INVESTIGATING POSITIVE LEADERSHIP, PSYCHOLOGICAL EMPOWERMENT, WORK ENGAGEMENT AND SATISFACTION WITH LIFE IN A CHEMICAL INDUSTRY

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B Com (Hons)

Mini-dissertation submitted as partial fulfilment of the requirements for the degree Magister Commercii in Industrial Psychology in the School of Behavioural Sciences at the North-West University (Vaal Triangle Campus).

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Vanderbijlpark
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The reader is reminded of the following:

- The references as well as the style as prescribed by the Publication Manual (6th edition) of the American Psychological Association (APA) were followed in this mini-dissertation. This practice is in line with the policy of the Programme in Industrial Psychology of the North-West University, Vaal Triangle Campus to use APA style in all scientific documents as from January 1999.

- The mini-dissertation is submitted in the form of a research article.
In loving memory of my Grandmother
Hester Sophia Nel (1903-1994)
And my best friend from childhood
Mariet van der Vyver (1977-2013)
ACKNOWLEDGEMENTS

I want to give all the honour and glory to God, my Father, without whose strength, peace and grace I would not have been able to complete this work.

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DECLARATION

I hereby declare that “Investigating positive leadership, psychological empowerment, work engagement and satisfaction with life in a chemical industry” is my own work, that it has not been submitted for any degree or examination at any other institution of higher learning and that all references have, to the best of my knowledge been correctly reported. It is being submitted for the degree Master of Commerce at the North-West University.

Full Name: Tersia Nel
Date: May 2013
Signed: __________________
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SUMMARY

Title: Investigating positive leadership, psychological empowerment, work engagement and satisfaction with life in a chemical industry

Key words: Positive leadership, psychological empowerment, work engagement, satisfaction with life, strengths-based approach, positive perspective, recognition

The world of work has changed dramatically in the last decade and constant change has become the new normality. Employees are affected by possible re-organisation, retrenchments and downsizing which affects their behaviours and attitudes at work. Leaders have the responsibility of leading their followers through these difficult times to the best of their ability. A positive leader is seen as someone who recognises and focuses on the strengths and accomplishments of his or her employees. When a leader is positive and has a positive leadership approach, it may influence their followers’ feelings of psychological empowerment, work engagement and satisfaction with life.

The objective of this study was to investigate the relationship between positive leadership, psychological empowerment, work engagement and satisfaction with life of employees in a chemical industry. A cross-sectional survey design was used with a convenience sample (n = 322). The measuring instruments used were the Positive Leadership Measure, the Measuring Empowerment Questionnaire, the Work Engagement Scale and the Satisfaction with Life Scale. Confirmatory factor analysis was used to test whether the measures of the constructs were consistent with the understanding of the nature of the constructs and to test whether the data fitted the hypothesised measurement model. Structural Equation Modelling (SEM) was used to examine the structural relationships between the constructs.

The results show that there are statistically significant relationships between positive leadership, psychological empowerment, work engagement and satisfaction with life. Positive leadership has an indirect effect on work engagement and satisfaction with life via psychological empowerment. The implication of the results is that the work related aspects of positive leadership, psychological empowerment and work engagement has a positive effect on the non-work related aspect of satisfaction with life.

Practical implications and directions for future research are offered.
**OPSOMMING**

**Titel:** 'n Onderzoek na positiewe leierskap, psigologiese bemagtiging, werksbetrokkenheid en tevredenheid met die lewe in 'n chemiese bedryf

**Sleutel woorde:** Positiewe leierskap, psigologiese bemagtiging, werksbetrokkenheid, tevredenheid met die lewe, sterk punte-gebaseerde benadering, positiewe perspektief, erkenning

Die werks omstandighede in die wêreld het dramaties verander in die laaste dekade en konstante verandering het die nuwe normaliteit geword. Werknemers word geaffekteer deur moontlike re-organisasie, afleggings en afskaling wat hulle gedrag en houdings by die werk beïnvloed. Leiers het die verantwoordelijkheid om hul volgelinge deur hierdie moeilike tye te lei na die beste van hulle vermoei. 'n Positiewe leier word gesien as iemand wie werknemers se sterkpunte en harde werk herken en daarop fokus. Wanneer 'n leier positief is en 'n positiewe leierskap benadering het, kan dit hul volgelinge se gevoel van psigologiese bemagtiging, werksbetrokkenheid en tevredenheid met die lewe beïnvloed.

Die doel van hierdie studie was om die verhouding tussen positiewe leierskap, psigologiese bemagtiging, werksbetrokkenheid en tevredenheid met die lewe vir werknemers in 'n chemiese bedryf te ondersoek. 'n Deursnee-opname-ontwerp is gebruik met 'n gerieflikheidsteekproef (N = 322). Die metings instrumente wat gebruik is, was die Positiewe Leierskap Vraelys, die Metings Bemagtigings Vraelys, die Werksbetrokkenheid Skaal en die Tevredenheid met die Lewe Skaal. Bevestigende faktorontleding is gebruik om te toets of die maatreëls van die konstrukte konstant is met die begrip van die aard van die konstrukte en om te toets of die data die hipotetiese meting model pas. Strukturele vergelykings-modellering (SVM) is gebruik om die structurele verhoudings tussen die konstrukte te ondersoek.

Die resultate dui daarop dat daar statisties beduidende verhoudinge tussen positiewe leierskap, psigologiese bemagtiging, werksbetrokkenheid en tevredenheid met die lewe is. Positiewe leierskap het 'n indirekte invloed op werksbetrokkenheid en tevredenheid met die lewe deur psigologiese bemagtiging. Die implikasie van die resultate is dat werksverbandhoudende aspekte van positiewe leierskap, psigologiese bemagtiging en werksbetrokkenheid 'n positiewe effek op die nie-werksverbandhoudende aspekte van tevredenheid met die lewe het.

Praktiese implikasies en rigtings vir toekomstige navorsing word aangebied.
CHAPTER ONE

INTRODUCTION

The purpose of this research is to determine whether a relationship exists between positive leadership, psychological empowerment, work engagement and employees’ satisfaction with life in a chemical industry. The study investigates whether psychological empowerment has an indirect effect on the relationship between positive leadership, work engagement and satisfaction with life. In this chapter the problem statement is discussed, the research objectives are set out, the research method is explained and lastly the division of chapters is given.

1.1 PROBLEM STATEMENT

Christine Lagarde, the International Monetary Fund’s Managing Director, recently commented that the world economy is still very fragile and that high unemployment and escalating oil prices pose threats to the global economy (Rooney, 2012). Similarly, Reuter’s (2012) Econometer indicates low confidence in the South African economy. According to Angloher (2010), in the current turbulent business reality, change is relatively unpredictable and happens at a more rapid pace. This puts leaders to the test in that they need to adapt their skills repertoire to enable them to lead and manage their organisations through increasing changes in the world of work (Angloher, 2010; Barrett, 2011; Potter, 2001).

Dickson, Smith, Grojean, and Ehrhart (2001) established that leader behaviour is a significant determinant of organisational climate, while Kefela (2012) suggests that leaders should develop new approaches to be able to face the challenges of a dynamic economic and organisational environment. Turbulent business environments often result in organisations needing to change by cutting costs, restructuring, or downsizing to remain competitive (Probst, 2003). Changing business environments can create uncertainty and even insecurity (Cameron, 1998; Devine, Reay, Stainton, & Collins-Nakai, 2003; Probst, 2003). Probst (2003) found that when employees’ job security and job satisfaction are lower; they have more negative affective reactions; their organisational commitment will be lower and their job withdrawal intentions will increase, leading to ill health. According to De Poel, Stoker, and Van Der Zee (2012), it seems that leaders are responsible for guiding their employees
through change, while Aarons (2006) argues that the leadership of an organisation has an important role in forming the employees’ perceptions and responses to organisational change.

In times of difficulty and change, the reactions of leaders are to focus on the now, to protect what is, and to solve the problems that are presented to them (Cameron, 2010). In these times, employees look to those in authority to help them create meaning in the stressful circumstances and give them support (Bartone, 2006). Leading employees in trying times requires a unique blend of optimism, helping skills, self-confidence and immediate task focus (Noer, 2010). Avey, Avolio, and Luthans (2011) found a strong effect of leader positivity on levels of follower positivity. They express that even if a leader feels optimistic about the outcome of a project, but they do not express their optimism, the positive effect on followers will be minimised (Avey et al., 2011). Based on the above it can be deduced that leaders and organisations need to have a positive approach to doing business.

The positive psychology movement has become a widely researched field internationally and in South Africa (Donaldson & Ko, 2010) and researchers within this field have focused on positive forms of leadership relevant to this study (Arakawa & Greenberg, 2007; Avolio & Gardner, 2005; Cameron, 2008). Seligman and Csikszentmihalyi (2000) postulate that positive psychology is the commencement of shifting the focus from fixing the worst things in life to constructing positive virtues. Furthermore, they state that the study of positive psychology is about positive subjective experiences, positive traits and positive institutions. Out of this positive view, positive organisational behaviour (POB) emerged and focuses on “the study and application of positively-oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today’s workplace” (Luthans, 2002, p. 59). At the same time, positive organisational scholarship (POS) also focuses on positive organisations (Luthans & Youssef, 2007) and searches for the understanding of what characterises the best of the human condition (Cameron, Dutton, & Quinn, 2003). It is from these positive points of view that Arakawa and Greenberg (2007) linked a leader’s optimistic explanatory style to employee engagement and productivity, and from there they conceptualised the behaviours of a positive leader.

Spreitzer (2007) suggests that leaders who have supportive relationships with their followers predict psychological empowerment in them. Several studies have found that positive forms
of leadership influence psychological empowerment (Barroso Castro, Villegas Perinan, & Casillas Bueno, 2008; Kark, Shamir, & Chen, 2003; Seibert, Wang, & Courtright, 2011). Stander and Rothmann (2010), as well as Mendes and Stander (2011) found that psychological empowerment predicts engagement. De Villiers and Stander (2011) confirm that there is a relationship between leader-member exchange and engagement and that it is obtained through psychological empowerment. Work engagement is closely linked to different types of leadership (Alok & Isreal, 2012; Babcock-Roberson & Strickland, 2012; Tims, Bakker, & Xanthopoulou, 2011). Krueger and Killham (n.d) report that supervisors have a crucial impact on employee well-being and engagement and that a positive relationship with the supervisor has a significant consequence on engagement. May, Gilson, and Harter (2004) found that all three determinants of work engagement, meaningfulness, safety and availability, had significant influences on engagement, but that supervisor relations particularly had the strongest effect. Arakawa and Greenberg (2007) hypothesised that positive leadership will positively correlate with engagement.

No studies were found that link positive leadership directly to satisfaction with life. However, satisfaction with life and job satisfaction are correlated (Pavot & Diener, 2008; Qu & Zhao, 2012) and job satisfaction, which resides in the work domain, has a natural spill over effect into life satisfaction (Heller, Judge, & Watson, 2002). It is therefore postulated that research which links leadership and job satisfaction can be accepted and research on the relationship between leadership and satisfaction with life should be explored. Numerous authors found that transformational leadership, as a form of positive leadership also positively influences job satisfaction (Braun, Peus, Weisweiler, & Frey, 2013; Munir, Rahman, Malik, & Ma’amor, 2012; Tsai, 2011; Weberg, 2010). As with the relationship between leadership and satisfaction with life, the relationship between work engagement and satisfaction with life has not been explored extensively. One such study by Hakanen and Schaufeli (2012) shows a positive relationship between work engagement and life satisfaction.

Barroso Castro et al. (2008) show that psychological empowerment has an indirect effect on the relationship between leadership and employee work attitude and Durand (2007) confirms an effect on work engagement. Several studies show that psychological empowerment indirectly effect the relationship between leadership and job satisfaction (Aryee & Chen, 2006; Dewettinck & Van Ameijde, 2010).
Positive Leadership

In the last quarter of the 20th century and into the 21st, leadership research has focused on more positive forms of leadership, such as transformational leadership (Bass, 1999), charismatic leadership (Bass & Avolio, 1993; Conger & Kanungo, 1994; Glynn & Dowd, 2008; Haney, 2012; Hunt, 1999), authentic leadership (Avolio & Gardner, 2005; Avolio, Gardner, Walumbwa, Luthans, & May, 2004) empowering leadership (Albrecht & Andreetta, 2011; Arnold, Arad, Rhoades, & Drasgow, 2000; Hakimi, Van Knippenberg, & Griessner, 2010; Konczak, Stelly, & Trusty, 2000) and servant leadership (Russell & Stone, 2002; Van Dierendonck, 2011). From the above theories and the positive psychology movement Arakawa and Greenberg (2007) describe positive leadership as a positive explanatory style that focuses on employees’ strengths, has a positive perspective on circumstances and recognises employees’ achievements.

In the past, organisations were mostly focused on fixing employees’ weaknesses and not on developing their talents (Stienstra, 2010). In an effort to clarify the concept of positive leadership, Arakawa and Greenberg (2007) postulate that a positive leader has a strengths-based approach. Linley and Harrington (2006) define strengths as “a natural capacity for behaving, thinking, or feeling in a way that allows optimal functioning and performance in the pursuit of valued outcomes” (p. 39). Linley, Govindji, and West (2007) encourage leaders and managers to create an environment where leader and employee can have a mature and meaningful conversation to understand what the employee may be best placed to do, to work from a position of strength rather than from weakness. Clifton and Harter (2003) caution that strength-based organisations do not ignore weaknesses, but rather build on talent, understand and manage weaknesses. They also indicate that employees who occupy themselves with their strengths increases performance as they are going with their own flow and do not struggle against their natural capacities.

Arakawa and Greenberg (2007) see positive perspective as a leader’s ability to de-catastrophise setbacks, to have an accurate perception of control, appropriately disengage, cope emotionally, be solution-orientated and positively interpret problems. This links closely to the concept of resiliency. Jackson and Daly (2011) emphasise that resilient leaders are able to draw on a broad range of internal and external resources. Jackson, Firtko, and Edenborough (2007) refer to resilience “as the ability of an individual to adjust to adversity,
maintain equilibrium, retain some sense of control over their environment, and continue to move on in a positive manner” (p. 3).

Arakawa and Greenberg (2007) see a positive leader as one who gives recognition to their employees’ accomplishments. Dolezalek (2008) advocates that leaders should recognise excellent performance in order to encourage more of the same in the future. According to Luthans (2000), employees place high worth on personalised, explicit and immediate social rewards such as consideration, recognition and sincere appreciation. Brun and Dugas (2008) define employee recognition as “first and foremost, a constructive response; it is also a judgment made about a person’s contribution, reflecting not just work performance but also personal dedication and engagement” (p. 727). Henryhand (2009) found that there is a positive relationship between employee recognition and job satisfaction. Employees tend to display more feelings of satisfaction towards their jobs when their efforts are recognised (Henryhand, 2009).

The benefits of a strengths-based approach and recognition are established in literature. Positive perspective as a construct has not been explored in research, thus this study will focus on strengths-based approach and recognition aspects of positive leadership.

Ilies, Morgeson, and Nahrgang (2005) suggest that leadership models should take into account the role of followers, their cognitions and their psychological states. Barroso Castro et al. (2008) confirm a correlation between leadership and psychological empowerment.

**Psychological Empowerment**

Menon’s (2001) conceptualisation of psychological empowerment, include perceptions of control, competence and goal internalisation. Spreitzer (1995) defines psychological empowerment as “a motivational construct manifested in four cognitions: meaning, competence, self-determination and impact. Together, these four cognitions reflect an active, rather than a passive orientation to a work role” (p. 1444). Empowered employees have a sense of meaning (their work is vital to them and they are concerned about their work), competence (they are confident about their capability to do their work well), self-determination (they freely choose how they do their work and are not micro-managed) and impact (they believe they have impact at work and their ideas are listened to) (Quinn &

**Work engagement**

Work engagement is the involvement of an employee in his/her job (Kahn, 1990; Roberts & Davenport, 2002; Rothmann & Jordaan, 2006). Schaufeli, Salanova, Gonzalez-Romá, and Bakker (2002) define work engagement as “a positive, fulfilling work-related state of mind that is characterised by vigour, dedication, and absorption” (p. 74). Kahn (1990) conceptualised personal engagement and personal disengagement at work and defines personal engagement as “the harnessing of organisation members’ selves to their work roles; in engagement, people employ and express themselves physically, cognitively and emotionally during role performance” (p.694). Kahn (1990) further discovered that three psychological conditions, namely, psychological meaningfulness, psychological safety and psychological availability prevail during engagement at work. While performing their jobs, employees are physically involved, cognitively attentive and emotionally attached to others (Kahn, 1990). One study established a positive link between work engagement and satisfaction with life (Korner, Reitzle, & Silbereisen, 2012), but little additional research has been done on this subject.

**Satisfaction with Life**

Pavot and Diener (1993) describe life satisfaction as a cognitive and global evaluation of one’s life as a whole, according to a person’s own unique set of criteria. Life satisfaction is the cognitive component of subjective well-being (SWB), which also consists of an affective component, including both positive and negative affect (Diener, Oishi, & Lucas, 2003). A person’s response to life satisfaction reflects a long-term perspective and may reflect conscious values and goals (Pavot & Diener, 1993). Pavot and Diener (2008) also explain that life satisfaction can be beneficial for the quality of social and marital relationships, physical health outcomes, positive mental health and success in work settings.
Climate at work has an influence on a person’s well-being (Probst, 2003). Pavot and Diener (2008) confirm that unique environmental effects have an influence on a person’s life satisfaction. Rode (2004) adds that life satisfaction is also partly conceptualised as the result of satisfaction with various life domains, such as work, family, health and work life. Work life domains (such as job satisfaction) correlate substantially to life satisfaction (Pavot & Diener, 2008) and thus it influences the integrated judgement of how a person sees their life holistically.

Based on the above discussion, the empirical study will be placed within the job demands-resources model (JD-R) (Demerouti & Bakker, 2011). The JD-R model is a theoretical framework where job demands are seen as initiators of health impairment processes and job resources are seen as initiators of a motivational process (Demerouti & Bakker, 2011). It is postulated that positive leadership is seen as a job resource which positively influences work engagement. According to Rothmann (2007), job resources are physical, psychological, social or organisational aspects of an employee’s job that may be practical in facilitating work goals, decreasing job demands and motivating personal growth and development. These aspects are also seen as the main drivers to ensure and sustain psychological availability, meaning and safety of employees (Rothmann, 2007).

The proposed model as seen in Figure 1 depicts the relationship between positive leadership, work engagement and satisfaction with life. Psychological empowerment is seen to have an indirect effect in the abovementioned relationship.

![Figure 1. The hypothesised research model](image)
Based on the problem statement, the following research questions are formulated:

- What is the relationship between positive leadership, psychological empowerment, work engagement and satisfaction with life?
- Is positive leadership related to psychological empowerment?
- Is positive leadership related to work engagement?
- Is positive leadership related to satisfaction with life?
- Does positive leadership have an indirect effect on work engagement via psychological empowerment?
- Does positive leadership have an indirect effect on satisfaction with life via psychological empowerment?

1.2 RESEARCH OBJECTIVES

The research objectives are divided into general and specific objectives.

1.2.1 General Objective

The general objective of this study is to investigate the relationship between positive leadership, work engagement and employees’ satisfaction with life in a chemical organisation in South Africa, and the possible effect of psychological empowerment on this relationship.

1.2.2 Specific Objectives

The specific objectives are:

- To conceptualise the concepts of positive leadership, work engagement, psychological empowerment and satisfaction with life from the literature and to determine the relationships that have been found in literature between these constructs.
- To determine the relationships between positive leadership, psychological empowerment, work engagement and satisfaction with life.
- To determine the relationship between positive leadership and psychological empowerment.
- To determine the relationship between positive leadership and work engagement.
• To determine the relationship between positive leadership and satisfaction with life.
• To determine whether psychological empowerment has an indirect effect on the relationship between positive leadership and work engagement.
• To determine whether psychological empowerment has an indirect effect on the relationship between positive leadership and satisfaction with life.

1.3 RESEARCH METHODS

1.3.1 Research Approach

The data for this study will be obtained through a quantitative research approach. Quantitative research is a form of conclusive research involving large representative samples and is a relatively structured data collection process (Struwig & Stead, 2001). The respondents are accessible and articulate, thus it is an availability or convenience sample (Struwig & Stead, 2001). A randomised, cross-sectional survey design, which entails structured questionnaires, will be used to collect the data (De Vos, Strydom, Fouche, & Delport, 2005).

1.3.2 Research Methods

Pertaining to the objectives of the study, the research will consist of two phases, namely, a literature review and an empirical study.

1.3.3 Literature Review

The results will be presented in the form of a research article. In the first phase, a literature review will be conducted where the main aim will be to focus on the relationship between positive leadership, psychological empowerment, work engagement and satisfaction with life. A wide range of relevant articles (1965 – 2013) will be consulted. However, the focus will be on more recent literature (2007 – 2013). To depict information relating to the aforementioned constructs, the following literature sources will be consulted:
Textbooks

- Library Catalogues
- Internet search engines (Academic Search Premier; Business Source Premier; Ebscohost; Emerald; Proquest; Google Scholar; PsycArticles; Psycinfo; Sabinet SACat; SAePublications; Science Direct)
- Psychological Journals (Journal of Personality and Social Psychology; South African Journal of Psychology)
- Electronic text and Journals
- Dissertations and theses.

1.3.4 Empirical study

The following areas will form part of the empirical study.

1.3.4.1 Participants

A convenience sample will be targeted in a specific operations business unit ($N = 700$) of a chemical organisation. The groups will consist of African, Indian, Coloured and White respondents and include males and females at different levels in the organisation. The questionnaires will be administered in English.

1.3.4.2 Measuring Instruments

The proposed measurement instruments are listed below:

*Biographical Questionnaire.* A questionnaire will be utilised to determine the biographical characteristics of the participants in the chemical industry. Characteristics that will be measured are gender, race, age, highest qualification, department, and years of service and level in the organisation.
The Positive Leadership Measure (PLM; Arakawa & Greenberg, 2007) was developed to investigate positive leadership and is a 12-item scale containing three subscales. An adapted measure will be used consisting of strengths-based approach and recognition. The questions will be answered using a five-point scale, varying from 1 (*I disagree a lot*) to 5 (*I agree a lot*). Strengths-based approach is measured by five items (e.g. “My manager appreciates my strengths”) and recognition is measured by seven items (e.g. “My manager recognises my accomplishments regularly”). The Cronbach’s alpha coefficients for the two PLM scales were: strengths-based approach = 0.86 and recognition = 0.89 (Arakawa & Greenberg, 2007).

The Measuring Empowerment Questionnaire (MEQ; Spreitzer, 1995) is a 12-item measure of psychological empowerment. Response options range from 1 (*strongly disagree*) to 7 (*strongly agree*). Sample items for each of the four sub-dimensions of psychological empowerment include: meaning which is measured by three items (e.g. “The work I do is very important to me”); competence is measured by three items (e.g. “I am confident about my ability to do my job”); self-determination is measured by three items (e.g. “I can decide on my own how to go about doing my work”), and impact is measured by three items (e.g. “my impact on what happens in my department is large”). The Cronbach’s alpha coefficients for the four MEQ scales were: meaning = 0.86; competence = 0.81; self-determination = 0.82; impact = 0.88 (Spreitzer, 1995).

The Work Engagement Scale (WES; Rothmann, 2010) will be used to measure work engagement. A seven-point frequency scale varying from 1 (*almost never or never*) to 7 (*always or almost always*) will be used. The items reflect each of the three components of Kahn’s (1990) conceptualisation of work engagement, namely cognitive, emotional and physical engagement. Cognitive engagement is measured by three items (e.g. “I am very absorbed in my work”). Emotional engagement is measured by four items (e.g. “I am passionate about my work”). Physical engagement is measured by four items (e.g. “I feel alive and vital at work”). Rothmann (2010) reported evidence for the construct validity of the WES. The Cronbach’s alpha coefficients for the three WES scales were: physical engagement = 0.80; emotional engagement = 0.82; and cognitive engagement = 0.78 (Rothmann, 2010).
The *Satisfaction with Life Scale* (SWL; Diener, Emmons, Larsen, & Griffin, 1985) was developed as a five-item measurement of an individual’s general satisfaction with life. The response is given on a seven-point scale varying from 1 (*strongly disagree*) to 7 (*strongly agree*). Illustrations of the items are: (e.g. “In most ways my life is close to my ideal”) and (e.g. “I am satisfied with my life”). The Cronbach’s alpha coefficient for the SWL scale is 0.87 (Diener et al., 1985).

### 1.3.5 Research Procedure

Written consent from the particular business unit and the company psychological forum will be obtained. A formal letter from the North-West University, which explains the purpose of the research as well as a consent letter, will be attached to the questionnaires. The formal letter and the letter of consent will give the participant an outline of the purpose of the research, why the research is important and beneficial for the individual, the business, university and participants. The collection of data will take place over 4 weeks and directly followed by the data analysis process. The questionnaire will take approximately 30 minutes to complete. The confidentiality and anonymity of the participants will be ensured and the business unit will receive a report on the findings of this research.

### 1.3.6 Statistical Analysis

The statistical analysis will be carried out with the SPSS 21 program (IBM Corporation, 2012) and the Mplus 7 statistical modelling program (Muthén & Muthén, 2011). Descriptive statistics (e.g. mean, standard deviation, skewness and kurtosis) will be used to describe the data. Cronbach’s coefficient alpha will be used to determine the construct reliability of the measuring instruments. Coefficient alphas contain important information regarding the proportion of variance of the item of a scale in terms of the total variance explained by that particular scale. A value of 0.70 is acceptable, with higher values indicating greater reliability (Pallant, 2010).

Correlation coefficients will be used to specify the relationships between the variables. The cut-off point for statistical significance will be set at \( p < 0.01 \). Effect sizes will be used to decide on the practical significance of findings (Steyn, 1999). A cut-off point of 0.30
(medium effect) will be set for the practical significance of correlation coefficients (Cohen, 1992).

Confirmatory factor analysis (CFA) will be performed to determine the validity. According to Byrne (2001), structural equation modelling is a statistical methodology that takes a hypothesis-testing approach to the analysis of theory. This hypothesised model will then be tested statistically to determine the extent to which it is consistent with the data. If the goodness-of-fit indices are at acceptable levels, the model argues for probability of relationships among the variables.

Structural equation modelling (SEM) methods, as implemented by Mplus 7 (Muthén & Muthén, 2011), will be used to examine the structural relationships between positive leadership, psychological empowerment, work engagement and satisfaction with life. Hypothesised relationships will be tested empirically for goodness of fit with the sample data. The hypothesised relationships with the data will also be tested using the following goodness-of-fit statistical techniques: Comparative-Fit Index (CFI), Tucker Lewis Index (TLI), and Root Mean Square of Approximation (RMSEA).

**1.3.7 Ethical Considerations**

Ethical clearance will be obtained from all role players before commencing with the research. A consent form will accompany the questionnaire and it will be completed anonymously to protect the privacy of every participant. Participation to the study is voluntary and confidentiality will be adhered to. This will be communicated to participants. The participants include individuals who are not vulnerable and can give informed consent.

**1.4 EXPECTED CONTRIBUTION OF THE STUDY**

The contributions are divided into three parts.

**1.4.1 Expected contribution for the organisation**

As winning with people is one of the chemical industries’ core values, the results of this study could be used to address talent management and human relationship challenges that the
organisation faces. The knowledge pertaining to positive leadership, psychological empowerment, work engagement and satisfaction with life and how these constructs inter-relate with one another could be used not only for the development of newly appointed leaders but also to help current leaders in the organisation to better understand the influence of their leadership behaviour. The results may be valuable in increasing work engagement and satisfaction with life.

1.4.2 Expected contribution to industrial/organisational literature

The results of this study will add to the body of knowledge within the South African context pertaining to the benefits of positive leadership. The study will enhance understanding of the effect of positive leadership, psychological empowerment and the influence of these constructs on employees’ work engagement and satisfaction with life in a chemical environment.

1.4.3 Expected contribution for the individual

The results may provide insight into positive leadership principles and how they contribute to the creation of positive work places. Leadership development is a strong focus area in the chemical industry and the results of the study may assist in the understanding of the terms, positive leadership, psychological empowerment, work engagement and satisfaction with life.
1.5 CHAPTER DIVISION

Chapter 1: Introduction
Chapter 2: Research Article
Chapter 3: Conclusion, Limitations and Recommendations

1.6 CHAPTER SUMMARY

This chapter provided the motivation for this study into the relationships between positive leadership, psychological empowerment, work engagement and satisfaction with life. It outlined the challenges which organisations and their leaders face and it gave a synopsis of each variable and the relationships between them. Research questions were derived from the literature and the research objectives were set for this study. The research design, participants, collection of data, the measuring instruments and ethical issues were addressed.

Chapter two will focus comprehensively on the variables of positive leadership, psychological empowerment, work engagement and satisfaction with life through a literature study. The statistical analyses will reveal the findings of the study and a discussion on these findings will conclude this chapter.

In the third chapter, a summary of the variables will be given and limitations and recommendations will be discussed to conclude this study.
REFERENCES


Krueger, J., & Killham, E. (n.d). *At work, feeling good matters: Happy employees are better equipped to handle workplace relationships, stress and change according to the latest GMJ survey*. Retrieved from http://gmj.gallup.com/content/20311/Work-Feeling-Good-matters.aspx#1


Chapter 2
Research article
INVESTIGATING POSITIVE LEADERSHIP, PSYCHOLOGICAL EMPOWERMENT, WORK ENGAGEMENT AND SATISFACTION WITH LIFE IN A CHEMICAL INDUSTRY

ABSTRACT

Title: Investigating positive leadership, psychological empowerment, work engagement and satisfaction with life in a chemical industry

Key words: Positive leadership, psychological empowerment, work engagement, satisfaction with life, strengths-based approach, positive perspective, recognition

Research purpose: The objective of this study was to investigate the relationship between positive leadership, psychological empowerment, work engagement and satisfaction with life of employees in a chemical industry in South Africa and the possible effect of psychological empowerment on this relationship.

Research design, approach and method: A cross-sectional survey design was used with a convenience sample (n = 322). Confirmatory factor analysis was used to test whether the measures of the constructs were consistent with the understanding of the nature of the constructs and to test whether the data fitted the hypothesised measurement model. Structural Equation Modelling (SEM) was used to examine the structural relationships between the constructs.

Main findings: The results show that there are significant relationships between positive leadership, psychological empowerment, work engagement and satisfaction with life. Positive leadership influence work engagement and satisfaction with life via psychological empowerment. The work related aspects of positive leadership, psychological empowerment and work engagement has a positive effect on the non-work related aspect of satisfaction with life.

Practical implications: It is recommended that leadership discussions, short training programs and individual coaching about positive leadership and particularly psychological empowerment takes place. Directions for future research are offered in terms of further exploring positive leadership and the effect of work related variables on non-work related variables.
Kim Cameron, a leading positive organisational scholar, has said, “Business leaders give more attention to the negative than to the positive, especially in trying times” (Cameron, 2010, p. 45). Trying times are not the exception anymore, but the norm. The world economy is still struggling, as seen from recent reports on the United States of America and the European economies (Appelbaum, 2012; Brittain, 2012; Inman, 2013). The growth in South Africa was slower in 2012 due to the sustained weakness in the global economy and domestic structural constraints (African Economic Outlook, 2012). Ben Bernanke, the USA Federal Reserve Chairman, made a case for further economic progress and indicated that particular emphasis must be placed on the labour market (Appelbaum, 2012).

In tough times, when organisations are forced to weather change, recession and downsizing, leaders are called to take responsibility for clear, effective and principled leadership (Blackie, 2012). They have a special responsibility to provide as much stability and safety as possible for their employees (Cone, 2012). Purnell and Johnson (2008) emphasise that keeping employees well and employed has obvious advantages for both the organisation and the employees. For the organisation it means productive employees, profits and greater competitiveness and for the employee it means a safeguard against financial suffering, promoting a better quality of life and allowing them to make the most of their potential (Purnell & Johnson, 2008).

Quality of life is the domain of positive psychology and according to Donaldson and Ko (2010), this field of psychology has blossomed since its introduction at the 1998 American Psychological Association convention. Seligman and Csikszentmihalyi (2000) set forth the focus areas of positive psychology: On an individual level it is about positive traits and its aim is to study what is right with people, what they do right and how they manage to do it right (Compton, 2005). In an organisational context, components can include positive leadership (Arakawa & Greenberg, 2007; Avolio & Gardner, 2005; Avolio, Gardner, Walumbwa, Luthans, & May, 2004; Bass, 1999; Cameron, 2008; Conger & Kanungo, 1994; Glynn & Dowd, 2008; Van Dierendonck, 2011), psychological empowerment (Menon, 2001; Mishra & Spreitzer, 1998; Quinn & Spreitzer, 1997; Spreitzer, 1995), work engagement (Khan, 1990; May, Gilson, & Harter, 2004; Schaufeli, Salanova, Gonzalez-Romá, & Bakker, 2002) and satisfaction with life (Lucas, Diener, & Suh, 1996; Pavot & Diener, 1993; Rojas, 2006; Sirgy & Wu, 2009).
Positive organisational psychology focuses on individual experiences and characteristics in the workplace and organisations and it is used to expand the efficacy and quality of life in organisations (Donaldson & Ko, 2010). Positive organisational behaviour (POB) focuses on positive psychological capacities (PsyCap) that can be measured, developed and managed, as well as on the study and application of positive human resources strengths (Luthans, 2002). Positive organisational scholarship (POS) on the other hand focuses on positive results, methods and qualities of organisations and their employees (Cameron, Dutton, & Quinn, 2003).

It is in this field of research wherein the concept of positive forms of leadership is settled. Arakawa and Greenberg (2007) see positive leaders as those that influence their followers positively and therefore increase their engagement and wellbeing (Krueger & Killham, n.d). They expound that a positive leader has an optimistic explanatory style, which is linked to a wide range of positive performance results in the work domain (Nolan-Hoeksema, Girgus, & Seligman, 1986; Peterson & Barrett, 1987; Peterson & Seligman, 1984), as well as better involvement, commitment, motivation and satisfaction of employees (Furnham, Brewin, & O'Kelly, 1994; Furnham, Sadka, & Brewin, 1992). Dasborough and Ashkanasy (2002) contend that the consequence of leaders who show positive emotions and have a positive attribution style result in followers that have more favourable emotional reactions towards leadership. Fredrickson’s (2001) broaden-and-build theory supports this and explains that positive emotions broaden the thought-action repertoires of followers and build enduring personal resources.

Positive leaders focus on an overall positive treatment of, and approach towards their followers and Bandura (2001) put forward that environmental factors such as leadership characteristics greatly influence intrapersonal, cognitive and motivational processes of individuals. It is hypothesised that positive leaders influence their followers’ psychological empowerment, work engagement and satisfaction with life. Quinn and Spreitzer (1997) emphasise that psychological empowerment is not something that management can do to their employees, but it is the employees’ mind-set regarding their role in their organisation. Employees choose to be empowered, but management can create a context that is more empowering (Quinn & Spreitzer, 1997). Spreitzer (1995) acknowledges that high-performance managerial practices are likely to facilitate psychological empowerment of employees, as all four cognitions (meaning, competence, self-determination and impact) are
affected. Several studies have linked leadership to psychological empowerment of employees (Barroso Castro, Villegas Perinan, & Casillas Bueno, 2008; Kark, Shamir, & Chen, 2003; Seibert, Wang, & Courtright, 2011).

Arakawa and Greenberg (2007) posit that positive leadership (strengths-based approach, positive perspective and recognition) will positively relate with work engagement. Leadership has a great impact on an employee’s perception of the safety to engage themselves fully at work (Alok & Isreal, 2012; Kahn, 1990; Krueger & Killham, n.d.; May et al., 2004). If an employee feels that their leader is supportive, resilient and has a clear explanatory style, they are more willing to engage even when circumstances are not ideal (Kahn, 1990). On the other hand, leaders who are unpredictable, inconsistent and reluctant to hand over control instil the message that employees are not to be trusted (Kahn, 1990). May et al. (2004) showed that supervisory relations had the strongest effect on psychological safety, indicating how strong a role leadership plays towards an employee’s cognitive, emotional and physical engagement levels.

Satisfaction with life theory is seen as part of the subjective or general wellbeing theory and is rarely included in the work domain research (Erdogan, Bauer, Truxillo, & Masfield, 2011; Hakanen & Schaufeli, 2012). As work constitutes a large part of a person’s life, it can be said that it affects a person’s wellbeing (Russell, 2008). Rode (2004), as well as Pavot and Diener (2008), indicate that life satisfaction is partly conceptualised as the result of satisfaction with various life domains, such as work. Stress and fatigue cause negative spill over into home life (Bartolome & Evans, 1980), but very little is known about positive spillover (Spreitzer, 2007). Spreitzer (2007) suggests the possibility of positive spillover from thriving at work to thriving at home. She indicates this as a “fertile” area for future research (p. 79).

Qu and Zhao (2012) confirm that there is a natural spillover effect between job and life satisfaction. In a search of the literature, no direct links between leadership and satisfaction with life could be found. However, while job satisfaction as a work life domain correlates with life satisfaction (Pavot & Diener, 2008), research confirming correlations between leadership and job satisfaction can be accepted. Several authors found that transformational leadership, a positive form of leadership, influences job satisfaction (Braun, Peus, Weisweiler, & Frey, 2013; Munir, Rahman, Malik, & Ma’amor, 2012; Weberg, 2010). It also
seems that strengths-based leadership influences subjective well-being (of which satisfaction with life is a component) (Diener, 2000; Peterson, 2002).

It is hypothesised that psychological empowerment will have an indirect effect on the relationship between positive leadership, work engagement and satisfaction with life. Several authors confirm a relationship between psychological empowerment and work engagement (Bhatnagar, 2012; De Villiers & Stander, 2011; Durand, 2007), while psychological empowerment was found to have an indirect effect on the relationship between transformational leadership and employee attitudes (Barroso Castro et al., 2008), especially work engagement (Durand, 2007). Psychological empowerment was found to have an indirect effect between leadership and job satisfaction (which has been established is correlated to satisfaction with life) (Aryee & Chen 2006; Dewettinck & Van Ameijde, 2011; Durand, 2007).

**Positive leadership**

Positive leadership theories that form part of the positive-orientated leadership genre are: authentic (Avolio & Gardner, 2005; Gardner, Avolio, Luthans, May, & Walumbwa, 2005); POS’s positive leader (Cameron, 2008); transformational (Bass, 1999); charismatic (Conger & Kanungo, 1994; Glynn & Dowd, 2008; Haney, 2012); empowering leader (Albrecht & Andreetta, 2011; Arnold, Arad, Rhoades, & Dragow, 2000; Hakimi, Van Knippenberg, & Griessner, 2010; Konczak, Stelly, & Trusty, 2000) and servant leader (Russell & Stone, 2002; Van Dierendonck, 2011).

Gardner et al. (2005) conceptualise authentic leadership as part of POB and posit that these leaders draw from PsyCap, which accompanies optimal self-esteem and psychological well-being to model and stimulate the development of these states in others. The PsyCap of authentic leaders fits well with Arakawa and Greenberg’s (2007) conceptualisation of positive leadership in that they focus on leaders who develop their followers, have a positive outlook (hope and optimism) and are resilient in dealing positively with employees and problems in the workplace (Avolio & Gardner, 2005). Positive leadership promotes individuals and organisations, emphasises what goes right with them, what gives them life, what is experienced as good, what is inspiring to them and what is extraordinary (Cameron, 2008). Arakawa and Greenberg’s (2007) view of positive leadership accompanies Cameron’s
Transformational leaders arouse followers through idealised influence and inspirational motivation (Bass, 1999). They intellectually stimulate their followers by managing them as individuals (Bass, 1999), which supports Arakawa and Greenberg’s (2007) view of focusing on individuals and recognising their efforts. In relation to Arakawa and Greenberg’s (2007) positive perspective of leadership, charismatic leaders have the notable ability to recast circumstances in a positive light, providing their followers with a mission to follow (Glynn & Dowd, 2008). They influence their followers with the power of their optimism and they have the ability to keep going forward in difficult circumstances (Arakawa & Greenberg, 2007; Haney, 2012). Arakawa and Greenberg (2007) posit that positive leaders have great resiliency.

Empowering leaders lead by example, provide employees with accountability, development, autonomy, decision latitude, discretion and power, concern, coaching and information (Albrecht & Andreetta, 2011; Arnold, Arad, Rhoades, & Drasgow, 2000; Konczak, Stelly, & Trusty, 2000; Pearce & Sims, 2002). These behaviours strongly correlate with Arakawa and Greenberg’s (2007) positive leaders’ strength-based approach and giving recognition. From a summary of literature, Russell and Stone (2002) propose that servant leaders have vision, honour, conviction, appreciation for others and have empowerment. Positive leaders focus on the strengths of their followers and build and encourage those strengths (Arakawa & Greenberg, 2007). Servant leaders stimulate personal growth in terms of self-actualisation of their followers, they encourage becoming well, wiser, at liberty and more self-directed in terms of positive job attitudes and they inspire their followers to become servants themselves (Van Dierendonck, 2011).

In an attempt to clarify further the concept of positive leadership, Arakawa and Greenberg (2007) endeavoured to operationalise the positive (optimistic) leadership role of managers in an organisation by developing a reliable and valid questionnaire, which measures perceived behavioural attributes. These behavioural attributes consist of strengths-based approach, positive perspective and recognition (Arakawa & Greenberg, 2007).
Several studies indicate that greater *strengths* use of employees was related to well-being, optimism, vitality, self-esteem, positive affect and lower perceived stress (Diener, 2000; Peterson, 2002; Proctor, Maltby, & Linley, 2010; Wood, Linley, Maltby, Kashdand, & Hurling, 2011). According to Rath and Conchie (2008), leaders who focus on follower’s strengths, build a well-rounded team of followers with complementary strengths and they understand the needs of followers. Strengths-based development is defined by Stienstra (2010), as “a positive organisational approach that stimulates and appreciates the use of employees’ strengths, derived through a process of identification and development of talents into strengths, to enlarge both individual and organisational outcomes” (p. 8). Managers who employ a strength-based approach instead of a deficit-based approach, have more success and they create environments where employees can use their talents, ensuring a more productive and engaged work unit (Clifton & Harter, 2003). The benefits of playing to our strengths as Park, Peterson, and Seligman (2005) confirm, is that it enhances well-being as we are doing what we are naturally good at. It also generates feelings of autonomy, competence, confidence and self-esteem (Linley & Harrington, 2006).

A leader’s *positive perspective* or optimistic explanatory style is the way they perceive and interpret adversity and how they relate to the world (Mak, Ng, & Wong, 2011). It is characterised by Arakawa and Greenberg (2007), as a leader’s ability to have accurate perception of control, to de-catastrophise setbacks, to cope emotionally, be solution-orientated and positively interpret problems. Peterson and De Avila (1995) postulate that an optimistic explanatory style allows individuals to expect that they can do things to prevent bad events. It is related to resiliency and resilient leaders are seen as having high self-esteem (Benetti & Kambouropoulos, 2006) and self-confidence (Klohnen, 1996). Smokowski, Reynolds, and Bezruczko (1999) and Wang (2009) suggest that having high regard pushes these resilient individuals to persevere and stand in times of struggle, enabling them to have a positive view of their world, seeing opportunities in these times and finding solutions more easily. Jackson and Daly (2011) postulate that resilient leaders are able to survive and thrive in a context of workplace difficulty and adversity, they model behaviour that will enhance employees’ ability to survive and thrive.

Brun and Dugas (2008) describe *recognition* as a constructive response by a leader that takes into consideration not just work performance, but also commitment and engagement. According to Luthans (2000), effective leadership depends on strengthening, encouraging and
rewarding value enhancing behaviours in order to gain greater performance. Dolezalek (2008) emphasises that the recognition a leader gives to employees, should be customised, meaningful and timely. Grawitch, Gottschalk, and David (2006) found that employee recognition is the key to protecting and building the uniqueness of individuals, giving their work meaning, supporting their development and contributing to their health and well-being. Employees tend to display more feelings of satisfaction towards their jobs when their efforts are recognised (Henryhand, 2009).

Arakawa and Greenberg’s (2007) conceptualisation of positive leadership included positive perspective, but this construct has not been developed further in research, thus this study focuses on the strengths-based and recognition aspects of positive leadership which has enjoyed more attention in the literature.

Positive forms of leadership have been shown to have positive outcomes for followers and organisations, such as follower positivity, performance, engagement, job satisfaction and well-being (Avey, Avolio, & Luthans, 2011; Arakawa & Greenberg, 2007; Kelloway, Weigand, McKee, & Das, 2012; Tsai, 2011). Ilies, Morgeson, and Nahrgang (2005) put forward that leadership models should take into account the role of followers, their cognitions and their psychological states. Psychological empowerment initiatives have been a popular idea for managers to implement in the workplace (Harris, Wheeler, & Kacmar, 2009).

**Psychological empowerment**

To empower, means to give power to someone (Thomas & Velthouse, 1990). Conger and Kanungo (1988) see empowerment as the process of enhancing feelings of self-efficacy through management, using empowerment strategies. Thomas and Velthouse (1990) conceptualise psychological empowerment as a cognitive model, including meaning, competence, choice and impact. Other theories regarding psychological empowerment include Menon’s (2001) conceptualisation of psychological empowerment, which is characterised by perceptions of control, competence and goal internalisation. Following this, Spreitzer (1995) demonstrates that the psychological states, namely, meaning, competence, self-determination and impact, constitute psychological empowerment and employees need this to feel a sense of control relative to their work (Spreitzer, 2007). Psychological empowerment is a motivational construct and together the four cognitions reveal an energetic
rather than a lifeless orientation to a work role, meaning that the employee feels able and wishes to form their work role and situations (Spreitzer, 1995; Thomas & Veldthouse, 1990).

*Meaning* reflects that an employee feels their work is essential and they care about what they are doing (Quinn & Spreitzer, 1997), while Mishra and Spreitzer (1998) describe meaning as dedication or personal association to work. *Competence* means that employees feel that they can perform (Quinn & Spreitzer, 1997) and they believe that they have the skills and ability to do their work well (Mishra & Spreitzer, 1998). Perceived *self-determination* is when employees experience freedom to choose how they do their work (Quinn & Spreitzer, 1997). Finally, *impact* means that employees believe that they influence the system in their organisation (Mishra & Spreitzer, 1998), have influence and others listen to them (Quinn & Spreitzer, 1997). A number of studies have ascertained a positive relationship between psychological empowerment and work engagement (De Villiers & Stander, 2011; Mendes & Stander, 2011; Stander & Rothmann, 2010).

**Work engagement**

Erickson (2005) describes engagement as commitment and compassion while other authors describe employee engagement as the degree to which employees are involved in their work (Kahn, 1990; Roberts & Davenport, 2002; Rothmann & Jordaan, 2006), or as Erickson (2005) puts it, the willingness to invest oneself to help the employer be successful. Schaufeli et al., (2002) describe another view of work engagement and they define work engagement as “a positive, fulfilling work-related state of mind that is characterised by vigour, dedication, and absorption” (p. 74). Vigour expresses itself through high energy and mental resilience, dedication shows a high level of both cognitive and affective involvement and absorption indicates a passing of time fully immersed in one’s work (Schaufeli et al., 2002). Kahn (1990) describes personal engagement as connecting oneself to a work role and bringing all cognitive, emotional and physical faculties to this role and role performance (Kahn, 1990). He proposes that employees utilise preferred dimensions in suitable circumstances and that they are then energised to become *cognitively* vigilant, empathically or *emotionally* connected to others in progress of role performance and *physically* involved (Kahn, 1990).

In Kahn’s (1990) research, he induced three psychological conditions that influence employees to personally engage or disengage, namely, meaningfulness, safety and
availability (Kahn, 1990). An employee experiences psychological meaningfulness if they feel that they obtain a return on their cognitive, emotional and physical investments (Kahn, 1990). Psychological safety is experienced if the employee feels able to safely engage themselves in a work role without fearing undesirable consequences to their status, self-image or career (Kahn, 1990). Lastly, when employees experience psychological availability, they feel that they have the cognitive, emotional and physical resources to engage personally in a work role (Khan, 1990). Limited evidence is available about the relationship between work engagement and satisfaction with life. Hakanen and Schaufeli (2012) and Korner, Reitzle, and Silbereisen (2012) found that work engagement has a positive effect on life satisfaction.

**Satisfaction with life**

The satisfaction with life construct is a component of the subjective well-being (SWB) construct, together with positive and negative affect (Arthaud-Day, Rode, Mooney, & Near, 2005). Conscious cognitive satisfaction with life judgements are done by individuals by assessing the overall quality of their lives based on their own distinct set of measures (Pavot & Diener, 1993). From the life domains literature it can be understood that life satisfaction is the result of satisfaction from various domains of life (Meadow, Mentzer, Rahtz, & Sirgy, 1992; Rampichin & D’Andrea, 1998; Salvatore & Munoz-Sastre, 2001; Veenhoven, 1996). As life is the sum of time spent on and at work, the interaction between life and job satisfaction is crucial (Dogan, Deniz, Odabas, Ozyesil, & Ozgirgin, 2009). Rojas (2006) established that a relatively high correlation exists between life and job satisfaction. Sirgy and Wu (2009) suggest that to satisfy the full range of human requirements, employees need to be involved in multiple domains of life. Kinnunen, Feldt, Geurts, and Pulkkinen (2006) found that well-being, both at work and in general, were positively influenced by work-to-family spillover in certain circumstances.

The empirical study will be placed within the job demands-resources model (JD-R) (Demerouti & Bakker, 2011), which is a theoretical framework where job demands are seen as initiators of health impairment processes and job resources are seen as initiators of a motivational process (Demerouti & Bakker, 2011). A job resource is seen as an occupational resource that facilitates the fulfilment of organisational outcomes and goals (Demerouti &
Bakker, 2011); therefore positive leadership is seen as a job resource which positively influences work engagement.

AIM OF STUDY

The general aim of this study was to investigate the relationship between positive leadership, psychological empowerment, work engagement and employees’ satisfaction with life in a chemical organisation in South Africa, and the possible effect of psychological empowerment on this relationship.

HYPOTHESES

Based on the model, the following hypotheses have been formulated:

H₁: Positive leadership is significantly positively related to psychological empowerment.
H₂: Positive leadership is significantly positively related to work engagement.
H₃: Positive leadership is significantly positively related to satisfaction with life.
H₄: Positive leadership has an indirect effect on work engagement via psychological empowerment.
H₅: Positive leadership has an indirect effect on satisfaction with life via psychological empowerment.

The hypothesised model is represented in Figure 1. The relationship between positive leadership, work engagement and satisfaction with life is shown. Psychological empowerment is depicted as having an indirect effect on the stated relationship.

![Figure 1. The hypothesised research model](image-url)
RESEARCH METHOD

Research design

A quantitative research methodology was followed for this research project (Struwig & Stead, 2001). A randomised, cross-sectional convenience survey design, which entails structured questionnaires, was used to collect the data (De Vos, Strydom, Fouche, & Delport, 2005; Terre Blanche, Durrheim, & Painter, 2006).

Participants

A convenience sample was targeted in a specific operations business unit (N = 700) of a chemical organisation and included managers, supervisors, administrative staff and professional human resources practitioners. Of the 700 questionnaires that were distributed 322 (46%) were returned. Table 1 presents the demographic characteristics of these participants.
The study population consisted of 92.5% male participants with females representing 7.5% of the sample. The white participants consisted of 53.7% and the African participants of 42.2%. Most of the participants were between the ages of 26-35 years (32%), while 29.5% reported a grade 12 qualification and 31.7% of the population reported NQF 4 levels. A total of 42.2% worked in the electrical generation and distribution area. Participants reported 30.7% less than 5 years’ experience.
Measuring instruments

Biographical Questionnaire. A questionnaire will be utilised to determine the biographical characteristics of the participants in the chemical industry. Characteristics that will be measured are gender, race, age, highest qualification, department, and years of service and level in the organisation.

The Positive Leadership Measure (PLM; Arakawa & Greenberg, 2007) was developed to investigate positive leadership and consists of a 12-item scale with three subscales. An adapted measure was used consisting of strengths-based approach and recognition. The items were answered using a five-point scale, varying from 1 (I disagree a lot) to 5 (I agree a lot). Strengths-based approach was measured by five items (e.g. “My manager appreciates my strengths”) and recognition measured by seven items (e.g. “My manager recognises my accomplishments regularly”). The Cronbach’s alpha coefficients for the two PLM scales are: strengths-based approach = 0.86 and recognition = 0.89 (Arakawa & Greenberg, 2007).

The Measuring Empowerment Questionnaire (MEQ; Spreitzer, 1995) is a 12-item measure of psychological empowerment. Response options range from 1 (strongly disagree) to 7 (strongly agree). Sample items for each of the four sub-dimensions of psychological empowerment included: Meaning was measured by three items (e.g. “The work I do is very important to me”); competence measured by three items (e.g. “I am confident about my ability to do my job”); self-determination measured by three items (e.g. “I can decide on my own how to go about doing my work”), and impact measured by three items (e.g. “My impact on what happens in my department is large”). The Cronbach’s alpha coefficients for the four MEQ scales are: meaning = 0.86; competence = 0.81; self-determination = 0.82; impact = 0.88 (Spreitzer, 1995).

The Work Engagement Scale (WES; Rothmann, 2010) was used to measure work engagement on a seven-point frequency scale varying from 1 (almost never or never) to 7 (always or almost always). The items reflected each of the three components of Kahn’s (1990) conceptualisation of work engagement, namely cognitive, emotional and physical engagement. Cognitive engagement was measured by three items (e.g. “I am very absorbed in my work”), emotional engagement by four items (e.g. “I am passionate about my work”) and physical engagement by four items (e.g. “I feel alive and vital at work”). Rothmann (2010)
reported evidence for the construct validity of the WES. The Cronbach’s alpha coefficients for the three WES scales are: physical engagement = 0.80; emotional engagement = 0.82; and cognitive engagement = 0.78 (Rothmann, 2010).

The Satisfaction with Life Scale (SWL; Diener, Emmons, Larsen, & Griffin, 1985) was developed as a five item measurement of an individual’s general satisfaction with life. The response is given on a seven-point scale varying from 1 (strongly disagree) to 7 (strongly agree). Examples of the items were: (e.g. “In most ways my life is close to my ideal”) and (e.g. “I am satisfied with my life”). The Cronbach’s alpha coefficient for the SWL scale was 0.87 (Diener et al., 1985).

**Procedure and Ethics**

The research project was assessed and accepted by the Ethics Committee of the North-West University (Vaal Triangle Campus). Written consent from the particular business unit and the company’s psychological forum were obtained. A formal letter from the University, which explains the purpose of the research and a consent letter were attached to the questionnaires. The formal letter and the letter of consent were given to the participants to outline the purpose of the research, why the research is important and beneficial for the individual, business and the university. The confidentiality and anonymity of the participants was ensured.

**Statistical analysis**

The raw data was converted by means of the SPSS 21 (IBM Corporation, 2012) program for further analysis of descriptive statistics. Cronbach’s alpha coefficients (α), which determine the reliability of the measuring instruments and Pearson product-moment correlation coefficients, which specify the relationships between the variables were calculated. The effect sizes as described by Steyn (1999) were used to determine the practical significance of the findings. The practical significant cut-off point for correlation coefficients was set at $p \geq 0.30$ which signifies a medium effect and $p \geq 0.50$ for a large effect (Cohen, 1998; Steyn, 1999).

Schreiber (2008) describes structural equation modelling (SEM) as a useful technique to analyse a variety of data, designs and models and in this study it was implemented through
the Mplus statistical modelling program (Muthén & Muthén, 2011). SEM was used in order to answer the research questions, to test the hypothesised model (Figure 1) and was applied to test the adequacy of the measurement and structural model.

Confirmatory factor analysis (CFA) was conducted in Mplus 7 (Muthén & Muthén, 2011), which is a flexible software package for handling categorical data for latent variable modelling. The conventional estimation methods, such as Maximum Likelihood and General Least Squares estimation are not appropriate to handle categorical data due to the underlying multivariate normality assumption. In this situation, the data was categorical and the Weighted Least Squares estimations indices were preferred in this study (Muthén & Muthén, 2011). A two-step, model-building procedure was used to test the hypothesised model through testing the measurement model and the structural model.

SRMR, AIC and BIC indices were not used as the data was categorical. In order to establish the goodness of fit, the indices used in the study were as follow: Absolute fit indices included the Chi-square ($\chi^2$) statistic, which specify the absolute fit of the model and Root-Mean-Square Error of Approximation (RMSEA). The incremental fit indices included the (TLI) Tucker-Lewis Index and the (CFI) Comparative Fit Index (Hair, Black, Babin, & Anderson, 2010). RMSEA values <0.05 indicate a close fit between the model and the data (Hair, et al., 2010). Acceptable values for the TLI and CFI indices are >0.90.

Indirect effects were evaluated through the procedure explained by Hayes (2009). Bootstrapping was used to construct two-sided bias-estimated confidence intervals to evaluate mediation effects. The statistical significance of bootstrap-estimated indirect effects was assessed (Preacher & Hayes, 2009) and the bootstrap confidence intervals (5000 trials) were set at 95% for all indirect effects and computed to assess whether they included zeros.

**RESULTS**

**Testing the Measurement model**

A hypothesised ten-factor measurement model was tested, using confirmatory factor analysis (CFA), to assess whether each of the measurement items would load significantly onto the scales with which they were associated. In line with the recommendation of Hair et al.
each latent variable included two to four observed variables. The correlations in Table 3 were scrutinised for multicollinearity and no relationships > 0.90 were found (Field, 2005). Six measurement models were tested.

Model 1a consisted of four latent variables, namely, a) positive leadership, consisting of two latent variables, that is, strength-based approach (measured by five observed variables) and recognition (measured by seven observable variables, b) psychological empowerment, consisting of four latent variables, namely, meaning (measured by three observed variables), competence (measured by three observed variables), self-determination (measured by three observed variables) and impact (measured by three observed variables); c) work engagement, consisting of three latent variables, namely, cognitive engagement (measured by three observed variables), emotional engagement (measured by four observed variables) and physical engagement (measured by four observed variables), and d) satisfaction with life (measured with five observed variables).

Models 1b, 1c, 1d, 1e and 1f followed the same template as model 1a. In model 1b, all observable variables were loaded onto one factor to test fit. In model 1c, all observable variables to do with positive leadership were loaded directly onto positive leadership without distinguishing between strength-based approach and recognition. In model 1d, all observable variables to do with psychological empowerment were loaded directly onto psychological empowerment without distinguishing between meaning, competence, self-determination and impact. In model 1e, all observable variables to do with work engagement were loaded onto work engagement without distinguishing between cognitive, emotional and physical engagement. Lastly, in model 1f all observable variables to do with psychological empowerment and work engagement were loaded onto one factor without distinguishing between psychological empowerment and work engagement. The fit statistics for testing the various models are presented in Table 2.
Table 2

Fit Statistics of Measurement Models

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>$df$</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1a</td>
<td>1481.82*</td>
<td>614</td>
<td>0.92</td>
<td>0.97</td>
<td>0.07</td>
</tr>
<tr>
<td>Model 1b</td>
<td>7164.97</td>
<td>629</td>
<td>0.72</td>
<td>0.74</td>
<td>0.18</td>
</tr>
<tr>
<td>Model 1c</td>
<td>1545.54</td>
<td>616</td>
<td>0.96</td>
<td>0.96</td>
<td>0.07</td>
</tr>
<tr>
<td>Model 1d</td>
<td>2252.64</td>
<td>618</td>
<td>0.93</td>
<td>0.94</td>
<td>0.09</td>
</tr>
<tr>
<td>Model 1e</td>
<td>1607.49</td>
<td>617</td>
<td>0.96</td>
<td>0.96</td>
<td>0.07</td>
</tr>
<tr>
<td>Model 1f</td>
<td>3525.48</td>
<td>624</td>
<td>0.88</td>
<td>0.88</td>
<td>0.12</td>
</tr>
</tbody>
</table>

$Df$ = degrees of freedom; TLI = Tucker-Lewis; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation.

A $\chi^2$ value of 1481.82 ($df = 614$) was obtained for measurement model 1a and the fit statistics were acceptable for: TLI = 0.96, CFI = 0.97 and RMSEA = 0.07. The hypothesised model (Model 1a) had an acceptable fit with the data. Standardised coefficients ranged from 0.72 to 0.93. The results show that the correlation between each observable variable and its corresponding construct was statistically significant ($p < 0.01$), establishing the relationships among indicators and constructs (Hair et al., 2010). The measurement models could not be directly compared as the data was categorical. Measurement Model 1a had a good fit with the data.

Evaluating the Structural Model

Descriptive Statistics

In Table 3, the descriptive statistics and Cronbach’s alpha coefficients for all variables are reported. The Cronbach’s alpha coefficients ranged from 0.72 to 0.93. According to Nunnaly and Bernstein (1994), Cronbach’s alphas of 0.70 are acceptable in statistical analyses of social sciences. The limitations of alphas are recognised when working with latent variables (Gu, Little, & Kingston, 2013; Raykov, 2004). Alternative methods to determine reliability could not be used as a result of the nature of the estimator used in Mplus (Muthén & Muthén, 2011). The means, standard deviations and Pearson correlations are shown in Table 3. All scales showed adequate internal consistencies.
Table 3

**Descriptive Statistics, Alpha coefficients, and Correlations**

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>α</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Positive leadership</td>
<td>3.60</td>
<td>0.99</td>
<td>0.86</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>2. PL Strength-based</td>
<td>3.53</td>
<td>0.96</td>
<td>0.90</td>
<td>0.87***</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>3. PL Recognition</td>
<td>5.81</td>
<td>1.39</td>
<td>0.91</td>
<td>0.98***</td>
<td>0.86***</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>4. Psychological Empowerment</td>
<td>6.15</td>
<td>1.02</td>
<td>0.84</td>
<td>0.45***</td>
<td>0.39***</td>
<td>0.44***</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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<td>-</td>
<td></td>
</tr>
<tr>
<td>5. PE Meaning</td>
<td>4.81</td>
<td>1.63</td>
<td>0.88</td>
<td>0.36**</td>
<td>0.31***</td>
<td>0.35***</td>
<td>0.80***</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>6. PE Competence</td>
<td>5.71</td>
<td>1.22</td>
<td>0.81</td>
<td>0.35***</td>
<td>0.30***</td>
<td>0.34***</td>
<td>0.77***</td>
<td>0.61***</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>7. PE Impact</td>
<td>4.57</td>
<td>1.30</td>
<td>0.72</td>
<td>0.32***</td>
<td>0.28**</td>
<td>0.32***</td>
<td>0.72***</td>
<td>0.57***</td>
<td>0.55***</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>8. PE Self-determination</td>
<td>5.60</td>
<td>1.42</td>
<td>0.93</td>
<td>0.83***</td>
<td>0.33***</td>
<td>0.38***</td>
<td>0.85***</td>
<td>0.68***</td>
<td>0.66***</td>
<td>0.61***</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>9. Work Engagement</td>
<td>5.28</td>
<td>1.42</td>
<td>0.92</td>
<td>0.45***</td>
<td>0.39***</td>
<td>0.44***</td>
<td>0.71***</td>
<td>0.57***</td>
<td>0.55***</td>
<td>0.51***</td>
<td>0.61***</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>10. WE Cognitive</td>
<td>4.39</td>
<td>1.13</td>
<td>0.92</td>
<td>0.32***</td>
<td>0.28***</td>
<td>0.32***</td>
<td>0.51***</td>
<td>0.41***</td>
<td>0.40***</td>
<td>0.37***</td>
<td>0.44***</td>
<td>0.72***</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>11. WE Emotional</td>
<td>3.56</td>
<td>0.92</td>
<td>0.87</td>
<td>0.43***</td>
<td>0.37***</td>
<td>0.42***</td>
<td>0.69***</td>
<td>0.55***</td>
<td>0.53***</td>
<td>0.50***</td>
<td>0.60***</td>
<td>0.97***</td>
<td>0.70***</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>12. WE Physical</td>
<td>5.62</td>
<td>1.03</td>
<td>0.77</td>
<td>0.43***</td>
<td>0.37***</td>
<td>0.42***</td>
<td>0.69***</td>
<td>0.55***</td>
<td>0.53***</td>
<td>0.49***</td>
<td>0.58***</td>
<td>0.96***</td>
<td>0.69***</td>
<td>0.93***</td>
<td>-</td>
</tr>
<tr>
<td>13. Satisfaction with life</td>
<td>5.20</td>
<td>1.20</td>
<td>0.84</td>
<td>0.32***</td>
<td>0.28**</td>
<td>0.31***</td>
<td>0.47***</td>
<td>0.38***</td>
<td>0.36***</td>
<td>0.34***</td>
<td>0.40***</td>
<td>0.43***</td>
<td>0.31***</td>
<td>0.42***</td>
<td>0.41***</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

†Correlation is practically significant $r > 0.30$ (medium effect)

††Correlation is practically significant $r > 0.50$ (large effect)
**Correlations**

Table 3 indicates that positive leadership has statistically and practically significant correlations with all the constructs (Positive leadership, psychological empowerment, work engagement and satisfaction with life). The practical significance is large with regard to self-determination and medium in terms of the rest of the constructs. Strength-based approach has a statistically significantly correlation with all the constructs, and practically significant (medium effect) relations with meaning, competence and self-determination, and work engagement. Recognition has a practically significant correlation (medium effect) with all the constructs.

Psychological empowerment has a practically significant relationship with total work engagement (large effect) and satisfaction with life (medium effect). Meaning and competence have a practically significant association with total, emotional and physical work engagement (large effect) and a medium effect on cognitive work engagement and satisfaction with life. Impact has a practically significant relation with total work engagement (large effect) and cognitive, emotional and physical work engagement and satisfaction with life (medium effect). Self-determination correlated practically significantly with total work engagement, emotional and physical work engagement (large effect) as well as with cognitive work engagement and satisfaction with life (medium effect). Work engagement has a statistically and practically (medium effect) significant correlation with satisfaction with life.

**Evaluating the hypothesised model**

Categorical data occurs when the items on the measuring instruments are scored on a seven-point or lower scale. As the data is categorical in this study, competing structural models cannot be compared directly. Categorical data does not give AIC and BIC values which is normally used in comparing competing structural models. Structural models were thus compared using Chi square differencing testing in order to check global model fit (Satorra & Bentler, 2010). Differencing testing is done by constraining different regression paths to zero. The results show what the change in Chi square and degrees of freedom will be for each specific structural model.

The postulated path model for the structural relations was analysed. Model 2a included paths from positive leadership to psychological empowerment, work engagement and satisfaction
with life and from psychological empowerment to work engagement and satisfaction with life (see Table 4). Based on the hypothesised model, seven competing structural models were tested (see Table 5).

Table 4

<table>
<thead>
<tr>
<th>Model</th>
<th>( \chi^2 )</th>
<th>df</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 2a</td>
<td>1479.92</td>
<td>615</td>
<td>0.96</td>
<td>0.97</td>
<td>0.07</td>
</tr>
</tbody>
</table>

\( Df = \) degrees of freedom; TLI = Tucker-Lewis; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation.

Table 5

<table>
<thead>
<tr>
<th>Model</th>
<th>( \Delta \chi^2 )</th>
<th>( \Delta df )</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 2b</td>
<td>119.12</td>
<td>2</td>
<td>0.00</td>
</tr>
<tr>
<td>Model 2c</td>
<td>13.24</td>
<td>2</td>
<td>0.002</td>
</tr>
<tr>
<td>Model 2d</td>
<td>156.22</td>
<td>2</td>
<td>0.00</td>
</tr>
<tr>
<td>Model 2e</td>
<td>8.70</td>
<td>0</td>
<td>0.01</td>
</tr>
<tr>
<td>Model 2f</td>
<td>69.96</td>
<td>2</td>
<td>0.00</td>
</tr>
<tr>
<td>Model 2g</td>
<td>76.32</td>
<td>3</td>
<td>0.00</td>
</tr>
</tbody>
</table>

In Model 2b, the path from positive leadership to psychological empowerment was constrained to zero and included paths from positive leadership to work engagement and satisfaction with life, from psychological empowerment to work engagement and satisfaction with life. Model 2c included paths from positive leadership to psychological empowerment and satisfaction with life. The path between positive leadership and work engagement was constrained to zero. The model included paths between psychological empowerment, satisfaction with life and work engagement.

Model 2d included paths from positive leadership to psychological empowerment, work engagement and satisfaction with life, but the path between psychological empowerment and work engagement was constrained to zero. The model included paths between psychological empowerment and satisfaction with life. Model 2e included paths from positive leadership to psychological empowerment and work engagement. The path between positive leadership
and satisfaction with life was constrained to zero. The model included a path between psychological empowerment, work engagement and satisfaction with life.

Model 2f included paths from positive leadership to psychological empowerment, work engagement and satisfaction with life and from psychological empowerment to work engagement. The path between psychological empowerment and satisfaction with life was constrained to zero. Model 2g included paths from positive leadership to psychological empowerment and satisfaction with life, and from psychological empowerment to work engagement. The paths between positive leadership and work engagement and between psychological empowerment and satisfaction with life were constrained to zero.

The results show that model 2a fitted the data the best.

**Hypothesis 1**: Positive leadership is significantly positively related to psychological empowerment.

Regarding the portion of the model predicting psychological empowerment, the path coefficient of positive leadership was significant and had the expected sign. Positive leadership had a positive relationship with psychological empowerment. The ML-estimated equation accounted for a moderate proportion of the variance in psychological empowerment ($R^2 = 0.20$). $H_1$ is therefore accepted.

**Hypothesis 2**: Positive leadership is significantly positively related to work engagement.

Regarding the portion of the model predicting work engagement, no statistically significant path coefficient was found for positive leadership. Thus, $H_2$ is rejected.

**Hypothesis 3**: Positive leadership is significantly positively related to satisfaction with life

Regarding the portion of the model predicting satisfaction with life, the path coefficient of positive leadership was significant, with the expected sign, although the effect size was small ($\beta = 0.10$). $H_3$ is therefore accepted.
To determine whether work engagement and satisfaction with life are indirectly affected by positive leadership and psychological empowerment, indirect effects were analysed. To test the significance of the indirect effects, bias-corrected 95% confidence intervals were computed using bootstrapping with 5000 samples (Hayes, 2009).

**Hypothesis 4:** Positive leadership has an indirect effect on work engagement via psychological empowerment.

Table 6 shows that the bootstrap-estimated indirect effect of positive leadership on work engagement (via psychological empowerment) was statistically significant ($p \leq 0.01$) and the confidence intervals did not include zero (Preacher & Hayes, 2008). For the portion of the model predicting that psychological empowerment will have an indirect effect between positive leadership and work engagement, the path coefficient was significant. Positive leadership and psychological empowerment explained 53% of the variance in work engagement. Thus an indirect effect from positive leadership on work engagement via psychological empowerment was found. $H_4$ is accepted.

**Hypothesis 5:** Positive leadership has an indirect effect on satisfaction with life via psychological empowerment.

The bootstrap estimated indirect effect of positive leadership on satisfaction with life (via psychological empowerment) was statistically significant ($p \leq 0.01$) and the confidence intervals did not include zero. For the portion of the model predicting that psychological

Table 6

<table>
<thead>
<tr>
<th>Scale</th>
<th>Estimate $\hat{\beta}$</th>
<th>SE</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Engagement</td>
<td>0.29</td>
<td>0.05</td>
<td>[0.17, 0.38]</td>
</tr>
<tr>
<td>Satisfaction with Life</td>
<td>0.14</td>
<td>0.06</td>
<td>[0.03, 0.25]</td>
</tr>
</tbody>
</table>

**Note.** CI = confidence interval

**$** p <.01.
empowerment will have an indirect effect on the relationship between positive leadership and satisfaction with life, the path was significant. Positive leadership has an indirect effect on satisfaction with life via psychological empowerment. H₃ is therefore accepted.

Figure 2. Maximum likelihood estimate for the hypothesised model

*p<.05. **p<.01.

Figure 2 show positive path coefficients between positive leadership and psychological empowerment, between positive leadership and satisfaction with life and indirect effects are shown via psychological empowerment to work engagement and satisfaction with life. The postulated path between positive leadership and work engagement was insignificant, but a positive path coefficient was found between work engagement and satisfaction with life. The results show that positive leadership, psychological empowerment and work engagement had a combined positive effect on satisfaction with life contributing 25% to the variance in satisfaction with life.
DISCUSSION

The aim of this study was to investigate the relationship between positive leadership, psychological empowerment, work engagement and employees’ satisfaction with life in a chemical organisation, and the possible effect of psychological empowerment on this relationship. The results showed that statistically significant correlations exist between the constructs of positive leadership, psychological empowerment, employee engagement and employees’ satisfaction with life.

Positive leadership is significantly positively related to psychological empowerment and this result is supported in other research on positive leadership practices (Barroso Castro et al., 2008; Kark et al., 2003; Seibert et al., 2011; Stander & Rothmann, 2009). A positive leader’s ability to match an employee’s strengths and talents to their tasks and their regular recognition of accomplishments increases an employee’s feelings of meaning towards their work, their awareness of their competence to do their work, the perception of their impact over what happens in their work place and their ability to decide how their work is done (Quinn & Spreitzer, 1997; Spreitzer, 1995). In practice, this means that employees who have gone through difficult organisational circumstances will benefit from a leader who focuses on the positive and empowers them to do well regardless of the circumstances. The results show a significant correlation (large effect) between positive leadership and the self-determination aspect of psychological empowerment. This may indicate that a positive leadership approach enhances employees’ perception that they can freely choose how they do their work and feel that they are not micro-managed. Bono and Judge (2003) found that followers have a greater ability to adopt autonomous goals and are more satisfied when their leaders support their followers’ need for self-direction.

The path coefficient between positive leadership and work engagement could not be established, but the results show a significantly positive relationship between positive leadership and work engagement. Arakawa and Greenberg (2007) could not establish a correlation between positive leadership and engagement. The results partly support Arakawa and Greenberg’s (2007) findings, in that, this study found that work engagement is rather affected indirectly by psychological empowerment and this is also supported by other studies (Barroso Castro et al., 2008; Durand, 2007). Positive leadership does not have a direct impact on work engagement, but positive leadership and psychological empowerment explains 53%
of the variance in work engagement. This suggests that when leaders focus on strengths and recognition and when employees’ psychological empowerment (meaning, competence, impact and self-determination) (Mishra & Spreitzer, 1998; Quinn & Spreitzer, 1997) is higher; they will be cognitively alert, emotionally available and have physical energy to perform in their job (Kahn, 1990). Practically this implies that employees who experience trying times at work and may be withdrawing from their jobs, will be more affected by positive leadership when they are also psychologically empowered and that if organisations want engaged employees in difficult times of change, the focus should be on the leadership style and on empowering employees.

The results show that there is a significant relationship between positive leadership and satisfaction with life. This study found that satisfaction with life is impacted positively by psychological empowerment. Positive leadership had a moderate indirect effect on satisfaction with life through psychological empowerment, indicating that the combination of positive leadership practices and higher psychological empowerment increases employees’ overall satisfaction with life (Aryee & Chen 2006; Dewettinck & Van Ameijde, 2011; Durand, 2007). This indicates that employees may feel more satisfied with their life in general when their leaders are positive and they feel more empowered while going through tough times at work. There is a strong relationship between the recognition component of positive leadership and satisfaction with life. This could indicate that when a leader gives recognition to an employee it does carry over to their general satisfaction with life.

Although no direct effect between work engagement and satisfaction with life was postulated, it is interesting to note that there is a positive correlation between work engagement and satisfaction with life. This may indicate that employees, who get absorbed into their job, are passionate and enthusiastic about their job and feel physically alive and vital at work, may be more satisfied with their life in general.

Finally, the findings indicate an interesting outcome, in that positive leadership, psychological empowerment and work engagement have a combined positive effect on satisfaction with life. Spreitzer (2007) postulates that there could be a spillover effect between work domains and life domains. Purnell and Johnson (2008) encourage organisations to look after their employees’ well-being in trying times. The combined effect of the work related variables of positive leadership behaviour (strengths-based and
recognition), high employee psychological empowerment (meaning, competence, self-determination and impact) and high work engagement (cognitive, emotional and physical) has a positive influence on the non-work related variable of satisfaction with life (explaining 25% of the variance in satisfaction with life).

The resultant practical implications of this study are numerous. It seems that leaders who add to their leadership style, a strengths-based approach and who make a point of giving recognition to their employees, influence positive outcomes regarding their employees’ psychological empowerment, work engagement and satisfaction with life. This may increase an employee’s feelings of empowerment, their attitude towards work and their positive perception of their life as a whole.

**RECOMMENDATIONS AND LIMITATIONS**

Based on the results, positive leaders have a positive influence on employees’ psychological empowerment, work engagement and satisfaction with life. It is recommended that organisations focus on the training and coaching of leaders on how to identify and harness employees’ strengths. Leaders should also be encouraged to give genuine recognition to employees and their accomplishments.

It was also seen that psychological empowerment enhances the effect that positive leadership has on work engagement and satisfaction with life. Firstly, the organisation should focus on increasing the leaders’ psychological empowerment through leadership discussions and coaching. Interventions focused on improving the psychological empowerment of employees are encouraged. Specific focus should be on the self-determination aspect of psychological empowerment through group discussion, role-play and individual coaching.

From the findings, it was shown that the work related aspect of positive leadership, psychological empowerment and work engagement has a significant effect on satisfaction with life, which is a non-work related aspect. By focusing on the above interventions, satisfaction with life will be positively affected.
Limitations include, among others, that the data was retrieved from a cross-sectional research design, thus inferences about causal relationships were excluded and the participants’ feelings, attitudes and beliefs are representative of only one point in time.
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CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

The purpose of this chapter is to present conclusions, recommendations and limitations according to the general objectives of the study. Firstly, conclusions are drawn from the research objectives. Secondly, attention will be given to the limitations of the study. Finally, recommendations will be made for the organisation as well as recommendations for future research.

3.1 CONCLUSIONS

The general objective of this study was to explore the relationships between positive leadership, psychological empowerment, work engagement and satisfaction with life in a chemical organisation in South Africa and the possible effect of psychological empowerment on this relationship.

The first general objective was to conceptualise the concepts of positive leadership, work engagement, psychological empowerment and satisfaction with life from the literature and to establish the relationships that have been found in literature between these constructs.

Positive leadership as conceptualised by Arakawa and Greenberg (2007) sees this type of leader as having an optimistic explanatory style, which has a positive influence on their followers. A positive leader is one who has a strengths-based approach to their employees’ performance and development and recognises employees’ achievements (Arakawa & Greenberg, 2007). Positive leadership has been shown to induce positive performance outcomes (Nolan-Hoeksema, Gergus, & Seligman, 1986; Peterson & Barrett, 1987; Peterson & Seligman, 1984) and positive well-being and engagement outcomes, such as better involvement, commitment, motivation and satisfaction of employees (Furnham, Brewin, & O’Kelly, 1994; Furnham, Sadka, & Brewin, 1992; Krueger & Killham, n.d.). Several studies have indicated a relationship between psychological empowerment and positive forms of leadership (Barroso Castro, Villegas Perinan, & Casillas Bueno, 2008; Kark, Shamir, & Chen, 2003; Seibert, Wang, & Courtright, 2011).
Psychological empowerment has been shown to consist of four constructs, including impact (the perception an employee has regarding the impact they make in their team or department), self-determination (the ability an employee feels they have to determine and control their work), meaning (the feeling an employee has that their work means something and is valued) and competence (the knowledge an employee has about their ability to perform their work) (Mishra & Spreitzer, 1998; Quinn & Spreitzer, 1997; Spreitzer, 2007). Psychological empowerment has been shown to influence work engagement positively (De Villiers & Stander, 2011; Stander & Rothmann, 2010).

Work engagement according to Khan (1990) is when an employee brings themselves fully to their work task and role and they are cognitively fully energised, emotionally connected to fellow employees and they are fully physically there. Many authors have made a connection between leadership and work engagement (Alok & Isreal, 2012; Kahn, 1990; Krueger & Killham, n.d., May et al., 2004). Korner, Reitzle, and Silbereisen (2012) have recognised a positive relationship between work engagement and life satisfaction.

Satisfaction with life is conceptualised as the cognitive part of the subjective well-being construct and constitutes an individual’s global and unique judgement of the quality of their life (Pavot & Diener, 1993). Satisfaction with life is not part of the work life literature, but job satisfaction and life satisfaction is closely related (Pavot & Diener, 2008; Rojas, 2006) while satisfaction with life is the result of satisfaction from various life domains (Meadow, Mentzer, Rahtz, & Sirgy, 1992; Rampichin & D’Andrea, 1998; Salvatore & Munoz-Sastre, 2001; Veenhoven, 1996). Leadership positively influences job satisfaction (Braun, Peus, Weisweiler, & Frey, 2013; Munir, Rahman, Malik, & Ma’amor, 2012; Weberg, 2010) and strengths-based leadership influences subjective well-being (of which satisfaction with life is a component) (Diener, 2000; Peterson, 2002).

To determine the relationships between positive leadership, psychological empowerment, work engagement and satisfaction with life, statistical analysis was conducted. The results show statistically and practically significant relationships between the constructs. The findings emphasise that the practice of positive leadership enhances employees’ psychological empowerment, work engagement and satisfaction with life. It was found that positive leadership, psychological empowerment and work engagement has a significant effect on satisfaction with life.
The second general objective was to determine whether positive leadership affects work engagement and satisfaction with life indirectly via psychological empowerment.

An indirect effect from positive leadership on work engagement via psychological empowerment was found. Studies confirm a relationship between psychological empowerment and work engagement (Bhatnagar, 2012; De Villiers & Stander, 2011; Durand, 2007) with Durand (2007) establishing that leadership has an indirect effect on work engagement via psychological empowerment.

Also, an indirect effect from positive leadership on satisfaction with life via psychological empowerment was found. No direct links exist between positive leadership and satisfaction with life, but studies have shown that psychological empowerment has an indirect effect linking leadership and job satisfaction and job satisfaction correlates with satisfaction with life (Aryee & Chen 2006; Dewettinck & Van Ameijde, 2011; Durand, 2007).

3.2 LIMITATIONS

Limitations of the present study include the fact that the data was retrieved from a cross-sectional research design thus causal inferences may be excluded. Longitudinal studies should be completed to establish causal relationships. The sample was drawn from only one section of the organisation through a convenience sampling technique and this means that information could differ from other business units and may not be wholly representative.

3.3 RECOMMENDATIONS

The current study has established a better understanding into the relationships between positive leadership, psychological empowerment, work engagement and satisfaction with life within a chemical industry. The following recommendations are made to organisations and researchers.
3.3.1 Recommendations for the organisation

One of the core values identified by the chemical organisation is their people. People, working in teams or individually contributing, are important to the company, whether they are succeeding or going through difficult times. The company has experienced major change and restructuring initiatives where employees were retrenched. Gagné, Koestner, and Zuckerman (2000) express that employees may resist change for fear of the unknown, but that organisational leaders can assist in the acceptance process by providing a rationale for the change, acknowledging employees’ feelings and providing them with choices.

Leadership development is already a key focus area for the organisation. A short training course on how to identify strengths and how to implement a strength-based approach is suggested. Linley, Govindji, and West (2007) suggest that a change towards a strengths-based organisation will be facilitated by creating an environment that fosters mature and meaningful dialogues regarding where an employee is best placed and utilised in the organisation. Mentoring and coaching leaders to learn how to recognise their employees’ strengths and how to harness those strengths to the benefit of the individual themselves and the organisation is recommended.

The company already has a formal recognition scheme that is well entrenched and leaders make use of it. Leaders, however, can be encouraged through leadership discussions to make informal recognition a part of their skills repertoire. Grawitch, Gottschalk, and David (2006) emphasise that leaders who recognise accomplishments regularly, encourage their employees. Furthermore, when leaders are clear about their expectations, their employees find meaning in their work and it contributes to their development and well-being.

From the results of this study, psychological empowerment was shown to have a key impact on both work engagement and satisfaction with life. Investing in interventions to increase psychological empowerment will have a significant positive effect on employees’ work engagement and satisfaction with life. Seibert et al. (2011) found that psychological empowerment can be influenced by an array of circumstantial variables and individual traits, and is also established as a definite method for cultivating employee attitudes and work behaviour (Harris, Wheeler, & Kacmar, 2009; Seibert et al., 2011). Quinn and Spreitzer (1997) emphasise that leaders who are not empowered themselves will have no ability to
empower others, thus it is foremost recommended that interventions focus on empowering leaders. This can be achieved through leadership discussion groups, where empowerment is discussed and some questions are raised, such as “If a sense of a clear strategic vision is a characteristic of an empowering environment, am I continually working to clarify the sense of strategic direction for the people in my stewardship?” (Quinn & Spreitzer, 1997, p. 47). The aim is to increase overall psychological empowerment, but the company can specifically put emphasis on increasing employees’ perceptions of self-determination by coaching leaders to acknowledge their employees’ perspectives, providing them with relevant information in a non-controlling way, offering them choices and encouraging self-initiation (Deci, Connell, & Ryan, 1989). The organisation can facilitate leadership group discussions, role-play and individual coaching to develop leaders in these areas. The role-play can focus specifically on maximising opportunities for employees to take initiative, giving them non-controlling feedback and recognising and accepting employees’ needs and feelings.

Judge and Locke (1993) submit that interventions that are designed to increase employee well-being are advised and may be beneficial for the organisation. The study has shown that positive leadership practices, together with higher employee empowerment and engagement increases satisfaction with life. Focusing on the above interventions will ultimately influence general satisfaction and well-being of employees.

3.3.2 Recommendations for future research

Recommendations for future studies are made with regard to the spillover effect that work-related variables, such as, job satisfaction, organisation citizen behaviour and burnout have on a person’s satisfaction with life. Further studies exploring positive leadership and the role of leader and follower psychological capital (PsyCap) should be conducted.

Another aspect that would be of interest is the influence of positive leadership on trust and the resultant organisational outcomes such as job security and organisational commitment and individual outcomes such as psychological wellbeing, and the experience of meaning and flourishing.
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