outcomes that exceed common or expected performance.
- *Virtuous practices* are characterised by a positive human impact, moral goodness and social betterment, and creating social value that transcends the instrumental desires of the actor, it produces benefit to others regardless of the reward.
- *An affirmative bias* means that institutions focus on strengths and capabilities and on affirming human potential. Virtuous behaviour promotes positive emotions and helps behaviour between individuals, and it creates social capital (Lewis, 2011).

The perceived level of virtuousness in an organisation is positively correlated with perceived performance, including innovation, quality, turnover and customer retention (Cameron et al., 2004). Research by Cameron, Mora, Leutscher, and Calarco (2011) identified six categories of positive practices, namely caring, compassionate support, forgiveness, inspiration, meaning and respect, integrity and gratitude. They found that high scores on these dimensions were related to better performance of organisations.

Specific Research Problems

Based on the discussion presented above, the research problems can be summarised as follows: Scientific information is needed to determine what individual and organisational factors best predict secondary school teachers' well-being, retention and performance.

First, information is needed regarding the psychological well-being of teachers (as expressed in experiences of psychological need satisfaction, psychological meaningfulness and work engagement), its antecedents as well as the effects thereof on intention to leave and performance of teachers. Second, scientific information is needed regarding the psychometric properties (reliability and validity) of the measuring instruments for well-being and intrinsic motivation, its antecedents and outcomes for teachers (Rothmann, 2014). Psychology today remains ill-equipped to help individuals live healthier and more meaningful lives. It has a full box of tools for working on stress, disease and dysfunction, but preventing the worst from happening does not equal promoting the best in people (Haidt & Keyes, 2003). A strategy must be developed that will improve the quality of work life of the teacher in South-Africa.

Third, scientific information is needed regarding relationships among psychological need satisfaction, psychological meaningfulness and work engagement of teachers. It is not clear how specific antecedents impact on psychological well-being of teachers (regarding psychological need satisfaction, psychological meaningfulness, and work engagement) and the outcomes thereof when variables are modelled in a multidimensional structural model. Fourth, scientific information is needed regarding the effects of positive practices on the well-being of individuals.

The main research question in this study was:

Which factors affect the well-being of teachers and the outcomes thereof in schools?

The following more specific research questions were posed:

- What are the relations between supervisor support, psychological need satisfaction, and work engagement and intention to leave of secondary school teachers?

- What are the antecedents of psychological need satisfaction, psychological meaningfulness and work engagement that indirectly affect the turnover intention and performance of secondary school teachers?
- What are the relations among work beliefs, job design, co-worker relations, meaning and purpose at work, and outcomes such as burnout, performance, and intention to leave?
- What is the validity of a multi-dimensional model of psychological well-being (which includes antecedents of psychological need satisfaction, psychological meaningfulness and work engagement as well as individual and organisational outcomes)?
- What are the effects of positive organisational practices on well-being, turnover intention of secondary school teachers?

1.3 RESEARCH OBJECTIVES

1.3.1 General Aim

This study aimed at investigating which factors influenced the intrinsic motivation and self-determination of teachers in secondary schools in North West Province. If those factors could be identified, it would be possible to suggest methods for improving well-being in the workplace. The researcher's main aim and objective with conducting this study was to suggest interventions that would target both organisational and individual variables.

1.3.2 Specific objectives

The specific objectives of this research were to:

- Investigate the relations among supervisor support, psychological need satisfaction, work engagement and intention of secondary school teachers to leave.
- Study whether the antecedents of psychological need satisfaction, psychological meaningfulness and work engagement indirectly affect the turnover intention and performance of secondary school teachers.
- Investigate the relations among work beliefs, job design, co-worker relations, meaning and purpose at work, and outcomes such as burnout, performance, and intention to leave.

- Test the validity of a multi-dimensional model of psychological well-being (which includes antecedents of psychological need satisfaction, psychological meaningfulness and work engagement as well as individual and organisational outcomes).
- Investigate the effects of positive organisational practices (at school level) on well-being, of secondary school teachers.

1.4 RESEARCH METHOD

The research consisted of a literature study and an empirical study.

1.4.1 Literature Study

A literature study was conceptualised with the following concepts, their antecedents, consequences and possible relationships: SDT and psychological need satisfaction, psychological meaningfulness, work engagement and positive organisational practices.

1.4.2 Empirical Study

1.4.2.1 Research Design

This study followed a quantitative approach, more specifically a cross-sectional design. The researcher drew a sample from the population at a specific point in time (Shaughnessy & Zechmeister, 1997). A cross-sectional research design typically consists of different people the researcher examines, using one or more variables (Huysamen, 2004). Within the cross-sectional design, three designs were utilised (Byrne, 2012; Muthén & Muthén, 1998-2014):

- A latent variable design was used to assess the psychometric properties of the measures.
- Latent variable modelling was used to investigate the fit of the hypothesised models as well as indirect and interaction effects.
- A latent class analysis (LCA) with Mplus 7.31 (Muthén & Muthén, 1998-2014) was used to group participants based on their levels of autonomy, competence, relatedness, engagement and meaning. A series of models with an increasing number of latent classes was tested.

This study attempted to identify the origins of strengths in the working environment of the teacher and to identify variables that could be linked to work well-being and motivational levels of the teacher. Significant attention was given to what makes life, and working life *per se*, meaningful, optimal and worth living for, according to Cameron, Dutton, and Quinn, (2003). In the cross-sectional survey, a large number of cases were compared (Druckman, 2005), the “cause and effect” variables were determined at the same time and there is neither a control group nor randomisation (Ghauri & Grønhaug, 2002).

Possible reasons for well-being were studied both within the individual and within the school as a system. The aim of this research design was to focus on and investigate the relation between the environment (the school) and the individual (the teacher). This study was descriptive, cross-sectional and quantitative and utilised a survey to gather data regarding well-being of a sample of teachers in the Kenneth Kaunda district in North West Province, its antecedents and outcomes. Cross-sectional surveys allowed comparisons between groups measured at one point in time (Gravetter & Forzano, 2006).

1.4.2.2 Participants

This study was undertaken with secondary school teachers in the Kenneth Kaunda district in the North West Province of South Africa. This province has a population of 3 509 953 people (6.8% of the total SA population). The province is characterised by high levels of poverty and high unemployment levels as well as low literacy levels (<http://www.southafrica.info>). 334 secondary schools are located across 109 cities and towns in the province (Department of Basic Education, 2013). The majority of the province's residents (68%) speak Setswana. Smaller groups include Afrikaans, Sesotho, and isiXhosa-speaking people. The proportion of the population 20 years and older that had attended school in the lower or primary education levels is higher than the national average. It lags behind the national average at the secondary and tertiary educational level (Department of Basic Education, 2013).

A wide range of issues and challenges in this province include school mergers; teacher post provisioning, infrastructure and the provision of learners' support material and scholar transport (Department of Basic Education, 2013). The Kenneth Kaunda district in North West Province was selected for reasons of accessibility and convenience, and because the province

is confronted with many educational challenges. A stratified random sample was taken of not less than 513 secondary school educators, representing various demographic strata (i.e. home language, experience and gender). A good way of producing a valid sample was by randomly selecting public, secondary schools from the Kenneth Kaunda district within North West Province. These teachers were invited to complete a questionnaire. In this way, the response rate was known and non-responders were identified.

Table 1

Participants' Selection Grid

Language Groups	Male	Male	Female	Female
	0-5 years' experience	6 + years' experience	0-5 years' experience	6 + years' experience
Afrikaans-speaking	√	√	√	√
English-speaking	√	√	√	√
Tswana-speaking	√	√	√	√

Eleven official languages issue huge challenges to the South-African education system. The researcher decided to select only Tswana, Afrikaans and English-speaking teachers. Different gender groups may possibly have different well-being; therefore gender was used as the second selection criterion. Teaching experience was used as the third selection criterion because the number of years teaching experience may possibly have an influence on well-being.

1.4.2.3 Measuring Instruments

The Supervisor Behaviour Scale (SBS) was developed to measure participants' perceptions of the behaviours of their leaders. All items are rated on an agreement-disagreement Likert format varying from 1 (*strongly disagree*) to 5 (*strongly agree*). The SBS consists of 17 items which measure three factors applicable to *principals as leaders*, namely: autonomy-support, competence-support and relatedness-support. Autonomy-support was measured by using five items (e.g. "My principal encourages people to speak up when they disagree with a decision"). Competence-support was measured by using six items (e.g. "My principal gives

me helpful feedback about my performance”). Relatedness-support was measured by means of six items (e.g. “My principal is accessible”).

The *Work-related Basic Need Satisfaction Scale* (WBNSS; van den Broeck, Vansteenkiste, de Witte, Soenens & Lens, 2010) was used to measure psychological need satisfaction. The WBNSS measures the satisfaction of three psychological needs, namely autonomy (6 items, e.g. “I feel like I can pretty much be myself at work”), competence (6 items, e.g. “I feel competent at work”) and relatedness (8 items, e.g. “People at work care about me”). The items were evaluated on a five-point scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). Research by Diedericks (2012) supported the three-factor structure of the WBNSS. Alpha coefficients of 0.81, 0.79 and 0.79 confirm the reliability for autonomy, competence and relatedness satisfaction respectively.

The *Work Engagement Scale* (WES; Diedericks & Rothmann, 2013) was applied to measure work engagement. The WES has 13 items. A 7-point frequency scale varying from 1 (*almost never or never*) to 7 (*always or almost always*) was used for all items. The three components of Khan’s (1990) conceptualization of work engagement will be reflected in the items, namely cognitive, emotional and physical engagement. Evidence for the construct validity of the WES was reported by Diedericks and Rothmann (2013) and an alpha coefficient of .72 was reported for the WES. Evidence for the construct validity of the WES was reported by Rothmann (2010) and the following alpha coefficients for the three scales of the WES: physical engagement = 0.80; emotional engagement = 0.82; and cognitive engagement = 0.78.

The *Turnover Intention Scale* (TIS) (Sjöberg & Sverke, 2000) was used to measure intentions to leave. The TIS consists of three items. An example of an item is “If I were completely free to choose I would leave this job”. Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). The authors found an alpha coefficient of 0.83 for the TIS. Diedericks (2012) found an alpha coefficient of 0.79 for the TIS in a study in South Africa.

The *Work-Life Questionnaire* (WLQ; Wrzesniewski et al., 1997) was used to measure the levels of meaning teachers associate with their work. The WLQ is a self-report measure that aims at classifying an individual’s orientation to work into three categories, namely a job,

career, and calling orientation. Only eight items that measure a calling orientation were used in this study. An example item is: “I enjoy talking about my work to others.” The items are rated on a Likert scale varying from 1 (*not at all*) to 4 (*completely*).

The Revised Job Diagnostic Survey (JDS; Idaszak & Drasgow, 1987) was used to measure individuals’ reactions to job characteristics. The JDRS consists of nine items. It measures autonomy (e.g., “The job gives me a chance to use my personal initiative and judgment in carrying out the work”), task identity (e.g., “The job is arranged so that I can do an entire piece of work from beginning to end”), skill variety (e.g., “The job requires me to use a number of complex or high-level skills”), task significance (e.g. “The job itself is very significant and important in the broader scheme of things”), and feedback (e.g., “After I finish a job, I know whether I performed well”). It uses a seven-point Likert-type scale anchored at extreme values of 1 (*very inaccurate*) and 7 (*very accurate*). In this study, the reliability coefficient for the JDS was 0.85.

Co-worker relations were measured using the *Co-worker Relations Scale* (CRS; May et al., 2004). Six items were used (e.g., “My interactions with my co-workers are rewarding”). The items are rated on a seven-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Rewarding co-worker relations can create an experience of belonging and care, which can lead to experiences of feeling safer at work (Olivier & Rothmann 2007). May et al. (2004) found a Cronbach alpha coefficient of 0.93 for the CRS.

The *Work and Meaning Inventory* (WAMI; Steger et al., 2012) was used to measure meaningful work. The WAMI consists of three subscales, namely the degree to which people find their work to have significance and purpose, the contribution work makes to finding broader meaning in life, and the desire and means for one’s work to make a positive contribution to the greater good. A composite score for the scale can also be obtained. Reliabilities varying from 0.82 to 0.89 were obtained for the subscales and 0.93 for the total score. Steger et al. (2012) found evidence for the construct validity of the inventory. The total score and subscales also correlated in the expected directions with measures of well-being, job satisfaction, work motivation, withdrawal intentions, organisational commitment, and days absent from work.

Burnout was measured by nine items from the *Personal Resources Scale* (PRS; May et al., 2004). The PRS measures three dimensions of burnout, namely Cognitive weariness (three items, e.g. “I find it difficult to focus my attention while at work”); Physical exhaustion (three items, e.g. “I feel emotionally drained from my work”), and Emotional exhaustion (three items, e.g. “I tend to postpone discussing touchy topics”).

A questionnaire was compiled to measure *Self-rated performance*. A 10-point Likert scale varying from 1 (low) to 10 (high). Four items were used: 1) “How would you rate your performance/effectiveness compared to your peers?” 2) “How would you rate your customer care compared to that of your peers?” 3) “How would you rate the quality of the service that you render compared to your peers?” 4) “How would you rate your competence in your work compared to your peers?” The self-rated job performance scale had an internal consistency of 0.93.

The Positive Practices Questionnaire (PPQ; Cameron et al., 2011) was used to assess positive organisational practices in schools. Practices are defined as collective behaviours or activities sponsored by and characteristic of an organisation. They are not indicative of emotions or climate, but are behavioural in their orientation. No overarching theory was used to derive this list of positive practices; rather they were identified because they had appeared in prior research, they represented behavioural practices or activities, and they possessed at least one of the three connotations of positive deviance, virtuous practices and/or affirmative bias. The survey consisted of 29 Likert-type items representing desirable, positively focused behaviours, techniques, or routines. Respondents selected answers to items on a five-point Likert scale. The PPQ has an underlying structure of six stable dimensions, namely caring, compassionate support, forgiveness, inspiration, meaning and respect, integrity and gratitude. The items had the organisation as the unit of analysis, not the individual respondent. Attributes and activities of organisations are assessed, not behaviours or traits of individual respondents.

Biographical information

Information regarding age, gender, ethnicity, marital status, parental status, number of children, language of choice, current position at the company, years working in education, and level of education were gathered from a biographical questionnaire.

1.4.2.4 Research Procedure

The questionnaires (in English) were administered in the Kenneth Kaunda district of North West Province. Permission to conduct the study had been obtained from the director of the Kenneth Kaunda district environment where participants are working. The researcher contacted the secondary schools' headmasters in a district of the North West Province to obtain permission to conduct the research. A cover letter explaining the purpose of the study and emphasizing the confidentiality of the research project accompanied the questionnaires. Participants completed the questionnaires on-line, and responses to items were captured in an Excel sheet, whereafter it was prepared for analysis with the Mplus software program.

1.4.2.5 Statistical Analysis

Latent variable modelling using Mplus Version 7.31 (Muthén & Muthén, 1998-2014) was used to test the measurement and structural models in this study. The items of all questionnaires were defined to be categorical if the scales have six points or less, and WLSMV was used as an estimator. To assess model fit, the comparative fit index (CFI; > 0.90), Tucker-Lewis index (TLI; > 0.90), and the root mean square error of approximation (RMSEA; < 0.08) was reported.

Reliabilities (ρ) of scales measured by items rated on a continuous scale was computed using a formula based on the sum of squares of standardised loadings and the sum of standardised variance of error terms (Wang & Wang, 2012). Indirect effects and moderation effects were computed. To determine whether any relationships are indeed indirectly affected by independent variables, the procedure explained by Hayes (2009) was used. Bootstrapping was used to construct two-sided bias-corrected 95% confidence intervals (CIs) so as to evaluate indirect effects. Lower CIs and upper CIs were reported.

Furthermore, the data was explored using a frequency analysis, utilizing SPSS22 (IBM, 2013). Thereafter a latent class analysis (LCA) with Mplus 7.31 (Muthén & Muthén, 1998-2014) was used to group participants based on their levels of autonomy, competence, relatedness, engagement and meaning. A series of models with an increasing number of latent

classes was tested. A model was retained when there was a significant improvement from the reference model to this model with more classes. The models were evaluated according to the lowest BIC value comparing the different models, relative entropy (called entropy) ranging from 0 to 1 (smaller than 0.60 not acceptable, higher is better).

1.5 ETHICAL CONSIDERATIONS

Participation in the study was voluntary. The roles and responsibilities of different parties involved in the study were outlined. The objectives of the study were discussed with employees. Written consent was obtained prior to them taking part in the study. Confidentiality and anonymity (where applicable) was assured. Upon completion of the study, feedback was provided if requested by participants. All participants were briefed on the research project and afforded the opportunity of asking questions and raising concerns about any issues before considering participation. A clear outline was given of the roles and responsibilities of all the parties involved. It was clearly stated that participation in the project was voluntary and anonymous, and participants were required to sign a consent form stating that the information obtained via the research was used for research purposes only. Feedback on the results of the study was given to the participants.

1.6 CHAPTER LAYOUT

Chapter 1: Introduction.

Chapter 2: Psychological need satisfaction, engagement and intention to leave: the effects of supervisor support.

Chapter 3: Antecedents and outcomes of meaningful work among school teachers.

Chapter 4: Functioning psychologically well at work: The effects of positive organisational practices.

Chapter 5: Conclusions, limitations and recommendations.

CHAPTER SUMMARY

Chapter 1 contains the background to the study, the problem statement, research objectives, research method and the chapter layout. It also refers to the statistical analysis, procedure and ethical considerations the researcher undertook in this study. Chapter 1 served to introduce the reader to the problem and to explain how the study was conducted.

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CHAPTER 2

MANUSCRIPT 1

**Psychological Need Satisfaction, Engagement and Intention to Leave: The Effects of
Supervisor Support**

Psychological Need Satisfaction, Engagement and Intention to Leave: The Effects of Supervisor Support

Abstract

The aim of this study was to investigate the relations among supervisor support, psychological need satisfaction, engagement and intention of employees to leave. A cross-sectional survey design was used with a convenience sample of 513 secondary school teachers in public schools in a province in South Africa. The Supervisor Support Scale, Work-related Basic Need Satisfaction Scale, Work Engagement Scale and Intention to Leave Scale were administered. The structural model confirmed that supervisor support (for autonomy, competence, and relatedness) was positively related to employees' psychological need satisfaction and engagement and negatively related to intention to leave. Supervisor support affected engagement positively and intention to leave negatively via employees' autonomy satisfaction. The findings suggest that supervisor support and psychological need satisfaction play a significant role in the engagement and retention of employees.

Keywords: Supervisor support, self-determination, psychological need satisfaction, engagement, intention to leave.

Supervisor behaviors play a significant role in affecting the engagement and retention of employees (Harter & Adkins, 2015; May, Gilson, & Harter, 2004; Rothmann & Rothmann, 2010). Kahn (1990, p. 694) defined engagement as the “harnessing of organizational members’ selves to their work roles by which they employ and express themselves physically, cognitively and emotionally during role performance”. High engagement is associated with productivity, motivation, and client satisfaction, and profits (Crawford, Rich, Buckman, & Bergeron, 2014). Employees’ experiences and conditions at work are closely linked to their levels of engagement and their decisions to either remain in the profession or not (Rothmann, 2015). In particular, the relationships between employees and their supervisors are important drivers for their work engagement (Kahn & Heaphy, 2014). Porath (2014) found that employees were 55% more engaged when supervisors treated them with respect. Half of employees in her study did not feel respected by their supervisors. According to Harter and Adkins (2015), managers account for up to 70% of the variance in work engagement scores.

O’Rourke, Catrett, and Houchins (2008) suggest that it takes three to seven years to become an effective and efficient employee. However, many employees become disengaged and/or want to leave their organizations because of the nature of their work and work relationships (Gu & Day, 2013; Janik & Rothmann, 2015). Retaining skilled employees is a major challenge for educational organizations (Janik & Rothmann, 2015). Individuals’ intentions to stay or leave institutions are useful predictors of voluntary turnover (Griffeth, Hom, & Gaertner, 2000). Rothmann, Diedericks, and Swart (2013) found that supervisor support and psychological need satisfaction of employees explained 42% of the variance in their intention to leave.

It is necessary to identify the underlying mechanisms through which supervisor behaviors affect the engagement and retention of employees (Harter & Adkins, 2015; Meyer & Gagné, 2008). Organizational scholars have emphasized the importance of self-determination for the optimal functioning of workers as well as organizational outcomes (Graves & Luciano, 2013; Van den Broeck, Vansteenkiste, De Witte, & Lens 2008). Self-determination concerns the right of employees to have full power over their behavior (Graves & Luciano, 2013). Self-determination theory (SDT; Deci & Ryan, 1985, 2008a) can explain how supervisors’ behaviors affect work engagement via autonomous regulation of behavior. Such effects might occur through identification (attaining a valued personal goal) and integration (expressing

one's sense of self). All individuals inherently strive towards developing and actualizing their potential. According to the SDT, this is subservient to individuals' ability to satisfy their three inborn psychological needs for autonomy, competence and relatedness (Deci & Ryan, 1985, 2008a). Need satisfaction is an important mediator of the relation between environmental influences (e.g. supervision) and autonomous regulation (Gagne & Deci, 2005; Van den Broeck et al., 2008).

The self-determination literature acknowledges the role of the supervisor in affecting psychological need satisfaction and autonomous motivation of employees (Gagne & Deci, 2005). Baard, Deci, and Ryan (2004) have demonstrated the beneficial effects of autonomy-support in a work context. Furthermore, a study by Graves and Luciano (2013) showed how leader-member exchange evokes psychological need satisfaction. Research (Hetland, Hetland, Andreassen, Pallesen, & Notelaers, 2011; Kovjanic, Schuh, & Jonas, 2013) showed that transformational leadership has positive effects on psychological need satisfaction and work engagement.

This study investigates types of supervisor behaviors that satisfy psychological needs, and how these variables affect the work engagement and retention of employees (Burnetti, 2001; Connolly, 2000). The idea is tested that specific supervisor behaviors elicit satisfaction of employees' psychological needs, which in turn promotes their work engagement, and reduces intention to leave. The focus is on employees' perceptions and interpretations of supervisors' behaviors. Workers' interpretations of their relationships with supervisors are conceptually distinct from supervisors' interpretations and may be differentially related to employee and organizational outcomes (Graves & Luciano, 2013). Individuals' interpretations are most likely to influence their internal motivational mechanisms (e.g. psychological need satisfaction) and results such as work engagement and intentions to leave. In developing the theoretical model of the processes by which the employee's perception of the supervisor-employee relationship influence outcomes such as work engagement and intention to leave, this study drew on SDT.

The Role of Psychological Need Satisfaction

The satisfaction of psychological needs (i.e. autonomy, competence, and relatedness) results in people aligning their behavior, values, beliefs and interests (Deci & Ryan, 2011; Greguras

& Diefendorff, 2010). Psychological needs provide the energy and direction for people to engage in activities that influence need satisfaction. Moreover, knowledge regarding individuals' psychological need satisfaction allows observers to understand whether such individuals will be subjectively well. Based on knowledge about individuals' psychological need satisfaction, interventionists could determine which social contextual aspects should change to promote autonomous motivation and well-being (Deci & Ryan, 2011). The need for autonomy refers to individuals' desire to experience freedom and choice to engage in behavior that is compatible with their values. The need for competence refers to individuals' inherent desire to feel effective in interacting with the environment. The need for relatedness concerns the innate need of individuals to feel connected to others, to love and care for others, and to be loved and cared for. This need is satisfied when individuals experience a sense of communion and develop close and intimate relationships with others (Deci & Ryan, 2011).

Deficiency needs (i.e. psychological needs that are unmet), as well as growth needs (i.e. needs that are satisfied), have motivational value across life domains (Sheldon & Gunz, 2009). Therefore individuals want more autonomy, competence, and relatedness experiences if their basic psychological needs have been satisfied. SDT focuses on the degree that psychological needs are satisfied and not on individual differences in need strength (Deci & Ryan, 2000). However, low need satisfaction is not synonymous with need thwarting (i.e. the feeling that others are actively undermining one's autonomy, competence, and/or relatedness).

Work environments that provide adequate support for the satisfaction of the three psychological needs generate more participation from employees. Satisfying the basic needs for autonomy, competence and relatedness leads to autonomous motivation (Milyavskaya & Koestner, 2011). Employees that set autonomous goals, attain more goals. Consequently, they will set and attain more autonomous goals in the future and in so doing enhance their well-being (Sheldon & Houser-Marko, 2001). The degree to which goals are autonomous will determine individuals' energy in achieving their goals. Goals that are achieved relate to psychological need satisfaction for autonomy, competence, and relatedness. Psychological need satisfaction, in turn, is essential for optimal human development and integrity (Gagné & Deci, 2005), and prompts positive organizational outcomes (Greguras & Diefendorff, 2010).

Supervisor Behavior and Basic Needs Satisfaction

In the workplace, supervision is one of the most important factors affecting the motivation of others (Gagné & Deci, 2005). The control that supervisors wield over policies, job characteristics, goals, and rewards gives them considerable influence on employees' perceptions of the work environment as controlling versus autonomous. Such control affects employees' sense of self-determination (Gilbert & Kelloway, 2014). Various leadership theories, including transformational leadership (Hetland et al., 2011; Kovjanic et al., 2012; Kovjanic et al., 2013), leader-member exchange (Graves & Luciano, 2013), and authentic leadership have linked follower needs to leadership. In fact, Burns' (1978) and Bass' (1985) definitions of transformational leadership state that the leader attempts to find and satisfy followers' higher-order needs. Supervisor behaviors that promote the satisfaction of three basic needs of employees, namely autonomy, competence and relatedness (Hetland et al., 2011), produce positive outcomes (e.g. engagement), whereas behaviors that prevent need satisfaction will likely lead to negative outcomes (e.g. intention to leave) (Gilbert & Kelloway, 2014).

Supervisor behavior can be autonomy supportive or controlling (Ryan & Deci, 2000; Fernet, Guay, Senécal, & Austin, 2012). Autonomy-supportive supervisors allow individuals to make choices about their work, give employees influence over their workplace, provide feedback in a non-controlling way, eliminate excessive rules and acknowledge their talents (Fernet et al., 2012; Gilbert & Kelloway, 2014). Supervisors can provide autonomy support through understanding and acknowledging individuals' perceptions, supplying information, providing opportunities, and by encouraging self-initiation. Individuals feel autonomous when they understand the value and/or relevance of tasks they are executing. According to Katz and Assor (2007), autonomy satisfaction is especially strong when the task is viewed as being closely connected to the an individual's values, interests and goals. Individuals' autonomy satisfaction increases when supervisors minimize coercion and interference, show understanding for individuals' perspective and feelings, provide a meaningful rationale for doing a task, and offer choice by allowing individuals to participate in task and goal selection and to choose their work methods and the mode of evaluation of their work (Deci & Ryan, 2011). According to Hetland et al. (2011), close monitoring of work, controlling supervision and frequent interruptions undermine autonomy satisfaction.

Competence-support of the supervisor is evident from behaviors such as providing challenges, supporting employees to acquire skills, showing confidence in them, giving helpful feedback and coaching on performance, making sure that they get the credit for accomplishments, praising good work, and allowing them to learn from their mistakes (Darling-Hammond, 2003; May et al., 2004; Reeve, 2009; Ryan & Deci, 2000). Clarifying expectations is vital to competence building; supervisors should frequently talk with employees about their responsibilities and progress (Harter & Adkins, 2015). Supervisors should give feedback in such a manner that individuals can judge their progress, correct mistakes, and redirect their efforts. Building the strengths of employees (rather than focusing on weaknesses) is regarded as an effective approach to supporting competence development.

Supervisor behaviors that are conducive to the satisfaction of relatedness needs of employees include regular communication and building genuine relationships with them (Harter & Adkins, 2015). The supervisor shows support, is dependable, and strengthens team spirit and co-worker relations (Deci & Ryan, 1985; Kovjanic et al., 2013; May et al., 2004). Trusting relationships with supervisors, characterized by a focus on employees' individuality and what they need so as to fulfill their roles, result in employees feeling connected to them and the missions they embody (Kahn & Heaphy, 2014). Relatedness satisfaction is supported when supervisors are accessible, treat employees fairly, show commitment to protect their interests, do what they say they will do, and demonstrate that they can be trusted (May et al., 2004).

Supervisor Behavior, Basic Needs Satisfaction, Work Engagement and Intention to Leave

Two outcomes strongly related to self-determination, given their relationships with motivation and supervision, are work engagement and intention to leave (Rothmann, 2014; Kahn & Heaphy, 2014). Studies (May et al., 2004; Rothmann et al., 2013; Schaufeli & Bakker, 2004) confirm the importance of supervisor behavior for the engagement and retention of employees.

Work engagement is defined as the mobilization of employees' selves in their work roles so that they express themselves physically, cognitively, and emotionally during role performance (Kahn, 1990). In this study, engagement is regarded as an experience, i.e. a psychological state in which employees are intrinsically motivated (Schaufeli, 2014).

Supervisors play a pivotal role in creating an environment conducive to work engagement (Soane, 2014). Supervisor-follower relationships can offer a sense of connectedness and opportunities to attach to a purpose (Kahn & Heaphy, 2014), as well as individualized consideration (Soane, 2014).

Intention to leave entails a subjective evaluation of the probability that an individual will quit an organization shortly (Vandenberg & Nelson, 1999). It represents a behavioral intention that precedes actual turnover of employees. A low turnover of employees is desirable because it reduces expensive replacement costs and keeps competent staff in organizations. Supportive supervisor behavior should be positively associated with work engagement (Tse, Huang, & Lam, 2013). Furthermore, the satisfaction of the psychological needs for autonomy, competence and relatedness should be negatively associated with intentions to leave a job (Otis & Pelletier, 2005).

According to SDT, social contexts that support the satisfaction of three psychological needs, namely autonomy, competence, and relatedness lead to positive outcomes for individuals and institutions (Deci & Ryan, 1985, 2008a). If a supervisor provides adequate support for satisfying the three needs, it should generate higher work engagement because of greater autonomous motivation (Milyavskaya & Koestner, 2011). Studies by Baard et al. (2004), Thomas (2000) and Rothmann et al. (2013) showed that autonomy-supportive behavior by supervisors affects work engagement positively and intention to leave negatively.

A direct relation exists between the satisfaction of psychological needs and work engagement. Sheldon and Gunz (2009) found that there is motivational value in needs that are not being met (deficiency needs) and needs that are satisfied (growth needs). Individuals that experienced that their psychological needs were satisfied desired more autonomy, competence, and relatedness experiences. However, the value of SDT lies not only in its ability to explain engagement, but also to explain the individual's specific behavior and reactions in situations where autonomy is lacking, and engagement becomes a challenge. Employees show less enthusiasm when their needs for autonomy are being undermined (Niemiec & Ryan, 2009).

Kovjanik et al. (2013) confirmed that transformational leadership had strong effects on satisfaction of the psychological needs for autonomy, competence, and relatedness.

Furthermore, they showed that competence and relatedness satisfaction mediated the relation between transformational leadership and work engagement. The behavior of supervisors could affect the employees' work engagement and intentions to leave (Rothmann et al., 2013). Higher levels of engagement are seen in individuals whose supervisors exhibit more relationship-oriented behavior (Kahn, 1990; May et al., 2004). Trusting relationships with supervisors, characterized by a focus on employees' individuality and what they need so as to fulfill their roles, result in employees feeling connected to the supervisors and the missions they embody (Kahn & Heaphy, 2014).

Aim and Hypotheses

Based on a review of the literature, it is argued that need-supportive behavior of supervisors affect the satisfaction of the psychological needs for autonomy, competence and relatedness, which affects the engagement and intention to leave of employees (Chalofsky & Krishna, 2009). Given that the three types of need satisfaction do not have identical causes and consequences (Deci & Ryan, 2000) and that previous studies (e.g., Rothmann et al., 2013; Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2010) supported the three-factor structure of psychological need satisfaction, we treated them as separate but related constructs to better understand the relations between the constructs (Graves & Luciano, 2013). Given the analytical strategy and based on the literature review, the following hypotheses were set for this study:

Hypothesis 1: Supervisor behaviors that support psychological need satisfaction relate positively to need satisfaction.

Hypothesis 2: Psychological need satisfaction relates positively to employees' engagement.

Hypothesis 3: Psychological need satisfaction relates negatively to employees' intentions to leave.

Hypothesis 4: Supervisor behaviors that support psychological need satisfaction relate positively to employees' engagement.

Hypothesis 5: Supervisor behaviors that support psychological need satisfaction relate negatively to employees' intentions to leave.

Hypothesis 6: Supervisor behaviors indirectly affect employees' engagement via psychological need satisfaction.

Hypothesis 7: Supervisor behaviors indirectly affect employees' intentions to leave via psychological need satisfaction.

Method

Participants and setting

The setting for this study was 40 public secondary schools within the Kenneth Kaunda District in North-West Province. Education in South Africa is in crisis, specifically concerning the quality of teaching (National Planning Commission, 2011), relationships within schools, and the well-being of teachers (Rothmann, 2015). Leaders of schools, and specifically school principals (Collins, 2015), can lift schools from weakness or mediocrity to greatness, particularly as it relates to the autonomous motivation, work engagement and retention of teachers.

The number of participants in this study varied from 8-20 educators per school. There are 334 secondary schools located in 109 cities and towns in the province (<http://www.schools4sa.co.za>; DoE, 2013). A total of 800 respondents representing 40 secondary schools were approached to take part in this study. A final sample of 513 completed the survey, and a usable survey was obtained for a response rate of 64.13%. (See Table 1 for a description of the participants.) Males comprised 38.99% of the sample and females 61.01%. The ages of the participants varied from 19 to 65 (Mean = 42). The length of service in the various schools varied between one year and 38 years. The distribution of participants' job position was student teacher (3.91%), junior teacher (13.79%), senior teacher (67.90%) and head of the department (14.40%).

Table 1

Characteristics of Participants (N=513)

Item	Category	Frequency	Percentage
Gender	Male	200	38.99
	Female	313	61.01
Age	Below 23	9	1.96
	23-30	97	21.23
	31-39	70	15.32
	40-45	113	24.73
	46-55	118	25.82
	Over 55	50	10.94
	Job Level	Student teacher	19
Junior teacher		67	13.79
Senior teacher		330	67.90
Head of Department		70	14.40
Years in Teaching	1-2	36	9.16
	3-5	44	11.20
	6-10	77	19.59
	11-20	121	30.79
	21-30	84	21.37
	More than 30 years	31	7.89
Home Language	Afrikaans	222	57.66
	English	31	8.05
	Setswana	132	34.29

Measuring Instruments

The Supervisor Behavior Scale (SBS) was developed to measure participants' perceptions of the behaviors of their supervisors. A total of 29 items which refer to autonomy, competence, and relatedness support by supervisors were identified from the literature on work engagement (Truss, Delbridge, Soane, Alfes, & Shantz, 2014), supervisor behavior (Kahn &

Heaphy, 2014; May et al., 2004; Rothmann et al., 2013), and self-determination (Deci & Ryan, 2000, 2002, 2008a, 2008b, 2011). Experts in the field of work and organizational psychology checked the content validity of the questions. We asked five experts to classify the 29 items in terms of three dimensions, namely autonomy, competence, and relatedness support. Twelve items were not consistently correctly classified and were removed from the initial questionnaire. The SBS consists of 17 items that measure three factors applicable to principals as supervisors, namely: autonomy-support, competence-support, and relatedness-support. Autonomy-support was measured by using five items (e.g. “My principal encourages people to speak up when they disagree with a decision”). Competence-support was measured by using six items (e.g. “My principal gives me helpful feedback about my performance”). Relatedness-support was measured by six items (e.g. “My principal is accessible”). All items are rated on an agreement-disagreement Likert format varying from 1 (*strongly disagree*) to 5 (*strongly agree*).

The *Work-related Basic Need Satisfaction Scale* (WBNSS; Van den Broeck et al., 2010) was used to measure psychological need satisfaction. The WBNSS measures the satisfaction of three basic psychological needs, namely autonomy (six items, e.g. “I feel like I can pretty much be myself at work”), competence (eight items, e.g. “I feel competent at work”) and relatedness (eight items, e.g. “People at work care about me”). The items were evaluated on a five-point scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). Research by Diedericks (2012) supported the three-factor structure of the WBNSS. Alpha coefficients of .81, .79 and .79 confirm the reliability for autonomy, competence, and relatedness satisfaction respectively.

The *Work Engagement Scale* (WES; Diedericks & Rothmann, 2013) was applied to measure work engagement. The WES has 13 items. A 7-point frequency scale varying from 1 (*almost never or never*) to 7 (*always or almost always*) was used for all items. The three components of Khan’s (1990) conceptualization of engagement are reflected in the items, namely cognitive, emotional and physical engagement. Evidence for the construct validity of the WES was reported by Diedericks and Rothmann (2013), and an alpha coefficient of .72 was reported for the WES.

The *Turnover Intention Scale* (TIS) (Sjöberg & Sverke, 2000) was used to measure intentions to leave. The TIS consists of three items. An example of an item is “If I were completely free

to choose I would leave this job”. Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). The authors found an alpha coefficient of .83 for the TIS. Diedericks (2012) found an alpha coefficient of .79 for the TIS in a study in South Africa.

Data Analysis

We performed latent variable modeling using Mplus version 7.31 (Muthén & Muthén, 1998-2014). Latent variable modeling reduces bias that originates from measurement error and makes it possible to test direct and indirect effects (Wang & Wang, 2012). A weighted least-squares with mean and variance adjustment (WLSMV) estimator was used to test the measurement and structural models. Given the fact that we wanted to test a theoretical model, we decided to employ a confirmatory factor analysis strategy.

The following Mplus fit indices were used in this study: absolute fit indices, which included the Chi-square statistic (the test of absolute fit of the model), the weighted root mean square residual (WRMR), and the root means square error of approximation (RMSEA); incremental fit indices, which included the Tucker-Lewis Index (TLI); and the Comparative Fit Index (CFI) (West, Taylor, & Wu, 2012). Criticism against the use of χ^2 is that it is a strict test that detects trivial differences between the hypothesized model and the data. The χ^2 test is often not of general interest when the fit of models is tested. Various practical fit indices have been developed to evaluate model fit. The Comparative Fit Index (CFI) compares the hypothesized and independent models but takes sample size into account. The Tucker-Lewis Index (TLI) is a relative measure of co-variation explained by the hypothesized model. CFI and TLI values higher than .90 are acceptable (Wang & Wang, 2012). Hu and Bentler (1999) recommended a cut-off value of .95. The RMSEA provides an indication of the overall amount of error in the hypothesized model-data fit, relative to the number of estimated parameters in the model. The RMSEA should be .05 or less and should not exceed .08. Cut-off values recommended by Hu and Bentler (1999) were based on simulation studies and should be used as rough indicators only, especially when models and data further away from confirmatory factor analysis models with complete data are studied (West et al., 2012).

Raykov's (2009) confirmatory factor analysis-based estimate of scale reliability (ρ) was computed for each scale. This estimate of reliability provides a dependable estimate of scale reliability if items are not tau-equivalent (Wang & Wang, 2012).

Research Procedure

Ethical approval for this study was obtained from the Ethics Committee at the university from where the research was undertaken. The director of the district where participants are employed provided permission for the study. The researcher contacted the secondary schools' principals in North West Province and obtained permission to conduct the research. A cover letter explaining the purpose of the study emphasizing the confidentiality of the research project accompanied the questionnaire. The survey questionnaire was designed to such an extent that, by participating, respondents gave consent that the researchers could use the information obtained from the survey for research purposes only. Participation in the project was voluntary, whereby respondents had the option to withdraw at any time. Participants completed the questionnaires in hard-copy format and responses to items were captured in an Excel sheet, where after it was prepared for analysis with the Mplus 7.31 software program.

Results

First, the results of tests of competing measurement models are reported. Second, the results of alternative structural models are analyzed.

Testing the Measurement Model

Using confirmatory factor analysis (CFA), a five-factor measurement model as well as four alternative models were tested to assess whether each of the measurement items would load significantly onto the scales with which they were associated. Survey items were used as indicators of first-level latent variables. Model 1 consisted of four latent variables, namely a) supervisor behavior, which consisted of three first-order latent variables: autonomy support (measured using five items), competence support (measured using six items), and relatedness-support (measured using six items); b) psychological need satisfaction, which consisted of three first-order latent variables: autonomy satisfaction (measured using five

items), competence satisfaction (measured using four items), relatedness satisfaction (measured using six items); c) engagement, which consisted of three first-order latent variables: cognitive, emotional and physical engagement (each measured using three items), and d) intention to leave (which consisted of two items). All the latent variables in model 1 were allowed to correlate.

Models 2, 3, 4 and 5 followed the same template: model 2 was specified with 21 observed variables measuring supervisor behavior (without the 3 first-order latent variables, namely autonomy support, competence support, and relatedness-support; model 3 was specified with 21 observed variables measuring supervisor behavior (without the 3 first-order latent variables, namely autonomy support, competence support, and relatedness-support) and 15 observed variables measuring psychological need satisfaction (without the 3 first-order latent variables, namely: autonomy, competence and relatedness satisfaction); model 4 was specified with 15 observed variables measuring psychological need satisfaction (without the 3 first-order latent variables, namely: autonomy, competence, and relatedness satisfaction); model 5 was specified with 47 observed variables, measuring one latent factor.

Table 2 presents fit statistics for the test of the various models.

Table 2
Fit Statistics of Competing Measurement Models

Model	χ^2	<i>df</i>	TLI	CFI	RMSEA	WRMR
1	1934.54*	798	.97	.97	.05* [.049, .055]	1.39
2	2513.27*	807	.96	.95	.06* [.061, .067]	1.71
3	2322.81*	801	.93	.93	.06* [.058, .063]	1.59
4	2743.58*	801	.95	.95	.07* [.066, .071]	1.75
5	9774.02	819	.77	.76	.15* [.143, .148]	4.11

* $p < .01$

χ^2 , chi-square statistic; *df*, degrees of freedom; TLI, Tucker-Lewis Index; CFI, Comparative Fit Index; RMSEA, root mean square error of approximation; WRMR, weighted root mean square residual

The results in Table 2 show a χ^2 value of 1934.54 ($df = 798$) for the hypothesized measurement model. The fit statistics on the four fit indices were acceptable: TLI = .97, CFI = .97, RMSEA = .05 and WRMR = 1.39. The hypothesized model had an acceptable fit with the data on four of the five fit indices. The standardized regression coefficients were all statistically significant and varied from .22 to .78.

Testing the Structural Model

Table 3 shows the reliabilities and correlations of the latent variables.

Table 3

Reliability Coefficients and Correlations of the Scales (N = 513)

VARIABLE	ρ	1	2	3	4	5	6	7	8
1. Autonomy support	.72	-	-	-	-	-	-	-	-
2. Competence support	.72	.78	-	-	-	-	-	-	-
3. Relatedness support	.73	.86	.81	-	-	-	-	-	-
4. Supervisor behavior	.81	.91	.86	.95	-	-	-	-	-
5. Autonomy Satisfaction	.93	.58	.55	.61	.64	-	-	-	-
6. Competence Satisfaction	.89	.24	.23	.25	.26	.66	-	-	-
7. Relatedness Satisfaction	.93	.41	.39	.43	.45	.79	.65	-	-
8. Engagement	.90	.44	.41	.45	.48	.77	.57	.57	-
9. Turnover Intention	.84	-.33	-.32	-.35	-.37	-.56	-.32	-.49	-.53

Note: The correlations among all variables are statistically significant ($p < .001$)

Table 3 shows scale reliabilities ranging from .72 to .93, which indicate acceptable internal consistency of all the scales. The results of all scales could, therefore, be interpreted. The structural model was tested based on the measurement model. Three competing models were tested. Model 1 included paths from supervisor behavior to psychological need satisfaction, from supervisor behavior to engagement and intention to leave, and from psychological need

satisfaction to engagement and intention to leave. Table 4 shows the fit statistics and standardized regression coefficients for the three competing structural models.

Table 4

Fit Indices and Standardized Path Coefficients of the Structural Models

Measures		Indirect effects (Model 3)	Direct effects (Model 2)	Direct and indirect effects (Model 1)
Fit Indices	χ^2	1929.27*	4712.96*	1934.54*
	<i>df</i>	800	801	798
	TLI	.97	.89	.97
	CFI	.97	.90	.97
	RMSEA	.05	.10	.05
	RMSEA 90% CI	[.049, .055]	[.09, .10]	[.049, .055]
	WRMR	1.39	3.03	1.39
Direct effects on autonomy	Supervisor behavior	.84**	-	.81**
Direct effects on competence		.27**	-	.27**
Direct effects on relatedness		.51**	-	.51**
Direct effects on engagement	Supervisor behavior	-	.48**	.08
	Autonomy	.80**	.72**	.83**
	Competence	.14**	.17**	.28**
	Relatedness	-.16	-.10	-.15
Direct effects on intention to leave	Supervisor behavior	-	-.37*	-.04
	Autonomy	-.50**	-.45**	-.40**
	Competence	.12	.10	.11
	Relatedness	-.17	-.21**	-.22**

* $p < .01$

df= degrees of freedom; TLI= Tucker-Lewis Index; CFI= Comparative Fit Index; RMSEA= Root Mean Square Error of Approximation; WRMR= Weighted Root Mean Square Residual

This model yielded the following fit statistics: $\chi^2 = 1934.54$, $df = 798$; $p < .001$; CFI = .97; TLI = .97; RMSEA = .05 [90% CI .049, .055]; WRMR = 1.39. These statistics show a good fit for the hypothesized model. Given the cross-sectional nature of the data, two other models

were tested (see Table 4). Model 2 (the direct effects model) included paths from supervisor behavior and psychological need satisfaction to engagement and intention to leave. However, the paths from supervisor behavior to psychological need satisfaction were constrained to zero. Model 3 (the indirect effects model) included paths from supervisor behavior to psychological need satisfaction, and from psychological need satisfaction to engagement and intention to leave. However, the paths from supervisor behavior to engagement and intention to leave were constrained to zero. The following changes in chi-square ($\Delta\chi^2$) were found: Models 1 and 2 ($\Delta\chi^2 = 287.34$, $\Delta df = 3$, $p < .001$), and models 1 and 3 ($\Delta\chi^2 = 1.02$, $\Delta df = 2$, $p = .60$). These results show that model 1 was the best-fitting model. Figure 1 and Table 4 show the standardized path coefficients estimated by Mplus for the hypothesized model. Correlations were allowed between engagement and intention to leave.

Next, the obtained relations of the best fitting and most parsimonious structural model (model 3) are discussed regarding the hypotheses of this study. For the portion of the model predicting *psychological need satisfaction*, Table 4 shows that the path coefficients of supervisor behavior were statistically significant for autonomy ($\beta = .84$, $p < .01$), competence ($\beta = .27$, $p < .01$), and relatedness satisfaction ($\beta = .51$, $p < .01$) and had the expected signs. Hypotheses 1 and 2 are accepted. For the portion of the model predicting *engagement*, the path coefficients of autonomy ($\beta = .80$, $p < .01$) and competence ($\beta = .14$, $p < .05$) were statistically significant and had the expected signs. However, the path coefficient of autonomy satisfaction was almost four times stronger than that of competence. Hypothesis 3 is accepted. For the portion of the model predicting *intention to leave*, the path coefficient of autonomy ($\beta = -.50$, $p < .01$) was statistically significant and had the expected sign. Autonomy had a negative relation with intention to leave. Hypothesis 4 is accepted.

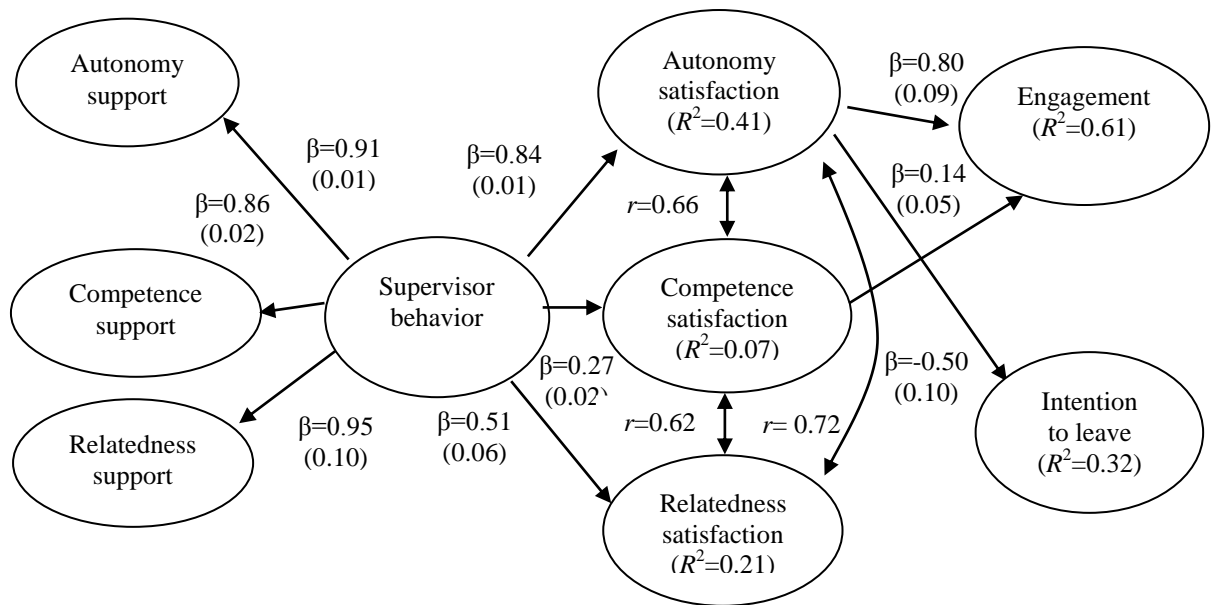


Figure 1. The structural model (standardized solution with standard errors in parentheses)

Indirect Effects

To determine whether any relations in the model were indirectly affected by supervisor behavior, the procedure explained by Hayes (2013) was followed. Bootstrapping (with 10 000 samples) was used to construct two-sided bias-corrected 95% confidence intervals (CIs) so as to evaluate indirect effects. Lower and upper CIs are reported (see Table 5).

Table 5

Indirect Effects of Supervisor Behavior on Engagement and Intention to Leave

Variable	Engagement			Intention to leave		
	Estimate	SE	95% BC CI	Estimate	SE	95% BC CI
Autonomy	.43	.10	[.24, .62]	-.27	.10	[-.47, -.06]
Competency	.05	.02	[.01, .09]	.02	.03	[-.03, .08]
Relatedness	-.05	.05	[-.14, .05]	-.09	.06	[-.21, .02]

* SE: standard error, BC CI: bias-corrected confidence interval

The total direct effect of supervisor behavior on engagement was .48 [.40, .56], while the total indirect effect was .43 [.30, .56]. Table 5 shows that supervisor behavior had a significant effect on engagement via autonomy satisfaction: $\beta = .43, p < .01, 95\% \text{ BC CI } [.24, .62]$. Supervisor behavior also had a significant effect on engagement via competence satisfaction: $\beta = .05, p < .01, 95\% \text{ BC CI } [.01, .09]$. Hypothesis 5 is partially supported. The total direct effect of supervisor behavior on intention to leave was $-.37 [-.46, -.27]$, while the total indirect effect was $-.34 [-.46, -.21]$. Supervisor behavior had a significant indirect effect on intention to leave via autonomy satisfaction: $\beta = -.27, p < .01, 95\% \text{ BC CI } [-.47, -.07]$. Hypothesis 6 is partially supported.

The model fit indices suggest that the relations posited in the revised model account for a substantial amount of the co-variation in the data. In terms of effect sizes (Cohen, 1988), the indirect effects model accounts for the following percentages of the variance: autonomy satisfaction = 41% (large effect), competence satisfaction = 7% (small effect), relatedness satisfaction = 21% (moderate effect), engagement = 61% (large effect), and intention to leave = 32% (large effect). These results lend empirical support for the model's fit.

Discussion

This study contributed to the literature by examining the role of supervisor behavior in facilitating psychological need satisfaction, work engagement, and intention to leave of employees. The results showed that supervisor support for psychological need satisfaction had a large effect on autonomy satisfaction, a moderate effect on relatedness satisfaction, and a small effect on competence satisfaction. Psychological need satisfaction, and specifically autonomy satisfaction, had a large positive effect on work engagement and a moderately negative effect on employees' intentions to leave. Competence satisfaction had a small effect on work engagement while relatedness satisfaction had a small negative effect on intention to leave. The study showed that autonomy satisfaction played a pivotal role, not only because of its direct effects on employees' work engagement and intentions to leave, but also because it mediated the relation between supervisor support for psychological need satisfaction and these outcomes.

The positive relationships between supervisor support and psychological need satisfaction suggest that the quality of the supervisor's relationships with employees affect engagement and intention to leave. Supervisors that create a climate for psychological need satisfaction of employees support their autonomy (by encouraging them to participate in important decisions, strengthening them to speak about what they feel, listening to different points of view before coming to conclusions, and by encouraging them to speak up when they disagree with a decision). Furthermore, they support employees' competence by supporting teachers' attempts to acquire additional training or education to further their careers, giving helpful feedback on employees' performance, taking the time to learn about employees' career goals and aspirations, caring about whether or not employees achieve their goals, making sure that employees get the credit when they accomplish something substantial on the job, and by giving employees helpful advice, when they need it, concerning improving their performance. Lastly, supervisors support employees' relatedness satisfaction by treating people fairly, showing commitment to protect employees' interests, doing what they say they will do, demonstrating that they can be trusted, being accessible, and by having confidence in employees' abilities.

Although we cannot establish causality, our findings suggest that employees' perceptions of supportive supervisor behavior fulfill their needs for autonomy, competence, and relatedness satisfaction. Increases in psychological need satisfaction may result in increases in work engagement of employees and decreases in their intentions to leave. Our findings suggest that satisfaction of autonomy needs are crucial, while satisfaction of relatedness needs are moderately important, while competence satisfaction are not that important. Furthermore, autonomy satisfaction was paramount for being engaged at work and not intending to leave the organization. Competence satisfaction did play a role in work engagement, but the effect thereof was small. The results of this study supported a model in which poor autonomy support from supervisors indirectly and negatively affected employees' work engagement, primarily via a lack of autonomy satisfaction. Autonomy support strengthens employees' social identity and generates greater meaningfulness within the workplace, which results in work engagement (May et al., 2004).

Autonomy satisfaction implies that employees perceive that they direct and determine their behavior, while relatedness satisfaction implies that individuals experience a sense of communion and develop close and intimate relationships with others (Deci & Ryan, 2011).

Supportive supervisor behavior, therefore, plays a significant role in psychological need satisfaction (i.e. autonomy and relatedness satisfaction) in the work context (Deci & Ryan, 2000). Supportive behaviors of supervisors contributed significantly to competence satisfaction of employees in this study. The need for competence refers to an individual's inherent desire to feel effective in interacting with the environment and results from mastering a task (Deci & Ryan, 2011). A possible explanation for this finding is that supervisors might not be sufficiently skilled and motivated to demonstrate behavior that elicits competence satisfaction of employees (Bandura, 1997, 2000).

Satisfaction of the psychological need for autonomy and competence explained a large percentage of the variance in work engagement. Adequate experiences of freedom and choice at work result in work engagement because such experiences lead to self-regulation of behavior. Work engagement is strengthened when employees master tasks and feel effective at work (Deci & Ryan, 2011). However, supervisor behaviors affected work engagement via fulfillment of the psychological need for autonomy (Gagné & Deci, 2005). If employees experience that supervisors are supportive and that they can be trusted, they will experience more autonomy satisfaction, which leads to work engagement. Therefore autonomy satisfaction is a critical psychological condition that mediates between supervisor support and individuals' work engagement (Deci & Ryan, 2008a, 2008b).

Need-supportive supervisor behaviors did not affect work engagement indirectly via relatedness. However, it is not impossible that such effects do exist in practice. Indeed, competence and relatedness satisfaction might affect work engagement via autonomy satisfaction (Deci & Ryan, 2000). Supervisors that support autonomous goal setting and achievement by being supportive and creating an atmosphere of trust contribute to psychological need satisfaction (notably autonomy and relatedness satisfaction), which reduces intentions to leave.

This study confirms the value of psychological need satisfaction in understanding the association between supervisor behavior on the one hand and work engagement and intention to leave on the other. Need supportive environments initiated by supervisors contributed to employees' engagement via the satisfaction of their autonomy needs. Furthermore, need-supportive supervisor behaviors contribute to relatedness satisfaction of workers,

characterized by experiences of a sense of communion and developing close and intimate relationships with others.

Supervisors contributed to the well-being of employees because they encouraged them to participate in important decisions and to develop new skills, gave them helpful feedback on their performance, and helped employees to solve work-related problems. Supportive supervisors showed the following types of behavior towards employees: confidence in their abilities, support for the development of their potential, provide direction when needed, understand what motivates them, communicate in a way that workers understand and treat them in a humane way. Supervision played a significant role in the motivation and retention of employees. Supervisor behavior affected psychological need satisfaction and engagement of employee, positively, and intention to leave negatively.

Limitations and Conclusions

This study had various limitations. First, self-reports were used to gather data. It is, therefore, possible that common method variance inflated the results. Furthermore, we focused on employees perceptions of supervisors' behavior, and we did not consider the supervisors perceptions of their own or employees' behavior. Second, the cross-sectional design used in this study makes it impossible to establish causality. Despite these limitations, the findings of this study suggest supervisor support and psychological need satisfaction are valuable concepts in understanding the engagement and intentions to leave of employees.

The generalizability of the findings of this study may be limited by the nature of the sample. Participants were secondary school teachers in one province in South Africa. Although Ryan and Deci (2000) pointed out that psychological need satisfaction is universally desirable for the well-being of people, the results of this study could have been affected by the complexity of participants' work. Given that the work of secondary school teachers is relatively complex, this could have increased the importance of supervisor support and psychological need satisfaction for engagement and intention to leave.

Recommendations

Supervisor' behavior and employees' psychological need satisfaction play a significant role in the engagement and retention of employees. Addressing the needs of workers and providing them with support can assist in their engagement and retention. Organizations should invest in training in self-determination theory for supervisors so that they can understand the importance of psychological need satisfaction in the intrinsic motivation of employees. Supervisors need to articulate their visions and expectations to employees, and should be available to assist, support, and encourage them. Supervisors should be prepared to improve engagement and intentions to leave of employees by focusing on psychological need satisfaction.

Future research should examine the antecedents of psychological need satisfaction using a longitudinal design. Longitudinal studies could provide more insight into the effects of supervisor behavior on psychological need satisfaction, work engagement and intentions of staff to leave. Future studies should include larger samples and be more representative in terms of gender and cultural diversity. More research is also needed regarding how social-contextual factors influence the effects of supervisor support on psychological need satisfaction. Future studies should also focus on the consequences of need thwarting and need satisfaction for outcomes such as employees' engagement and intentions to leave.

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CHAPTER 3

MANUSCRIPT 2

Antecedents and Outcomes of Meaningful Work among School Teachers

Antecedents and Outcomes of Meaningful Work among School Teachers

Abstract

The aim of this study was to investigate antecedents and outcomes of meaningful work among school teachers. A cross-sectional survey design was used with a convenience sample of 513 secondary school teachers in the North West Province in South Africa. The Work-Life Questionnaire, Revised Job Diagnostic Survey, Co-worker Relations Scale, Work and Meaning Inventory, Personal Resources Scale, Work Engagement Scale, Turnover Intention Scale, and a measure of self-rated performance were administered. The results showed that a calling orientation, job design, and co-worker relations explained a large percentage of the variance in experiences of meaningful work. A low calling orientation and poor co-worker relations predicted a moderate percentage of the variance in burnout. A calling orientation, a well-designed job, good co-worker relations, and meaningful work predicted work engagement. Job design was moderately associated with self-ratings of performance. The absence of a calling orientation predicted teachers' intentions to leave the organisation.

Keywords: Meaningful work; work beliefs; work design, performance, intention to leave; burnout; secondary school teachers.

Meaningful work underpins people's motivation and affects their well-being and job satisfaction (Rosso, Dekas, & Wrzesniewski, 2010; Steger, Dik, & Duffy, 2012). Furthermore, it is a significant pathway to healthy and authentic organisations (Keller & Price, 2013; Ryde & Sofianos, 2014). Regarding well-being and optimal functioning, Ryan, Huta, and Deci (2008) contrast a hedonic well-being perspective (which stresses maximum pleasure) with a eudaimonic well-being perspective (which emphasises meaningfulness). People seek meaning and purpose in their lives and work (Steger, Kawabata, Shimai, & Otake, 2008). Moreover, they want to work for significance-seeking reasons (Pink, 2009). Steger and Dik (2009) found that meaningful work matters to people's well-being and flourishing (Keyes & Annas, 2009; Seligman, 2011). Meaningful work contributes to the work engagement (Kahn & Heaphy, 2014), particularly when people are not exposed to experience positive affect (Steger, Littman-Ovadia, Miller, Menger, & Rothmann, 2013). Moreover, when individuals do not experience meaning at work, they are prone to leave the organisation (George, Louw, & Badenhorst, 2008; Janik & Rothmann, 2015).

The provision of quality education is a significant challenge that must be addressed in South Africa (Statistics South Africa, 2013). Quality education is dependent on the motivation, well-being and retention of teachers (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Louw, George, & Esterhuysen, 2011). Worldwide changes in education result in increasing demands on teachers. Teachers in African countries are facing poor job conditions and high job demands (Jackson & Rothmann, 2006; Ingersoll, 2001; Tye & O'Brien, 2002). High demands might lead to negative attitudes towards work as well as experiences of meaninglessness (Willemsse & Deacon, 2015). As a result, teachers show high incidences of burnout and dissatisfaction (Fernet, Guay, Senécal, & Austin, 2012). Furthermore, if they are not well at work, they might think of leaving the education profession (McCormick & Barnett, 2011). Jalongo and Heider (2006) found that 46% of teachers leave the profession within the first five years. However, some teachers find their work meaningful and engaging (Buckley, Schneider, & Shang, 2005; Houchins, Shippen, & Cattret, 2004; Tye & O'Brien, 2002). Therefore, a need exists to study meaningful work as experienced by teachers, as well as its antecedents and outcomes (Parker & Martin, 2009).

Understanding teachers' experiences of meaning and purpose at work will assist in understanding their motivation. A lack of information exists on how teachers could work in ways that are intrinsically motivating and which will not undermine their interest in work.

Furthermore, information is needed to reform school systems to be more meaningful and engaging. A study of teachers in Zambia (Rothmann & Hamkangandu, 2013) showed that work beliefs (and specifically a calling orientation) directly and indirectly affected work role fit, psychological meaningfulness and work engagement. Poor work-role fit and low psychological meaningfulness had direct effects on teachers' intentions to leave. A study of secondary school teachers in Namibia showed that poor work role fit and low psychological meaningfulness directly affected teachers' intentions to leave (Janik & Rothmann, 2015). However, scientific information is needed regarding the effects of work beliefs, job design, and co-worker relationships on experiences of meaningful work. Furthermore, information is needed regarding the effects of meaningful work on the burnout, work engagement, performance and retention of teachers.

Meaningful Work

Steger (2009) distinguished two approaches to understanding meaning in life, namely a motivational (or purpose-centred) approach and a cognitive (significance-centred) approach. Having a purpose in life is in line with Frankl's (1992) notion that people have some unique purpose for their lives. The motivational approach explains how people construct short to long-term goals in life. In this regard, meaning refers to what people are trying to do to enact their values. Purpose in life is often sought under circumstances of adversity (e.g., traumatic experiences and adverse life conditions) and it gives direction when adversarial circumstances are present. The cognitive approach considers people's understanding of themselves and the world they live in, as well as how they prioritise and manage important life events. Meaning as significance implies that people experience meaning when their lives make sense or convey some comprehensible information. Meaning refers to peoples' contemplations on why they are in this world and what they do to make sense of it and, more particularly, their lives.

Isaksen (2000) points out that psychological meaningfulness is not merely a result of employees' experiences of their working conditions. It is the result of individuals' efforts in terms of meaning making – despite the working conditions they might endure. Meaningfulness is a psychological condition that is essential for personal growth, work motivation (Pratt & Ashforth, 2003), and work engagement (Fairlie, 2011). Psychological meaningfulness refers to the significance a person attaches to something. It goes beyond the

value of life's existence and is a critical condition for work (May, Gilson, & Harter, 2004; Taubman-Ben-Ari & Weintroub, 2008).

Steger et al. (2012) state that meaningful work comprises more than that which their work means to people (i.e. meaning). Their definition of meaningful work includes meaningfulness because it is significant and positive in valence. The positive valence of meaningful work has “a eudaimonic (growth- and purpose-oriented) rather than hedonic focus” (p. 2). Steger et al. (2012) conceptualized meaningful work in terms of three dimensions: a) Psychological meaningfulness in work is a subjective experience that one's work is significant. This facet captures the sense that work does matter. b) Meaning making through work captures the idea that work is a major source of meaning in one's life. In this regard, meaningful work helps people in understanding their selves and the world around them. c) Greater good motivations, which reflect the desire to make a difference and to have a broader impact on others.

Antecedents of Meaningful Work

As Steger and Dik (2009) as well as Pratt and Ashforth (2003) see it, four factors could contribute to meaningful work. First, work is meaningful when there is a fit between individuals and the organisation's values and mission. Second, the nature of the task (e.g. the significance, purposefulness and comprehensibility thereof) contributes to meaningful work. Third, the camaraderie people experience in their workplace relationships results in experiences of meaningful work. Fourth, meaningful work is associated with work beliefs, e.g. whether work is believed to be a calling (Wrzesniewski, 2012; Wrzesniewski, McCauley, Rozin, & Schwartz, 1997). Various studies (e.g., Janik & Rothmann, 2015; Van Zyl, Deacon, & Rothmann 2010) confirmed the association between person-environment fit and meaningful work. Hence this study focuses on three factors, namely calling as a work belief, job design, and co-worker relations.

Calling as a Work Belief

When retaining teachers, it is important to focus on their work beliefs and how they perceive their work. These career conceptions can have a significant influence on the day-to-day experiences they have in their schools (Farkas, Johnson, Foleno, Duffett, & Foley, 2000). Beliefs about the role or function of work in life can shape the meaning of work (Wrzesniewski et al., 1997; Wrzesniewski & Tosti, 2005). Individuals with a calling

orientation find that their work is inseparable from their life. They are working for the fulfilment the work brings. The word “calling” was initially used in a religious context (called by God to do morally or socially significant work). A calling implies that people see their work as socially valuable, involving activities that may, need not, be pleasurable. Wrzesniewski, Dekas, and Rosso (2009) described callings as meaningful activities with significance for the person on a moral, social and a personal level. Pursuing a calling means that individuals act out their work beliefs via their work (Elangovan, Pinder, & McLean, 2010). It is the highest form of subjective career success (Hall & Chandler, 2005). Bunderson and Thompson (2009) view callings as a pathway to connect with one’s true self by fulfilling a specific purpose in life.

Work contributes to a greater good and makes the world a better place when people have a calling orientation towards their work. Thus, a natural outcome would be meaningful work that stems from having a calling as a work belief. The concept calling can have different interpretations. For purposes of this study, the focus will be on callings as a work orientation and specific work belief. Work orientations provide a framework to understand how individuals make meaning of their work and how they do their work to reflect these meanings (Hall & Heras, 2012). Furthermore, work as a calling can be regarded as fulfilling a kind of duty and seeing work as a destiny (Bunderson & Thompson, 2009).

What differentiates a calling from other constructs such as work centrality and work commitment is the reason for doing the work (Wrzesniewski, 2012). Callings have inherent to the construct the desire to make a social contribution and a sense of personal fulfilment. Teachers wanting to make a difference in the lives of others and their learners will be less likely to leave the profession if they experience a sense of personal fulfilment in their work. Wrzesniewski (2001) claims that over time a calling can grow or decline in the life of an individual.

Studies in South Africa and Zambia confirmed that a calling orientation contributes to perceptions of meaningful work (Janik & Rothmann, 2015; Rothmann & Hamukangandu, 2013). Van Zyl et al. (2010) found that the calling work orientation results in psychological meaningfulness and work engagement. A calling orientation led to improved work role fit, which in turn predicted psychological meaningfulness.

Job Design

According to the Job Characteristics Model (Hackman & Oldham, 1980), higher levels of autonomy, variety and significance of work lead to experienced meaningfulness. Grant (2008) pointed out that a job that provides a sense of purpose and positively impacts the lives of others will enhance significance. Janik and Rothmann (2015) found that job enrichment had direct positive effects on teachers' experiences of psychological meaningfulness.

Jobs that include challenging tasks offer creative opportunities and variety and allow autonomy to contribute to experiences of meaningfulness (Kahn & Heaphy, 2014). This positive attitude to work invokes internal motivation, spurs continuous attempts to take responsibility for the task, and attempts to continuously improve the job and to perform optimally (Searle & Parker, 2013). According to Drach-Zahavy and Erez (2002), an individual's style of appraisal can affect outcomes such as task performance, for example, if an employee perceives his work to be meaningful and experience positive emotions regarding the work, then it is more likely that he will perform better.

Employees with a positive appraisal approach to their work will be more inclined to experience positive, affective states (Carver, Scheier, & Segerstrom, 2010). Positive emotions have also been linked to the pro-active behaviour of employees and their enthusiasm for the task (Searle & Parker, 2013). Recent research found that employees' positive core self-evaluations can affect their workplace behaviour. Employees' perceptions of their work situations can indeed have a profound effect on their work beliefs and attitudes, which affect emotions at work (Carver et al., 2010; Searle & Parker, 2013).

Allowing individuals to take responsibility for their work, participate in decision-making, and perform a variety of tasks, will result in higher levels of well-being (May et al., 2004; Rothmann, 2015). Employees that feel they are in control of their work environment and that they have enough opportunities for growth will take ownership of their work (Deci & Ryan, 2008; Rothmann, 2015). As a result, their autonomous motivation will be enhanced. Autonomy is associated with freedom in a job, where employees can take control of their work. Non-autocratic processes strengthen autonomy satisfaction, which lead to better well-being (Deci & Ryan, 2011; Rothmann, 2015).

Co-worker Relations

Interpersonal relationships at work affect the meaning individuals experience at work (Dutton & Ragins, 2007; Kahn, 2007). When employees experience co-worker relations as rewarding, they will experience greater meaningfulness in the workplace. The acceptance of the individuals by their fellow workers has a significant influence on the meaning individuals experience at work (Steger & Dik, 2009). Wrzesniewski et al. (2009) looked into employees' interpersonal sense-making process as a driving force for how to behave in the workplace. Pratt, Rockmann, and Kaufmann (2006) referred to the meaning employees derive from their identification with groups.

Co-worker relationships at work have a significant impact on the meaning individuals experience in their work (Rothmann, 2015; Steger & Dik, 2009). Satisfying relationships with co-workers encourage a sense of relatedness, which might lead to psychological meaningfulness. Positive relations can create a sense of care, which can result in employees feeling that they are emotionally saved and taken care of (Olivier & Rothmann, 2007; Rothmann, 2015). Likewise, Pratt and Ashforth (2003) argued that workers might experience their work as more meaningful, to the extent in which organizations can create dynamic, family-like connections for their employees.

Outcomes of Meaningful Work

Meaningful work (or the lack thereof) can have specific consequences for the individual as well as for the organisation. Some outcomes can be negative, e.g. burnout, absenteeism and intention to leave. Positive outcomes include high levels of work engagement and good performance.

Burnout is a negative state of mind in working people characterized by a lack of physical, emotional and cognitive resources (May et al., 2004). It includes exhaustion, disengagement, and cognitive weariness (Kahn & Heaphy, 2014; May et al., 2004). Strümpfer (2003) suggested that meaning-providing variables may ward off burnout and strengthen engagement inclinations. Cherniss (1995, p. 185) also linked burnout to the quest for meaning. Burnout is a response to stress, but the cause thereof is a lack of meaning for suffering. Pines and Aronson (1988) examined burnout through Frankl's (1992) humanistic-existential paradigm. According to Pines (1993), people search for meaning in life because

the finality of burnout and death is the result for those individuals that fail to find meaning in life. Traditionally, people found their meaning in life through religion. However, in modern times many people depend (focus) on their work to find meaning in life. Lambie (2006) found that the susceptibility to burnout is reduced in supportive environments where employees are respected, and where bureaucratic hassles and administrative interference are minimized. Such an environment enables highly motivated employees to reach their goals and expectations and to achieve meaning (Pines, 1993). In contrast, a stressful environment may contribute to a sense of meaninglessness and burnout. When meaningfulness in work disappears, an existential crisis can arise, which results in burnout (Lambie, 2006).

Meaningful work has been linked to higher engagement levels (Martin, 2006; Richardson & Watt, 2006). Engagement refers to the “harnessing of organizational members’ selves to their work role by which they employ and express themselves physically, cognitively and emotionally during role performance” (Kahn, 1990, p. 694). Work engagement comprises a physical, emotional, and cognitive dimension (Kahn & Heaphy, 2014). The physical dimension entails being physically involved in a task and showing energy. The emotional dimension entails being connected to job/others while working. The cognitive dimension refers to being alert at work and becoming absorbed in tasks. According to the relational model of Kahn and Heaphy (2014), deepened purposes (resulting from collective efforts, belongingness, and contact with beneficiaries) lead to meaningful work, which results in work engagement. Therefore high work engagement occurs because employees attach themselves to their work roles when they experience meaningful work. Studies performed by May et al. (2004), Olivier and Rothmann (2007), and Janik and Rothmann (2015) confirmed that meaningful work is indeed a strong predictor of work engagement.

Price (2001, p. 600) defined turnover as the “individual movement across the membership boundary of an organization”. Intention to leave can be described as the conscious and planned willingness of an employee to leave an organisation (Chang, Wang, & Huang, 2013; Tett & Meyer, 1993). Intention to leave occurs due to mental withdrawal behaviour. Humphrey, Nahrgang & Morgeson (2007) found that workplace attributes predict intention to leave. Studies confirmed that job design (Searle & Parker, 2013) and relationships with co-workers (Rothmann, Diedericks, & Swart, 2013) affect employees’ intentions to leave organisations. An enriched job, supportive co-worker relationships, and having a calling will reduce the intention to leave by encouraging and sustaining a sense of meaningful work.

Teachers' intentions to leave depend on how they experience their work and the amount of support they receive in their respective workplaces.

Employee performance refers to whether individuals execute their job duties and responsibilities well. Self-rated performance is defined as an individual's reflection on their efficacy using an evaluation of their thoughts and actions (Bandura, 2008). Alfred Bandura's (2008) social cognitive theory can explain why meaningful work influences performance. The theory has four core properties, namely intentionality, forethought, self-reactiveness, and self-reflectiveness. Intentionality refers to people's intentions and the action plans they use to implement these programs. Forethought includes the goals people set, expected outcomes, and the measures they take that will motivate their efforts. Self-reactiveness refers to people as self-regulators – monitoring and evaluating their actions via self-rating. Self-reflectiveness refers to the “self-examining” of own functioning. Employees experiencing their jobs as negative and less meaningful will be less prone to believe in their ability to achieve challenging work goals and as a result not perform at their best (Searle & Parker, 2013). May et al. (2004) found that employees perform better when included in a group's social activities.

Aim and Hypotheses

The objective of this study was to investigate the relations among work beliefs, job design, co-worker relations, meaning and purpose at work, and outcomes such as burnout, performance, and intention to leave. Based on a review of the literature, it is argued that a calling orientation, job design and co-worker relationships affect the meaningfulness an employee experiences at work. These antecedents and meaningful work affect employees' burnout, work engagement, performance, and intention to leave (Janik & Rothmann, 2015; May et al., 2004; Whittington & Galpin, 2010).

The following hypotheses were set for this study:

Hypothesis 1a: A calling orientation to work is positively associated with meaningful work.

Hypothesis 1b: Job design is positively associated with meaningful work.

Hypothesis 1c: Good co-worker relations are positively associated with meaningful work.

Hypothesis 2a: Meaningful work is negatively associated with burnout.

Hypothesis 2b: Meaningful work is positively associated with work engagement.

Hypothesis 2c: Meaningful work is positively associated with self-rated performance.

Hypothesis 2c: Meaningful work is negatively associated with intentions to leave.

Hypothesis 3: A calling orientation, job design, co-worker relations, and meaningful work affect burnout.

Hypothesis 4: A calling orientation, job design, co-worker relations, and meaningful work affect work engagement.

Hypothesis 5: A calling orientation, job design, co-worker relations, and meaningful work affect intentions to leave.

Hypothesis 6: A calling orientation, job design, co-worker relations, and meaningful work affect self-rated performance.

Method

Participants and Setting

The setting for this study was 40 public secondary schools within the Kenneth Kaunda District in North-West Province. Education in South Africa is in crisis, specifically concerning the quality of teaching (National Planning Commission, 2011), relationships within schools, and the well-being of teachers (Rothmann, 2015).

The number of respondents in this study varied from 8-20 educators per school. There are 334 secondary schools located in 109 cities and towns in the province. A total of 800 respondents representing 40 secondary schools were approached to take part in this study. A final number of 513 respondents completed the survey – a response rate of 64.13%.

Table 1 provides a description of the characteristics of the participants. Males comprised 38.99% of the sample and females 61.01%. Participants' ages varied from 19 to 65 (Mean = 42). The length of service in the various schools varied between one year and 38 years. The distribution of participants' job position was student teacher (3.91%), junior teacher (13.79%), senior teacher (67.90%) and head of the department (14.40%).

Table 1

Characteristics of Participants (N=513)

Item	Category	Frequency	Percentage
Gender	Male	200	38.99
	Female	313	61.01
Age	Below 23	9	1.96
	23-30	97	21.23
	31-39	70	15.32
	40-45	113	24.73
	46-55	118	25.82
	Over 55	50	10.94
	Job Level	Student teacher	19
Junior teacher		67	13.79
Senior teacher		330	67.90
Head of Department		70	14.40
Years in teaching	1-2	36	9.16
	3-5	44	11.20
	6-10	77	19.59
	11-20	121	30.79
	21-30	84	21.37
	More than 30 years	31	7.89
Home language	Afrikaans	222	57.66
	English	31	8.05
	Setswana	132	34.29

Measuring Instruments

The *Work-Life Questionnaire* (WLQ; Wrzesniewski et al., 1997) was used to measure the levels of meaning teachers associate with their work. The WLQ is a self-report measure that aims at classifying an individual's orientation to work into three categories, namely a job, a

career, and calling orientation. Only eight items measuring a calling orientation were used in this study. An example item is: “I enjoy talking about my work to others.” The items are rated on a Likert scale varying from 1 (*not at all*) to 4 (*completely*).

The Revised *Job Diagnostic Survey* (JDS; Idaszak & Drasgow, 1987) was used to measure individuals’ reactions to job characteristics. The JDRS consists of nine items. It measures autonomy (e.g. “The job gives me a chance to use my personal initiative and judgment in carrying out the work”), task identity (e.g., “The job is arranged so that I can do an entire piece of work from beginning to end”), skill variety (e.g., “The job requires me to use a number of complex or high-level skills”), task significance (e.g. “The job itself is very significant and important in the broader scheme of things”), and feedback (e.g., “After I finish a job, I know whether I performed well”). It uses a seven-point Likert-type scale anchored at extreme values of 1 (*very inaccurate*) and 7 (*very accurate*). In this study, the reliability coefficient for the JDS was .85.

Co-worker relations were measured using the *Co-worker Relations Scale* (CRS; May et al., 2004). Six items were used (e.g., “My interactions with my co-workers are rewarding”). The items are rated on a seven-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Rewarding co-worker relations can create an experience of belonging and care, which can lead to experiences of feeling safer at work (Olivier & Rothmann, 2007). May et al. (2004) found a Cronbach alpha coefficient of .93 for the CRS.

The *Work and Meaning Inventory* (WAMI; Steger et al., 2012) was used to measure meaningful work. The WAMI consists of 10 items which measures three subscales, namely positive meaning (four items, e.g. “I understand how my work contributes to my life’s meaning”), meaning-making through work (three items, e.g. “I view my work as contributing to my personal growth”), and greater good motivations (three items, e.g. “The work I do serves a greater purpose”). A composite score for the scale can also be obtained. Reliabilities varying from 0.82 to 0.89 were obtained for the subscales and 0.93 for the total score. Steger et al. (2012) found strong evidence for the construct validity of the inventory.

Burnout was measured using nine items from the *Personal Resources Scale* (PRS; May et al., 2004). The PRS measures three dimensions of burnout, namely Cognitive weariness

(three items, e.g. “I find it difficult to focus my attention while at work”); Physical exhaustion (three items, e.g. “I feel emotionally drained from my work”); and Emotional exhaustion (three items, e.g. “I tend to postpone discussing touchy topics”).

The *Work Engagement Scale* (WES; Diedericks & Rothmann, 2013) was applied to measure work engagement. The WES has 13 items. A 7-point frequency scale varying from 1 (*almost never or never*) to 7 (*always or almost always*) was used for all items. The three components of Khan’s (1990) conceptualization of engagement are reflected in the items, namely cognitive, emotional and physical engagement. Evidence for the construct validity of the WES was reported by Diedericks and Rothmann (2013) and an alpha coefficient of .72 was reported for the WES.

Two items of the *Turnover Intention Scale* (TIS) (Sjöberg & Sverke, 2000) was used to measure intentions to leave. An example of an item is “If I were completely free to choose I would leave this job”. Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). The authors found an alpha coefficient of .83 for the TIS. Diedericks (2012) found an alpha coefficient of .79 for the TIS in a study in South Africa.

A questionnaire was compiled to measure *self-rated performance*. A 10-point Likert scale was used varying from 1 (*low*) to 10 (*high*). Four items were used: 1) “How would you rate your performance/effectiveness compared to your peers?” 2) “How would you rate your customer care compared to that of your peers?” 3) “How would you rate the quality of the service that you render compared to your peers?” 4) “How would you rate your competence in your work compared to your peers?” “The self-rated job performance scale had an internal consistency of .93.

Data Analysis

We performed latent variable modelling using Mplus version 7.31 (Muthén & Muthén, 1998-2014) to test the measurement and structural models. Latent variable modelling is particularly advantageous because the biasing effects of measurement error are reduced, measurement and structural models can be tested, indices of overall fit are obtained, and mediational models can be tested (Wang & Wang, 2012). A weighted least-squares with mean and variance adjustment (WLSMV) estimator was used to test the models. This estimator is

robust; it does not assume normally distributed variables, and it provides the best option for modelling categorical data. The following Mplus fit indices were used in this study: absolute fit indices, which include the Chi-square statistic (the test of absolute fit of the model), the weighted root mean square residual (WRMR) and the root means square error of approximation (RMSEA); incremental fit indices, which included the Tucker-Lewis Index (TLI); and the Comparative Fit Index (CFI) (West, Taylor, & Wu, 2012). Criticism against the use of χ^2 is that it is a strict test that detects trivial differences between the hypothesized model and the data. Therefore, the χ^2 test is often not of general interest when the fit of models is tested. Various practical fit indices have been developed to evaluate model fit. The Comparative Fit Index (CFI) compares the hypothesized and independent models but takes sample size into account.

The Tucker-Lewis Index (TLI) is a relative measure of co-variation explained by the hypothesized model that has been designed for the assessment of factor models. Critical values for good model fit have been recommended for the CFI and TLI to be acceptable above the .90 level (Wang & Wang, 2012), although Hu and Bentler (1999) recommended a cut-off value of .95. The RMSEA provides an indication of the overall amount of error in the hypothesized model-data fit, relative to the number of estimated parameters (complexity) in the model. The recommended acceptable levels of the RMSEA should be .05 or less and should not exceed .08. West, Taylor & Wu (2012) point out that cut-off standards for model fit recommended by Hu and Bentler (1999) were based on simulation studies and should be used as rough indicators only, especially when models and data further from models with complete data are studied.

Raykov's (2009) confirmatory factor analysis-based estimate of scale reliability (ρ) was computed for each scale. This estimate of reliability provides a more dependable estimate of scale reliability if items are not tau-equivalent (Wang & Wang, 2012).

Research Procedure

Ethical approval for this study was obtained from the Ethics Committee at the University from which the research was undertaken. Permission for the study was granted by the director of the Kenneth Kaunda district where participants are employed. The researcher contacted the

secondary schools' principals in the North West Province and obtained permission to conduct the study. A cover letter explaining the purpose of the study emphasizing the confidentiality of the research project accompanied the questionnaire. The questionnaire included a consent letter which was completed by all participants. Participation in the project was voluntary, and respondents were granted the option of withdrawing at any time. Participants completed the questionnaires in hard-copy format and the researcher captured responses in an Excel sheet, where after it was prepared for analysis with Mplus 7.31.

Results

First, the results of tests of competing measurement models are reported. Second, the results of alternative structural models are analysed.

Testing the Measurement Model

Using confirmatory factor analysis (CFA), a five-factor measurement model as well as four alternative models, were tested to assess whether each of the measurement items would load significantly onto the scales they were associated with. Survey items were used as indicators of first-level latent variables. Model 1 consisted of eight latent variables, namely a) Calling orientation (measured by means of eight items); b) Job design (measured by means of seven items); c) Co-worker relations (measured by six items); d) Meaningful work (measured by means of 10 items); e) Burnout (measured by means of nine items); f) Engagement, which consisted of three first-order latent variables: cognitive, emotional and physical engagement (each measured using three items); g) Performance (measured by means of four items); and h) Intention to leave (measured by means of two items). Latent variables in model 1 were allowed to correlate. Models 2 and 3 followed the same template: Model 2 was specified with eight observed variables measuring a Calling orientation, and 48 observed variables measuring Job design. Model 3 was specified 48 observed variables, measuring one latent factor.

Table 2 presents fit statistics for the test of the various models.

Table 2

Fit Statistics of Competing Measurement Models (N = 513)

Model	χ^2	<i>df</i>	TLI	CFI	RMSEA	WRMR
1	3127.90*	1399	.96	.96	.05 [.047, .051]	1.41
2	3398.04*	1252	.93	.94	.06* [.055, .060]	1.75
3	8104.80*	1242	.79	.80	.10* [.101, .105]	3.25

* $p < .01$

χ^2 , chi-square statistic; *df*, degrees of freedom; TLI, Tucker-Lewis Index; CFI, Comparative Fit Index; RMSEA, Root Mean Square Error of Approximation; WRMR, Weighted Root Mean Square Residual.

Table 2 reflects that Model 1 had the best fit. The standardized regression weights varied from .40 (for item 7 of the WLQ) to .93 (for item 3 of the self-rated performance measure).

Testing the Structural Model

Table 3 shows the reliabilities and correlations of the latent variables.

Table 3

Descriptive Statistics, Reliability Coefficients and Correlations of the Scales (N = 513)

VARIABLE	Mean	<i>SD</i>	ρ	1	2	3	4	5	6	7
1. Calling orientation	2.06	.60	.74	-	-	-	-	-	-	-
2. Job design	5.57	.98	.85	.57**	-	-	-	-	-	-
3. Co-workers	5.47	1.13	.93	.43**	.63**	-	-	-	-	-
4. Meaningful work	3.82	.72	.93	.66**	.57**	.45**	-	-	-	-
5. Burnout	3.39	1.30	.88	-.41**	-.34**	-.36**	-.36**	-	-	-
6. Work engagement	5.19	1.11	.90	.72**	.67**	.59**	.65**	.48**	-	-
7. Performance	2.49	1.21	.91	.33**	.46**	.29**	.27**	-.25**	.42**	-
8. Turnover Intention	7.60	1.35	.84	-.66**	-.44**	-.38**	-.50**	.48**	-.53**	-.16**

** $p < 0.01$

Note: Calling orientation was reverse-scored so that a high score reflects a high calling orientation.

Table 3 shows scale reliabilities ranging from .56 to .93, which indicate acceptable internal consistency of all the scales.

The structural model was tested based on the measurement model. Three competing models were tested. Model 1 (the direct and indirect effects model) included paths from Calling orientation, Job design, and Co-worker relations to Meaningful work, Burnout, Work engagement, Performance, and Intention to leave. Model 2 (the direct effects model) included paths from Calling orientation, Job design, and Co-worker relations, and Meaningful work to Burnout, Work engagement, Performance, and Intention to leave. However, the paths from Calling orientation, Job design, and Co-worker relations to Meaningful work were constrained to zero. Model 3 (the indirect effects model) included paths from Meaningful work to Burnout, Work engagement, Performance, and Intention to leave. However, the paths from Calling orientation, Job design, and Co-worker relations to Burnout, Work engagement, Performance, and Intention to leave were constrained to zero. Correlations were allowed between burnout, work engagement, performance and intention to leave in all three models. Table 4 illustrates the fit statistics and standardized regression coefficients for the three competing structural models.

Table 4 indicates that Model 1 was the best-fitting model compared to Model 2 ($\Delta\chi^2 = 474.33$, $\Delta df = 3$, $p < .001$), and Model 3 ($\Delta\chi^2 = 255.75$, $\Delta df = 12$, $p < .001$). Next, the obtained relations of the best fitting and most parsimonious structural model (model 1) are discussed regarding the hypotheses of this study.

For the portion of the model predicting Meaningful work, Table 4 confirms that the direct effects of a Calling orientation ($\beta = .49$, $p < .01$), Job design ($\beta = .23$, $p < .01$), and Co-worker relations ($\beta = .21$, $p < .01$) were statistically significant and had the expected signs. These three independent variables explained a large proportion of the variance in Meaningful work ($R^2 = .49$). Hypotheses 1a, 1b and 1c are accepted.

For the portion of the model predicting Burnout, Table 4 demonstrates that the direct effects of a Calling orientation ($\beta = -.25$, $p < .01$) and Co-worker relations ($\beta = -.19$, $p < .01$) were statistically significant and had the expected signs. These two independent variables

explained a moderate proportion of the variance in Burnout ($R^2 = .21$). These findings provide partial support for Hypothesis 3.

For the portion of the model predicting Work engagement, Table 4 explicates that the direct effects of Meaningful work ($\beta = .18, p < .01$), a Calling orientation ($\beta = .39, p < .01$), Job design ($\beta = .21, p < .01$), and Co-worker relations ($\beta = .21, p < .01$) were statistically significant and had the expected signs. These four independent variables explained a large proportion of the variance in Work engagement ($R^2 = .67$). These findings provide partial support for Hypothesis 4.

For the portion of the model predicting Performance, Table 4 depicts that the direct effects of Job design ($\beta = .42, p < .01$) was statistically significant and had the expected sign. Job design explained a moderate proportion of the variance in Performance ($R^2 = .22$). These findings provide partial support for Hypothesis 5.

For the portion of the model predicting Intention to leave, it can be seen from Table 4 that the direct effect of a Calling orientation ($\beta = -0.55, p < .01$) was statistically significant and had the expected sign. A low calling orientation explained a large proportion of the variance in Intention to leave ($R^2 = .45$). These findings provide partial support for Hypothesis 6.

Table 4

Fit Indices and Standardized Path Coefficients of the Structural Models

Measures		Direct and indirect effects (Model 1)	Direct effects (Model 2)	Indirect effects (Model 3)
Fit Indices	χ^2	3127.90**	8682.02**	4059.99***
	<i>df</i>	1399	1402	1411
	TLI	.96	.85	.95
	CFI	.96	.84	.94
	RMSEA	.06**	.10**	.06**
	RMSEA 90% CI	[.049, .051]	[.098, .102]	[.058, .062]
	WRMR	1.41	3.11	1.82
Direct effects on Meaningful work	Calling orientation	.49**	-	.56**
	Job design	.23**	-	.28**
	Co-worker relations	.21**	-	.20**
Direct effects on Burnout	Meaningful work	-.08	-.36**	-.45**
	Calling orientation	-.25**	-.30**	-
	Job design	-.04	-.05	-
	Co-worker relations	-.19**	-.19**	-
Direct effects on Work engagement	Meaningful work	.18**	.65**	.81**
	Calling orientation	.39**	.48**	-
	Job design	.21**	.26**	-
	Co-worker relations	.21**	.22**	-
Direct effects on Performance	Meaningful work	-.05	.27**	.40**
	Calling Orientation	-.13	.10	-
	Job design	.42**	.41**	-
	Co-worker relations	-.01	-.02	-
Direct effects on Intention to leave	Meaningful work	-.09	-.50**	-.61**
	Calling Orientation	.55**	-.59**	-
	Job design	-.03	-.05	-
	Co-worker relations	-.08	-.09*	-

* $p < .05$ ** $p < .01$ *df*= degrees of freedom; TLI= Tucker-Lewis Index; CFI= Comparative Fit Index; RMSEA= Root Mean Square Error of Approximation; WRMR= Weighted Root Mean Square Residual

Indirect Effects

To determine whether any relations in the model were indirectly affected by meaningfulness, the procedure explained by Hayes (2013) was followed. Bootstrapping (with 10 000 samples) was used to construct two-sided bias-corrected 95% confidence intervals (CIs) so as to evaluate indirect effects. Lower and upper CIs are reported (see Table 5).

Table 5

Indirect Effects of Meaningfulness on Burnout, Work Engagement, Performance, and Intention to Leave

Variable	Indirect effect		
	Estimate	SE	95% BC CI
Burnout			
Calling orientation	.05	.04	[-.03, .13]
Job design	-.02	.02	[-.07, .01]
Co-worker relations	-.01	.01	[-.03, .00]
Work engagement			
Calling orientation	.09*	.03	[.04, .13]
Job design	.04*	.02	[.01, .07]
Co-worker relations	.01	.01	[.00, .03]
Performance			
Calling orientation	.03	.04	[-.09, .17]
Job design	-.01	.02	[-.09, .03]
Co-worker relations	-.01	.01	[-.03, .01]
Intention to leave			
Calling orientation	.04	.03	[-.05, .19]
Job design	-.02	.02	[-.12, .01]
Co-worker relations	-.01	.01	[-.04, .00]

The indirect effect of a Calling orientation on Work engagement was .09, $p < .01$ [.04, .13]. Furthermore, the indirect effect of Job design on Work engagement was .04, $p < .01$ [.01, .07]. These findings provide further partial support for Hypothesis 4.

In terms of effect sizes (Cohen, 1988), the indirect effects model accounts for the following percentages of the variance: Meaningfulness in work = 51% (large effect); Burnout = 39% (large effect); Work engagement = 67%; Performance = 22% (moderate effect); Intention to leave = 56% (large effect). These results lend empirical support for the model's fit.

Discussion

This study investigated the antecedents and outcomes of meaningful work among secondary school teachers. The results showed that a calling orientation, nature of the job, and co-worker relations explained a significant percentage of the variance in experiences of meaningful work. Research by Steger and Dik (2009) supports these findings. According to these authors, the most important factors that contribute to meaningful work is the nature of the task, good co-worker relations and work beliefs – specifically a calling orientation (Wrezniewski et al., 1997; Wrezniewski, 2012).

A low calling orientation and poor co-worker relations predicted a moderate percentage of the variance in burnout. This finding is supported by Steger et al. (2012) and Steger and Dik (2009), who studied meaningful work as the positive valence of work from a eudaimonic (growth and purpose) perspective. This perspective focused on the significance of work and meaning making through work. They argued that people possessing greater good motivations want to make a difference (calling orientation) and wish to make an impact on others (relations with co-workers). Thus, where this is not the case, negative outcomes, such as burnout, will prevail.

A calling orientation, an enriched job, good co-worker relations and meaningful work, predicted work engagement. This is a critical finding since higher engagement levels have significant implications for positive organisational outcomes. This finding is supported by Kahn and Heapy (2014) and has links with their relational model. They proposed that challenging tasks, a variety of tasks and autonomy lead to the experience of meaningful work. This study lends support for the important role of an enriched job. Furthermore, when

employees attach themselves to their work roles, experience a sense of belongingness from collective efforts, and when they are working in challenging environments that allow them flexibility and creativity, they will perceive their work to be meaningful, resulting in higher engagement levels (Martin, 2006; Richardson & Watt, 2006).

Another finding was that the absence of a calling was strongly associated with high intention to leave. Having a calling will reduce the intention to leave by encouraging and sustaining a sense of meaningful work. Teachers' intentions to leave depend on how they experience their work and the support they receive at work (Rothmann et al., 2013; Searle & Parker, 2013; Wrezniewski, 2012). Teachers wanting to make a difference in the lives of others and their learners will be less likely to leave the profession if they experience a sense of personal fulfilment in their work. This argument is supported by the Wrezniewski and Tosti (2005). The authors proposed that people seeing their work as socially valuable and deriving some personal fulfilment from their work will have a calling orientation to their work, leading to the experience of meaningful work which in turn will reduce the likelihood of intention to leave.

A valuable finding in this study was namely that a calling orientation had a direct effect on meaningful work. This finding is confirmed by Janik and Rothmann (2015) and also by Rothmann and Hamukangandu (2013) who found that a calling orientation contributed to perceptions of meaningful work. Furthermore, it was found that a calling orientation results in psychological meaningfulness and work engagement. A calling orientation led to a better person-environment fit, which in turn predicted psychological meaningfulness (Van Zyl et al., 2010). A calling orientation could promote work attitudes when a teacher experiences meaningful work (Willemse & Deacon, 2015). These authors postulated that when teachers have a calling orientation they will perceive their work to be meaningful and to impact on the greater good of themselves and others; thus act out their callings in the way in which they approach their work.

Job design was positively associated with meaningful work. This finding is supported by Hackman and Oldham's (1980) job characteristics model. According to them, meaningful work is experienced when employees have autonomy, variety and significance in their work roles. Janik and Rothmann (2015) found that a link existed between job enrichment and meaningful work. Kahn and Heapy (2014) found a connection between challenging tasks,

variety and autonomy and the experience of meaningful work. All these previous research findings thus lend support to our finding.

Meaningful work was positively associated with self-rated performance. Searle and Parker (2013) also found that a positive attitude towards work provides internal motivation and increases a person's sense of meaningful work. Therefore, it also enables a person to perform optimally. Drach-Zahavy and Erez (2002) linked employee's self-rated performance (style of appraisal) to performance. They found that positive, self-rated performance leads to positive emotions which, in turn, lead to positive workplace behaviour (Carver et al., 2010; Drach-Zahavy & Erez, 2002). Another finding that is noteworthy is that good co-worker relations are positively correlated with meaningful work. This finding links to the results of Steger and Dik (2009) and Wrzesniewski et al. (2010) who found that employees have an interpersonal sense-making process which is the driving force for their behaviour. Steger and Dik (2009) discussed the importance of co-worker relations and found that it does indeed have a significant impact on meaningful work. Good interpersonal relations thus enhance a person's sense of belonging and leads to experiences of meaningfulness.

Meaningful work was negatively associated with *burnout*. Employees that perceive their work as meaningful are "protected" against burnout, and it might serve as a buffer against stress. Meaningful work thus strengthens employees' engagement levels. Lambie (2006) found that burnout is reduced in supportive environments where people respect each other. As a result, people are highly motivated and able to achieve meaning. Meaninglessness in work results in burnout (Lambie, 2006).

Meaningful work was positively associated with *work engagement*. Martin (2006) also found that meaningful work relates to engagement (Martin, 2006). The relational model of Kahn and Heapy (2014) focused on the feeling of belongingness that leads to meaningful work, which results in work engagement. Meaningful work contributes to work engagement (Kahn & Heaphy, 2014), particularly when people are not exposed to experience positive affect (Steger et al., 2013), and when they feel that they are free to make decisions and to monitor their work environments. As a result, engagement levels might increase and lead to positive organisational outcomes, such as improved performance and productivity.

Meaningful work was positively associated with *self-rated performance*. Bandura's (2008) social cognitive theory found definite links to exist between meaningful work and performance. According to his theory, employees act as the "examiners" of their functioning. Employees who perceive their jobs as meaningful will be more likely to take on more challenging tasks. Thus, by expecting a positive outcome they motivate themselves to achieve their goals, and, as a result, to perform better (Searle & Parker, 2013).

The study confirmed that a calling orientation, job design, co-worker relations and meaningful work, affected *intention to leave*. Previous research found a clear link between employees' workplace environment and their intention to leave (Hornung et al., 2010). Furthermore, Rothmann et al. (2013) found an association between job design and co-worker relations and employees' intentions to leave. Previous findings confirm that a calling orientation, a well-designed job, and quality co-worker relations, enhance meaningful work and result in higher engagement levels (Rothmann et al., 2013; Searle & Parker, 2013).

From the description given above it is clear that meaningful work (or the lack thereof) can have specific consequences for individuals as well as for organizations. Some outcomes can be negative, e.g. burnout, absenteeism and intention to leave. Positive results include high levels of work engagement and good performance. A calling orientation, job design and co-worker relationships affect meaningful work, which, in turn affects work engagement. The antecedents thereof affect teachers' well-being, performance, and intentions to leave (Janik & Rothmann, 2015; May et al., 2004; Whittington & Galpin, 2010).

This study provided significant insights into the relationship between a calling orientation, an enriched job, good co-worker relations, meaningful work and work outcomes. However, more in-depth, longitudinal and qualitative research is needed to better understand the interplay and dynamics among the different constructs. The cross-sectional nature of the data is also a limitation because it does not provide evidence for the temporal relations among the constructs. Hence there might be the possibility of common method bias. Furthermore, the sample included teachers in secondary schools in one province in South Africa only. Therefore, the findings cannot be generalized to all teachers in South Africa. It is critical that future research on meaningful work be done with populations of secondary school teachers from other provinces in South-Africa. Finally, all of the data used in this study were based on

self-reports. More research is needed to investigate how meaningful work manifests in the behavioral of teachers in schools.

Recommendations

Different tools are available to employees for enhancing the meaningfulness they experience in their work. One of these tools is job crafting – employees use different techniques to adapt to their workplace situation and demands. Job crafting can be a path to meaningfulness in more contemporary work contexts (Wrzesniewski, Berg, & Dutton, 2010). In our vastly changing world, organizations are placing a higher premium on employee pro-activity and initiative (Grant & Ashford, 2008). Employees’ shaping and adapting to their jobs often deliver benefits to the organizations by fostering adaptability (Frese & Fay, 2001). Job crafting opens up opportunities for employees to create meaningful experiences for themselves.

Employees can make adaptations in their interactions with others at work so that it can foster meaningfulness. Positive relations between people lead to more adaptability in jobs, increased engagement (Chiaburu & Harrison, 2008), and better physiological functioning (Heaphy & Dutton, 2008). Thus relationships are critical sources of meaningfulness that can be unlocked through job crafting. This pathway to meaningfulness is seen as cognitive job crafting – meaningfulness then arises from employees changing the way they think about the tasks, relationships or jobs as a whole.

The main focus of the top-down redesign approach is that of job enrichment and having fixed roles within specific jobs. To the contrary, the bottom up job crafting perspective’s main focus is that of individual role innovation and more flexible and dynamic processes at work. Hornung, Rousseau, Glaser, Angerer, and Weigl (2010) proposed that between these two main perspectives lie what they called the “I-deals”. This approach attempts to find a type of “mid-way” between the top-down redesign of jobs and that of the bottom-up job crafting of jobs. It is thus referring to a type of negotiation between the employer and the employee, where both parties win and benefit from such an arrangement. They argued that such negotiations would benefit all parties involved and contribute to more experienced meaningfulness at work (Hornung et al., 2010).

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CHAPTER 4

MANUSCRIPT 3

**Functioning Psychologically Well at Work: The Effects of Positive Organisational
Practices**

Functioning Psychologically Well at Work: The Effects of Positive Organisational Practices

Abstract

The aim of this study was to investigate the association between positive organisational practices and psychological well-being at work. A cross-sectional survey design was employed to collect data on the effect of positive organisational practices and indicators of psychological well-being (autonomy, competence, relatedness, work engagement, and meaningful work) of 513 secondary school teachers. The results showed that the measurement model fitted the data. The reliabilities of all scales were acceptable. Latent class analyses showed that functioning well at work can be classified in terms of five classes. Two categories of organisational practices, namely promoting meaning (emphasizing meaning, and focussing on elevation and renewal by the work), and inspiration (inspiring one another to work and setting a positive example for each other) were consistently associated with good psychological functioning at work.

Keywords: Psychological well-being, work engagement, meaning and purpose, autonomy, competence, relatedness, organisational practices, virtuousness, secondary school teachers.

Quality teaching cannot take place without properly trained and well-functioning teaching staff (Kayuni & Tambulasi, 2007). While teachers are the cornerstones of a society and serve as role models for learners (Motshekga, 2011), the challenges they face are emotionally demanding (Hynds & McDonald, 2010). Specific factors challenging the educational system in developing countries include resource and staff-related issues (Legotlo, 2014). Demanding work environments and a lack of job resources might result in poor well-being (Jackson, Rothmann, & Van de Vijver, 2006). Factors that lead to poor well-being of teachers include heavy workloads, educator absenteeism, working conditions, social transition and community factors (Legotlo, 2014). If teachers are not supported to function well psychologically in their jobs, it might have detrimental consequences for themselves, learners and schools. Teachers function well (compared to those who are not) will be better positioned to deal with the challenges they face (Fourie & Fourie, 2015).

Two approaches to well-being models have been identified, namely the disease model and the positive psychological model (Peterson & Seligman, 2004). The disease model focuses on ill health and how people are suffering. The positive psychological model focuses on positive aspects, such as individual psychological states that are associated with well-being as well as positive organisations (Seligman, 2002, 2011). In line with the positive psychological model, three themes related to well-being were observed (Pink, 2009). First, a movement from profit-maximising to purpose-maximising organisations is taking place. The first theme stresses the importance of meaningful work for teachers. Second, work is increasingly being regarded as enjoyable, creative, and self-directed rather than routine and boring. The second theme emphasises the significance of self-determination and autonomous functioning. Third, it is realised that the behaviour of people is not always rational. They do things for backward-looking reasons, but even more, for significance-seeking reasons. The third theme highlights the value of meaningfulness and engagement at work. The three themes reiterate the importance of recruiting and retaining teachers that function well psychologically (Rothmann, 2016).

Rothmann (2013a) studied the psychological states associated with well-being at work. In line with models of well-being suggested by Seligman (2011), Huppert and So (2013) and Keyes (2002, 2013) he suggested that a multidimensional model of work-related well-being, which includes dimensions of feeling and functioning well, is needed. Spreitzer, Porath, and Gibson (2012) showed that such a multidimensional model (consisting of vitality and

learning) is important for understanding people's behaviour. Seligman (2011) presented a multidimensional model of well-being which consists of positive emotions, engagement, meaning, accomplishment, and positive relations. Rothmann (2013) suggested a model of work-related well-being which consists of feeling well and functioning well dimensions. Functioning well includes, amongst others, psychological states such as autonomy, competence, relatedness, work engagement, and meaningful work (Rothmann, 2013). Studies by Diedericks and Rothmann (2014), and Rothmann (2014a) showed that individual (e.g. job satisfaction) and organisational outcomes (e.g. performance and intention to leave) are strongly predicted by individuals' psychological well-being in work contexts. Moreover, functioning well psychologically is almost essential for people to feel well at work.

Information is needed regarding the psychological functioning of teachers regarding a multidimensional model of well-being. More specifically, two research gaps exist. First, scientific information is lacking regarding the psychological functioning of teachers according to a multidimensional model of well-being. Rothmann (2013) suggested such a multidimensional model but only one empirical study regarding the different types of well-being according to this model has currently been undertaken (Rautenbach & Rothmann, in press). Research on a multidimensional model of well-being could combine psychological states, such as perceptions of psychological need satisfaction (regarding autonomy, competence and relatedness), work engagement, and meaningful work might result in a more holistic perspective on the psychological well-being of teachers. Such information can be used to plan interventions that might contribute teachers flourishing. Second, scientific information is needed regarding the effects of positive organisational practices on the psychological functioning of teachers. The effects of various job demands and job resources on the well-being of teachers have been investigated (see Jackson et al., 2006). However, no studies have been conducted on the effects of positive organisational practices on the psychological functioning of teachers.

This study investigated the effects of positive organisational practices on the psychological well-being of teachers. Investigations of positive phenomena in organisational science are relatively sparse and underdeveloped, and few studies have examined systematically the effects of positive practices on organisational performance (Caza & Cameron, 2008). Especially within educational settings there seems to be a gap in current research, which this study attempts to address.

Psychological Well-being at Work

Psychological well-being refers to positive functioning and flourishing in life (Ryff & Singer, 2008). Individuals functioning well experience their lives as worthwhile; they are engaged in their work, they feel in control of their work environment (autonomous), feel that they are competent to do their work and experience positive relationships with others (Rothmann, 2013, 2014b). The concept of psychological well-being links to the concept of eudaimonia. Eudaimonic well-being arises from particular sources and focuses on virtues, excellence and self-realization (Rothmann, 2013; Waterman, 2008).

Psychological well-being entails a person's potential for development and growth and includes feelings of personal expressiveness and accomplishment (Waterman, 2008). The following psychological states are relevant to be able to function well: work engagement (consisting of energy, dedication and absorption), purpose and meaning, and self-determination (based on autonomy, competence and relatedness satisfaction) (Rothmann, 2013).

Work engagement

Work engagement is defined as "... an employee's psychological presence in a role" (Rothbard & Patil, 2012, p. 59). It entails the "harnessing of organizational members' selves to their work role by which they employ and express themselves physically, cognitively and emotionally during role performance" (Kahn, 1990, p. 694). Engagement results from knowing what your signature strengths are and recrafting your life to use them at work or in other life contexts (Seligman, 2011). Work engagement is affected by the balance individuals experience between skills and challenges (Moneta & Csikszentmihalyi, 1996).

Work engagement comprises three components, namely a physical component (being physically involved in a task and showing vitality), a cognitive component (being alert at work and experiencing absorption and involvement), and an emotional component (being connected to job/others while working and showing dedication (Kahn & Heaphy, 2014; Rothmann, 2013).

Meaningful work

Purpose refers to an individual's sense of having accomplished something or some goal of some kind in work, while meaning refers to an individual's work experience as having significance (Barrick, Mount, & Li, 2013). Having purpose and meaning is crucial for an individual's mental and psychological well-being at work. Making sense of what is happening in one's work environment is important for coping with life's challenges. Meaning refers to making evaluations of events in one's work and the importance and significance these events have in relation to one's goals, values and beliefs (Matuska & Christiansen, 2008).

According to Steger, Dik, and Duffy (2012), meaningful work comprises more than that which work means to people: it also includes meaningfulness because it is significant and positive in valence. Meaningful work has "a eudaimonic (growth- and purpose-oriented) rather than hedonic focus" (Steger et al., 2012, p. 2). Steger et al.'s (2012) conceptualisation of meaningful work includes three dimensions, namely psychological meaningfulness, meaning making, and greater good motivations. Psychological meaningfulness in work is a subjective experience that one's work is significant. This facet captures the sense that work does matter. Meaning making through work captures the idea that work is a major source of meaning in one's life. In this regard, meaningful work helps people in understanding their selves and the world around them. Greater good motivations reflect the desire to make a difference and to have a broader impact on others.

Self-determination

Psychological functioning of individuals at work can be explained by the Self-determination theory (SDT; Deci & Ryan, 1985). According to Graves and Luciano (2013), self-determination concerns the right of employees to have full power over their behaviour. SDT (Deci & Ryan, 1985, 2008) explains individuals' functioning and behaviours through autonomous regulation of behaviour. Such effects might occur through identification (attaining a valued personal goal) and integration (expressing one's sense of self). According to the SDT, individuals' development and actualization of their potential are subservient to their ability to satisfy their three inborn psychological needs for autonomy, competence and relatedness (Deci & Ryan, 1985, 2008).

Self-determination can explain how work conditions affect employee engagement via autonomous regulation of behaviour. (Deci & Ryan, 2011; Milyavskaya & Koestner, 2011). Milyavskaya and Koestner (2011) have shown that satisfying the basic needs for autonomy, competence and relatedness leads to autonomous motivation, which in turn leads to positive employee and organisational outcomes. If a work environment provides adequate support for the satisfaction of the three needs, it should generate more participation from employees as it would be associated with more autonomous motivation.

The needs for autonomy, competence, and relatedness can be defined as follows (Baumeister & Vohs, 2002; Deci, 2011). The need for autonomy is the desire to experience freedom and choice to engage in behaviour that is compatible with individuals' values. The need for competence refers to individuals' inherent desire to feel effective in interacting with the environment. Competence enables people to take control of what is happening in their work environments. The ability to exercise free choice and manage own work activities, thus enhances individuals' feelings of competence (Wrzesniewski & Dutton, 2001). The need for relatedness concerns the innate need of individuals to feel connected to others, to love and care for others, and to be loved and cared for. This need is satisfied when individuals experience a sense of communion and develop close and intimate relationships with others. Relationships shape experienced meaningfulness by deepening individuals' experiences or the purposes of their work (in teams, in leader-follower situations and relations with beneficiaries) and by heightening their sense of belongingness (social identification) at work. Experienced safety is shaped through containment, empathic acknowledgement and an enabling perspective. Relationships influence psychological well-being at work, through energizing interactions and emotional relief (Kahn & Heapy, 2014).

Satisfaction of psychological needs increases intrinsic motivation and optimal functioning; whereas poor need satisfaction causes a decline in motivational levels and optimal functioning (Deci & Ryan, 2000). Psychological well-being at work will improve when work environments satisfy employees' needs (Deci & Ryan, 2000; Gagné & Deci, 2005). Individuals experiencing that their needs are being met would be more likely to function well (Deci & Ryan, 2011; Rothmann, 2013), will be more productive (Baard, Deci, & Ryan, 2004), and will be less inclined to think of leaving their jobs (Rothmann, Diedericks, & Swart, 2013).

Positive Organisational Practices

Positive organisational practices are based on a eudemonic principle, namely the belief in the intrinsic value of things and persons and to the value they can bring to the organisation (Cameron, Bright, & Caza, 2004; Dutton & Sonenshein, 2007). Positive organisational practices refer to procedures, behaviours, techniques that represent positively deviant (i.e., unusual) practices, practices with an affirmative bias (acknowledgment), and practices that promote virtuousness and eudemonic (psychological) well-being in organisations (Cameron, Mora, Leutscher, & Calarco, 2011). Empirical evidence support the argument that positive practices (respectful treatment, personal development) lead to positive emotions in employees (satisfaction, well-being), which again lead to positive individual behaviour (better retention, higher engagement) which, in turn, has a positive organisational outcome, namely more profitability and productivity (Cameron et al., 2011; Lyubomirsky, King, & Diener, 2005).

Research performed by Cameron et al. (2011) identified six categories of positive practices (as already mentioned), namely caring, compassionate support, forgiveness, inspiration, meaning and respect, integrity and gratitude.

- Caring: People care for, are interested in, and maintain responsibility for one another as friends.
- Compassionate support: People provide support for one another, including kindness and compassion when others are struggling.
- Forgiveness: People avoid blame and forgive mistakes. They do not hold grudges.
- Inspiration: People inspire one another at work and set a positive example for each other.
- Meaning: The meaningfulness of the work is emphasized, and people are elevated and renewed by the work.
- Respect, integrity, and gratitude: People treat one another with respect and express appreciation for one another. They trust one another and maintain integrity.

If high scores are obtained on these dimensions, that was related to better performance of organisations. No specific theory was used that underpins these categories of positive

practices; rather they were identified because of previous research, they are related to certain behavioural practices or activities, and they are characterised by at least one of the three connotations of positive practices (Cameron et al., 2011).

Cameron et al. (2011) found that there was a significant correlation between positive practices and organisational climate. Other studies by the same author found that there was a perceived level of virtuousness in an organisation which was positively correlated with individual performance, quality of work, and social betterment (Cameron et al., 2004). Individuals can only function optimally and be well if their work environments are supportive and conducive to growth. The organisational practices (which reflect the climate of an organisation), affect the well-being and performance of people (Gittell, Cameron, Lim, & Rivas, 2006) and the performance of organisations (Cameron et al., 2011). Positive organisational practices enable employees to perform at their best.

Cameron et al. (2011) found that positive practices are associated with positive affect and with generating social capital (Cameron et al., 2004). Positive practices promote positive feelings within individuals, which, in turn, lead to better performance in organisations. When employees experience that their co-workers and the organisation care for them; show compassion and gratitude; or when they witness forgiveness, a strong positive growth cycle begins. What is more, positive emotions lead to improved mental functioning, better decision making, and high-quality interpersonal relationships among organisation members (Cameron et al., 2011).

When employees experience positive practices among their co-workers - for example, sharing, loyalty, caring - the results are stronger commitment, trust, and cooperation, all of which may contribute to organisational betterment and improved performance (Gittell et al., 2006). Positive practices also protect the organisation from the harmful effects of trauma by strengthening resilience, and a sense of efficacy and competence in their workers (Cameron et al., 2004, 2011).

Cameron and Wooten (2009) focused on the role of supportive communication that can strengthen relationships - even when negative feedback must be provided. They found that when people feel that they are engaging in work that is important, turnover and dissatisfaction are reduced; whilst commitment, engagement and fulfilment are increased

(Cameron & Wooten, 2009). They also referred to attributes of positive meaning as having a positive impact on well-being by building supportive relationships or a sense of belonging. It is thus all about capitalizing on people's strengths – people who are given feedback on their strengths are significantly more likely to feel highly engaged and to be more productive than people who are given feedback on their weaknesses (Cameron, 2012).

Organisational virtuousness is significantly and positively related to effectiveness (e.g., profitability, productivity, quality, innovation, better retention rates) – according to Cameron (2012). Effective organisations are highly non-bureaucratic. They satisfy their employee's needs by providing resources to assist in reaching goals. Such organisations motivate their employees via participation and teamwork – not rules (Cameron, 2008). This approach links with that of the “abundance model” of Cameron, Dutton, and Quinn (2003). It focuses on organisational dynamics and factors such as purpose and meaningfulness, virtuous behaviours, positive emotions and high levels of energy and vitality. The organisational practices (virtuousness), affect the well-being and performance of people and the performance of organisations (Cameron et al., 2011).

The implementation of positive practices in schools would empower educators to reach their full potential. When educators are working in supportive environments, it would increase their job satisfaction and productivity (Lazear, 2000). There is evidence which suggests that not only policy (Ball, 2003) but also school environment (Gu & Day, 2013) affect teachers and their working lives. Improving quality in schools is not only to have a better understanding of what influences teachers' inner strength and motivation, but also the means by which their inner strength can be nurtured and developed in the contexts in which they work and live (Luthar & Brown, 2007).

Aim

This study investigated positive organisational practices as antecedents for psychological well-being at work. The main hypothesis is that positive organisational practices have positive correlations with aspects of psychological well-being at work.

Method

Participants and Setting

The setting for this study was 40 public secondary schools within the Kenneth Kaunda District in North West Province. Education in South Africa is in crisis, specifically concerning the quality of teaching (National Planning Commission, 2011), relationships within schools, and the well-being of teachers (Rothmann, 2015). The number of respondents in this study varied from 8-20 educators per school. There are 334 secondary schools located across 109 cities and towns in the province. Table 1 depicts a description of the characteristics of the participants.

A total of 800 respondents representing 40 secondary schools were approached to take part in this study. A final number of 513 respondents completed the survey. Usable surveys were obtained for 64.13%. Males comprised 38.99% of the sample and females 61.01%. The ages of the participants varied from 19 to 65 (Mean = 42). The length of tenure at the various schools varied between one year and 38 years. The distribution of participants' job position was student teacher (3.91%), junior teacher (13.79%), senior teacher (67.90%) and head of department (14.40%).

Table 1

Characteristics of Participants (N=513)

Item	Category	Frequency	Percentage
Gender	Male	200	38.99
	Female	313	61.01
Age	Below 23	9	1.96
	23-30	97	21.23
	31-39	70	15.32
	40-45	113	24.73
	46-55	118	25.82
	Over 55	50	10.94
	Job Level	Student teacher	19
	Junior teacher	67	13.79
	Senior teacher	330	67.90
	Head of Department	70	14.40
Years in Teaching	1-2	36	9.16
	3-5	44	11.20
	6-10	77	19.59
	11-20	121	30.79
	21-30	84	21.37
	More than 30 years	31	7.89
Home Language	Afrikaans	222	57.66
	English	31	8.05
	Setswana	132	34.29

Measuring Instruments

The *Work-related Basic Need Satisfaction Scale* (WBNSS; van den Broeck, Vansteenkiste, de Witte, Soenens, & Lens, 2010) was used to measure psychological need satisfaction. The WBNSS measures the satisfaction of three basic psychological needs, namely autonomy (six items, e.g. “I feel like I can pretty much be myself at work”), competence (eight items, e.g. “I

feel competent at work”) and relatedness (eight items, e.g. “People at work care about me”). The items were evaluated on a five-point scale ranging from 1 (totally disagree) to 5 (totally agree). Research by Rothmann et al. (2013) supported the three-factor structure of the WBNS. Alpha coefficients of 0.81, 0.79 and 0.79 confirm the reliability for autonomy, competence, and relatedness satisfaction respectively.

The Work and Meaning Inventory (WAMI; Steger et al., 2012) was used to measure psychological meaningfulness at work. The WAMI consists of 10 items which measure three subscales, namely positive meaning (four items, e.g. “I understand how my work contributes to my life’s meaning”), meaning-making through work (three items, e.g. “I view my work as contributing to my personal growth”), and greater good motivations (three items, e.g. “The work I do serves a greater purpose”). A composite score for the scale can also be obtained. Reliabilities varying from 0.82 to 0.89 were obtained for the subscales and 0.93 for the total score. Steger et al. (2012) found strong evidence for the construct validity of the inventory. The total score and subscales also correlated in the expected directions with measures of well-being, job satisfaction, work motivation, withdrawal intentions, organisational commitment, and days absent from work.

The Work Engagement Scale (WES; Rothmann, 2010) was used to measure work engagement. The WES has 13 items. A 7-point frequency scale varying from 1 (*almost never or never*) to 7 (*always or almost always*) was used for all items. The items reflect the three components of Kahn’s (1990) conceptualization of employee engagement, namely cognitive (three items; e.g. “I am very absorbed in my work”), emotional (three items; e.g. “I am passionate about my work”), and physical engagement (three items; e.g. “I feel alive and vital at work”). Evidence for the construct validity of the WES was reported by Rothmann (2010) and the following alpha coefficients for the three scales of the WES were found: physical engagement = 0.80; emotional engagement = 0.82; and cognitive engagement = 0.78.

The Positive Practices Questionnaire (PPQ; Cameron et al., 2011) was used to assess positive organisational practices in schools. Practices are defined as collective behaviours or activities sponsored by and characteristic of an organisation. They are not indicative of emotions or climate, but are behavioural in their orientation. No overarching theory was used to derive this list of positive practices; rather they were identified because they had appeared in prior research, they represented behavioural practices or activities, and they possessed at

least one of the three connotations of positive deviance, virtuous practices and/or affirmative bias. The survey consists of 29 Likert-type items representing desirable, positively focused behaviours, techniques, or routines. Respondents select answers to items on a five-point Likert scale. The PPQ has an underlying structure of six stable dimensions, namely caring (four items, e.g. “We are interested in each other”), compassionate support (seven items, e.g. “We help people who are facing difficulty”), forgiveness (three items, e.g. “We do not blame one other when mistakes are made”), inspiration (three items, e.g. “We share enthusiasm with one another”), meaning (five items, e.g. “We are being renewed by what we do”), and respect (seven items, e.g. “We treat each other with respect”).

Research Procedure

The questionnaires (in English) were administered in the North West Province. Permission to conduct the study has been obtained from the director of the Kenneth Kaunda district environment where participants are working. The researcher contacted the secondary schools’ headmasters in North West Province to obtain permission to conduct the research. A cover letter explaining the purpose of the study and emphasizing the confidentiality of the research project accompanied the questionnaire. Participation in the project was voluntary, whereby respondents were granted the option of withdrawing from the study at any time. Participants completed the questionnaires in hard copy and responses to items were captured in an Excel sheet, where after it was prepared for analysis with the Mplus software program.

Data Analysis

Latent variable modelling methods as implemented by Mplus, version 7.31 (Muthén & Muthén, 1998-2014) were used to test the measurement model. The Robust Maximum Likelihood estimator (MLR) was used. MLR provides for correction to estimates and standard errors and is used for data with outcome variables that are continuous and non-normally distributed (Byrne, 2012). It produces a chi-square statistic that is equivalent to the Satorra-Bentler chi-square statistic (Muthén & Muthén, 1998-2014). A critical assumption in the conduct of structural equation modelling is that the data are multivariate normal. However, Muthén and Muthén (1998-2014) point out that tests of multivariate normality are of less importance because non-normality robust estimators (e.g. MLR) are available for use in Mplus. The following indices produced by Mplus were used to test model fit: absolute fit

indices, which included the chi-square statistic, the standardised root mean square residual (SRMR) and the root means square error of approximation (RMSEA); incremental fit indices, which included the Tucker-Lewis Index (TLI); and the Comparative Fit Index (CFI) (West, Taylor, & Wu, 2012). Critical values for good model fit have been recommended for the CFI and TLI to be acceptable above the 0.90 level (Wang & Wang, 2012). Values for SRMR should be closer to 0, with 0.08 or lower as the recommended criterion (West et al., 2012). The recommended acceptable levels of the RMSEA are 0.05 or less and it should not exceed 0.08. Raykov's (2009) confirmatory factor analysis-based estimate of scale reliability (ρ) was computed for each scale. The descriptive statistics were computed utilising SPSS22 (IBM Corp, 2013).

Following this, a latent class analysis (LCA) with Mplus 7.31 (Muthén & Muthén, 1998-2014) was used to group participants based on their levels of autonomy, competence, relatedness, engagement and meaning. Factor scores for each latent variable used in the latent class analysis were computed with Mplus 7.31. A series of models with an increasing number of latent classes was tested. A model was retained when there was a significant improvement from the reference model to this model with more classes. The models were evaluated according to the lowest BIC value comparing the different models, relative entropy (called entropy by Mplus) ranging from 0 to 1 (smaller than 0.60 not acceptable, higher is better). Mplus can test the number of classes in a mixture analysis using the LO-Mendell-Rubin (LMR LR) test, Adjusted LMR LR test, and the bootstrapped likelihood ratio test (BLRT) (Wang & Wang, 2012). The quality of class membership was indicated by posterior class membership probabilities and the entropy values.

Results

Testing the Measurement Model

Using confirmatory factor analysis (CFA), an 11-factor measurement model was tested to assess whether each of the measurement items would load significantly onto the scales they were associated with. Survey items were used as indicators of first-level latent variables. The model consisted of four latent variables, namely a) psychological need satisfaction, which consisted of three first-order latent variables: autonomy satisfaction (measured using five

items), competence satisfaction (measured using four items), relatedness satisfaction (measured using six items); b) engagement, which consisted of three first-order latent variables: cognitive, emotional and physical engagement (each measured using three items); c) meaningful work (measured by means of 10 items); d) respect, integrity, and gratitude (measured by seven items); e) compassionate support (measured by seven items); f) caring (measured by four items); meaning (measured by five items); inspiration (measured by three items), and forgiveness (measured by three items). All the latent variables in model 1 were allowed to correlate.

Although the chi-square value was statistically significant ($\chi^2 = 3335.32$, $df = 1711$, $p < 0.001$, scaling correction factor for MLR = 1.24) and indicated a poor fit of the model to the data, all the other fit indices showed acceptable fit of the data to the model: CFI = 0.91, TLI = 0.90, RMSEA = 0.04 (90% CI [.041, .045], $p = 1.00$), SRMR = 0.05. Standardised regression coefficients varied from 0.40 to 0.93, showing statistically significant loadings of each variable on the latent variable it was supposed to measure.

Descriptive Statistics

Table 2 shows the descriptive statistics, reliabilities and correlations of the latent variables.

Table 2

Descriptive Statistics, Reliability Coefficients and Correlations of the Scales (N =513)

VARIABLE	ρ	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Autonomy satisfaction	0.93	3.66 (5)	0.72	-	-	-	-	-	-	-	-	-	-
2. Competence satisfaction	0.89	4.08 (5)	0.71	0.59	-	-	-	-	-	-	-	-	-
3. Relatedness satisfaction	0.93	3.91 (5)	0.74	0.72	0.62	-	-	-	-	-	-	-	-
4. Work engagement	0.90	5.19 (7)	1.09	0.73	0.51	0.55	-	-	-	-	-	-	-
5. Meaningful work	0.93	4.03 (5)	0.82	0.55	0.39	0.45	0.61	-	-	-	-	-	-
6. Respect	0.95	3.75 (5)	0.80	0.51	0.19	0.44	0.34	0.33	-	-	-	-	-
7. Support	0.93	3.85 (5)	0.72	0.55	0.19	0.54	0.40	0.34	0.79	-	-	-	-
8. Caring	0.92	3.69 (5)	0.83	0.51	0.16	0.45	0.39	0.31	0.81	0.88	-	-	-
9. Meaning	0.92	3.71 (5)	0.77	0.71	0.37	0.48	0.62	0.52	0.57	0.64	0.60	-	-
10. Inspiration	0.88	3.75 (5)	0.74	0.59	0.25	0.56	0.49	0.37	0.73	0.75	0.76	0.71	-
11. Forgiveness	0.85	3.31 (5)	0.87	0.45	0.15	0.32	0.31	0.24	0.60	0.60	0.62	0.60	0.72

Note: a) The correlations among all variables are statistically significant ($p < 0.001$) b) The number in brackets (column Mean) indicates the scale used

Table 2 shows scale reliabilities ranging from 0.85 to 0.95, which indicates acceptable internal consistency of all the scales (Raykov, 2009; Wang & Wang 2012). The results of all scales could therefore be interpreted. All the dimensions of psychological well-being at work were statistically significantly and positively related. Furthermore, Table 2 shows that positive psychological practices were moderately to strongly related to dimensions of psychological well-being at work.

Regarding some responses on positive organisational practices, the following frequencies were obtained:

- Respect: 18.5% of the participants disagreed on item 2 (“We trust each other”).
- Support: 9.6% of the participants disagreed on item 2 (“We care for fellow employees who are struggling”).
- Caring: 12.3% of the participants disagreed on item 1 (“We are interested in each other”).
- Meaning: 13.5% of the participants disagreed on item 2 (“We are being renewed by what we do”).
- Inspiration: 10% of the participants disagreed on item 1 (“We share enthusiasm with one another”).
- Forgiveness: 26% of the participants disagreed on item 2 (“We correct errors without placing blame”).

Latent Class Analysis

Several steps were followed to estimate the LCA model. First, the optimal number of latent classes was determined. Second, the latent class classification was examined. Third, the latent classes were labelled. Fourth, latent class membership was predicted. To determine the number of latent classes, six models with different numbers of latent classes were estimated and compared, starting with a single class model and increasing the number of classes with one each time. Table 3 shows the fit indices. The AIC, BIC and ABIC values of the model with one latent class were the largest, indicating that this model has the worst fit. Three steps were followed to test the hypothesized model of five classes. The first step was to find the best log-likelihood values for the models. The 5-class solution replicated the best log-likelihood value (-1457.975) several times using the default number of starting values. To verify that a better log-likelihood cannot be obtained, a second run increased the number of

random starting values five times and found the same best-replicated log-likelihood value. With 5 classes, the default starts setting was sufficient to obtain replication of the best log-likelihood 40 times when the start values were 10 times higher. The second step was to conduct a 6-class analysis to make sure that the k-1 class model (5 classes) shows the best log-likelihood value found in Step 1.

The OPTSEED value 534483 from the previous run was used in the 6-class run. The Vuong-Lo-Mendell-Rubin LR test for 5 versus 6 classes had a log-likelihood value of -1457.98 (2 times the log-likelihood difference) = 86.09; difference in the number of parameters = 6; Mean = 55.68; SD = 67.21; $p = 0.0086$. The Lo-Mendell-Rubin Adjusted LR test (Value=119.381) was also not statistically significant; $p = 0.0095$. In the third step, a 5-class analysis was done using the same OPTSEED value as in step 2 with LRT starting values = 00 100 20. The Parametric Bootstrapped LR test for 3 versus 4 classes was statistically significant ($p < 0.0001$), rejecting the 3-class model in favour of the 4- and 5-class models (Wang & Wang, 2012). The p-values of the LMR LR test and ALMR LR test of the 5-class model were smaller than 0.05. The 5-class model also had the smallest AIC, BIC and ABIC values and therefore fitted the data the best.

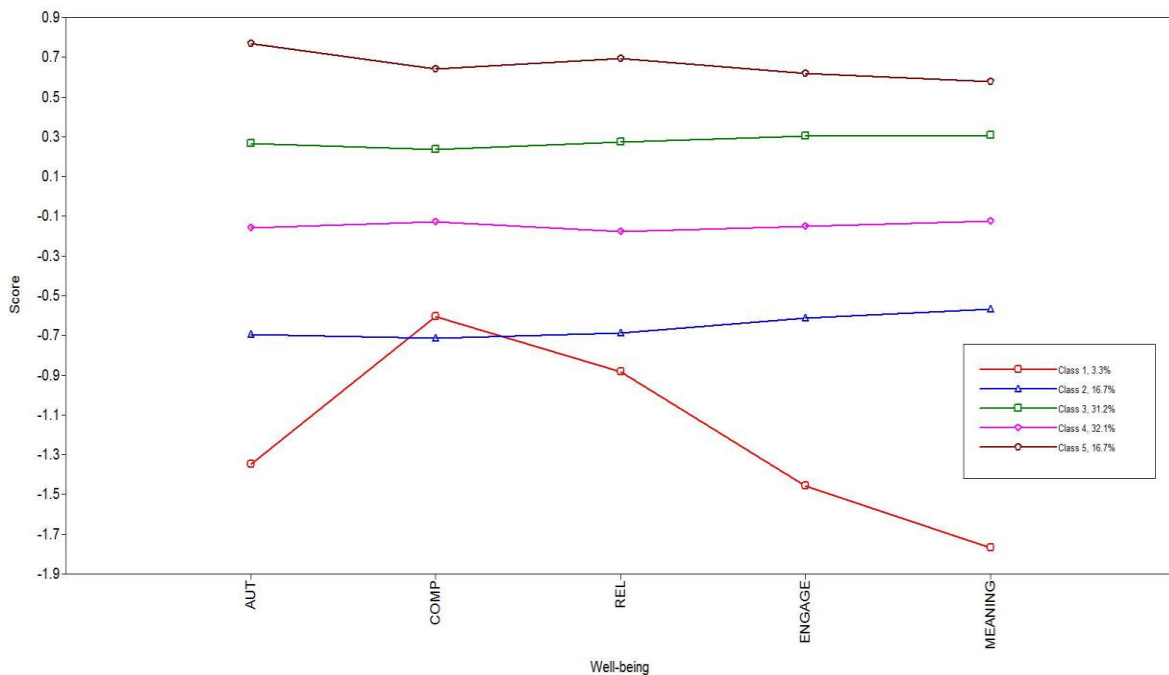
Table 3
Comparison of Different LCA Models (N=513)

Model	AIC	BIC	ABIC	LMR-LR	ALMR LR	BLRT <i>p</i>
1-class LCA	4711.65	4754.15	44722.41	N/A	N/A	N/A
2-class LCA	3659.62	3727.65	3676.86	< 0.0000	< 0.0000	< 0.0001
3-class LCA	3267.99	3361.53	3291.70	< 0.1605	< 0.1660	< 0.0001
4-class LCA	3094.51	3213.57	3124.69	< 0.1708	< 0.1750	< 0.0001
5-class LCA	2983.95	3128.51	3020.59	< 0.0086	< 0.0095	< 0.0001

Next, we examined the quality of the latent class membership. The entropy values for the 2-class and 3-class LCA were 0.86 and 0.85 respectively, which indicates a good classification (Clark, 2010). Furthermore, the posterior class membership probabilities for the 5-class LCA model were all larger than 0.92, which is acceptable compared to the

recommended cut-off value of 0.70 or greater (Nagin, 2005). Figure 1 illustrates the five different classes by means of a graphical representation of the data.

The structural model revealed five different classes. Class 1 contained 3.3% ($n = 17$) of secondary school teachers had the *lowest* means on meaning, work engagement and autonomy. Competence and relatedness were somewhat higher for this class. Class 2 contained 16.7% ($n = 87$) of the sample that scored low on autonomy, competence, relatedness, work engagement, and meaningful work. Class 3 contained 31.2% ($n = 163$) of the sample that scored higher on autonomy, competence, relatedness, work engagement, and meaningful work. This class shows a better psychological well-being and ability to function rather well. Class 4 contained 32.1% ($n = 166$) of the sample that scored average on autonomy, competence, relatedness, work engagement, and meaningful work. Class 5 contained 16.7% ($n = 86$) of the sample that scored high on autonomy, competence, relatedness, work engagement, and meaningful work. This class thus showed the best psychological functioning.



—	Class 1 - 3.3%
—	Class 2 - 16.7%
—	Class 3 - 31.2%
—	Class 4 - 32.1%
—	Class 5 - 16.7%

Figure 1. The five latent classes of functioning well psychologically

Prediction of Latent Class Membership

Next, different latent classes are compared regarding the positive organisational practices that predict class membership.

Table 4

Regression Coefficients for the Different Latent Classes

Class 2 compared with Class 1					Class 3 compared with Class 1				
Practice	Estimate	SE	Est. / S.E.	<i>p</i>	Practice	Estimate	SE	Est. / S.E.	<i>p</i>
Respect	0.719	0.622	1.155	0.248	Respect	1.004	0.681	1.474	0.140
Support	0.542	1.494	0.363	0.717	Support	1.219	1.694	0.719	0.472
Caring	-1.854	1.155	-1.605	0.109	Caring	-1.515	1.263	-1.199	0.230
Meaning	1.510	0.486	3.108	0.002**	Meaning	4.587	0.646	7.103	0.000**
Inspire	1.084	0.713	1.522	0.128	Inspire	1.780	0.940	1.894	0.058
Forgive	-0.383	0.486	-0.788	0.431	Forgive	-1.548	0.586	-2.641	0.008**
Class 4 compared with Class 1					Class 5 compared with Class 1				
Practice	Estimate	SE	Est. / S.E.	<i>p</i>	Practice	Estimate	SE	Est. / S.E.	<i>p</i>
Respect	1.401	0.625	2.243	0.025*	Respect	0.773	0.839	0.921	0.357
Support	-0.129	1.589	-0.081	0.935	Support	1.540	1.923	0.801	0.423
Caring	-1.775	1.180	-1.504	0.133	Caring	-2.764	1.394	-1.983	0.047*
Meaning	2.706	0.520	5.201	0.000**	Meaning	6.464	0.946	6.833	0.000**
Inspire	1.728	0.796	2.171	0.030*	Inspire	4.789	1.446	3.312	0.001**
Forgive	-1.100	0.559	-1.967	0.049*	Forgive	-1.857	0.678	-2.738	0.006**
Class 3 compared with Class 2					Class 4 compared with Class 2				
Practice	Estimate	SE	Est. / S.E.	<i>p</i>	Practice	Estimate	SE	Est. / S.E.	<i>p</i>
Respect	0.286	0.511	0.559	0.576	Respect	0.683	0.472	1.446	0.148
Support	0.677	1.013	0.668	0.504	Support	-0.671	0.996	-0.673	0.501
Caring	0.339	0.678	0.501	0.617	Caring	0.079	0.604	0.131	0.896
Meaning	3.077	0.525	5.862	0.000**	Meaning	1.197	0.403	2.973	0.003**
Inspire	0.696	0.682	1.020	0.308	Inspire	0.643	0.540	1.192	0.233
Forgive	-1.165	0.490	-2.379	0.017*	Forgive	-0.717	0.465	-1.542	0.123
Class 5 compared with Class 2									
Practice	Estimate	SE	Est. / S.E.	<i>p</i>					
Respect	0.055	0.704	0.077	0.938					
Support	0.998	1.362	0.733	0.464					
Caring	-0.910	0.895	-1.017	0.309					
Meaning	4.955	0.873	5.675	0.000**					
Inspire	3.704	1.315	2.818	0.005**					
Forgive	-1.473	0.594	-2.480	0.013**					

* $p < 0.05$; ** $p < 0.01$

Table 4

Regression Coefficients for the Different Latent Classes

Class 4 compared with Class 3					Class 5 compared with Class 3				
Practice	Estimate	SE	Est. / S.E.	<i>p</i>	Practice	Estimate	SE	Est. / S.E.	<i>p</i>
Respect	0.397	0.439	0.905	0.365	Respect	-0.231	0.606	-0.382	0.703
Support	-1.347	0.767	-1.757	0.079	Support	0.321	1.050	0.306	0.760
Caring	-0.260	0.582	-0.447	0.655	Caring	-1.250	0.768	-1.627	0.104
Meaning	-1.880	0.496	-3.788	0.000**	Meaning	1.878	0.729	2.574	0.010**
Inspire	-0.052	0.630	-0.083	0.934	Inspire	3.009	1.197	2.514	0.012**
Forgive	0.448	0.349	1.284	0.199	Forgive	-0.309	0.434	-0.712	0.477

Class 4 compared with Class 5				
Practice	Estimate	SE	Est. / S.E.	<i>p</i>
Respect	-0.628	0.648	-0.970	0.332
Support	1.669	1.139	1.465	0.143
Caring	-0.990	0.806	-1.227	0.220
Meaning	3.758	0.839	4.477	0.000**
Inspire	3.061	1.250	2.449	0.014**
Forgive	-0.757	0.471	-1.605	0.108

* $p < 0.05$; ** $p < 0.01$

Table 4 depicts how the different classes and their levels of psychological functioning link with specific positive organisational practices. Meaning as positive organisational practice dimension was associated with psychologically well-functioning teachers. The higher the level of psychological well-being (i.e. autonomy, competence, relatedness, meaningful work, and work engagement) the higher the probability that meaning as positive organisational practice would play a statistically significant role. Psychologically well-functioning teachers (compared to those that are not functioning well psychologically) are more likely to be renewed by the way their work is organised. Class 1 obtained lower scores on meaning as organisational practice than did classes 2, 3, 4, and 5 ($p < 0.001$). Furthermore, class 2 obtained lower scores on meaning as organisational practice than did classes 3, 4, and 5 ($p < 0.001$). Also, class 3 obtained lower scores on meaning as organisational practice than did classes 4, and 5 ($p < 0.001$). Finally, class 4 obtained lower scores on meaning as organisational practice than did class 5 ($p < 0.001$).

Inspiration as positive organisational practice dimension was associated with psychologically well-functioning teachers. Class 5 that obtained a high level of psychological well-being (i.e. autonomy, competence, relatedness, meaningful work, and work engagement) measured statistically significantly higher in terms of inspiration as a positive organisational practice. Class 5 obtained statistically significantly higher scores on inspiration as positive organisational practice than did classes 1, 2, 3 and 4 ($p < 0.001$). Teachers with a high psychological well-being are more likely to experience inspiration and a positive example in their schools.

Furthermore, teachers in class 4 of psychological well-being experience statistically significantly higher levels of respect as positive organisational practice than do those in class 2 ($p < 0.05$). Table 4 shows another interesting finding: teachers in class 5 (i.e. the highest psychological well-being class) experience statistically significantly lower forgiveness as positive organisational practice than do class 1 and class 2 ($p < 0.01$). Also teachers in class 2 experience statistically significantly lower forgiveness as positive organisational practice than do those in class 2 ($p < 0.05$). Individuals in class 5 (that function well psychologically) experience lower forgiveness of mistakes in their schools.

Discussion

The aim of this study was to investigate the association between positive organisational practices and psychological well-being of teachers. Using latent class analysis, five types of well-being were identified. These classes differ in terms of the combination of components of psychological well-being at work, namely: autonomy, competence, relatedness, work engagement and meaningful work. Class 1 referred to teachers measuring the lowest on all dimensions of psychological well-being. Class 2 referred to those teachers showing moderate levels of psychological functioning on the five dimensions. Class 3 was those teachers in possession of higher levels of psychological well-being. Class 4 included teachers functioning moderately to high psychologically – this class also comprises the highest percentage of teachers, namely 32.1%. Class 5 comprised the teachers measuring the highest on all dimensions of psychological well-being.

The main finding from the data was that individuals experiencing positive organisational practices focussing on meaning, showed higher levels of functioning well, characterised by

autonomy, competence, relatedness, work engagement and meaningful work. Teachers experiencing practices relating to meaning were renewed by the work they do. It was also found that the highest functioning teachers experience inspiration as a virtue in their schools. Teachers functioning well psychologically experience inspiration and a positive example being set by colleagues for each other. An interesting finding was that the group with the best psychological well-being and that seems to function optimally did not measure high on forgiveness. In fact, they showed lower levels of forgiveness compared to classes that function less well.

It seems that the most important positive practices in the pathway to better psychological well-being at work are those of *meaningful work and inspiration*. The organisational practices (reflecting virtuousness), affect the well-being and performance of people and the performance of organisations (Cameron et al., 2011). Positive organisations implement virtuous practices, characterised by a positive human impact, moral goodness and social betterment, and creating social value that transcends the instrumental desires of the actor, it produces benefit to others regardless of the reward. Virtuous practices in schools have positive effects on self-determination (autonomy, competence, and relatedness), work engagement, and meaningful work. Therefore interventions should not only focus on individuals but on developing virtuous practices in schools.

This study had various limitations. First, self-report measures were used to obtain the data. While subjective judgements allow for important perspectives on positive organisational practices, it will be helpful to also gather information from other sources (e.g. expert ratings). Second, this study employed a cross-sectional design. Longitudinal studies could provide more insight into the direction of the relations between positive organisational practices and psychological well-being of teachers. Third, the sample included secondary school teachers in the North West Province. More representative samples including other provinces are necessary.

Recommendations

Given that schools characterised by positive practices contribute to the well-being of teachers, interventions should be implemented to build positive practices in schools. Improvement in parent satisfaction, internal climate, employee participation, and quality of

teaching will occur when schools provide compassionate support for teachers, emphasize positive and inspiring messages to teachers, forgive mistakes, express gratitude to and confidence in teachers, clarify the meaningfulness of the work being done, and reinforce an environment characterised by respect and integrity.

Interventions should be evaluated to promote virtuousness in schools. Virtuous practices, positive deviance and affirmative bias are causes rather than outcomes of abundance in organisations. Virtuous behaviour promotes positive emotions, promotes helping behaviour between individuals, and creates social capital (social networks within institutions).

Leaders are important role models of virtuous behaviour. They should promote individuals' freedom to operate, freedom to speak, and freedom to actualize them in organisational contexts. It is necessary to promote the joy of working. Therefore it is essential for school management to listen to staff members and learn from them and reform the school system to be more engaging and inspiring.

Longitudinal studies are needed regarding the relation between positive organisational practices and psychological well-being of teachers. Furthermore, future studies might make use of more schools to allow for multilevel analyses.

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CHAPTER 5

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

The purpose of this chapter is to draw conclusions from the three articles which comprise this study. Conclusions are drawn in accordance with the research objectives. Furthermore, limitations of this study are discussed and recommendations made for the organisation. Finally, research opportunities emanating from this study, are presented.

5.1 CONCLUSIONS

Next, the conclusions of the research are drawn.

Psychological Need Satisfaction, Engagement and Intention to Leave: The Effects of Supervisor Support

The first objective of this study was to investigate the relations among supervisor support, psychological need satisfaction, engagement and intention of employees to leave. This study examined the relationship between Psychological Need Satisfaction (PNS) and educator engagement as well as the relationship between PNS and Turnover Intention (TI).

Relatively high rates of teacher attrition have been identified as a major issue for the teaching profession over several decades now. Over the past three decades, an impressive number of research efforts have been devoted to understanding the nature, antecedents, and consequences of employee engagement (Rozman, 2014). Employee engagement is important because high levels of engagement lead to several favourable organizational outcomes. Research showed that engagement is negatively related to turnover (Cooper-Hakim & Viswesvaran, 2005), absenteeism, and counter-productive behaviour (Dalal, 2005) and positively related to need satisfaction (Cooper-Hakim & Viswesvaran, 2005), motivation and organizational citizenship behaviours (Riketta, 2002).

However, studies on the retention of good educators for the teaching profession, in particular the effects of psychological need satisfaction on educator engagement and intention to leave in secondary schools, are limited. Teachers and principals are the most expensive and,

possibly, the most critical components in establishing quality in secondary education systems (Mulkeen, Chapman, DeJaeghere & Leu, 2007). According to Mulkeen et al. (2007), the projected demand for secondary school teachers exceeds projected supply, in some cases by substantial numbers. Factors contributing to this include high rates of teacher attrition, in some areas due to illness, and bottlenecks in teacher preparation systems. A variety of unattractive conditions of service also plays a strong role in limiting teacher supply. These include perceived low salary, arbitrary teacher deployment systems, unattractive work locations, unprofessional treatment of teachers, lack of professional development opportunities, and insufficient supportive supervision. Secondary teachers also have higher attrition rates in urban schools (Mulkeen et al., 2007).

In this study, the results showed that supervisor behaviour had a significant effect on engagement via autonomy satisfaction. Psychological need satisfaction – specifically autonomy satisfaction – had a large positive effect on work engagement. The concept of basic psychological needs is regarded as a significant predictor of individual functioning in life (Van den Broeck, Vanteenkiste, de Witte, Soenens, & Lens, 2010). Basic need satisfaction has a close association with the self-determination theory (SDT). Van den Broeck, Vansteenkiste, de Witte, and Lens (2008) imply that within the SDT, basic psychological needs are defined as the nutrients needed by humans to fulfil their potentials and maintain their growth, integrity and health.

Furthermore, it was found that there was a positive relationship between supervisor support and psychological need satisfaction. This is an important finding since teacher performance is closely related to the quality of the educators' relationship with their school principal. Teacher performance, the quality of school leadership (the principal) and organisational practices are the most important factors in South Africa's poor school results (Cameron, Mora, Leutscher, & Calarco, 2011; National Planning Commission, 2011). The implication of these findings are namely that the relationship between employee and supervisor (leader) is crucial – when it is a high-quality relationship it is more likely that employees will be highly engaged with their work and less likely for them to leave the organization. Empirical research confirmed the relationship between engagement and organisational outcomes (e.g. organisational commitment, turnover intention, productivity, motivation, job resources and burnout) (Bakker, Demerouti, & Schaufeli, 2005; Hakanen, Bakker, & Schaufeli, 2006; Harter, Schmidt, & Hayes, 2002; Schaufeli & Bakker, 2004).

A related finding that flows from the above was that autonomy support showed that it can strengthen employee's social identity. The more teachers felt that they were included in decision making, the more they became engaged in their work and experienced feelings of autonomy and recognition (Deci & Ryan, 1985; Gagné & Deci, 2005; Ryan & Deci, 2000). Lack of autonomy can contribute to isolation, threatening satisfaction with and commitment to the profession (Danielson, 2002). It was also shown that autonomy support generates greater meaningfulness within the workplace. The positive outcome of this is work engagement (May et al., 2004; Rothmann & Rothmann, 2010).

Studies have come up with the results that work engagement is closely related to burnout and turnover intentions and leadership qualities (supervisor behaviour) in the workplace. Du Plooy and Roodt (2010) found that work engagement and burn-out were significant predictors of turnover intentions. Hassan and Ahmed (2011) studied the contribution of authentic leadership to subordinates' trust in leadership and how this, in turn, predicted subordinates' work engagement. The findings revealed that authentic leadership improved subordinates' trust in leaders, and contributed to work engagement. These findings from Hassan and Ahmed (2011) are worth taking note of, since they focus on the importance of the quality of leadership (school principal) with the educators in a particular school. This study also confirmed the importance of quality leadership.

The findings of this study further suggests that educators' performance should be managed properly by the principal, providing thorough feedback on performance and implementing incentives that will encourage the educator to perform better. Thus, a focus on the development of potential of teachers warrants attention. Traditionally, the role of teaching has been one of nurturing and developing students' potential. As Evers, Tomic and Brouwers (2004) report, teachers play a valuable role in helping children grow. In order to do this they must remain physically and mentally well. However, there is apparent dissonance between teachers' perceived capacities and the expectations of their role (Smith & Bourke, 1992) yet, they continue to carry out their work. This may have implications for their physical and mental well-being and their professional competence as teachers. Teachers that feel appreciated and empowered would be more engaged in their work and as a result would perform better. Davis and Wilson (2000) found that principals that involved teachers in decision making had a significant impact on teacher empowerment. A number of themes emerge from the literature, explaining why some teachers stay. The reasons for staying are

important to consider as they provide a window into understanding reasons for attrition (Clotfelter, Ladd, & Vigdor, 2011). “The problem does not lie in the number of teachers available, but in the challenge in keeping the teachers that are good and ensuring that the school system does not fail those” (Darling-Hammond, 2003, p. 7.) These reasons why teachers stay are important because they give teacher educators, district officials, and school-based administrators information for developing solutions to encourage teachers to continue teaching. Relevant literature also supports the main finding of this research, namely that supervisor behaviour had a significant effect on engagement of educators. Darling-Hammond (2003) found that the context provided by school leadership influenced interaction among staff, teachers’ feelings of being valued for their work and their sense of involvement in the school.

The *conclusion* for this study can thus be seen as follows: Diagnosing and supporting employees’ motivation is complex and challenging (Bono & Judge, 2003; Thomas, 2000), but it is well worth the effort in terms of potential gains in both productivity and workplace climate. Therefore we believe that *supervisor support* is of the utmost importance to keep teachers engaged and to ensure that good educators remain teaching.

Antecedents and Outcomes of Meaningful Work among School Teachers

The second objective of this study was to investigate the relations among antecedents and outcomes of meaningful work among school teachers. This study examined the relationships between work beliefs (a calling orientation), an enriched job, co-worker relations, meaningful work and engagement of secondary school teachers. This study investigated how meaning contributes to optimal functioning of secondary school teachers.

If teachers perceive their careers as a calling, that might contribute to their experience of finding their work meaningful. As a result it can mean better engagement levels and lower intention to leave the teaching profession.

In order to build employee engagement, employers must realize that they must create *meaningful work experiences* for their employees. In spite of the value of meaningful work for both the employee and the employer, this construct has only recently received attention in organizational behavioural research. According to the researcher this is ironic – since

meaningful work contributes significantly to ensure better retention rates. Research by Towers Perrin (2003) and May, Gilson, and Harter (2004) as well as research done by Scroggins (2008) referred to motivational factors that contribute to the experienced meaningfulness of individuals. When individuals can identify themselves with the values of an organization, they receive self-verifying information that could motivate them to stay with the organization. Employees perceiving a good fit between their values, roles and that of the organization, experience meaningfulness and as a result regard their work as a calling (Dik & Duffy, 2008). To the contrary, employees who regard their work as meaningless will not be intrinsically motivated and more prone to leave their jobs and the organization (Whittington & Galpin, 2010).

This study's results showed that a calling orientation, nature of the job, and co-worker relations explained a significant percentage of the variance in experiences of meaningful work. This finding is confirmed by the research of Steger and Dik (2009) who focused on the importance of the person-environment fit. According to these authors the most important contributing factors to meaningful work are the nature of the task, good co-worker relations and work beliefs – specifically a calling orientation (Wrezniowski et al., 1997; Wrezniowski, 2012). The argument in this study is that people possessing greater good motivations want to make a difference (calling orientation) and want to make an impact on others (relations with co-workers). Hence, when this is not the case, negative outcomes will result, such as burnout and meaninglessness.

Furthermore, it was found that a calling orientation, an enriched job, good co-worker relations and meaningful work predicted work engagement. This is a very important finding since higher engagement levels have important implications for positive organisational outcomes. When employees attach themselves to their work roles (having a calling); experience a sense of belongingness (co-worker relations) from collective efforts and when they are working in supportive environments (enriched job) that allows them flexibility and creativity, that will lead to perceptions of meaningful work, resulting in higher engagement levels (Martin, 2006; Richardson & Watt, 2006).

The implications of this study is far reaching since meaningful work (or the lack thereof) can have specific consequences for the individual as well as for the organisation. Steger & Dik (2009) found that meaning matters to people's well-being and that individuals' career

attitudes are related to their overall well-being. Flesher (2009) focused on the importance for organizations to understand individual differences in meaning-of-work and to use this knowledge to enable them to work towards achieving positive organizational outcomes. Thus, when employers realize how meaningful work matters in attaining the organisation's goals, they will hopefully begin to implement organizational practices and try to create an organizational climate that would be conducive to growth and create more opportunities for individuals to engage in meaningful work.

Pyszczynski, Greenberg, and Solomon (1999) proposed that people reach their highest level of meaningfulness when they are actively engaged in matters that transcends their own immediate interests. This is consistent with Emmons (2003) taxonomy of meaning, which derives meaning (as a source) from a much deeper level, namely that of self-transcendence. This study also focused on the importance of having a calling orientation - when work is experienced as personally fulfilling and making a difference in the world, that work would be regarded as a *calling*. Research done by Thompson and Bunderson (2003) focused on the importance of congruence between the value set of the individual and that of the organization. When employees perceive congruence between their core values and that of their organization, it can provide some positive meaning. To the contrary, when they perceive the organization's values to violate their core values, it might contribute to negative meaning and strong negative reactions (Thompson & Bunderson, 2003).

This study investigated the antecedents that contribute to the experience of meaningful work – thus tried to explain which factors enhance meaningful work experiences and how that can be positively linked to positive organizational outcomes such as becoming more engaged. Having knowledge of how to get employees to become more engaged in their work has certain benefits for both the individual and the organization's productivity and attrition rates. Knowledge of the above leads to job satisfaction, increased levels of intrinsic motivation and positive feelings and experiences (Carver, Scheier, & Segerstrom, 2010; Searle & Parker, 2013). Enjoyment of work and satisfaction at work have been linked to work-related well-being and higher engagement levels (Martin, 2006a; Richardson & Watt, 2006). Thus it can be argued that when teachers experience their work as meaningful and they are feeling positive about their work, it would enhance their work well-being and as a result help them in becoming more engaged and absorbed in their work. If employees perceive their work as meaningful and experience positive emotions regarding the work, then it is more likely that

they will perform better. Teachers wanting to make a difference in the lives of others and their learners will be less likely to leave the profession if they experience a sense of personal fulfilment in their work. This argument of ours is supported by the work of Wrezniewski and Tosti (2005) who proposed that people who see their work as socially valuable and who derive some personal fulfilment from their work, will have a calling orientation to their work, leading to the experience of meaningful work which in turn will reduce the likelihood of intention to leave.

School leadership and employers must be realistic in their expectations when they are recruiting teachers (Farkas et al., 2000). When retaining teachers it is important to focus on their *work beliefs* and how they perceive their work. These career conceptions can have a great influence on the day-to-day experiences they have in their schools (Farkas et al., 2000; Peske et al., 2001). Whether teachers stay or leave depends primarily on how they experience their work and the amount of support they receive in their workplaces. Work conditions seemed to be a crucial factor in staying or leaving the teaching profession (Farkas et al., 2000; Darling-Hammond, 2003).

The *conclusion* for this study can thus be seen as follows: A calling orientation predicted meaningful work (van Zyl et al., 2010). Teachers with a calling orientation would perceive their work as meaningful and impact on the greater good of themselves and others; thus act out their callings in the way they approach their work and also in the way they approach their co-workers and the action steps they take to enrich their own work experience. *Meaningful work* is experienced when employees have autonomy, variety and significance in their work roles (Janik & Rothmann, 2015).

School management must find ways for enriching teachers' jobs and for understanding their work beliefs, in an effort to create an environment in which meaningful work can be carried out. By doing so they will reap the long-term benefits – having an engaged and highly motivated teaching corps.

Functioning Psychologically Well-being at Work: The Effects of Positive Organisational Practices

The fourth and fifth objective of this study was to investigate the relationship between psychological well-being at work and positive organizational practices. It is argued that psychological well-being at work will improve when work environments satisfy employees' needs (Gagne & Deci, 2005). This study investigated how and in which way the implementation of positive organizational practices allowed employee's to function in an optimal way. For example: A healthy work environment will enable employees to experience their work as meaningful and will inspire them to reach their goals. Within a safe work environment the climate will be conducive for people's growth and such a positive climate will enable employees to show respect and appreciation for one another.

The main finding of this study was that positive organizational practices predicted positive outcomes such as meaning, engagement and self-determined behaviour and autonomous motivation. This study investigated the effect of positive organizational practices on the psychological well-being of the educator at work. Satisfaction of psychological needs increase intrinsic motivation and optimal functioning, whereas poor need satisfaction causes a decline in motivational levels and optimal functioning (Deci & Ryan, 2000). Education in South Africa is in desperate need to identify factors that contribute to the optimal functioning of educators in their work settings, namely the school. Knowledge of what keeps educators motivated and how their potential can be developed in their educational settings (the school) is becoming crucial. To teach, at one's full potential, has always required the ability to persevere.

To date, however, little research has been done which has investigated the ways in which teachers' capacity to cope may be nurtured and sustained (Gu & Day, 2013). Roles have become diversified and intensified and workloads of teachers have increased, which is claimed to have threatened their sense of autonomy (Day & Gu, 2010). A threatened sense of autonomy has implications for the way in which employees approach their work. It has a direct effect on their engagement levels at work. Employees' experiences and conditions at work are closely linked to their levels of engagement. Employees function well when they experience psychological need satisfaction at work and when they engage in their work (Rothmann, 2013). Studies by Diedericks and Rothmann (2014), Rothmann (2013) and Swart

(2012) showed that individual (e.g. job satisfaction) and organisational outcomes (e.g. performance and intention to leave) are strongly predicted by individuals' level of well-being in work contexts.

Psychological well-being at work includes the following states: work engagement (consisting of energy, dedication and absorption), purpose and meaning, self-determination (based on autonomy, competence and relatedness satisfaction), and learning (Rothmann, 2014). The school environment in which teachers are imbedded play a significant role in their psychological well-being at work. Teachers experiencing that their needs are being met, would be more likely to function well within their schools and to show higher psychological well-being levels at work. They would be better able to cope with teaching demands than those teachers who showed lower levels of psychological well-being and who might be more vulnerable to symptoms of burnout. Empirical evidence supports the argument that positive practices (respectful treatment, personal development) result in positive organizational outcomes (Cameron et al., 2011; Lyubomirsky, King, & Diener, 2005).

Another finding was that teachers with high levels of psychological well-being reflected high levels of autonomy, competence, relatedness, engagement and meaning. They perceived their work to be meaningful and they inspire each other because they are motivated. Psychological well-being is linked to certain aspects of functioning. When employees' needs for autonomy, competence and relatedness are met, it will lead to autonomous motivation and to better well-being (Milyavskaya & Koestner, 2011). Teachers with the highest levels of psychological functioning (well-being) derived the most meaning from their work, as our finding suggests. Making sense of one's work environment is crucial for equipping employees with the coping skills to handle life and work challenges (Matuska & Christiansen, 2008).

Meaning as a positive organisational practice dimension was associated with psychologically well-functioning teachers. The higher the level of psychological well-being (i.e. autonomy, competence, relatedness, meaningful work, and work engagement) the higher the probability that meaning as positive organisational practice would play a statistically significant role. Psychologically well-functioning teachers (compared to those that are not functioning well psychologically) are renewed and inspired by the way their work is organised. They approach their work in a positive manner and also serve as positive examples for their colleagues.

An interesting finding was that psychologically well-functioning teachers forgave less for mistakes in their schools. It might be interpreted that they feel less of a need to forgive because they are functioning well and maybe as a result have less tolerance for mistakes. It might also be argued that in their striving to be the best they might neglect the importance of being able to forgive others for mistakes. This finding can mean that well-functioning teachers do not tolerate those teachers that are struggling to cope with teaching demands – it might also explain the lower focus on empathy and compassion overall. It might even alienate the non-copers from the copers and enlarge the gap between the two groups in schools. In practice it can mean that well-functioning teachers need to reach out to their fellow colleagues and support each other better. Then compassion and empathy levels should be higher.

It seems that the most important positive practices in the pathway to better psychological well-being at work are those of *meaningful work and inspiration*. The organisational practices (reflecting virtuousness), affect the well-being and performance of people and the performance of organisations (Cameron et al., 2011). Virtuous practices in schools have positive consequences for teachers' self-determined behaviour (autonomy, competence, and relatedness), work engagement, and meaningful work. Future efforts should not only focus on individuals but on developing virtuous practices in schools.

It is a challenge to know what motivates employees and to have the knowhow to support them in the workplace (Bono & Judge, 2003). Investing in the potential of employees is well worth the effort, considering the benefits it reaps for productivity (Kouzes & Posner, 2002). Individuals can only function optimally and be well if their work environments are supportive and conducive to growth. The organisational practices (which reflect the climate of an organisation), affect people's well-being and performance (Gittell, Cameron, Lim, & Rivas, 2006) and organisations' performance (Cameron et al., 2011). Positive organizational practices enable employees to perform at their best and to remain well psychologically. School environments (Gu & Day, 2013) affect teachers and their working lives. Improving quality in schools is not only to have a better understanding of what influences teachers' inner strength and motivation, but also the means by which their inner strength can be nurtured and developed in the contexts in which they work and live (Luthar & Brown, 2007).

Cameron et al. (2003) found that organizational conditions and practices influence a variety of positive outcomes such as employees' sense of meaningfulness, engagement and self-efficacy beliefs. This corresponds with our finding that positive organizational practices do indeed affect psychological well-being at work. More specifically, meaningfulness was found to be strongly affected by working conditions and organizational practices in this study.

The *conclusion* for this study can thus be seen as follows: Employees cannot thrive and be well in an environment that does not provide the “fuel” they need to keep them motivated and engaged. Organizations need to realize this and be willing to take action to improve the psychological well-being of its employees. This statement is supported and confirmed by the literature, namely that organizational practices have a profound effect on the amount of meaning, sense of belonging and employees' ability to access resources (Harquail & King, 2010). Organisational practices that promote meaning and inspiration of secondary school teachers are crucial to promote their psychological well-being and flourishing.

5.2 INTEGRATION AND CONTRIBUTION OF THIS STUDY

This study contributes towards the literature on SDT and the well-being of the educator in a broader sense, namely that it helped to explain the important relationships between the satisfaction of educators' psychological needs, their engagement levels and intention to leave. Specifically the quality of the relationship with the principal (supervisor) was examined and it was found to have a large impact on educators' engagement with their tasks. Employees' interpretations of their relationships with leaders are conceptually distinct from leaders' interpretations and may be differentially related to employee and organizational outcomes (Graves & Luciano, 2013). Leadership showed that it plays an important role in the motivation and retention of employees, as this study well indicated, and in doing so, drew on SDT in the development of theory. Also, this study helped to explain the antecedents and outcomes of meaningful work, in the sense that it highlighted the important relationships between work as a calling, an enriched job, good co-worker relations, meaningful work and engagement levels of secondary educators. The results showed that a calling orientation, nature of the job, and co-worker relationships explained a significant percentage of the variance in experiences of meaningful work.

The current educational crisis in SA cannot be understood without investigating constructs of psychological meaningfulness at work. This statement is supported and confirmed by studies by Wolhuter, van der Walt, Potgieter, Meyer & Mamiala (2012). This study how important meaningful work is to the educator in SA – without positive work experiences (meaningful work) it is possible to understand why educators remain unengaged and unmotivated. The dynamics of meaningful work were investigated and explained. The role of motivation as the fuel that enables educators to become more engaged in their work has been clarified. This is a valuable contribution. Individuals that are afforded opportunities to grow and to do more challenging work will be more likely to experience meaningfulness and as a result be more satisfied with their jobs. This in turn can assist in reducing high attrition rates and in enhancing the chances that an individual will remain with the organization (Cavanaugh et al., 2000; Schaufeli & Bakker, 2004).

Furthermore this study contributed in the sense that it showed that positive organizational practices predicted positive outcomes such as meaning, engagement and self-determined behaviour of secondary educators. When individuals experience that they are making progress and are moving forward, that will be the very fuel that will motivate them to grow and to develop to their fullest. As a result they are learning, thus allowing them to thrive at work. Employees cannot thrive and be well in an environment that does not provide the “fuel” they need to keep them motivated and engaged. School management needs to realize this and be willing to take action to improve the psychological well-being of its teaching corps.

In order for schools to be successful resources must be available for its teaching staff that will enable them to reach their goals. A school principal must understand the role of resources as a positive tool to promote positive cycles in his school – to the long-term benefit of all. In an educational setting teachers can use resources in the school environment that energize them to take specific actions that can have positive or negative outcomes. In the process of taking collective action towards a specific cause, they become part of an engaged community. Highly engaged educators with well-structured and well-designed jobs would be able and willing to bring new, creative ideas to their work, which in turn will make them feel more in control of their working environment and might enhance engagement levels.

It can be argued that competent and committed employees make positive outcomes possible. Thus, positive practices can be seen as an antecedent of good organizing in institutions and committed and engaged employees as a direct result thereof (Vogus, 2012). As a result experiences at work might improve and performance may rise. Very little research and empirical evidence exists in the current literature that investigates the effect of positive practices on organisational effectiveness.

This study made the following *contributions* to the field of positive psychology, a concept that focuses on more positive aspects such as positive organizations and individual characteristics which improve well-being and is also known as the science of happiness (Seligman, 2002).

First, it resulted in reliable and valid, useful measuring instruments of psychological well-being and its antecedents and outcomes.

Second, it resulted in validated models of work well-being for the secondary school teacher.

Third, it resulted in new scientific information regarding the relationships between psychological need satisfaction and the lack of psychological need satisfaction and individual and organisational outcomes thereof (work engagement, psychological meaningfulness, well-being, turnover intention, performance and positive organizational practices) of secondary school teachers.

Fourth, new information was created regarding the relationship between psychological well-being and its antecedents and work engagement, psychological meaningfulness, psychological need satisfaction, turnover intention, performance and positive organizational practices of secondary school teachers.

Positive psychology as a field has a wide range of inter-related concepts and constructs that must be studied from a broader perspective to be able to understand the dynamics thereof. The essence of psychological need satisfaction lies in the relationship between school management and the teacher in which autonomous motivation played a pivotal role. The well-being of the educator is crucial for the positive functioning of the school, which in turn has a great influence on the educational system in South Africa.

5.3 LIMITATIONS

First, the interpretation of the findings of the study is limited by the cross-sectional design utilised in this study which allows identification of relationships between variables at one point only. Causal relationships could not be confirmed. Findings of this study were based on correlation data, which makes it impossible to prove causality of relationships. The cross-sectional nature of the data does not provide evidence for the temporal relations among the constructs.

Second, the sample was derived from educators within one province of SA only – thus making generalization of results problematic. However, despite this, significant relationships were observed between the study variables. It will be critical that future research is completed with populations of secondary school teachers from a wide range of provinces within South-Africa.

Third, the present study relied on self-report instruments to measure target variables. As both independent and dependent variables are based upon one source of information, namely the participants, self-reported data might be contaminated by common method variance (Spector & Jex, 1991).

Fourth, although Ryan and Deci (2000) pointed out that psychological need satisfaction is universally desirable for the well-being of people, the results of this study could have been affected by the complexity of participants' work. Finally, more in-depth, longitudinal and qualitative research is needed to better understand the interplay and dynamics among the different constructs in this study. The complexity of the constructs and how they are related need some further in-depth investigation within qualitative research.

5.4 RECOMMENDATIONS

5.4.1 Recommendations to Solve the Research Problems

Based on the results of this study, it is recommended that various aspects be addressed to promote the well-being of teachers since it is positively associated with individual and organisational outcomes. The most important research problem and challenge for education in SA is to determine individual and organizational factors that best predict secondary school

teachers' well-being, retention and performance. If school principals know how to support their teaching staff, it would decrease the high attrition rates amongst teachers. Organizations should invest in training in self-determination theory for leaders so that they can understand the importance of psychological need satisfaction in the intrinsic motivation of employees.

Teacher attrition is a real problem that many school systems face. Lepi (2013) introduced some statistics, worthy to take note of: 14% of teachers leave the profession after one year. The majority of teachers that leave the profession cite dissatisfaction with the administration as the reason (38%), 71% of all teachers say they bring their own supplies to the classroom. Teacher turnover rates in areas with mentoring and support programs are less than half of those with no support (9% versus 21%). This study found that supportive supervisor relations do indeed contribute to higher engagement levels. This is confirmed by the research of Lepi (2013).

The quality of teachers is essential for obtaining positive learning outcomes. Therefore the education system should attract and retain well-functioning teachers and support them in their work environment. This requires schools to be positive institutions. Teachers have to be assisted in their pursuit of better, healthier, more meaningful lives (Ryff & Singer, 1998; Lepi, 2013). Given the stressors the teacher have to deal with, it would be important to develop a strategy that would help teachers to negotiate, resolve and grow in the face of life's stressors and challenges. Well-being is also important because of its consequences for teachers and schools. Teachers experiencing poor well-being in the workplace may be less productive, make poor decisions, be more prone to be absent from work (Boyd et al., 2006), and do not contribute to the effective functioning of the schools (Price & Hooijberg, 1992). The need to investigate teachers' work experiences is thus becoming crucial. If we know what factors contribute to teachers functioning well, it will contribute to teachers reaching their full potential.

Therefore it is necessary to understand the nature of psychological well-being at work in the interest of promoting teachers' health. Interventions should be implemented to promote teachers' well-being. Psychological well-being of teachers should be the focus of interventions, since it is the focus of this study. Interventions might be aimed at enhancing the engagement levels, meaning making and psychological need satisfaction of teachers. To

achieve outcomes that would be to the advantage of both employer and employee, the following should receive attention.

Firstly, interventions should be made to create work environments that will be conducive to enhancing the overall psychological well-being of teachers by focusing on ways in which they can become more engaged and experience more meaning in their work. Thus focusing on the psychological needs of teachers and how these needs can be satisfied should be the priority of school management. If school principals do not give support and recognition for the needs of autonomy, relatedness and competence, that would have long-term negative outcomes like burnout, experiences of meaninglessness and consequently leads to high intention to leave the profession since they have negative work experiences. Pertaining to work-related factors it seems that particularly conditions of employment are important correlates of turnover and turnover intention (Lepi, 2013; Mulkeen et al., 2007). More specifically it was found that lack of satisfaction with job facets such as salary, career opportunities, and work content (i.e., un-met career expectations) were associated with turnover intention (Mulkeen et al., 2007).

Secondly, researchers should intervene with a view to apply and implement the constructs of psychological need satisfaction, psychological meaningfulness and work engagement (which indicates psychological well-being) for the multi-cultural context in SA, and with this specific study to the secondary school teacher in North West Province. In order to achieve educational progress, South Africa needs an education system which promotes good teaching and attracts and retains the best teachers. Focusing on secondary teachers from all grades and from different secondary schools in Northwest province makes it possible to apply these constructs to the multi-cultural context in SA. Low teacher effort and engagement levels are considered one of the most serious problems in South African schooling (Van der Berg et al., 2011) and should be addressed as soon as possible. According to Youssef-Morgan and Bockorny (2014), positive psychology, positive organisational scholarship and positive organisational behaviour are examples of positive paradigms that can be applied to understand and promote the psychological well-being of individual teachers in their work contexts. A strategy must be developed that will improve the quality of work life of the teacher in South-Africa.

Thirdly, interventions should be directed towards understanding the inter-relatedness between the constructs of psychological need satisfaction, psychological meaningfulness and work engagement of secondary school teachers and how the one construct cannot function without the other. This study revealed that when employees' needs for autonomy, competence and relatedness are met, it will lead to autonomous motivation and to better well-being (Milyavskaya & Koestner, 2011). Furthermore, making sense of one's work environment is crucial for equipping employee with the coping skills to handle life and work challenges (Matuska & Christiansen, 2008). All these findings have important implications for school management – they need to understand the dynamics and links between satisfaction of psychological needs that will lead to the experience of meaningful work and that will have the positive outcome of more engaged teachers which will result in a decrease in attrition rates – thus to the benefit of both the individual and the organizational outcomes.

Fourthly, interventions should be directed towards understanding the effects of positive practices on the well-being and performance of individuals and organisations. Psychological well-being at work will improve when work environments satisfy employees' needs (Deci & Ryan, 2000; Gagné & Deci, 2005). This study found that positive organizational practices predicted positive outcomes such as meaning, engagement and self-determined behaviour. That is why employees that perceive their work as being meaningful, will possess higher levels of psychological well-being (Barrick, Mount & Li, 2013). Employees cannot thrive and be well in an environment that does not provide the “fuel” they need to keep them motivated and engaged. Organizations need to realize this and be willing to take action to improve the psychological well-being of its employees. In the end the fruits which positive action will reap, will be sweet.

5.4.2 Practical Recommendations to Address the Research Problems

When considering ways in which educator's *psychological well-being* can be improved, there are different recommendations that can be made. Low levels of psychological well-being leads to burnout and non-engagement. This can be addressed by the Department of Basic Education and school management by considering a few practicalities.

Firstly, it was found that *supervisor behavior* played a role in facilitating psychological need satisfaction, work engagement, and intention to leave of employees. The results showed that supervisor support for psychological need satisfaction had a large effect on autonomy

satisfaction. Autonomy satisfaction, had a large positive effect on work engagement. The positive relationships between principal support and psychological need satisfaction suggest that the quality of the principal's relationship with educators affect engagement and intention to leave the education profession. School principals can create a school climate in which educators can feel safe and appreciated, by showing support in practical ways. Practical examples are set out, underneath.

Autonomy supportive behaviour:

- Encourage educators to participate in important decisions.
- Strengthen teachers to speak about what they feel.
- Listen to different points of view before coming to conclusions.
- Encourage teachers to speak up when they disagree with a decision.
- Seek feedback to improve interactions with others.

Competence supportive behaviour:

- Support teachers' attempts to acquire additional training or education to further their careers.
- Gives teachers helpful feedback about their performance.
- Take the time to learn about teachers' career goals and aspirations.
- Care about whether or not teachers achieve their goals.
- Make sure that teachers get the credit when they accomplish something substantial on the job.
- Give teachers helpful advice about improving their performance when they need it.

Relatedness supportive behaviour:

- Treat teachers fairly.
- Show commitment to protect teacher interests.
- Does what he/she says he/she will do.
- Demonstrate that he/she can be trusted.
- Is accessible.
- Has confidence in teachers' abilities.

School principals who are trained in the principles of SDT like set out above, would reap the longterm benefits in terms of better teacher retention and lower attrition rates. It is crucial for the survival of secondary schools within SA that school management understands the important role they need to play in ensuring quality education at all levels. Supervisors must be trained to nurture teacher's inner *motivational resources* by valuing the work they are doing, showing interest in their career goals and giving attention to their specific needs. They must refrain from having a controlling attitude and must focus on constructive ways to motivate teaching staff.

School principals can furthermore improve teachers' psychological well-being by:

- using positive language when talking to staff;
- providing rationales for requests and also acknowledging and accepting teachers expressions of negative affect;
- providing feedback on performance and try to be less rigid and more flexible when approaching teachers;
- focusing on empowerment, recognition, protection of teacher's human rights, must be available and committed to the development of their staff, and
- creating a caring school community.

Secondly, it was found that a *calling orientation*, nature of the job, and co-worker relations explained a significant percentage of the variance in experiences of meaningful work. A calling orientation, an enriched job, good co-worker relations and meaningful work predicted work engagement. Since higher work engagement levels benefit the educator as well as the school it would be of importance to make some recommendations on how to best facilitate such engagement within the school. It would therefore make sense to suggest practical ways in which meaningful work can be experienced. These suggestions and recommendations refer to ways in which a calling orientation can be strengthened, as well as ways in which the job can be structured, and suggestions on how to ensure good co-educator/teacher relations. All these aspects contribute to the experience of meaningful work and are mentioned underneath.

Practical ways in which meaningful work can be enhanced

- Challenging tasks, a variety of tasks and autonomy

- Sense of belongingness from collective efforts
- Teambuilding exercises
- Motivational incentives like recognition, appreciation, acknowledgement of needs
- Challenging environments that allow for flexibility and creativity
- Experience a sense of personal fulfilment from work – enjoyment
- Seeing work as socially valuable and contributing to the greater good
- Workshops in personal development
- Opportunities for contributing to work in new ways
- Creating an environment conducive to growth and personal fulfillment
- A chance to use personal initiative and judgment in carrying out work
- Frequent feedback on work progress in a constructive manner
- Allowing sufficient time to do challenging and complex work
- Clear work roles and boundaries
- Less administrative burdens
- Supporting attempts to acquire additional training or education
- Help to solve work-related problems by providing mentors and workshops
- Job crafting – adapting and shaping own job.

Furthermore it was found that positive, self-rated performance leads to positive emotions which, in turn, lead to positive workplace behaviour. Employees experience meaningful work when they feel that they are free to make decisions and to monitor their work environments. By expecting a positive outcome they motivate themselves to achieve their goals, and, as a result, to perform better.

Thirdly, it was found that individuals that experienced *positive organisational practices* focussing on meaning, showed good functioning, characterised by autonomy, competence, relatedness, work engagement and meaningful work. It seems that the most important positive practices in the pathway to better psychological well-being at work are that of meaningful work and inspiration. Since positive organisational practices predicted psychological well-being and there seems to be a strong correlation between these constructs, it would be appropriate to focus on recommendations that will enhance psychological well-being via the implementation of positive organizational and school practices. Therefore we

referred to positive practices which seem to enhance psychological well-being. Interventions should be implemented to build positive practices in schools.

Positive practices that enhance good psychological functioning

- providing compassionate support by listening, showing empathy,
- emphasizing positive and inspiring messages to teachers by acknowledging their efforts,
- forgiving mistakes and allowing room to learn from mistakes by providing an environment of understanding and respect,
- expressing gratitude to and confidence in teachers by allowing them to function autonomously,
- clarifying the meaningfulness of the work being done, by frequent follow up on progress and psychological needs for autonomy, competence and relatedness,
- reinforcing an environment characterised by respect and integrity by creating a positive climate of understanding and acceptance,
- promoting the freedom to operate, the freedom to speak, and the freedom to self-actualizing of potential,
- promoting the joy of working, by creating a positive work climate that will contribute to the psychological well-being of teachers.

The school must fulfil the role of different agents in order to enable its teaching staff to perform at their best. These different roles can be referred to as that of:

- Freedom fighter (authenticity),
- Head of learning and development (adaptation),
- Interpreter (alignment),
- Accountability steward (accountability),
- Occasional interventionist (action).

Finally, recruitment and *selection procedures* for principals and educators should be improved to ensure that only the best quality teachers and principals are retained for the teaching profession. Principals and teachers must be recruited from a pool of experienced and well-qualified people, who must undergo intensive psychometric assessment together with

interviews. The underlying motivation for choosing teaching as a career should be an important consideration for the recruitment of suitable candidates for the teaching profession. Above practices should improve the psychological well-being of educators and enhance the meaningfulness they experience from their work. As a result it may also increase engagement levels and motivate teachers to develop to their full potential.

5.4.3. Recommendations for Future Research

Future research should examine the antecedents of psychological need satisfaction at work using a *longitudinal design*. Longitudinal studies could provide more insight into the effects of leader behaviour on psychological need satisfaction, work engagement and intentions of staff to leave. Future studies should use longitudinal studies because they are useful to validate causal relationships between individual and organisational outcomes and they also offer insight into the possibility of other variable outcomes in the study of psychological well-being. Future studies should include *larger samples* and be more representative in terms of gender and cultural diversity. More research is also needed regarding the effects of social-contextual factors which influence the effects of leader support on psychological need satisfaction. Future studies should also focus on the effects of need thwarting and need satisfaction on outcomes such as employees' engagement and intentions to leave.

Furthermore, there are different tools for assisting employees in enhancing the meaningfulness they experience in their work. One of these tools is job crafting – employees use different techniques for adapting to their workplace situation and demands. Job crafting can be a path to meaningfulness in more contemporary work contexts (Wrzesniewski, Berg, & Dutton, 2010). Thus job crafting can be a possible research topic to explore further for future research endeavours. Employees' shaping and adapting to their jobs often deliver benefits to the organizations by fostering adaptability (Frese & Fay, 2001). Job crafting opens up opportunities for employees to create meaningful experiences for themselves. This needs to be explored and investigated in more depth in future research. Finally, more holistic and integrated models on psychological work well-being and individual and organisational outcomes in educational settings are needed in South Africa.

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ADDENDUM A
DECLARATION FROM LANGUAGE EDITOR



9 November 2015

I, **Ms Cecilia van der Walt**, hereby confirm that I took care of the editing of the thesis of Ms Elmari Fouché titled ***WELL-BEING OF TEACHERS IN SECONDARY SCHOOLS.***

MS CECILIA VAN DER WALT

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ADDENDUM B: ETHICAL APPROVAL CERTIFICATE



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7 February 2014

ETHICS APPROVAL OF PROJECT

The North-West University Ethics Committee (NWU-EC) hereby approves your project as indicated below. This implies that the NWU-EC grants its permission that provided the special conditions specified below are met and pending any other authorisation that may be necessary, the project may be initiated, using the ethics number below.

Project title: Well-being of teachers in Secondary Schools in the North West Province : A Multilevel Study																																														
Project Leader: Prof I Rothmann																																														
Ethics number:	<table border="1"><tr><td>N</td><td>W</td><td>U</td><td>-</td><td>0</td><td>0</td><td>0</td><td>1</td><td>3</td><td>-</td><td>1</td><td>4</td><td>-</td><td>A</td><td>8</td></tr><tr><td colspan="3">Institution</td><td colspan="5">Project Number</td><td colspan="2">Year</td><td colspan="5">Status</td></tr><tr><td colspan="15"><small>Status: S = Submission, R = Re-Submission, P = Provisional Authorisation, A = Authorisation</small></td></tr></table>	N	W	U	-	0	0	0	1	3	-	1	4	-	A	8	Institution			Project Number					Year		Status					<small>Status: S = Submission, R = Re-Submission, P = Provisional Authorisation, A = Authorisation</small>														
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Approval date: 2014-01-29	Expiry date: 2019-01-28																																													

Special conditions of the approval (if any): None

General conditions:

While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, please note the following:

- The project leader (principle investigator) must report in the prescribed format to the NWU-EC:
 - annually (or as otherwise requested) on the progress of the project,
 - without any delay in case of any adverse event (or any matter that interrupts sound ethical principles) during the course of the project.
- The approval applies strictly to the protocol as stipulated in the application form. Would any changes to the protocol be deemed necessary during the course of the project, the project leader must apply for approval of these changes at the NWU-EC. Would there be deviated from the project protocol without the necessary approval of such changes, the ethics approval is immediately and automatically forfeited.
- The date of approval indicates the first date that the project may be started. Would the project have to continue after the expiry date, a new application must be made to the NWU-EC and new approval received before or on the expiry date.
- In the interest of ethical responsibility the NWU-EC retains the right to:
 - request access to any information or data at any time during the course or after completion of the project;
 - withdraw or postpone approval if:
 - any unethical principles or practices of the project are revealed or suspected,
 - it becomes apparent that any relevant information was withheld from the NWU-EC or that information has been false or misrepresented,
 - the required annual report and reporting of adverse events was not done timely and accurately,
 - new institutional rules, national legislation or international conventions deem it necessary.

The Ethics Committee would like to remain at your service as scientist and researcher, and wishes you well with your project. Please do not hesitate to contact the Ethics Committee for any further enquiries or requests for assistance.

Yours sincerely

Prof Amanda Lourens
(chair NWU Ethics Committee)

ADDENDUM C: COVER LETTER FOR QUESTIONNAIRES

1 May 2014

Dear Educator,

I am currently busy with my PhD studies at the North-West University, Potchefstroom Campus. My research focuses on the well-being of the educator with specific reference to the quality of work life of the educator in specifically secondary, public schools in the North West Province, Kenneth Kaunda district. My major objective is to find ways in which the educator can be best supported in their working environment, the school. I also want to determine what keeps the educator motivated and dedicated despite circumstances and sometimes harsh working conditions. In this study the researcher would like to determine how educators in South-Africa, and specifically in North-West Province (District: Kenneth Kaunda), view their own quality of work life and which aspects in the work environment have an impact on the educator's job satisfaction and self-determination.

With this study the researcher would like to emphasize the need to develop a strategy that will improve the quality of work life of the educator in South-Africa, and by doing so, improve the job satisfaction and psychological needs of the educator, specifically in North-West province. The researcher will be conducting this study to investigate and propose a strategy that will not only provide insights to educational authorities, but will also enrich academic knowledge by developing a strategy of teacher engagement. Participation in this study will include all available educators, teaching in different grades.

The attached questionnaires will enable me to gather your valuable input on the research topic. Authorisation for this research was given to me by the District Director, Mr H Motara, (Dr Kenneth Kaunda District). The research project was also approved by the Ethics Committee of the North-West University (Ethics number: NWU-00013-14-A8.) Your school was randomly selected as one of the schools in the Kenneth Kaunda District to participate in this survey. I therefore kindly request your assistance in completing these questionnaires.

Before completing the questionnaires, please take note of the following:

- You complete the questionnaires on a voluntary basis.
- The completion of the questionnaires will take you approximately **30-45 minutes**.
- Questionnaires will be completed anonymously and collected from you directly.
- There is no harm to you as respondent in completing the questionnaires.
- All information will be treated as confidential.
- Your identity will not be revealed, every respondent and school will remain anonymous.
- If you complete these questionnaires we accept that your participation in this research is voluntary.
- By completing these questionnaires you agree to participate in this research.
- The study will hold many benefits, not only to the participating schools, but also to the educational sector in general.
- The information gathered during this research project will at all times remain confidential.
- Feedback on the results of the study will be given to the management of the school and to the Department of Education.
- Please indicate on the questionnaire if you want personal feedback about the results of the survey that you completed.

- If you want personal feedback, you should provide your surname, initials and staff number on the questionnaire. (Only the researcher will have access to such personal details and your responses will remain confidential).
- Participation is voluntary and refusal to participate in this study will involve no penalty.
- Each participant is free to withdraw consent and discontinue participation at any given moment in time.
- There will be no costs involved for taking part in this research study.
- No participant will receive any payment to participate in this research project.

Your co-operation is highly valued and appreciated. Your positive attitude will contribute positively towards our profession as educators.

Thank you very much for your participation, valuable time and energy to take part in this study.

Kind regards,

A handwritten signature in black ink that reads "E Fouche". The signature is written in a cursive style and is underlined with a single horizontal line.

Me E. Fouche (Researcher)

Telephone number: 018 299 4552.

Cell phone number: 082 5323 118.

ADDENDUM D: PERMISSION FOR THE STUDY



education

Lefapha la Thuto la Bokone Bophirima
Noord-Wes Departement van Onderwys
North West Department of Education
NORTH WEST PROVINCE

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8 O.R. Tambo Street, Potchefstroom
Private Bag X1256,
Potchefstroom 2520
Tel.: (018) 299-8216
Fax: (018) 294-8234
Enquiries: Mr H. Motara
e-mail: hmotara@nwpg.gov.za

DR KENNETH KAUNDA DISTRICT

SENIOR PROFESSIONAL SUPPORT MANAGER

14 August 2013

Mrs E Fouché
Student Number: 10084975
North West University – Potchefstroom Campus

PERMISSION TO CONDUCT RESEARCH FOR ACADEMIC PURPOSES AT SECONDARY SCHOOLS IN DR KENNETH KAUNDA DISTRICT

The above matter refers.

Permission is hereby granted to you to conduct your research at secondary school in the Dr Kenneth Kaunda District under the following provisions:

- **the activity you undertake at the school should not tamper with the normal process of learning and teaching;**
- **you inform the principals of your identified schools of your impending visit and activity;**
- **you provide my office with a report in respect of your findings from the research; and**
- **you obtain prior permission from this office before availing your findings for public or media consumption.**

Wishing you well in your endeavour.

Thanking you

MR H MOTARA
DISTRICT DIRECTOR
DR KENNETH KAUNDA DISTRICT

cc *Mr S S Mogotsi – Area Manager: Matlosana*
Mr A J Engelbrecht – Area Manager: Maquassi Hills
Ms S S Yssel – Area Manager: Tlokwe

