THE RELATIONSHIP BETWEEN AUTHENTIC LEADERSHIP, PSYCHOLOGICAL CAPITAL, FOLLOWERSHIP AND WORK ENGAGEMENT

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A thesis submitted in partial fulfilment of the requirements for the degree of Doctor Philosophiae in the Department of Industrial Psychology, University of the Western Cape.

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KEYWORDS

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ABSTRACT

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PhD thesis, Department of Industrial Psychology, University of the Western Cape.

Positive organisational behaviour focuses on what enables employees to thrive in the workplace and to attain peak performance. Employees with high levels of work engagement manifest higher levels of organisational commitment and are twice as productive as those who are actively disengaged in their work. In the healthcare industry low levels of work engagement is associated with absenteeism, high staff turnover and poor quality of care provided to patients. Consequently, work engagement is seen as a promising avenue to improve talent retention, job performance and service quality.

The present study provided insight into authentic leadership, psychological capital and exemplary followership behaviour as antecedents of work engagement of employees. A quantitative, cross-sectional survey design was utilised, using a composite electronic questionnaire. Data was gathered by using a purposive sample of managers in a national South African healthcare industry organisation (N = 647).

The portability of the measurement instruments to a South African context were validated through confirmatory and exploratory factor analysis. The psychological capital and authentic leadership measures retained its original factor structure and

items, whilst the work engagement and followership measures were adapted to improve the internal reliability and construct validity of the instrument for the healthcare industry sample. The higher-order factor structure of psychological capital was also confirmed.

Demographic groups had significant relationships with work engagement, PsyCap, authentic leadership and followership. A general pattern emerged where respondents in higher / more senior occupational categories and higher educational category levels had higher levels of work engagement, PsyCap and followership behaviour. The sample also perceived higher levels of authentic leadership behaviours in male leaders.

Through correlation and regression analyses, significant relationships were found between PsyCap, authentic leadership, followership and work engagement. However, a positive association was not found between authentic leadership and followership. PsyCap explained the biggest proportion of the variance in work engagement, when controlling for the influence of authentic leadership and followership. The psychological capital dimensions of hope, efficacy, resilience and optimism may therefore be part of an individual's personal resources that improve vigour, absorption and dedication in work. Furthermore, PsyCap was found to mediate the relationship between authentic leadership and work engagement. The effect of the leader's transparency, balanced processing, moral/ethical orientation and self-awareness on the individual's work engagement may as a result be enhanced by the individual's hope, resilience, efficacy and optimism.

A theoretical model of the relationships between the variables in the present study were constructed and tested. The model of the relationships was found to fit the data well. Consequently, the study found that authentic leadership, PsyCap and followership have a sequential relationship with work engagement. As a result, organisational development interventions relating to training and development, as well as organisational practices and procedures were suggested to enhance the levels of work engagement of employees. Implementation of this model in organisations is envisioned to improve work engagement, wellbeing, commitment and retention of employees in the workplace.

2 May 2014

DECLARATION

I hereby declare that *The relationship between authentic leadership, psychological capital, followership and work engagement* is my own work, that it has not been submitted before for any degree or examination in any other university, and that all the sources I have used or quoted have, to the best of my knowledge, been indicated and acknowledged as complete references.

Full Name: Marieta du Plessis

Date: 2 May 2014

Signed.....

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ACRONYMS AND ABBREVIATIONS

ALQ	Authentic Leadership Questionnaire
ANOVA	Analysis of variance
CFA	Confirmatory factor analysis
CFI	Comparative fit index
EFA	Exploratory factor analysis
JD-R	Job Demands - Resources
NFI	Normed fit index
OD	Organisational Development
PCQ	Psychological capital questionnaire
POB	Positive Organisational Behavior
POP	Positive Organisational Psychology
POS	Positive Organisational Scholarship
PsyCap	Psychological capital
RMR	Root mean square residual
RMSEA	Root mean square error of approximation
UWES	Utrecht Work Engagement Scale

Statistical notations:

α	Cronbach alpha
r	Correlation coefficient
N	Sample
M	Mean
SD	Standard deviation
SE	Standard error
χ^2	Chi square
df	Degrees of freedom

1 INTRODUCTION

1.1 INTRODUCTION

This chapter provides a general introduction to the context of the study as well as exploring the proposed relationship between work engagement, psychological capital, followership and authentic leadership. The chapter begins by setting the context through an exploration of the field of positive organisational behaviour in which the study is set. This is followed by an introduction to the variables to be studied. The need for the present study is justified and the research objectives are stated. Finally, the potential benefits of the study are identified and an outline of the remainder of the thesis is presented.

1.2 SETTING THE CONTEXT FOR THE STUDY

According to a Gallup poll conducted in 2011, 52% of American workers had described themselves as "not engaged" in their work while 19% had described themselves as "actively disengaged" (Blacksmith & Harter, 2011). According to Blacksmith and Harter (2011), actively disengaged individuals are disconnected from their places of work and less likely to be productive. On the other hand, engaged employees are up to two times more productive than those who are actively disengaged (Blacksmith & Harter, 2011). Clearly, improving the engagement of employees in the workplace may improve organisational productivity and success.

Academics, corporate leaders and organisational practitioners all agree that engaged employees are needed now more than ever before. As a result of the competitive landscape of work, employees have a critical impact on innovation, organisational performance, competitiveness and, consequently, organisational success. The healthcare industry is an example of such a complex environment where private sector healthcare administrators need to show concern for delivering high-quality care in which both the clients (patients) and healthcare providers (employees) are satisfied while maintaining a profitable business (Love, Revere, & Black, 2008). A report from England's National Health Services stated that hospitals with higher levels of staff engagement were measured to have higher quality service and better financial performance than the hospitals where low levels of engagement was found (West, Dawson, Admasachew, & Topakas, 2011). For this reason, it is essential that

organisations address the issue of how to keep their employees creative, dedicated and thriving and that they determine the organisational conditions or interventions that may inspire employee engagement (Bakker & Schaufeli, 2008).

Organisations are focusing on employee work engagement as a promising strategy in order to increase retention, decrease absenteeism and improve productivity (Gibbons & Schutt, 2010; Lockwood, 2007). However, according to the academic literature on employee engagement development there has been little research conducted in this field (Macey & Schneider, 2008). The fact that, as part of organisational strategic planning, human resource practitioners and organisational development practitioners are being asked by their companies to implement work engagement enhancing strategies highlights the need for more research into the issue of work engagement. In particular, there is a specific need for research to examine the antecedents of work engagement in organisations in order to facilitate the creation of a climate that will actively foster work engagement.

The assumption underlying the present study is that the proposed antecedents (authentic leadership, PsyCap and followership) all have an impact on the work engagement of employees. Thus, through providing a theoretical model of the relationships between these antecedents and work engagement, the researcher envisages that the study will contribute to the literature regarding the development of work engagement. Thus, the study will have theoretical and practical implications for the field of industrial and organisational psychology.

The organisational challenge of engagement may be approached from the perspective to decreasing the negative effects of disengagement, for example, low productivity, high absenteeism and high staff turnover. On the other hand, an alternative perspective may be to adopt a positive focus in terms of which human strengths and optimal functioning are considered (Storm & Rothmann, 2003). The Positive Organisational Behaviour (POB) movement, stemming from positive organisational psychology, adopts this positive focus and has been chosen as the theoretical grounding for the present study.

1.2.1 Positive organisational psychology

Positive organisational psychology (POP), although a relatively new phenomenon, is based on the notions of earlier scholars of the Positive Psychology movement (Seligman & Csikszentmihalyi, 2000). Since the beginning of psychology as a science, the following three objectives were stated, namely, to repair psychological damage, prevent psychological problems, and build up psychological strengths in people (Linley, Joseph, & Wood, 2006; Luthans, 2002a, 2002b; Park, Peterson, & Seligman, 2004). The emphasis was on the negative impact of dysfunctional behaviour on organisations and employees – the focus of the first two objectives. However, this pathogenic perspective (Coetzee & Cilliers, 2001; Vaillant, 2003) is gradually being replaced by a positive approach to both psychology and organisational behaviour (Luthans, 2002a). Seligman and Csikszentmihalyi (2000) maintain that the mission of positive psychology should be to focus on both human strengths and positive institutions. The integration of positive psychology in a workplace setting means that the focus is now on finding ways of designing work settings that emphasise people's strengths so as to enable them to be both their best selves and at their best with each other (Luthans, 2002b).

Positive Organisational Behaviour may be defined as the study and application of both people's strengths as well as psychological capabilities. It is essential that these strengths and capabilities be measured, developed, and managed in order to improve organisational performance (Luthans, 2002a). The constructs included in POB include, for example, hope, optimism, efficacy, ownership, wellness, engagement, and shares the focus on resilience, strengths and emotions with Positive Organisational Scholarship (Luthans & Avolio, 2009a). Bakker and Schaufeli (2008) report several studies that demonstrate that positive organisational variables may explain the variance in organisational outcomes. It is, thus, vital that the development of these psychological strengths to the benefit of organisations and individuals should be emphasised as, without such a developmental approach, it will be impossible to achieve improvements that would be focused on positive outcomes in both individual and organisational performance (Luthans, 2002b).

Another approach that can be associated with the positive psychology movement is Positive Organisational Scholarship (POS). Championed by Cameron and colleagues (Cameron,

Dutton, & Quinn, 2003) POS focusses on what goes right in organisations, seeking to understand human excellence and exceptional organisational performance (Nelson & Cooper, 2007). POS investigates positive processes and states that occur in combination with organisational outcomes. For instance, POS studies in organisations focus on individual behaviours that help others to flourish and thrive by investigating character strengths such as hope, gratitude, compassion, wisdom, relationships, energy, courage and forgiveness (Cameron & Spreitzer, 2012; Luthans & Avolio, 2009a).

The difference between POS and POB is not entirely clear. Both POB and POS study organisations and individuals in a workplace setting based on positive approaches (Donaldson & Ko, 2010). Bakker and Schaufeli (2008) propose that the difference between the two movements is that POS emphasises the positive aspects of the organisational context, whilst POB is often more focussed at the individual level and mostly measured in a quantitative manner (Luthans & Avolio, 2009b). Furthermore, POB would use the inductive method to generalise findings from individuals to organisations, whilst POS has developed mostly by deducing organisational findings to individuals (Luthans & Avolio, 2009a). However, both POS and POB share a common root of positivity and emphasise scientific rigour in the study of positive workplaces and individuals. As the present study is focussed more at the individual level of analysis and extrapolating the findings to organisations, POB is set as the theoretical grounding.

Positive organisational behaviour and scholarship has not been practiced without criticism. The primary critique of the movements is that it ignores negative phenomena due to the exclusive focus on positivity (Cameron & Spreitzer, 2012). Ehrenreich (2009) maintains that the focus on positivity denies reality, avoids difficult questions and leads to naïve optimism. Hackman (2009) further states that there is little evidence that suggests that positivity fosters success. In addition, critique has been expressed that POS and POB is not precisely defined, and hence, that it does not have a sound theoretical basis (Hackman, 2009). To address the creation of a sound theoretical basis, Luthans and Avolio (2009a) calls for researchers in the field of POB to practice rigour in their research.

Regarding appropriate scientific rigour when doing a study in the POB field, it is not appropriate scientific rigour to study positive variables without linking these to positive outcomes (Peterson & Steen, 2005). In the present study, the positive outcome that will be studied is work engagement and its associated predictors, namely, PsyCap, authentic leadership and followership. The following sections will briefly elaborate on each of these constructs.

1.3 VARIABLES EXPLORED WITHIN THIS STUDY

1.3.1 Work engagement

Schaufeli and Bakker (2003) maintain that work engagement may be explained as a positively satisfying, work-related state of mind which is exemplified by vigour, absorption and dedication. Vigour is characterised by high energy levels and mental resilience while working whereas absorption signifies being fully concentrated during one's work, with time passing quickly and difficulty being experienced in separating oneself from work. On the other hand, dedication encompasses being involved in one's work and experiencing significance, enthusiasm, inspiration, pride and challenge (Bakker & Demerouti, 2008; Schaufeli, Bakker, & Salanova, 2006).

Studies have demonstrated a positive relationship between work engagement and performance (Cameron & Spreitzer, 2012). Work engagement has been linked to increased organisational citizenship behaviours (Rich, LePine, & Crawford, 2010), enhanced overall performance (Bakker & Demerouti, 2008; Schaufeli & Salanova, 2007a), high levels of job satisfaction and reduced levels of turnover intention (Bakker & Demerouti, 2008).

Contemporary organisations need the services of engaged employees (Bakker & Schaufeli, 2008). However, low levels of engagement have been found in many countries (Robertson & Cooper, 2010). Maslach, Schaufeli, and Leiter (2001) theorised that the impact of the changing world of work is demonstrated in the expectations imposed on employees. These expectations include expending more time and effort and possessing greater skills and flexibility while, the organisation, on the other hand, is offering less in terms of career opportunities, employment and job security.

Dissatisfied employees are not committed to an organisation and they are also frequently absent from work in an attempt to cope with or escape from the high work demands. Organisations with a disengaged workforce may experience severe financial constraints and also lack the competitive edge to survive in the market. It is, therefore, important for management to focus on ways in which to enhance those aspects of the job that will make employees feel energetic, dedicated and engaged in their work (Mostert & Rathbone, 2001).

1.3.2 Psychological capital

Bearing in mind the criteria for Positive Organisational Behaviour constructs as stated by Luthans (2002a), Luthans and colleagues identified the positive constructs of efficacy, hope, optimism and resilience as meeting the inclusion criteria (Luthans, Luthans, & Luthans, 2004; Luthans & Youssef, 2007; Luthans, Youssef, & Avolio, 2007a). These writers termed the combination of these positive constructs as "psychological capital". Psychological capital (PsyCap) is defined by Luthans, Youssef, & Avolio (2007a) as:

> An individual's positive psychological state of development that is characterised by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals, and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success. (p. 3)

A meta-analysis of PsyCap revealed that a number of studies have tested the relationship between PsyCap and various employee attitudes, behaviours and performance (Avey, Reichard, Luthans, & Mhatre, 2011). These writers argue that individuals who possess a high level of PsyCap are likely to be energised and produce effort that leads to higher levels of performance over extended periods of time. PsyCap has been positively correlated to employee performance and satisfaction (Luthans, Avolio, Avey, & Norman, 2007), as well as organisational commitment and psychological well-being at work (Avey, Reichard, et al., 2011). Research results have also indicated that PsyCap is negatively related to attitudes that are considered undesirable, such as employee cynicism, turnover intentions, and employee stress and anxiety (Avey, Reichard, et al., 2011).

PsyCap has also been found to mediate the relationship between a supportive organisational climate and performance (Luthans, Norman, Avolio, & Avey, 2008) as well as the relationship between authentic leadership and intact work group performance and organisational citizenship behaviour (Walumbwa, Luthans, Avey, & Oke, 2011).

Luthans et al. (2004) reported that, as with human and social capital, PsyCap may be developed and used in the workplace. PsyCap capacities are psychological states, as opposed to fixed traits and are, therefore, open to development through methods such as role modelling, social persuasion, mastery experiences or performance attainments (Luthans et al., 2004). By utilising these development techniques, leaders may have a significant role to play in the development of the PsyCap of their employees.

1.3.3 Followership

The article "In Praise of Followership", written by Robert Kelley, was published in the *Harvard Business Review* (Kelley, 1988) in 1988. Since then, the concept of followership has been explored in both academic research and the popular press. The importance of the construct is to be found in the fact that followers have an active role to play in organisational success, and therefore, success is not solely dependent on dynamic leaders (Baker, 2007). Kelley (1992) argued that leaders contribute a maximum of 20% to organisational success, whilst followers contribute an estimated 80% to organisational success.

Kelley (1992) conceptualised exemplary followership in terms of the behaviours that are associated with good followership. He divided these behaviours into two dimensions, namely, independent critical thinking and active engagement. Independent critical thinking would require employees to analyse the information given to them, critically evaluate situations and actions, and utilise discernment that is independent of the political consequences of their decisions (Kelley, 1992; Latour & Rast, 2004). Critical thinking is perceived as a desirable employee characteristic (Blanchard, Welbourne, Gilmore, & Bullock, 2009) as it may improve through ongoing learning (Yeo, 2007) and is important in team performance (Kurubacak, 2007). Active engagement produces followers that take the initiative, assume ownership and actively participate in performing their jobs (Blanchard et al., 2009). Building on Kelley's exemplary followership dimensions, Zhu, Avolio, and Walumbwa (2009) termed

these dimensions positive follower characteristics. The aim of this renaming was to provide a link between the literature on leadership and the literature on positive organisational behaviour, both of which refer to similar positive characteristics being associated with leaders and followers.

Zhu et al. (2009) found that, at the individual level, positive follower characteristics and transformational leadership demonstrated a positive relationship with follower work engagement. These findings are important in the sense that followership may be as important as leadership to the success of an organisation. On the other hand, positive follower characteristics may be as important to the development of leadership as they are the product of positive leadership (Gardner, Avolio, Luthans, May, & Walumbwa, 2005).

1.3.4 Authentic leadership

Luthans and Avolio (2003) conceptualised a positive form of leadership, which is termed "authentic leadership". Authentic leadership draws from both positive psychological capacities and a highly developed organisational context. These factors, in turn, result in greater self-awareness and self-regulated positive behaviours on the part of the leader. Authentic leadership comprises of self-awareness, relational transparency, internalised moral perspective and balanced processing (Avolio & Mhatre, 2012).

The theory of authentic leadership emphasises positive and developmental interactions between leaders and followers (Woolley, Caza, & Levy, 2011). Avolio, Gardner, Walumbwa, Luthans, and May (2004) proposed a theoretical framework that links authentic leadership to the attitudes and behaviours of followers. According to Avolio et al. (2004), authentic leaders influence their followers' attitudes and behaviours by creating a sense of personal and social identification, using role-modelling behaviours and setting high moral values and standards.

Jensen and Luthans (2006a) reported that employee perceptions of authentic leadership were the strongest predictor of employee job satisfaction, organisational commitment and work happiness while further empirical research has demonstrated a positive relationship between the frequency with which authentic leadership is exhibited and the job performance of followers (Peterson, Walumbwa, Avolio, & Fredrickson, 2010, cited in Cameron & Spreitzer,

2012). In addition, authentic leadership also demonstrated a positive relationship with organisational citizenship behaviours and work engagement of followers (Walumbwa, Wang, Wang, Schaubroeck, & Avolio, 2010).

Authentic leadership theory ascribes an important role to PsyCap (Woolley et al., 2011) while Luthans and Avolio (2003) maintain that the development of PsyCap is an antecedent of authentic leadership development. Furthermore, the development of the followers' PsyCap is predicted to be one of the key outcomes of authentic leadership (Luthans, Avolio, et al., 2007). This predictive relationship was confirmed in a study conducted by Walumbwa, Luthans, et al. (2011) who found that authentic leadership may increase both PsyCap and trust levels which, in turn, affect the citizenship behaviours and performance of followers.

Avolio and Mhatre (2012) suggest that, although research on authentic leadership continues to grow, researchers should also explore a broader range of mediating and moderating mechanisms in an attempt to explain the authentic leadership construct. These mediators and moderators may include variables such as cultural values, the level of experience of the follower with the leader, and the type of performance outcomes.

1.4 THE JUSTIFICATION FOR THE STUDY

Positive organisational behaviour research focuses on creating peak performance in organisations and investigating the conditions under which workforces thrive (Bakker & Schaufeli, 2008). Work engagement is gaining ground as a desirable characteristic of the workforce in the creation of peak performance. Accordingly, studies on work engagement contribute to the practice of creating positive organisational processes within organisations. Bakker and Schaufeli (2008) concluded that work engagement is a promising avenue for POB research.

PsyCap is focussed on positivity and thriving at the individual level. The psychological strengths of efficacy, hope, resilience and optimism, although not yet extensively applied to the workplace (Luthans, Youssef, & Avolio, 2007a), have shown promise in predicting job performance (Luthans, Avey, Avolio, & Peterson, 2010) and desired workplace outcomes (Avey, Luthans, & Youssef, 2010). It may be valuable to examine the role and mediating role

of PsyCap due to its predictive properties in explaining peak performance, particularly in the realm of the healthcare industry.

One of the omissions in leadership research is the absence of discussions around followership and its impact on leadership outcomes (Avolio, Walumbwa, & Weber, 2009). To understand the influence of the leader on work outcomes and desired workplace behaviour, the mediating role of followership characteristics should be taken into account (Woolley et al., 2011). Shamir (2007) suggests that leadership effectiveness results from good followers just as much as it results from good leadership.

According to Muchiri (2011), the previous decade has produced numerous research articles in the field of authentic leadership. However, more empirical research is needed to understand the mediators and moderators of the impact of authentic leadership on outcome variables (e.g. work engagement) within an organisational setting.

The variables that will be researched and explored in the present study include work engagement, PsyCap, followership and authentic leadership. On the basis of the literature review, the conceptual argument states that relationships exist between these variables.

1.5 PROBLEM STATEMENT

The high level of disengaged employees in organisations has negative organisational consequences such as absenteeism, high turnover and decreased productivity (Mostert & Rathbone, 2001; Robertson & Cooper, 2010). On the other hand, engaged employees have been shown to be more productive than those who are disengaged (Blacksmith & Harter, 2011). In a study that was conducted in the United States of America, it was shown that, on average, engaged employees demonstrated 27% less physical absenteeism (Wagner & Harter, 2006) than their disengaged peers. This amounted to a saving of approximately $86 500 000 per year in lost productivity (Sanford, 2002). Engaged employees are also 87% less likely to leave a company (Buchanan, 2004) and this, in turn, results in savings on recruitment and retraining costs.

The healthcare industry statistics demonstrate a similar picture of low levels of work engagement. Towers Watson's survey (cited in R Sherwood, 2013) reported that 56% of the hospitals' workforce displayed low levels of engagement. The Towers Watson's survey also supports the finding that staff turnover is decreased when higher levels of engagement is present. This finding on staff turnover was confirmed by Lowe (2012) who found that 90% of highly engaged employees plan to stay with the organisation. The problem of high staff turnover is further exacerbated as global nursing shortages exist (Newman, Maylor, & Chansarkar, 2001). Apart from the Human Resources problems that are created by low levels of engagement (e.g. staff turnover), previous studies have concluded that disengaged employees negatively affect the quality of care provided, which has a resultant effect on patient satisfaction and the reputation of the organisation (Al-Mailam, 2005; Atkins, Marshall, & Javalgi, 1996).

In accordance with the aim of the proposed study, the study sets out to answer the following research questions:

1. To what extent is work engagement related to authentic leadership, psychological capital and followership?
2. Can a valid model of the sequential relationships among the combinations of variables and their dimensions, namely authentic leadership, psychological capital, followership, and work engagement, within the realm of positive organisational behaviour, be built?

1.6 RESEARCH OBJECTIVES

The present study sets out to achieve the following primary and secondary goals:

Primary:

1. To create a theoretical model of the relationships between authentic leadership, psychological capital, followership, and work engagement that will assist in developing organisational development (OD) interventions and leadership practices in order to improve work engagement.

Secondary:

i. To embark on an examination of work engagement, psychological capital, followership and authentic leadership in order to propose a theoretical model.
ii. To conduct an empirical investigation of the relationship between work engagement, psychological capital, followership and authentic leadership.
iii. To develop a model to support workplaces in developing organisation development (OD) interventions and leadership practices to improve work engagement.
iv. To provide an understanding of the relationship between authentic leadership and followership behaviours (a previously unexplored field).
v. To provide a springboard for further research on the construct of followership.

1.7 SCOPE OF THE STUDY

It may be observed from a review of relevant academic and popular literature that positive factors are considered more frequently than before in organisations. It is for this reason that the present study is based on the notion of Positive Organisational Behaviour. The field of POB contains a number of variables and possible predictors of work engagement that could be included in the present study. However, the scope of this empirical study will be limited to authentic leadership, psychological capital, followership behaviours and work engagement.

The empirical research took place in a private sector organisation. Thus, this excludes academic institutions, religious institutions, public sector and non-profit organisations. The respondents were required to have an acceptable level of English literacy and to be a manager of other employees. Accordingly, this excluded both lower level employees and also those who are in non-managerial positions. The reason for this exclusion was to ensure the integrity of the data in that the respondents who complete the questionnaire are in the required context and they are also sufficiently literate in English to enable them to understand the measuring instruments.

Finally, as the focus of this study is on building a structural model to determine the pathways to improving work engagement, practical recommendations will be suggested. However, it is beyond the scope of the study to implement these recommendations and report on their success.

1.8 POTENTIAL CONTRIBUTION OF THE STUDY

Empirical evidence has suggested that, when positive factors are given more attention than negative factors, individuals and organisations tend to flourish (Cameron & Spreitzer, 2012). It is envisaged that the present study will contribute to the field of industrial/organisational psychology by expanding the existing body of knowledge on work engagement and other positive constructs within the workplace. Thus, the study will inform researchers of previously unexplored relationships between constructs. By developing and testing the theoretical model of the relationships and the predictive ability of the various constructs, the research will assist practitioners in developing sequential training and organisational development interventions and leadership practices in order to improve the work engagement of employees.

1.9 FRAMEWORK FOR THE PRESENT STUDY

Chapter 1 provided a brief introduction to the present study. Chapter 2 focuses on the definition of the constructs used for the purposes of this study. The constructs of work engagement, psychological capital, followership and authentic leadership are defined and described. Previous research conducted on these constructs and possible relationships between the respective constructs are also discussed. Finally, the research propositions are stated and the theoretical model of the study is outlined.

Chapter 3 describes the methodology employed in the present study, which includes exploratory and confirmatory factor analysis, correlation analysis, structural equation modelling, mediation analysis and regression analysis. The chapter includes a discussion of the obtained factor structures for each of respective constructs, which is used for further analysis and reporting in Chapter 4. The results of the quantitative data analyses and propositions testing are presented in Chapter 4.

The interpretation and discussion of the research findings and their link to the research propositions are presented in Chapter 5. Moreover, limitations of the study and recommendations for practice and future research are discussed.

1.10 CONCLUSION

The positive organisational behaviour movement, focusing on the application of positively oriented human resource strengths and psychological capacities, has as its aim to discover what makes individuals and organisation strong and thriving. This information is then utilised to help organisations to develop proactive interventions that can be measured and managed to attain this positive state.

Work engagement has been identified as a key imperative to create strong and thriving organisations and individuals. The present study aimed to explore and investigate the relationship between work engagement and other positive respective constructs in order to offer suggestions for the development of a successful work engagement intervention for implementation in organisations.

2 LITERATURE REVIEW

2.1 INTRODUCTION

The principal aim of the present study was to explore the relationships between work engagement and the Positive Organisational Behaviour (POB) variables, namely, authentic leadership, psychological capital (PsyCap), and followership that possibly impact on the levels of work engagement experienced within an organisation. It is anticipated that the development of a theoretical model of the relationships between these variables will contribute to organisational interventions that will improve work engagement.

In the present chapter, the discussion of the variables will include a review of the existing literature on the four main variables of the study, namely, work engagement, PsyCap, followership and authentic leadership. Work engagement will be discussed first as it is the proposed outcome of the variables that will be explored. Secondly, the proposed variables that influence work engagement will be discussed in the following order, namely, PsyCap, followership and authentic leadership. For each variable, the definition and history of the construct is provided. Furthermore, a review of the antecedents and consequences of the respective variables will follow, as well as a summary of the criticisms of the construct. As the present study aims to suggest organisational development interventions to enhance work engagement in organisations, a review of the suggestions for interventions to develop each of the variables will also be presented.

The final section of the literature review will reflect on the empirical research that has been conducted on the variables in the study in order to provide theoretical grounding for the proposed relationships between these variables. A knowledge gap regarding the relationships between the combinations of the variables of the present study currently exists. In light of the dire financial and emotional consequences of low levels of work engagement in organisations, it is critical to reflect on how POB variables can be utilised to counter these negative effects and benefit South African organisations and employees.

2.2 WORK ENGAGEMENT

In the contemporary competitive business environment, organisations are in need of employees who not only offer their skills to the organisation, but who engage in their jobs with their heart, mind and soul. In the changing global environment, organisational survival has, to a large extent, become dependent on the ability to satisfy customer needs, while providing quality products or services, flexibility, innovation and organisational responsibility, all of which requires engaged and committed employees (Olivier & Rothmann, 2007). From the individual perspective, employees want to engage in work that gives them a sense of meaning and is an extension of who they are and hope to become (Harter, 2001). In the following sections, the concept and definition of work engagement will be discussed, followed by a review of the research done on work engagement and its relationship with other organisational variables.

2.2.1 The history and notion of work engagement

William Kahn was one of the first authors to explore the concept of work engagement within the scholarly literature. His interest was sparked by the absence, at the time, of literature relating to 'how' people occupy their work roles, or in other words, to how people are psychologically present when performing their work role. Kahn (1990) argues that people will use varying degrees of themselves, on a physical, emotional and cognitive level, in fulfilling their work roles. This variance does not influence the boundaries between personal identity and role fulfilment, but rather relates to the reasons why people would bring themselves into, or remove themselves from task behaviours. Kahn (1990, 1992) observed that if people draw more upon themselves to perform in their roles, a higher level of performance is seen and the more content people are with the role they fulfil. Kahn (1990) went on to formally describe work engagement as a psychological state and defined it as "the harnessing of an organization's members' selves to their work roles" (p. 694). In Kahn's (1990, 1992) view, work engagement was differentiated from alienation at work or psychological absence. These states are characterised by employee's acting in a robotic and mechanical manner and by estranging themselves from others (Rothbard & Patil, 2012).

Building on Kahn's writing on psychological engagement and presence, Rothbard (2001) elaborated on the idea of work engagement by suggesting that there are two important

components of role engagement, namely: attention and absorption. Attention can be defined as an employee's cognitive availability and the amount of time that the person can remain focussed on the role. Absorption, on the other hand, refers to the intensity of focus that a person displays in a role and the extent to which he/she is captivated by the task (Rothbard, 2001).

Looking at work engagement from a different theoretical perspective, Maslach et al. (2001) differentiated the work engagement construct by juxtaposing it at the opposite end of a scale with burnout. According to Maslach et al. (2001) work engagement and burnout could both be measured on the Maslach Burnout Inventory (Maslach & Leiter, 1997). These authors were initially of the opinion that low scores on exhaustion, cynicism and reduced professional efficacy would imply a high level of engagement. However, Schaufeli and Bakker (2001) came to the conclusion that work engagement was not fully captured by the juxtaposition with burnout and the two constructs should be measured independently. In 2003 Schaufeli and Bakker developed a new instrument and conceptualisation of work engagement, namely the Utrecht Work Engagement Scale and in 2004, Schaufeli and Bakker proved the distinctiveness of burnout and work engagement, thereby redefining the construct of work engagement.

2.2.2 Defining the work engagement construct

Rothbard's (2001) explication of the two components of work engagement gave rise to the conceptualisation of a multi-dimensional work engagement construct. Although most scholars agree on the concept of a multi-dimensional work engagement construct, there is little agreement to the exact dimensions that constitute work engagement (Rothbard & Patil, 2012). According to Bakker, Schaufeli, Leiter, and Taris's (2008) meta-analysis of work engagement studies, most scholars do include an energy dimension and an identification dimension in their conceptualisation of work engagement. With the inclusion of the energy and identification dimension, it could be concluded that work engagement refers to focused energy that is directed towards organisational goals (Macey, Schneider, Barbera, & Young, 2009).

One of the most widely used definitions of work engagement, which will also be used in the present study, was provided by Schaufeli, Salanova, González-Romá, and Bakker (2002). Schaufeli, Salanova, et al. (2002) stated that work engagement is "… a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption" (p.74). Vigour can be characterised as having high levels of energy; zest and stamina while working; mental resilience; displaying a willingness to invest effort in one's work; persisting in the face of difficulty; and not being easily fatigued. Dedication is identified when a person is strongly involved in his/her work and thereby experiences a sense of significance from his/her work; feeling enthusiastic and proud about the job; and feeling inspired and challenged by it. Absorption refers to being totally immersed in one's work and finding it difficult to detach oneself from the job. Individuals who experience high levels of absorption would feel that time passes quickly while working and the person might even forget everything else that is around him/her. The vigour, dedication and absorption dimensions are collectively captured by 17 items in the Utrecht Work Engagement Scale (Schaufeli & Bakker, 2003).

In further exploring the work engagement construct, it is important to stress that employees' psychological presence in their roles are still at the core of the work engagement construct, regardless of how the dimensions of the measurement are articulated. Work engagement is believed to be rooted in the theory of authenticity. Authenticity is displayed by the belief that there can be value in displaying one's whole self that can be utilised to the benefit of work (Rothbard & Patil, 2012). In clarifying the authentic root of engagement, it can be deducted that being engaged in one's work may not always produce positive affect. For instance, an individual can be authentically engaged in resolving major business crises where high levels of energy, absorption and dedication to the task will be demonstrated. Yet, this type of situation could lead to negative affect.

The scholarly study of engagement in organisations has received quite a lot of attention in the past few years (Rich et al., 2010). However, it is important to point out that the term 'engagement' has been used to describe various forms of engagement. These forms include personal engagement, burnout/engagement, employee engagement, as well as the form that is utilised within the present study, namely work engagement. The most often confused

engagement forms that are utilised in the workplace are employee engagement and work engagement. Employee engagement is defined as an "individual's involvement and satisfaction as well as enthusiasm for work" (Harter, Schmidt, & Hayes, 2002, p. 269). The term 'employee engagement' is to some degree more popularised than work engagement as it is the subject of study of many Gallup research interventions. Employee engagement is measured by the Gallup $Q^{12®}$ that provides feedback not only on employee's subjective experiences, but also on employee perceptions of work characteristics (Simpson, 2009). By mixing the references to work conditions and the references to subjective experiences of engagement, it is likely that employee engagement and work engagement would not be similar. Schaufeli and Bakker (2010) expressed concern that the word 'engagement' is being used loosely in the business arena and may be indistinctly used for already existing concepts such as job satisfaction, organisational commitment and extra-role behaviour.

In contrast to the research on employee engagement, Bakker and Leiter (2010) maintain that academic researchers have defined work engagement as a distinct concept. Schaufeli and Bakker (2004) reported the distinctiveness of work engagement in relation to burnout and state that the constructs are also conceptually distinct. Work engagement is a different motivational process which involves pro-active preparation and application of resources to dedicate oneself fully in a task. In comparison, burnout is often the result of prolonged periods of exhaustion, cynicism and a decline in efficacy. Furthermore, studies that support the distinctiveness of work engagement as a construct include those that explored the distinction between work engagement and organisational commitment (Schaufeli & Bakker, 2010), job embeddedness (Halbesleben & Wheeler, 2008), workaholism (Taris, Schaufeli, & Shimazu, 2010), Type-A behaviour (Hallberg, Johansson, & Schaufeli, 2007), job involvement (Hallberg & Schaufeli, 2006), job satisfaction (Maslach et al., 2001), and flow (Bakker, 2011).

When considering an overall model of work engagement, the Job Demands – Resources (JD-R) model is useful in explaining the antecedents and consequences of work engagement (Bakker & Demerouti, 2007). The JD-R model is displayed in Figure 2.1.

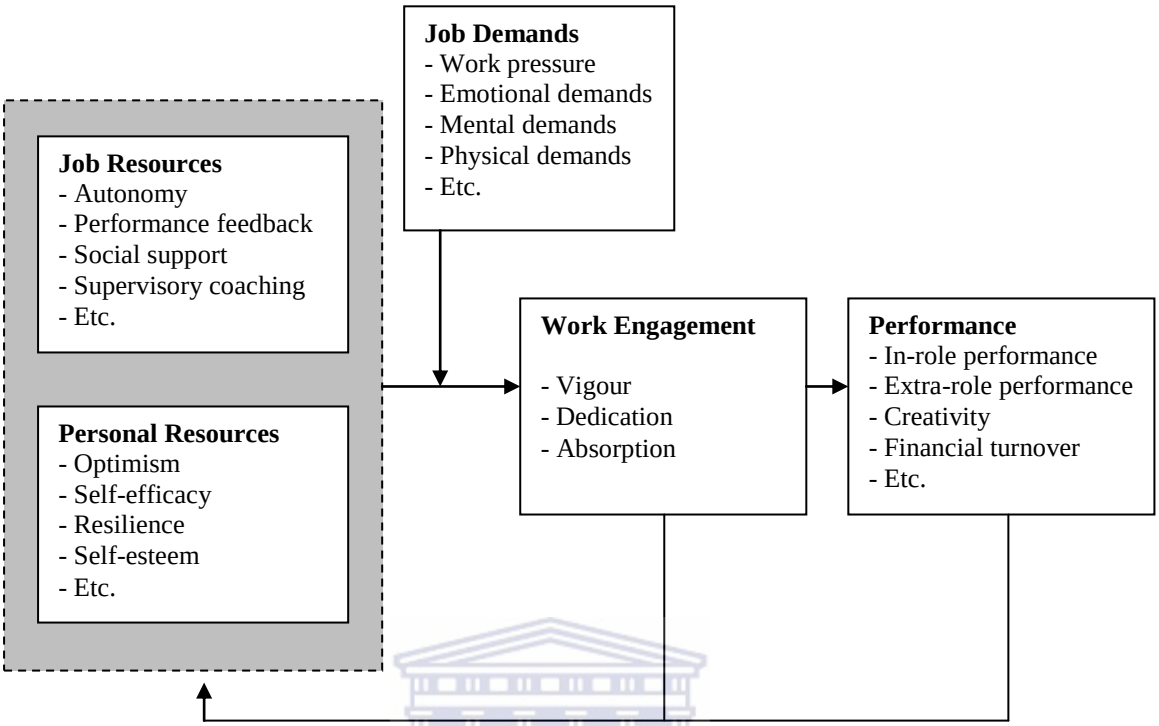


Figure 2.1 The JD-R Model of Work Engagement
Source: Bakker 2009, based on the model by Bakker & Demerouti, 2007

As can be seen from Figure 2.1, it is assumed that job resources and personal resources independently or combined predict work engagement. Furthermore, when job demands are high, job and personal resources have a positive impact on work engagement. Work engagement is also related to performance, which includes in-role and extra-role performance. There is a feedback loop which states that work engagement and performance will influence an individual's ability to create their own resources, which then again fosters engagement over time. These antecedent and consequence relationships with work engagement are discussed in more detail in the subsequent sections.

2.2.3 Antecedents of work engagement

Fitting with the JD-R model, one of the major drivers of work engagement that has been found in the scholarly literature is job resources (Bakker, 2009). Job resources, such as social support from colleagues and supervisors, learning opportunities, skill variety and performance feedback have all shown a positive correlation with work engagement (Bakker & Demerouti, 2007; Schaufeli & Salanova, 2007b), especially under conditions of high job

demands (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007). Job resources are also predictors of work engagement over time, rather than as just a short-lived state (Mauno, Kinnumen, & Ruokolainen, 2007; Schaufeli, Bakker, & Van Rhenen, 2009).

In addition to job resources, studies have also shown that personal resources such as self-efficacy, optimism (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007), resilience (Bakker, 2009), active coping style (Rothmann & Storm, 2003) and organisation-based self-esteem (Mauno et al., 2007) are important antecedents of work engagement. These personal resources assist engaged employees to control and impact their work environment in a positive manner (Luthans, Norman, et al., 2008). Self-efficacy, optimism and resilience are described as dimensions of PsyCap, and hence, it can be derived that PsyCap would also be an antecedent of work engagement. The conceptual link was tested in an empirical study by Simons and Buitendach (2013) who confirmed the relationship between dimensions of PsyCap and work engagement.

In testing for further antecedents of work engagement, Taghipour and Dezfuli (2013) report that psychological empowerment, work motivation, job satisfaction and moral climate are also predictors of work engagement. In a South African context, Stander and Rothmann (2010) and Mendes and Stander (2011) report that psychological empowerment (consisting of meaning, competence, impact and self-determination) predicts work engagement in a statistically significant manner. Psychological meaningfulness was also found to be a strong predictor of work engagement (Rothmann & Rothmann, 2010).

Leroy, Anseel, Dimitrova, and Sels (2013) argue that apart from the static antecedents of work engagement that have been reported, the pro-active role of individuals in stimulating their own work engagement also needed to be explored. Leroy et al. (2013) therefore report the results of their analysis to state that mindfulness (receptive attention to and awareness of external and internal states, events and experiences) and authentic functioning (being aware of oneself and regulating oneself accordingly) are also predictors of work engagement.

Another perspective on the antecedents of work engagement relates to the impact of the leader and leadership style as a predictor of higher levels of work engagement. Harter et al. (2002) proposes that leadership is one of the biggest factors that influence employee work engagement. Vogelgesang, Leroy, and Avolio (2013) confirm that when a leader communicates behavioural integrity transparently, work engagement is positively impacted. In other words, employees who witness the words and actions of their leader identify with the behavioural integrity that their leader demonstrates, and as a result, become more engaged in their work. Furthermore, leader empowerment behaviour (Mendes & Stander, 2011; Van Schalkwyk, Du Toit, Bothma, & Rothmann, 2010), showing support to teams, competent performance by the leader (Xu & Thomas, 2011) and transformational leadership behaviours (Salanova, Lorente, Chambel, & Martínez, 2011; Tims, Bakker, & Xanthopoulou, 2011) have been shown to increase work engagement. Authentic leadership have also been shown to significantly predict work engagement (Walumbwa, Wang, et al., 2010). Giallonardo, Wong, and Iwasiw (2010) confirmed this finding in their sample where higher levels of work engagement were found when employees perceived authentic leadership behaviour in their leader.

When considering the antecedents of work engagement, it is important to keep in mind that most empirical studies that are reported were of a cross-sectional design. The cross-sectional designs of the studies make causal inferences difficult (Schaufeli & Salanova, 2007). Nevertheless, it can be concluded that certain contextual factors (described as job resources) are at least associated with work engagement. Furthermore, personal resources (i.e. optimism, efficacy, resilience, etc.) can have a positive gain spiral where employees feel more engaged (Llorens, Schaufeli, Bakker, & Salanova, 2007), and ultimately, this heightened sense of engagement will generate a higher level of personal resources (Bakker et al., 2008). Thus personal resources, especially self-efficacy, are also a consequence of work engagement. Lastly, the role of the leader in enhancing work engagement levels among employees should not be ignored. By increasing their transformational and or authentic leadership behaviours, employee work engagement can be heightened.

2.2.4 Consequences of work engagement

Possibly the most important and valuable consequence of work engagement that have been established is the relationship between engagement and performance (Rothbard & Patil, 2012). Demerouti and Cropanzano (2010) argue that work engagement has stronger effects on job performance than other related constructs because it captures the "can do" and "will do" dimensions in one construct (p. 148).

In their study on the impact of work engagement on performance, Schaufeli, Taris, and Bakker (2006) differentiated between two different types of performance, namely in-role performance and extra-role performance. In-role performance is defined as the official duties, tasks and behaviours that employees have to demonstrate that directly serve the goals of the organisation (Motowidlo & Van Scotter, 1994). In-role performance is therefore instrumental to achieving the goals of the organisation. However, in-role performance does not explain the full scope of behaviour in organisations. Extra-role performance is the employees' discretionary behaviours, over and above their official duties and tasks, which influence the effective functioning of the organisation (MacKenzie, Podsakoff, & Fetter, 1991). Extra-role performance includes proactive behaviours such as organisational citizenship behaviour, showing initiative (Frese & Fay, 2001) and giving constructive feedback and input (Van Dyne & LePine, 1998). With regard to the relationship between work engagement and performance, Schaufeli et al. (2006) report a positive relation with in-role performance ($\gamma = 0.37$), extra-role performance ($\gamma = 0.32$) and innovativeness ($\gamma = 0.37$).

Further support for the relationship between work engagement and performance was also found. Bakker and Bal (2010) report that weekly work engagement (meaning that slight daily differences in work engagement are averaged by measuring work engagement over a weekly period) was found to be a predictor of performance. In their study, highly engaged teachers received higher ratings from supervisors on in-role and extra-role performance. Salanova, Agut, and Peiró's (2005) study in the hospitality industry indicated that organisational resources and work engagement predicted service climate, which in turn predicted employee performance and customer loyalty. Using financial returns as an indicator of performance, Xanthopoulou, Bakker, Demerouti, and Schaufeli (2009) also report that day-levels (meaning work engagement as measured on a daily basis) of work engagement was predictive of

performance. Halbesleben and Wheeler (2008) report that work engagement explained a unique proportion of the variance in job performance as well as intention to leave. Bakker, Demerouti, and Ten Brummelhuis (2012) also maintain that work engagement is linked to performance, but only for employees who display high levels of conscientiousness.

The reported studies suggest a positive relationship between work engagement and performance. Some studies utilised more than one source of information to measure performance. Bakker (2009) offers an argument for why engaged employees would perform better than non-engaged workers. He states that engaged employees (i) often experience positive emotions (Schaufeli & Salanova, 2007b) and this may be the reason for higher levels of productivity (Fredrickson & Losada, 2005); (ii) experience better health and therefore, are physically able to perform well and present less absenteeism (Schaufeli & Bakker, 2004; Schaufeli et al., 2009; Shirom, 2003); (iii) are more productive because they have the ability to mobilise their own resources (Fredrickson, 2001; Schaufeli et al., 2009); and (iv) transfer their engagement to their colleagues (Bakker, Van Emmerik, & Euwema, 2006), and consequently improves team performance.

Apart from the predictive relationship between work engagement and performance, work engagement also has other important workplace consequences. Empirical evidence has been found that work engagement is positively related to organisational commitment (Field & Buitendach, 2011; Hakanen, Bakker, & Schaufeli, 2006) and job satisfaction (Bakker & Demerouti, 2008; Burke & El-Kot, 2010; Wefald, Reichard, & Serrano, 2011), and negatively related to turnover intentions (Bakker & Demerouti, 2008; Bhatnagar, 2012; Mendes & Stander, 2011; Schaufeli & Bakker, 2004; Van Schalkwyk et al., 2010). These findings support the notion that highly engaged individuals are less likely to leave the organisation, which may result in the retention of valued employees.

Not only are highly engaged employees committed to the organisation and show intent to stay, these individuals also demonstrate positive employee attitudes. According to Demerouti and Cropanzano (2010) and Schaufeli and Salanova (2007b) employees with high levels of work engagement demonstrate pro-active job behaviours and higher levels of psychological

wellbeing. With regard to physical wellbeing, work engagement and especially the dimension of vigour is positively related to physical health (Shirom, 2003; Schaufeli & Bakker, 2004).

2.2.5 Criticism of and controversies around work engagement

Work engagement is seen as a desirable characteristic in employees due to the predictive relationship of the construct with job performance. However, Bakker and Bal (2010) cautions that, under certain conditions, work engagement is linked to worse performance. For instance, when an employee who has a high level of work engagement is highly aroused, the levels of arousal may be distracting for cognitive performance (Beal, Weiss, Barros, & MacDermid, 2005). Furthermore, the high positive affect associated with work engagement may also impede performance due to the lack of controlled information processing associated with positive affect (Martin & Clore, 2001).

Although highly engaged employees may not necessarily be workaholics, it is likely that they may take work home due to their high levels of absorption in the tasks. This might cause higher levels of conflict between work and family roles (Halbesleben, Harvey, & Bolino, 2009). Work-home interferences may lead to health problems (Geurts & Demerouti, 2003) and hence, the danger of being over-engaged is that it may lead to workaholism (Schaufeli, Taris, & Van Rheenen, 2008). However, Culbertson, Mills, and Fullager's (2012) findings dispute the negative effect of high levels of work engagement on the work-family facilitation. Culbertson et al. (2012) reported that daily work engagement was related to positive affect at home and work-family facilitation.

One of the most common pieces of criticism about work engagement that was reviewed in the literature relate to the various definitions and meaning ascribed to engagement. The debate on whether engagement can be seen as an umbrella term that includes trait engagement, state engagement and behavioural engagement (as suggested by Macey & Schneider, 2008) or a specific, well-defined psychological state (as proposed by Bakker et al., 2008) still ensues. This debate also influences the operational definition of burnout and complicates the comparison and application of findings from studies that utilised different conceptualisations of engagement.

As for the Schaufeli, Salanova, et al.'s (2002) definition of work engagement and operationalised through the UWES instrument, the dimensionality of the work engagement construct has not shown a stable pattern. For instance, Bakker, Albrecht, and Leiter (2011) suggest that further theory development is still needed to conclude whether absorption is a core aspect of work engagement, or rather an outcome of energy and efficacy. Concerns are also still expressed about the distinctiveness of work engagement and burnout. The work engagement dimension Vigour is considered the opposite of the burnout dimension Exhaustion, and Dedication is seen to be the opposite of Cynicism (Schaufeli & Bakker, 2003). Schaufeli and Bakker (2010) argue that even though work engagement can conceptually be seen as the positive antithesis of burnout, the content and measurement of the two is different. Demerouti, Mostert, and Bakker (2010) concurred that exhaustion (dimension of burnout) and vigour (dimension of work engagement) should be measured by burnout and work engagement scales respectively as these have been found to be different, albeit highly related constructs. However, Demerouti et al. (2010) suggest that the identification components of burnout and work engagement more likely represent the same construct and that there is no need to measure the scores for burnout and work engagement on two different scales.

Lastly, with regard to the UWES measure of work engagement, the factor structure of the instrument has not been found to have consistent patterns. In comparison to Schaufeli and Bakker's (2003) three-factor conceptualisation of work engagement, a number of studies have found better model fit for a single factor construct (Bell & Barkhuizen, 2011; Britt, Dickinson, Greene, & McKibbon, 2007; Stander & Rothmann, 2010; Wefald & Downey, 2009), a two-factor structure construct (Harris, 2012; Rothmann & Jordaan, 2006) and a four-factor structure construct (Mills, Culbertson, & Fullager, 2012). Some authors suggest that work engagement should only focus on the dimensions of vigour and dedication (Mauno et al., 2007; Llorens et al., 2007) as these are at the core of work engagement (Gonzales-Roma, Schaufeli, Bakker, & Lloret, 2006). These findings suggest that there is not yet consensus whether work engagement is more accurately portrayed by a single-factor or multi-dimensional construct. In a meta-analysis of work engagement, Christian and Slaughter (2007) conclude that the high mean corrected inter-item correlation of the three dimensions of engagement may suggest that a uni-dimensional composite scale of work engagement is likely to be more advantageous for researchers to use.

2.2.6 Socio-demographic explanations of work engagement

A number of demographic variables have been studied in relation to employee engagement, with often conflicting results (Maslach & Leiter, 2008). Avery, McKay, and Wilson (2007) surveyed 901 employees at an organisation in the United Kingdom and found marginal negative correlations with low practical significance between work engagement and organisational tenure (r = -0.11), tenure in current position (r = -0.017), and age (r = -0.012). However, the general picture to emerge with regard to work engagement and age is that older employees seem to have higher levels of work engagement (Barkhuizen & Rothmann, 2006; Mostert & Rothmann, 2006; Park & Gursoy, 2012; Schaufeli & Bakker, 2003).

When examining the work engagement levels of men and women, there is some consensus in the literature that women are more engaged in their work than their male colleagues (Avery et al., 2007; Coetzee & De Villiers, 2010; Mauno et al., 2007; Schaufeli et al., 2007). However, evidence also exists that the levels of engagement does not differ significantly between males and females (Ariani, 2013).

Smulders (2006) found that work engagement levels were higher among individuals who held complex, professional occupations where a greater degree of job control is possible (i.e. managers, teachers, nurses and artists) than those individuals who held jobs that are less skilled and autonomous (i.e. blue collar workers and retail workers). It can therefore be argued that individuals who are managers of others (or as known in business as middle managers) or managers of other managers (also known as senior managers) are likely to fall within the occupational group of complex, professional jobs and are likely to have higher levels of work engagement than individuals in the less autonomous job categories.

Work engagement and educational level was found to be positively related (Barkhuizen & Rothmann, 2006) in a group of academics. Bell and Barkhuizen's (2011) findings challenge this relationship as their study on a different sample did not find a relationship between work engagement and educational level. Although no consensus in the literature could therefore be found that related educational level to work engagement, it may be assumed that a higher level of education is likely to lead to an occupation that offers more complexity and job

autonomy. Therefore, it is likely that higher levels of work engagement will be reported for individuals with higher levels of education.

Generally speaking, the available literature on work engagement and socio-demographic characteristics are limited. The present study will therefore explore the relationship and differences between work engagement and various demographic characteristics of the sample.

2.2.7 Development of work engagement

Work engagement is generally described as a psychological state, although Macey and Schneider (2008) propose that there are trait, state and behavioural characteristics of engagement. Trait engagement would refer to an individual's positive views of life and work, whilst state engagement is the dynamic feelings of energy and absorption in one's work. Behavioural engagement refers to the extra-role outcomes of work engagement, for instance, organisational citizenship behaviour and initiative. State work engagement is particularly useful for exploration from an organisational intervention perspective as constructs should be predominantly state-like to be open to development (Luthans, 2002a).

In recent times a number of organisational interventions have been suggested to improve employees' level of work engagement. These interventions include Bakker's (2009) 'Engagement Monitor' which provides a tailor-made measurement of employee job demands and resources. Interventions to reduce the job demands and enhance job resource are then suggested at the individual and organisational level. Individual level interventions include personal feedback, benchmarking individual scores to a comparison group, coaching and individual level job redesign. At the organisational level, job redesign and training of managers may be utilised.

Schaufeli and Salanova (2007b) agree that work engagement interventions should be done at the individual and the organisational level. These authors suggest that work engagement can be improved by enhancing the person-job fit, developing psychological contracts that link

employees' personal goals to organisational resources, conducting regular surveys of job resources and job demands and their association with positive and negative outcomes, job redesign to decrease stressors and improve personal resources, training and developing leaders to create a positive emotional climate in the workplace, and developing training programmes to enhance organisational health and individual wellbeing.

Bakker et al. (2011) warns practitioners to make a sustained effort to promote work engagement. Even though work engagement may be contagious and spread across members of work teams (Bakker et al., 2006), leadership practices and individual interventions are needed to foster work engagement among followers (Tims et al., 2011). Individual level interventions could focus on building personal resources such as psychological capital (Bakker et al., 2011).

In dealing with the challenges of the changing global nature of work and increased job demands, having engaged employees may be the key to competitive advantage. If engagement leads to a number of positive behaviours as reported in this review, it makes sense for managers and organisations to develop interventions to actively foster work engagement among employees. Dedicated, absorbed and vigorous employees are needed for organisations and individuals to thrive (Schaufeli & Salanova, 2007b). For this reason, it is imperative for researchers and practitioners to study and test the antecedents of work engagement in an effort to develop interventions to develop work engagement in the workplace.

2.3 PSYCHOLOGICAL CAPITAL

Given the importance of work engagement to ensure high levels of organisational performance and individual wellbeing, it is important to review constructs, such as PsyCap, that could have a positive influence on work engagement. Furthermore, organisations also need to assist employees in navigating the changing landscape of work and increasingly the role of positivity and developing employee strengths are being utilised for this purpose. Luthans et al. (2004) contend that it is not only what the individual knows (human capital) and who they know (social capital) that creates value within organisations, but also who they are (psychological capital) that enhances organisational performance.

2.3.1 The notion and definition of the PsyCap construct

Using positive psychology and POB as the foundation, Luthans, Youssef, and Avolio (2007b) developed psychological capital as a core construct of POB that could be measured and developed for performance impact. Luthans (2012) holds that the vision for developing POB was to create a sustainable, evidence-based, positive approach to organisational behaviour. Therefore, the inclusion of the PsyCap construct in POB was dependent on laying the theory-research foundation and creating a validated measure of the construct. Furthermore, in order for PsyCap to have practical significance for Human Resource Management and Human Capital Development, the positive construct also had to be state-like, and therefore, open to development. After reviewing the literature, Luthans and colleagues (Luthans & Youssef, 2004; Luthans et al., 2004, Luthans, Youssef, & Avolio, 2007a) determined that the positive constructs that met the inclusion criteria for POB consisted of self-efficacy (confidence and belief about succeeding at challenging tasks), hope (persevering towards goals and, when necessary, redirecting paths to goals in order to succeed), resilience (bouncing back from problems and adversity to attain success) and optimism (being positive about succeeding now and in the future).

Apart from the importance of each of the four constructs, the synergistic phenomenon of overall PsyCap has been shown to have a higher correlation with performance outcomes than any of the four individual constructs (Luthans, Avolio, et al., 2007). This finding is consistent with Hobfall's (2002) psychological resource theory which suggests that some constructs are best understood as indicators of broader underlying factors. As a result, PsyCap is classified as a second-order (or higher-order) construct which includes the first-order factors of efficacy, hope, resilience and optimism, but also the synergy and shared variance between these four dimensions (Avey, Reichard, et al., 2011; Dawkins, Martin, Scott, & Sanderson, 2013). The synergy between the constructs is explained by considering Bandura's (1997) suggestion that individuals with high levels of efficacy will be more resilient to adversity, and Snyder's (2000) statement that individuals with high levels of hope will be more confident in specific tasks (self-efficacy) and will be able to exhibit resilience after a short period of hopelessness. Avey, Reichard, et al. (2011) propose that the reason for the interaction and synergy between the four first-order factors is the commonalities in the coping mechanisms. The common, integrative thread of the four dimensions (i.e. efficacy, hope, resilience and

optimism) of PsyCap relates to a motivational inclination to achieve goals and success (Avey, Luthans, Smith, & Palmer, 2010).

PsyCap has been proven to be a core construct of POB conceptually (Luthans, Youssef, & Avolio, 2007a; Stajkovic, 2006) and empirically (Luthans, Avolio, et al., 2007). The four dimensions or states included in PsyCap each have considerable theory and research that supports the integrative nature of PsyCap (Luthans, Avolio, et al., 2007), although the dimensions have not extensively been applied to the workplace (Luthans, Youssef, & Avolio, 2007b). Furthermore, the PsyCap measurement (the Psychological Capital Questionnaire, or PCQ-24) was constructed from valid and reliable measures, including the Parker (1998) measure of efficacy, the Snyder et al. (1996) state hope scale, the resiliency scale from Wagnild and Young (1993), and the optimism questionnaire from Scheier and Carver (1985). The following subsections will elaborate on the four dimensions that constitute PsyCap.

2.3.1.1 Self-efficacy as a dimension of PsyCap

Self-efficacy, or confidence, is based on the social-cognitive theory of Bandura (1997). When efficacy or confidence is applied to the workplace, it is defined as "an individual's conviction (or confidence) about his or her abilities to mobilize the motivation, cognitive resources and courses of action needed to successfully execute a specific task within a given context" (Stajkovic & Luthans, 1998, p. 66). Individuals who are confident in their abilities are more likely to choose to engage in challenging tasks, put in the necessary time and energy to work towards the achievement of their goals and they will persevere when faced with obstacles or negative feedback (Stajkovic & Luthans, 1998).

Bandura (1989) elaborated that irrespective of a person's skills and knowledge; self-efficacy will influence his/her feelings, thoughts, motivation and behaviour towards achieving certain life goals. The definition of self-efficacy as a dimension of PsyCap implies that a person would have confidence in his/her ability to complete a specific task, and it does not refer to a general sense of confidence that can be extrapolated to all tasks (Sridevi & Srinivasan, 2012). Self-efficacy is therefore domain specific (Luthans, Youssef, & Avolio, 2007a). This specific nature of the individual's confidence means that he/she will have to gain confidence in new

tasks presented, which means that efficacy, is also open to development. In fact, Bandura (1997) maintains that self-efficacy can be readily developed in a workplace setting.

Based on Bandura's theory (1989), self-efficacy is influenced by four sources. These sources include (i) performance mastery, that is, previous successes and failures in a particular task are likely to have an influence on whether the person will choose to do the task or not; (ii) vicarious experiences, which means that observing the success of significant others on specific tasks may influence the individual's own perception of his/her abilities to carry out certain tasks or life goals; (iii) social persuasion, which means that he individual's confidence to succeed is based on the positive or negative reinforcement they receive from others; and (iv) physical and emotional states, being the states that people use to judge their physical and emotional abilities, strengths and vulnerabilities. Furthermore, an individual's confidence can also be built on their belief of integrated team capacities (collective efficacy) rather than just each person's own abilities and actions (Luthans, Youssef, & Avolio, 2007a). In practice, these developmental sources can be applied to strengthen self-efficacy in the workplace.

Self-efficacy has been found to be strongly associated with work-related performance (Bandura & Locke, 2003; Stajkovic & Luthans, 1998). Individuals with high self-efficacy distinguish themselves by setting tough goals and choosing (out of free will) to engage in difficult tasks. These individuals actively seek out challenges and thrive when challenges are presented by the environment. They have high levels of self-motivation and can often perform independently for long periods of time (Luthans, Youssef, & Avolio, 2007b). Highly self-efficacious individuals are not derailed by obstacles, self-doubt, scepticism, negative feedback or even repeated failure (Bandura & Locke, 2003). Rather, these individuals would be motivated to persevere in attaining success in the task.

Self-efficacy has shown a relationship with socialisation and retention of new employees (Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007) as well as a relationship with organisational commitment and turnover (Avey, Reichard, et al., 2009; Harris & Cameron, 2005) of existing staff members. These finding are important for retention purposes and the conclusion can be drawn that high levels of employee self-efficacy is likely to have a positive influence on retention of staff. Furthermore, self-efficacy, amongst other positive

psychological constructs, was also found to have a mediating effect on occupational stress (Avey, Reichard, et al., 2009), burnout and work engagement (Rothmann, 2003). Salanova, Llorens, and Schaufeli (2011) confirmed that self-efficacy influences work engagement indirectly through the impact on positive affect over time.

2.3.1.2 Hope as a dimension of PsyCap

Hope is a word that is commonly used in everyday life, whether it relates to general wellbeing or religious guidance. When referring to hope as a dimension of PsyCap, hope is seen as a psychological strength which is displayed as a cognitive or thinking state (Luthans, Youssef, & Avolio, 2007a). Therefore, hope is not just wishful thinking to escape an undesired future, rather, it is a state where an individual can set realistic, albeit challenging, goals and expectations to reach these goals through perseverance, hard-work and goal-directed behaviour. Snyder et al. (1996) refer to this goal-directedness as 'agency' or 'willpower'. As much as this agency or willpower is of importance, Snyder et al. (1996) also stresses the importance of 'pathways' or 'waypower'. These terms refer to the individual's ability to reroute or create alternative pathways to attain their goals when the original pathways are blocked (Snyder, 2000). Agency and pathways are distinct concepts in the hope model, yet they reciprocally influence one another such that a change in the one will cause a change in the other (Snyder et al., 1991)

An important part of developing and managing hope is through effective goal-setting. Setting specific, measurable, challenging yet achievable goals can facilitate the development of a sense of agency towards accomplishing the goals (Luthans, Youssef, & Avolio, 2007b). Empirical research has demonstrated that individuals with higher levels of hope are more likely to achieve their goals (Snyder et al., 1991). In a workplace setting, goals should be negotiated, shared and communicated in order for individuals to be motivated towards goal achievement. Furthermore, pathways' thinking is also instrumental to the development of hope. Contingency analysis, mental rehearsals of challenging tasks and 'what-if' analysis are all useful techniques to prepare individuals to overcome obstacles (Luthans & Youssef, 2004; Snyder, 2000). In fact, it is the pathways component of hope that differentiates the construct from resilience, optimism and self-efficacy (Luthans & Jensen, 2002) as it requires active steps, creativity, innovation and resourcefulness to come up with alternate pathways.

Hopeful individuals most often display an internal locus of control and they tend to be independent thinkers (Luthans, Youssef, & Avolio, 2007a). Autonomy is important for individuals with high levels of hope and these individuals typically enjoy jobs that are meaningful. On the other hand, individuals who are low in hope may be observed by others as obedient rule-followers. If this behaviour is coupled with low levels of agency and limited pathways, the individual may struggle to adapt to the ever changing work environment. Individuals with low levels of hope are also likely to have a negative reaction to feedback which is displayed in their resultant rumination and self-doubt (Michael, 2000).

In empirical studies it has been found that hope has a positive relationship with performance outcomes (Adams, Snyder, Rand, King, Sigman, & Pulvers, 2002; Luthans, Avolio, et al., 2007; Peterson & Byron, 2008). However, Youssef (2004, cited in Luthans, Youssef & Avolio, 2007a) reports the contrary where hope demonstrated a negative relationship with performance outcomes. Reasons for the negative relationship could be that individuals with high levels of hope may sometimes have more to offer an organisation than what they are allowed to give.

With regard to the relationship between hope and other organisational variables, Cooperider and Sekerka (2003) maintain that higher levels of hope is linked to high performing work units, greater employee satisfaction and lower levels of turnover. Hopeful managers have also been found to have more profitable work units (Peterson & Luthans, 2003) and hopeful individuals demonstrate higher levels of organisational commitment than those with low levels of hope (Larson & Luthans, 2006, Youssef & Luthans, 2007). Finally, Weick and Quinn (1999) opine that hope is necessary for employee wellbeing.

2.3.1.3 Resilience as a dimension of PsyCap

Over time and different disciplines, resilience has been defined in a number of different ways (Barker Caza & Milton, 2012). The definition of PsyCap resilience is drawn from clinical and positive psychology that supports the role of resilience in improving a number of aspects of human functioning (Masten & Reed, 2002). Luthans (2002b, p. 702) defined PsyCap resilience as "the positive psychological capacity to rebound, to 'bounce back' from adversity, uncertainty, conflict, failure or even positive change, progress and increased

responsibility". The two aspects of resilience are, firstly, that resilience requires some kind of threat, challenging event or negative stressor (the adversity). The second aspect includes the individual's achieved adaptation to this stressor, change or threat (Luthans, Youssef, & Avolio, 2007a; Luthar, Cicchetti, & Becker, 2000; Masten & Reed, 2002). These definitions indicate that having a high level of resilience does not imply that one has a risk- or problem-free life, but rather the definition refers to the effective management of resources despite the risks and adversities (Luthans, Youssef, & Avolio, 2007b).

In the turbulent business environment, employees are faced with negative and positive adversities on a daily basis. Ryff and Singer (2003) proposes that it is not sufficient for employees to merely cope with these difficulties, but rather that employees should be able to thrive and flourish through difficulties better and faster than the competition. PsyCap resilience proposes that resiliency should be viewed pro-actively to achieve sustainable gains, rather than a reactive coping or neutralising process (Bonanno, 2004). This pro-active assessment of risks and personal resiliency assets can positively affect employee outcomes (Luthans, Vogelgesang, & Lester, 2006). The presence of personal resiliency assets forecasts good results for adaptation, despite pending risk factors (Masten & Reed, 2002). Personal resiliency assets include cognitive abilities, emotional stability, sense of humour, temperament, positive self-perceptions, a positive outlook on life and faith (Masten, 2001). Resiliency risk factors refer to characteristics of individuals or their circumstances that forecast negative outcomes (Masten & Reed, 2002). Such risk factors include workplace accidents, burnout and unemployment. Risks cannot be avoided completely and risk factors are important for the development and growth of the individual when it is pro-actively identified and managed. Therefore, the presence of the risk factors does not imply a lack of resilience on the part of the individual.

Preliminary research has supported the notion that resilience is related to improved performance (Luthar, 1991; Luthans, Avolio, Walumbwa, & Li, 2005; Zamahani, Ghorbani, & Rezaei, 2011), retention of individuals in high risk professions (i.e. nurses) (Hodges, Keeley, & Grier, 2005), and financial gain (Luthans, Avey, Avolio, Norman, & Combs, 2006). It is also proposed that organisations that develop resilience in their employees will be able to adapt to change and be more successful over time (Luthar & Cicchetti, 2000) and

prevent the development of intentions to quit (Luthans, Avey, et al., 2006). Furthermore, a leadership approach that demonstrates an intention to develop followers, open communication and trust-building has a very important effect on employee resilience (Luthans, Youssef, & Avolio, 2007a). These characteristics are indicative of authenticity on the part of the leader, and therefore, Avolio and Luthans (2006) proposes that authentic leadership will enhance follower resiliency. Furthermore, positive links between resilience, commitment and work engagement have also been proposed (Luthans, Avolio, et al., 2007; Youssef & Luthans, 2007).

2.3.1.4 Optimism as a dimension of PsyCap

Optimism is used in everyday language to describe a person who expects positive and desirable events in the future. This definition explains part of what is meant by PsyCap optimism, but PsyCap optimism also refers to the attributions or reasons that a person would use to explain negative or positive events that occur (Luthans, Youssef, & Avolio, 2007a). This attribution is not confined to current events, but also past and future events. Seligman (1998) offers that a person with high levels of optimism would explain positive events (i.e. task accomplishment) by referring to personal or stable causes (i.e. work ethic), and negative events to external, temporary and situation-specific causes (i.e. a missed deadline). Seligman's definition points to the fact that optimistic people would take credit for the positive situations in their life. These optimistic people would view the causes of the positive event as falling within their power and control and would expect these causes to continue to exist in the future (Luthans, Youssef, & Avolio, 2007a). For instance, an optimistic individual who received a job promotion may attribute the positive moment to his/her extra effort that was put in. Furthermore, the individual will then be assured that he/she will always be able to put in extra effort and that it will be successful not only in their current job, but in other life endeavours as well.

In contrast to the positive explanatory style of optimism, pessimists do not give themselves credit for positive events that occur in their life. For instance, the pessimist who receives a job promotion may explain it as good luck, that other candidates did not have enough experience, and so forth. Also, the pessimist's view of positive events is that it is temporary and unlikely to happen again in future. When it comes to negative situations, pessimist will

internalise the causes of unfortunate situations and believe that the situation will continue to exist for them in the future (Luthans, Youssef, & Avolio, 2007a).

Seligman's definition of PsyCap optimism refers to a state-like characteristic, but other research studies present optimism as a dispositional personality trait which is exhibited in a general tendency to expect more favourable outcomes and events than negative ones (Scheier & Carver, 1987). Luthans and Avolio (2003) recognise this continuum, but emphasise optimism's state-like developmental properties. According to Luthans, Norman, et al. (2008), optimism is not based on an unchecked process that has no realistic assessment but includes an objective assessment of what an individual can accomplish in a specific situation given the available resources at the time, and therefore can vary. Schneider (2001) suggests that optimism can be developed in the workplace by reframing past events and acknowledging the realities of the situation, learning to appreciate present situations by focussing on the positives, and seeing the future as a prospect that holds many positive opportunities.

Optimism has been reported to have a positive relationship with desired workplace outcomes such as workplace performance (Luthans et al., 2005; Luthans, Avey, et al., 2006; Seligman, 1998) and performance in other life domains such as education, sports, and politics (Seligman, 2002). Optimism has also been found to be associated with a broad range of positive outcomes, including physical and psychological health, well-being, coping and recovery (Scheier & Carver, 1987; Seligman, 2002). A direct effect of optimism on cynicism and exhaustion has been reported (Rothmann & Essenko, 2007), and a positive correlation between optimism and employee engagement was found (Arakawa & Greenberg, 2007; Simons & Buitendach, 2013). A negative relationship between optimism and undesired workplace characteristics, such as turnover intention have also been reported (Avey et al., 2008; Mantler, Armstrong-Stassen, Horseburgh, & Cameron, 2006). In general, optimistic employees are viewed as assets to organisations as they are likely to deal with changes in the environment more readily than would pessimistic employees (Luthans, Youssef, & Avolio, 2007a).

2.3.2 Antecedents of PsyCap

Recent studies have emphasised the role of the leader in enhancing employees' levels of PsyCap (Walumbwa, Peterson, Avolio, & Hartnell, 2010). Leaders who have a high level of PsyCap would display more positive attitudes and higher performance levels, whilst at the same time serving as role-models for their followers. The transfer of positivity from leader to follower can be explained by social learning (Bandura, 1989), emotional contagion (Sy, Côté, & Saavedra, 2005) and the salience of the leader's emotional expression on follower mood (Bono & Ilies, 2006). Leader PsyCap has been empirically tested to have a significant relationship with follower PsyCap (Avey, Avolio, & Luthans, 2011; Walumbwa, Wang, et al., 2010). Leader PsyCap was also found to be a significant predictor of follower PsyCap (Walumbwa, Wang, et al., 2010).

Viewing the impact of leadership on PsyCap from a positive leadership approach, Gardner and Schermerhorn (2004) suggested the possible impact of authentic leadership on follower PsyCap. These authors state that authentic leaders are likely to develop and influence their followers by energising them with positive psychological states. Recent studies tested this assertion and found a significant positive relationship between authentic leadership and follower PsyCap (Caza, Bagozzi, Woolley, Levy, & Barker Caza, 2010; Rego, Sousa, Marques, & Pina e Cunha, 2012).

Another antecedent of PsyCap refers to the climate and culture of the organisation. Walumbwa et al. (2010) stated that a positive climate leads to higher levels of PsyCap which, in turn, would facilitate higher levels of goal accomplishment and desired performance outcomes. Munyaka (2012) report that the psychological climate of the organisation indicated a 24% variation in employee levels of PsyCap.

2.3.3 Consequences of PsyCap

Results of empirical analysis indicate the positive relation between employee overall PsyCap and employee performance and satisfaction (Luthans, Avolio, et al., 2007, Luthans, Avey, Clapp-Smith, & Li, 2008). Recent developments in PsyCap research also support the causality between PsyCap and performance (Luthans et al., 2010; Peterson, Luthans, Avolio,

Walumbwa, & Zhang, 2011). Furthermore, in a return on investment (ROI) analysis of efforts to increase PsyCap in the workplace, ROI was determined through utility analysis to be over 200%. This finding points to the actual profit increase that can result from increasing the levels of PsyCap in the workplace (Luthans, Youssef, & Avolio, 2007a). Harris (2012) reported that PsyCap explained 26% of the variance in customer satisfaction.

Avey, Luthans, and Youssef (2010) report a significant relationship between PsyCap and organisational citizenship behaviour and a negative relationship between PsyCap and cynicism, intention to quit, absenteeism and counterproductive workplace behaviours. Further studies have also demonstrated the inverse relationship between PsyCap and factors that influence retention, namely job search behaviours and occupational stress symptoms (Avey, Reichard, et al., 2009). Other consequences of PsyCap include team commitment (Munyaka, 2012) Moreover, a significant positive relationship has been reported between PsyCap and psychological well-being (Avey, Luthans, et al., 2010), as well as a significant negative correlation with stress and anxiety (Avey, Reichard, et al., 2009) and burnout (Laschinger, 2014).

Self-efficacy, hope, resilience and optimism, as well as overall PsyCap have been shown to have positive relationships with work engagement (Harris, 2012; Simons & Buitendach, 2013). With regard to the relationship of the respective dimensions of PsyCap and work engagement, it was found that personal resources such as self-efficacy and optimism had demonstrated value in explaining variance in work engagement (Xanthopoulou, Bakker, Heuven, Demerouti, & Schaufeli, 2008). In a South African study, Roux (2010) found a positive relationship between self-efficacy and work engagement.

2.3.4 The mediating role of PsyCap

PsyCap is mainly focussed on positivity at the individual level, but it has also been shown to be a mediator of the relationship between organisational climate and employee performance (Luthans, Norman, et al., 2008). PsyCap also mediates the relationship between authentic leadership and intact work groups' performance as well as organisational citizenship behaviour (Walumbwa, Luthans, et al., 2011). Furthermore, Norman, Avey, Nimnicht, and

Pigeon (2010) reported that PsyCap mediates the relationship between organisational identity and employee citizenship and deviance behaviours.

Avey et al. (2008) expanded on the role of PsyCap in organisations to state that employees with higher levels of PsyCap may proactively facilitate positive changes in the organisation. This finding is consistent with the mediating role of PsyCap that was explained in the preceding paragraph and it can be stated that PsyCap seems to be instrumental in facilitating the impact of a positive organisational context on various desirable outcomes (Youssef & Luthans, 2012).

Expounding on the mediating role of PsyCap, Bitmiş and Ergeneli (2013) found that PsyCap and trust are mediators for the relationship between individual performance and job satisfaction. Their study employed a multiple mediation and bootstrapping method in order to test the mediation model. The findings from this study point to the dynamic interaction of PsyCap where individuals who perform well gain more confidence and make attributions of the possibility of success now and in the future. This might lead the individuals to feel more confident and motivated, which in turn has a positive impact on job satisfaction.

In examining the mediating effect of PsyCap on authentic leadership and performance, it was found that a higher level of performance was achieved when a lack of PsyCap was complemented with high levels of authentic leadership (Wang, Sui, Luthans, Wang, & Wu, 2014). This finding is somewhat surprising as one would imagine that high levels of authentic leadership and high levels of follower PsyCap would be more indicative of follower job performance. However, Wang et al. (2014) claim that their finding contributes to understanding the integrative nature between authentic leadership and PsyCap. Wang et al. (2014) stated that PsyCap may have a complementary role to leadership rather than a supplementary role. The supplementary role is the more common approach to leadership where a leader's influence is enhanced by followers' characteristics. Complementary congruity theory (Kiesler, 1983, see also Grant, Gino, & Hofmann, 2011) suggests that leaders and followers coordinate their actions by one party acting dominant and the other would then be expected to be submissive (and thus, the leader might not always be the dominant party). Following the thinking of complementary congruity and the classical

substitutes for leadership theory (Kerr & Jermier, 1978), Wang et al. (2014) explained their surprising result and speculates that follower PsyCap could be viewed as a substitute for authentic leadership.

2.3.5 Criticisms of and controversies around PsyCap

Luthans, Youssef, and Avolio (2007a) proposed the expansion of the PsyCap construct to include more variables that meet the criteria of being state-like, measureable and open to development. The constructs that are considered for inclusion fall in the following domains: cognitive (creativity, wisdom), affective (flow, humour, well-being), social (gratitude, forgiveness, emotional intelligence), and higher-order strengths (authenticity, spirituality, courage). Dawkins et al. (2013) heed a warning to the developers and researchers to take care not to practice an 'all inclusive' approach to PsyCap. If the development of the construct is not done methodically and systematically, it could lead to a lack of consensus of what is meant by PsyCap.

During the PCQ scale development, investigation of the construct validity of PsyCap measure was done within a wide variety of settings, and not specifically for use in organisational research (Little, Gooty, & Nelson, 2007). The PsyCap measurement have also mostly been criticised for its apparent lack of construct validity. Little et al. (2007) report that optimism and hope were not found to be distinct dimensions in their study and hence, suggest that these two PsyCap dimensions should not be utilised as separate constructs within organisational settings. However, a number of empirical studies conducted in workplace settings have since confirmed the construct validity and four factor structure of the PCQ (for example Harris, 2012; Luthans, Norman, et al., 2008; Görgens-Ekermans & Herbert, 2013; Munyaka, 2012; Simons & Buitendach, 2013).

A further controversy in the PsyCap literature is the question of whether a very high level of PsyCap is optimal for effective functioning or "too much of a good thing" (Youssef & Luthans, 2011). For instance, it is suggested that extreme positivity could lead to undesired behaviour such as accidents where individuals are overconfident; and/or turnover based on optimistic and hopeful beliefs about a better future at another organisation. These types of thresholds of extremity have been found in the positivity (Fredrickson, 2009) and happiness

(Diener & Biswas-Diener, 2008) literature and provide impetus for PsyCap researchers to investigate nonlinear models in positivity research (Youssef & Luthans, 2012).

2.3.6 Socio-demographic explanations of PsyCap

Caza et al. (2010) reported that the PCQ measurement for men and women was equally reliable and valid in their sample of New Zealand's general population. However, when observing the scores of men and women on the respective PsyCap dimensions some differences in PsyCap levels are observed. Bonanno (2004) reported higher levels of resilience in men, but Caza et al.'s (2010) study found no systematic difference in resilience between the two genders. With regard to self-efficacy, it has been reported that women have lower self-reported self-efficacy than their male counterparts (Caza et al., 2010; Kling, Hyde, Showers, & Buswell, 1999).

In a sample of Chinese workers, age was found to be positively related to PsyCap (Luthans et al., 2005). This finding was confirmed by McMurray, Pirola-Merlo, Sarros, and Islam (2010) in a sample of Australian non-profit organisations. Luthans et al. (2005) also reported that higher levels of PsyCap were related to higher educational levels of the respondents in the Chinese worker sample. In a South African context, Harris (2012) found that the occupational category consisting of sales people scored higher on overall PsyCap as well as efficacy. Beal III, Stavros, and Cole (2013) reported that neither age, gender or years of employment explained a significant proportion of the variance in PsyCap.

2.3.7 Development of PsyCap

Short or micro-interventions to develop PsyCap have been shown to increase the level of PsyCap reported by participants by at least 2% (Luthans, Youssef & Avolio, 2007a). This statistically significant increase in PsyCap was tested in an experimental design with matched control groups. During the initial studies, management studies were the population of study. However the same positive results for the PCI microintervention were found for a broad array of managers, including engineers and technicians (Luthans, Avey, et al., 2006). These brief interventions suggested by Luthans, Youssef and Avolio (2007a) usually last between one to three hours and include activities aimed at enhancing self-efficacy, hope, resilience,

optimism, as well as overall PsyCap. The interventions have been presented face-to-face and online (Luthans, Avey, & Patera, 2008; Youssef & Luthans, 2012).

The components of the Psychological Capital Intervention (PCI) (Luthans, Youssef, & Avolio, 2007a; see also Avey, Reichard, et al., 2009) are depicted in Figure 2.2. Starting at the hope dimension of the training, participants would be asked to set key goals that will be used throughout the intervention. Participants are also encouraged to generate proactive pathways for goal attainment and consider scenarios that would take them closer to or further from the goal. At this stage of the process, participants have taken ownership of an important goal and they have also considered the obstacles that would make goal achievement difficult. The facilitator, and other participants in the training, role-model optimism to help participants to build confidence that they can achieve their goals. The process of considering possible negative scenarios also assists in creating realistic optimism for the employees. The final step of the PCI includes a reflection on a recent setback in the work domain that affected the participant in a personal manner (i.e. pending retrenchments, missed deadline, etc.). The facilitator would then discuss the value of facing reality, reframing the setback and taking the positive out of the situation. Through this reflection, resilience is enhanced.

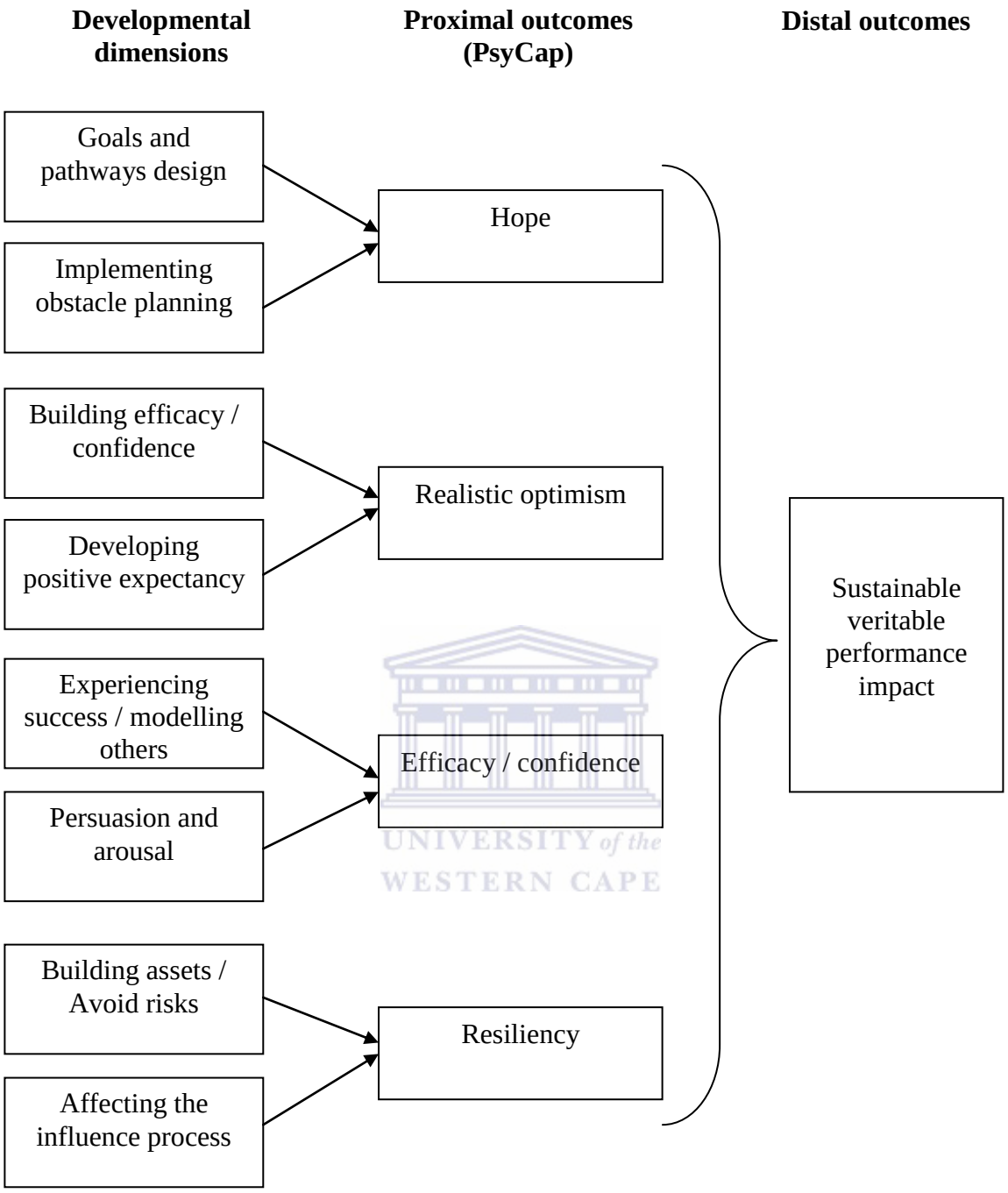


Figure 2.2 Psychological Capital Intervention

Source: Luthans, Youssef & Avolio (2007a, p. 214)

To date, the development of PsyCap was mostly focussed on the PCI (Youssef & Luthans, 2012). It is suggested that further research needs to be done in order to examine other methods of developing and sustaining PsyCap in the workplace. It is possible that leaders with high levels of PsyCap may be able to coach employees to develop their levels of PsyCap

and role-model the appropriate attitudes and behaviours (i.e. authenticity and trust) (Avey, Avolio, & Luthans, 2011).

From the definition of PsyCap it can be concluded that PsyCap is more than knowledge, skills and abilities (Luthans, Youssef, & Avolio, 2007b). PsyCap is a unique construct that offers a positive perspective on human potential, rather than a focus on dysfunctional workplaces and counterproductive organisational practices. PsyCap was established on well-founded theoretical frameworks such as Bandura's (1989) social cognitive theory and Snyder's (2002) hope theory. Furthermore, PsyCap is classified as being malleable and consisting of developmental states which can be increased with even brief interventions (Luthans, Avey, et al., 2006).

2.4 FOLLOWERSHIP

The leader of an organisation has responsibility for charting a vision and the direction of the company, developing strategies for success, managing change and influencing others to achieve a common goal (Northouse, 2004). Thus, leadership is critically important to achieve organisational success. However, as the ratio between leaders and followers in an organisation is usually characterised by a majority of followers, the deciding factor of whether the goals and accomplishments of the organisation are achieved, may be more dependent upon the followers in the group. Researchers have proposed that studies must examine how the influence of the leader is mediated through the followers they work with in order to better understand the dynamics of the leadership process (Avolio & Luthans, 2006; Woolley et al., 2011).

2.4.1 The history and notion of the followership construct

Hollander (1995, p. 56 cited in Bligh, 2011) stated that "followership is periodically rediscovered as important to leadership, despite a long tradition of usage". Meindl (1995) supports Hollander's statement and points out that there seems to have been an ebb and flow in the interest in followership research. However, literary evidence on followership that have emerged in the last 30 years suggests that the interest in followership is entering the stage of evaluation and augmentation of the concept (Bligh, 2011). During this stage, the

development of clearly distinguishable traditions in the followership literature has started to emerge. One such example is Baker's (2007) conceptualisation of the followership construct. According to Baker (2007) the study of followership is based on a number of key principles. First, followers are deemed as active, not passive. Second, followers and leaders are roles, not genetic predispositions. Third, followers and leaders share a common purpose. Fourth, the follower-leader relationship is characterised by interdependence between the roles.

According to Baker (2006), from the initial 'Great Man' leadership theories to the 1970's, leadership was viewed as a process where the leader actively led subordinates and these subordinates (or as later defined, followers) passively and obediently followed. Alcorn (1992) states that the obedient follower view created a stigma associated with the term 'follower' to indicate a passive, weak and conforming role within the organisation. This purported stereotyping may have created the perception that leadership is a desired position, whilst most people want to avoid being categorised as followers. Williams and Miller (2002) state that this is ironic as over one third of business leaders are followers – to some extent – on a daily basis. The stereotype of followership is possibly also reinforced by the high availability of and importance ascribed to research studies and literature on leadership. Bjugstad, Thach, Thompson, and Morris (2006) report the ratio of leadership to followership books as 120:1. However, Bligh (2011) reports that there has been a change in the availability of followership literature on the Internet in recent years. Although the ratio of leadership to follower items found on the Google search engine is still 22:1, this is reportedly lower than the 57:1 ratio reported by Weick (2007).

To a large extent the literature about the leadership and followership process is viewed from a leader-centric lens (Bjugstad et al., 2006; Kelley, 2008), which implies that the role of the follower has not been explored and empirically validated as a valued position. Meindl, Ehrlich, and Dukerich (1985) introduced and developed a follower-centric perspective on leadership which directed the attention to the importance of followers' process of attribution and sense-making in organisations, without disregarding the importance of leaders. Kelley's (1988) seminal article *In Praise of Followers*, was published approximately the same time as Meindl's reflections and sought to refocus attention on followership, rather than it being a peripheral leadership component (Kelley, 2008). In 1998, Ira Chaleff published his argument

that followers have a moral responsibility to act courageously and that followers, as a complementary role to leaders, should serve a common purpose. Bennis (1999) added to the focus on followership by stating that the hierarchical, top-down approach to leadership where the leader holds the power, may have been both wrong and dangerous.

Organisation models commonly portray leadership and followership as mutual and reciprocal relationships. In the past, governance and maintenance was mostly seen as the role of the leader and leadership was perceived as the powerful and dominant entity in the leader-follower reciprocal relationship (Vanderslice, 1988). Globalisation has led to a decentralisation in bases of power and followers are required to act as self-managers and supervisors (Robbins & Judge, 2009). This decentralisation requires a higher level of interdependence between leaders and followers (Daft, 2008).

Furthermore, followers in contemporary business environments are more empowered than previously through their ability to access information more easily (Brown, 2003; Cross & Parker, 2004). Bennis (2010) contends that this empowerment has led to the power between leaders and followers to be democratised by media sources, such as blogging, social media and television. As a result, leaders no longer hold the same level of informational power as before and as Brown (2003) observed, leaders "... can no longer expect to be followed blindly by their now-well informed, more sceptical ranks" (p. 68). The growth of the number of knowledge workers and experts in the workplace could also be an explanation for the more empowered workforce (Dalkir, 2005). Furthermore, the incidence of toxic leadership and unethical practice in business has led followers to distrust leadership and to challenge the immoral and unethical behaviour of toxic leaders (Bennis, 2010).

Leadership theories started to focus on the role of the follower from the leadership perspective. Situational leadership theory suggests that assessing the situation of the follower could assist in choosing the most appropriate leadership style (Hersey, 1984). The Path-Goal theory (House, 1996) emphasises that working with followers would have an effect on follower motivation and performance. Therefore, the traditional approach to organisational psychology sees followership as an outcome of leadership, and does not emphasise the ability of the follower to produce independent of the leader's influence (Gardner et al., 2005) and

influence the leader's decision making. Followership recognises that at most times, followers are autonomous contributing members at all levels of the organisation (Chaleff, 2003), that they are more able to recognise the day-to-day events in the organisation than leaders (Kelley, 1998), and that organisations can develop and cultivate good followers (Bennis, 2010). More recent leadership theories have acknowledged that leadership is highly dependent on mutual trusting relationships with followers (Brower, Schoorman, & Tan, 2000; Uhl-Bien, 2006) and the Leader-Member-Exhange (LMX) theory (Danserau, Graen, & Haga, 1975) emphasised the dyadic-line between leaders and followers where loyalty is fundamental to a successful relationship. Other related research traditions also assisted in eroding the traditional leader-follower distinctions, for instance shared leadership (Pearce & Conger, 1980 cited in Bligh, 2011), self-management/self-leadership (Manz, 1986, cited in Bligh, 2011), and substitutes or neutralisers of leadership (Kerr & Jermier, 1978).

Kelley (2008) states that most leadership courses now also have a section that is devoted to the scholarship of followership. The interest in the development of followership has also been institutionalised in Kellerman's followership course at Harvard's Kennedy School. The first Followership conference was correspondingly held in 2006 at the Claremont McKenna College. Based on this evidence, it can be concluded that the leadership landscape and interest in followership has undergone a dramatic change in the last 30 years.

2.4.2 Defining the followership construct

Robert Kelley introduced one of the first conceptualisations of followership in 1998 (Bligh, 2011). Kelley (1998) emphasises that followership and leadership are roles that people play in the workplace. He argues that leaders play both roles at different points in their careers, or even at different times during the working day. Followership is defined as an active, participative role where the follower would choose to support the views of a leader and actively work towards the goals that are held in common with the leader and/or the organisation (Baker & Gerlowski, 2007). However, even leaders have to display the followership role more often than the leadership role. Kelley (1998) uses the example that for every committee a leader chairs, the leader is a member on several other committees. Therefore, the understanding and examination of what represents good followership behaviours is as important to organisational success as understanding the role of the leader.

Kelley's (1992) conceptualisation of followership is one of the few positive views of followership (Blanchard et al., 2009). Kelley (1988) explains good followers as sharing the following qualities: (i) they manage themselves well; (ii) they are committed to the organisation and are individualists who courageously and honestly pursue their own meaning in life, rather than follow norms and societal goals such as money, status and position; (iii) they build competence and exert a focussed efforts in task completion; (iv) they are honest, courageous and credible individuals. These good followers would also not compete for leadership or power, but rather, they would cooperate to accomplish goals.

Kelley (1992) further conceptualised followership in relation to the behaviours that are associated with good followers. He characterised these behaviours into the dimensions of independent critical thinking and active engagement. However, the interaction between these two dimensions is what classifies the individual into five different followership styles. These styles are depicted in Figure 2.3.

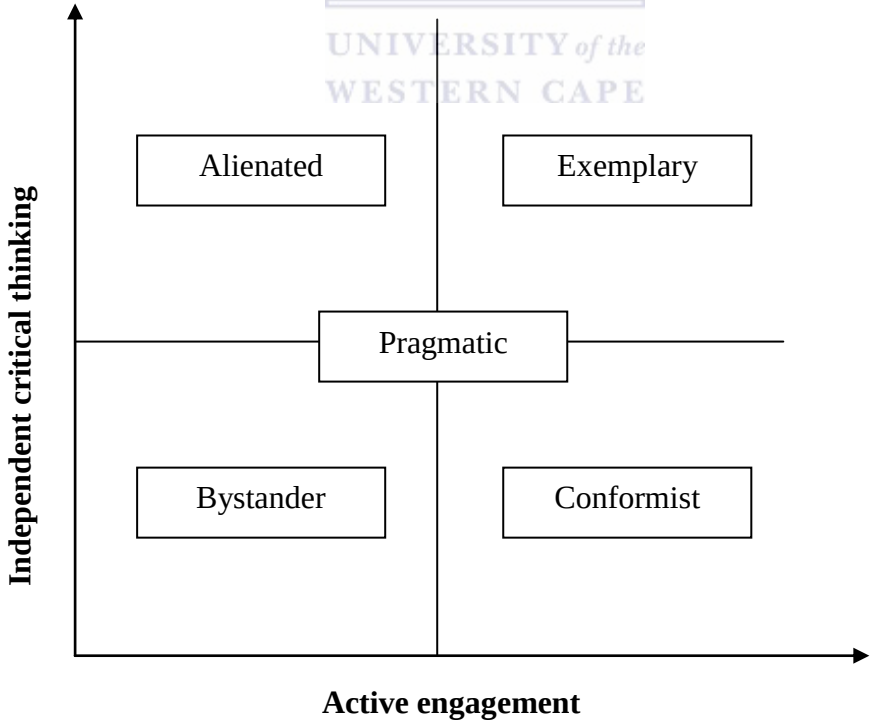


Figure 2.3 Kelley's followership style grid.

Source: Adapted from Kelley, 2008, p. 97

The five followership styles are based on the juxtaposition of the two dimensions and an individual's score on the followership instrument is then plotted based on the intercept derived from the scores on the two dimensions. According to Kelley (1998), individuals who have a low level of independent critical thinking and active engagement, are described as bystanders who relies on the leader's judgement and thinking, acts only when given direction and requires a high level of supervision. Alienated followers have high levels of critical thinking, but low levels of engagement. Alienated followers see themselves as people with healthy scepticism, who think for themselves, being the organisation's conscience and advocating for those who are not heard. Alienated followers are often seen as troublesome, cynical or negative. Towards the other end of the grid, conformist followers have a high level of active engagement and are generally seen as team players, trusting and committed to the leader and non-threatening individuals. However, these individuals lack independent critical thinking and would therefore avoid conflict, compromise their own needs to please the organisation, and be unwilling to take an unpopular position. The middle position in the followership grid would be that of pragmatic followers. These individuals are often full of uncertainty, might engage in politicking in the organisation, and are adverse to risks. The ideal follower, based on Kelley's (1998) theory, would be the exemplary follower who has a high level of active engagement and independent critical thinking. These individuals are self-starters, are focussed and committed to the goals of the organisation, and have strong organisational networks. Furthermore, exemplary followers would take initiative, give constructive criticism, think for themselves and continually increase their value to the organisation.

Chaleff's (2008, p. 72) model of Courageous Followership, like Kelley's model, focuses on followership in the workplace. Chaleff's model includes five dimensions of courageous followership attitudes and behaviours, namely: the courage to support the leader; the courage to assume responsibility for common purpose; the courage to constructively challenge the leader's behaviours; the courage to participate in any transformation needed; and the courage to take a moral stand when warranted to prevent ethical abuse. From these dimensions of attitude and behaviour, Chaleff identified four followership styles which are closely linked with Kelley's (1998) model. These styles include the resource style, the individualist style, the implementer style and the partner style. The partner style is characterised by the follower's high level of support for and challenges presented to the leader. Followers with a

partner style assume full responsibility for their actions and take ownership for future activities. It is interesting to note that both Kelley (1998) and Chaleff (2008) emphasises the moral responsibility of followers to act courageously and speak out against toxic leaders.

Another frequently used followership model is that of Blackshear. Blackshear (2003) provides a Followership Continuum in order to explain the developmental stages of followership within an organisation. The first stage involves a follower's entry into the organisation and the employee would provide work in return for some form of pay. In the second stage, the employee would grow to be a committed follower which is characterised by the internalisation of the mission, idea, or organisation or alternatively, an internal pledge to an effort or a person. At the third stage of Blackshear's continuum, the follower becomes an engaged follower, who is an active supporter that is willing to go above and beyond the routine. Stage four is characterised by effective followership where the follower is capable and dependable. The last stage, stage five, is that of exemplary followership. The exemplary follower could without difficulty be the leader and demonstrates a high level of self-leadership.

Kellerman (2008) also provides a classification of follower types. The followership types described by Kellerman are significantly influenced by the style of the follower's direct leader. The five follower types are: (i) isolates – described as individuals who have little or no concern to have a good relationships with the leader; (ii) bystanders – are people who are willing to be led, but are not engaged; (iii) participants – accommodate the requests of the leader, but only those requests that he/she agrees with; (iv) activists – followers who demonstrate a deep commitment to the organisation and the leader, doing whatever it takes to show their support and loyalty; (v) diehards – describes people who are dedicated to the cause and the leader that embodies the cause. The dieheards will follow the leader passionately and challenge the leader when he/she deviates from the mission.

From another perspective, Kaak, Reynolds, and Whyte (2013) suggest that there are strong conceptual similarities between emotional intelligence and good followership. These authors propose that good followership is not unthinking compliance, but rather a mature level of self-awareness, self-management, social awareness and relationship management. Kaak et al.

(2013) states that these good followers would not only display independent critical thinking (as per Kelley's model, 1992), but awareness about own feelings and using this information to guide thinking and actions. Kaak et al. (2013) proposes that this will result in mature followership that can be called exemplary or authentic. Kaak et al. (2013) differentiates between resistant, compliant and mature followers with the latter being equivalent to the exemplary follower as described by Kelley (1992) and Blackshear (2003). These individuals, according to Kaak et al. (2013) would fulfil the followership role with a high level of emotional intelligence, maintain good relationships with the leader and peers, hold high ethical standards, retain commitment to the organisation, and will allow and respond to human error with commitment and grace.

Although the different conceptualisations of followership have a unique focus and describe different followership styles, most models aim to describe an ideal follower. The different terms utilised to describe this follower include exemplary, partner, diehard, authentic, and mature. What is useful about Kelley's (1992) model is the identification and interaction of the two dimensions of followership, namely independent critical thinking and active engagement. The following sections will provide further elaboration on the factors that influence whether followers act in an exemplary manner. The consequences of exemplary followership will also be expounded upon.

2.4.3 The antecedents and consequences of followership

Exemplary followership behaviour has been found to be positively correlated with overall performance and productivity of the employee (Favara, 2009; Gilbert & Hyde, 1988; Kim, 2011). Furthermore, followers who scored high on the independent critical thinking dimension of followership (as conceptualised by Kelley, 1992) demonstrated creativity (Banutu-Gomez, 2004), improved health outcomes in stressful situations (Dowd & Bolus, 1998) and improved performance through continuous learning (Yeo, 2007). Blanchard et al. (2009) found a negative relationship between independent critical thinking and normative organisational commitment, as well as extrinsic job satisfaction. This negative relationship is possibly due to the critical thinker's questioning and evaluation of information at work, which may make the individual more aware of negative aspects of their jobs. Therefore, even though independent critical thinking is seen as a desired asset of followers in the workplace,

it may also have negative consequences such as lowered commitment and satisfaction (Blanchard et al., 2009).

With regard to the active engagement dimension of followership (Kelley, 1992), followers who score high on this dimension take initiative, assume ownership, go above and beyond expectations and provide high-quality work (Kelley, 1992). Tanoff and Barlow (2002) utilised Kelley's model of followership and reported that conscientiousness had a strong relationship with active engagement. Furthermore, Blanchard et al. (2009) reported that active engagement is positively related to organisational commitment (both affective and normative commitment) and job satisfaction (intrinsic and extrinsic).

Kelley's (1992) followership model has only been used in a limited number of studies. However, due to the dynamic relationship between leader and follower one could assume that leadership is likely to have an influence on follower characteristics. Authentic leadership theory gives emphasis to positive and developmental interactions between leaders and followers (Peterson, Walumbwa, Avolio, & Hannah, 2012; Woolley et al., 2011). Followers who are led by authentic leaders feel more empowered and take greater ownership for their work (George, 2003; Ilies, Morgeson, & Nahrgang, 2005), both of which are characteristics of exemplary followership. Effective leaders have been shown to strengthen their followers by developing their self-confidence, self-determination (Ilies et al., 2005) and by designing roles for the followers to make a valued contribution to the organisation (Kouzes & Posner, 2002). George (2003) argues that authentic leaders motivate followers by modelling a deep sense of purpose and ethical work ethos. Sergiovanni (1992) confirms that it is the moral component of leadership that brings out the best in followers. Effective followers are committed to a purpose and derive personal satisfaction from their work (Potter & Rosenbach, 2006) and therefore, their self-perceptions of their own characteristics can have a positive effect on their work engagement (Zhu et al., 2009) and level of openness, self-awareness and ethical behaviour (Walumbwa, Wang, et al., 2010). Therefore, it is envisaged in the present study that authentic leadership will have a positive relationship with followership, and in turn, followership would be positively related to work engagement.

Zhu et al. (2009) emphasise that further research is needed to examine the role that followers play with regard to being an active participant in the leadership process dynamics. Several researchers have suggested that a specific leadership style may be more effective for some followers than others (Conger & Kanungo, 1998; Pillai & Meindl, 1998) and therefore, it can be assumed that follower characteristics could be a moderator of the effect of such leadership on follower work engagement or performance (Walumbwa, Wang, et al., 2010; Zhu et al., 2009). These follower characteristics could, amongst others, include proactivity (Parker, Williams, & Turner, 2006), empowerment (Walumbwa, Wang, et al., 2010) or psychological strengths (Wang et al., 2014). For instance, followers who have a high level of psychological strengths, i.e. PsyCap might be expected to develop into exemplary followers and perform more effectively than those who have low levels of PsyCap. Followership positivity and the context in which leadership takes place may therefore have a mediating effect between leadership and workplace outcomes (Peterson et al., 2012). Kim (2011) report that followership mediated the relationship between participative leadership and organisational performance. Furthermore, Zhu et al. (2009) found that follower characteristics mediated the relationship between transformational leadership and work engagement. These authors found that the perception of the qualities, attributes and characteristics of followers as perceived by both the leader and followers may have an impact on the effectiveness of leadership.

2.4.4 Criticisms of and controversies around the followership construct

Currently, followership as a field of research is still in the beginning phases of conceptualisation and clarification (Kelley, 2008). Therefore, a number of different conceptualisations of followership currently exist (for instance, Kelley, 1998; Blackshear, 2003; Kellerman, 2008, 2012; Kaak et al., 2013) and to date, clarity has not been established on what constitutes effective followership characteristics. It is also not clear whether these characteristics are context or culture bound.

With regard to measuring followership, the literature indicates that this is still in a developmental stage. For instance, researchers using Kelley's (1992) followership instrument have not been able to validate the original two-dimensional conceptualisation of the questionnaire, but rather found a three-factor (Blanchard et al., 2009), or four-factor (Colangelo, 2000) structure. Both Blanchard et al. (2009) and Colangelo's (2000) factor

analysis did retain the active engagement and independent critical thinking dimensions (albeit with fewer items as originally conceptualised), but added further dimensions, namely follower attitude and affect (Blanchard et al., 2009), as well as passion and team-mindedness (Colangelo, 2000). It has been reported that Kelley developed the followership instrument for exploratory purposes only and therefore, the validity and reliability was not determined at the conceptualisation of the instrument (Baker, 2006). Therefore, the absence of a valid and reliable workplace measure of the followership construct is a matter of concern within scholarly research and researchers using Kelley's followership instrument are advised to validate the instrument for their respective samples (Baker, 2006; Blanchard et al., 2009).

Another issue that is debated in the literature is the use of the term 'follower' (Bligh, 2011). Rost (2008) states that the use of the term 'follower' may be perceived with the connotation of subordination, submission and passivity and poses the question whether the word *follower* should be discarded in favour of words such as participant, contributor, member, collaborator or associates. Alternatively, adjectives such as exemplary followers (Kelley, 2002) or powerful followers could be used as alternatives. However, some researchers argue that changing the semantics or ascribing positive or negative adjectives to the terminology used in leadership and followership is not the answer. These researchers propose that the dichotomous approach to leadership and followership must shift to incorporate the multiple, changing, and often contradictory identities and roles of leaders and followers (Collinson, 2005; Rost, 2008).

2.4.5 Socio-demographic explanations of followership

There are currently only a limited number of studies that utilised Kelley's (1992) model of followership, and of these studies, only one study was found that reported the relationship between socio-demographic characteristics and followership. Therefore, in order to address this gap, the present study will report on the relationship between socio-demographic variables and followership.

Blanchard et al. (2009) did find that tenure in the organisation was significantly related to the independent critical thinking dimension of followership. This may suggest that employees who have experience in the organisation are more likely to be sceptical about new trends and

decisions that are put before them. Furthermore, no significant differences were found between genders and the two dimensions of followership.

Utilising Chaleff's model of followership, Dixon (2006) reported significant differences between reported follower behaviours and occupational levels. The results indicate that the executive level managers within the sample had the most evidence of followership behaviour while the operational level had the lowest.

2.4.6 Development of followership

The development of followership seems to be an area in the followership literature and practice that still needs to be expanded on. Most of the current training of followers in organisations seems to be for the purpose of equipping the follower to take on leadership roles (Baker, 2006). Kelley (1998) observes that even though most individuals in organisations spend the greatest part of their working day in followership roles, most organisations only provide leadership training. Additionally, many specialists, experts and knowledge workers may prefer not to get into leadership positions (Dalkir, 2005). Brown and Thornborrow (1996) concur that training followers could increase their effectiveness, yet few organisations provide such training. Agho (2009) maintains that developing effective followers should be viewed as a requisite for organisational success in light of global competition for intellectual and human resources.

A number of training interventions to hone followership skills are suggested in the literature. However, most of these references date more than 20 years back and no evidence was found relating to the effectiveness or practical implications of the suggested interventions. Nevertheless, the researcher found it prudent to report the findings in order to create context for possible future studies.

Communication skills in order to influence upwards were mentioned as a key topic for followership training (Chaleff, 2008; Lippitt, 1982; Offerman, 1998; Yung & Tsai, 2013). Further skills such as problem-solving, decision-making (Offerman, 1998; Pittman, Rosenbach, & Potter, 1998), conflict-handling, making ethical choices, independent thinking,

self-management (Kelley 1988, 1992) and change agility training (Offerman, 1998) was suggested. Additionally, individual coaching for followers with high potential was advocated (DeLong & Vijayaraghavan, 2003), as well as teaching followers to partner with leaders in achieving goals (Kelley, 1992; Pittman et al., 1998). The development of effective followers within the organisation is however not only dependent on training interventions, but also include recruiting employees who have the potential to partner with the leaders (Pittman et al., 1998). Rewards and recognition of effective followership behaviour likewise play an important role and should be measured and managed in order for followers to see what the company values (Blackshear, 2003; Kelley, 1991; Vecchio, 1997). This should correspondingly be echoed in the organisational climate that celebrates followership (Lundin & Lancaster, 1990) and creates the opportunity for interdependence and partnership between leaders and followers (Kelley, 1991).

The characteristic of courage is utilised and emphasised by Kelley (2008) and Chaleff (2003) to describe effective followers. Kelley (2008) states that it is the responsibility of followers to voice unethical actions on the part of leaders or peers in order to reduce the occurrence of toxic leadership and dysfunctional organisations. In order to be able to do this, Kelley (2008) suggests that *courageous conscience* should be instilled in followers. Kelley (2008) does not offer guidelines for development of this conscience, but notes that it should include the legitimisation of whistleblowing, helping followers to find the courage to speak out against unethical actions, providing societal support that encourages people to exercise their courageous conscience and preparing followers with successful techniques for standing up against unethical actions.

In summary, a good follower is someone who is an active, rather than a passive conduit of other's direction (Frisina, 2005; Hollander, 1992). These good followers can identify, choose how to best approach, and in the end, complete a task (Miller, 1996). Good followers trust and work effectively with others, perform their jobs competently, embrace change, identify with the leader and share in the leader's vision (Latour & Rast, 2004).

2.5 AUTHENTIC LEADERSHIP

Confidence in contemporary business leadership has decreased following unethical actions on the part of leaders and resultant business failure (Kets De Vries & Balazs, 2011; Treviño & Brown, 2007). This has sparked an increased interest in equipping followers with skills to communicate with their managers, otherwise known as voice behaviours (Chaleff, 2003; Kelley, 2008), but also in the development of leaders who focus on the interests of their followers and organisations (Boyatzis & McKee, 2005; Walumbwa, Christensen, & Hailey, 2011). Authentic leadership have recently been included in the categorisation of positive forms of leadership (Avolio & Gardner, 2005; George, 2003; Luthans & Avolio, 2003) and recent research results have provided evidence of the positive relationship between authentic leadership and positive workplace outcomes (Avolio & Mhatre, 2012).

2.5.1 The history, notion and definition of authentic leadership

Although the conceptualisation of authentic leadership is quite novel, the concept and theory of authenticity as a human trait can be traced back to Greek philosophy (Luthans & Avolio, 2003). Early definitions of authenticity include Sartre's being true to oneself and the absence of self-deception (1966, cited in Avolio & Mhathre, 2012), and the ability to make choices, take responsibility and recognising own weaknesses (Brumbaugh, 1971, cited in Avolio & Mhatre, 2012). Harter's (2002) definition of authenticity therefore includes two components, namely, 'knowing one's true self' and 'acting in accordance with that true self'. Based on these two components, it becomes apparent that authenticity is a subjective and reflexive process and therefore, if an individual believes he or she is authentic, then that belief would be true for that person (Avolio & Gardner, 2005; Harter, 2002). Other approaches to authenticity do require empirical validation. One such example is the definition by Kernis (2003) who defined authenticity as consisting of four components. These components include: (i) full awareness and knowledge of one's needs, values, feelings, and roles in behaviour, (ii) objective acceptance of one's positive and negative aspects, attributes and qualities, (iii) acting in accordance with one's true self as opposed to acting to please others, attain rewards or avoid punishment, and (iv) a relational orientation that values openness and truthfulness in close personal relationships.

Combining these two conceptualisations of authenticity, the proponents of authentic leadership define authenticity as having clear and definite knowledge about oneself in all regards (including beliefs, preferences, strengths and weaknesses) and behaving in a way that is consistent with this self-knowledge (Caza & Jackson, 2011; Gardner et al., 2005; Ilies et al., 2005). Borrowing from Kernis's (2003) four components, authentic leaders are described as leaders who embody four behavioural tendencies, namely self-awareness, relational transparency, balanced processing and internalised moral perspective (Luthans & Avolio, 2003). Self-awareness is defined as an individual's accurate knowledge of own strengths, weaknesses and the way one makes sense of the world. Relational transparency involves appropriate self-disclosure and a genuine presentation of oneself to other people. Balanced processing includes the collection and use of objective, relevant information and balancing this with beliefs that are held, even if the objective information challenges the prior held belief. An internalised moral perspective would influence an individual to act with self-determination and self-regulation, rather than acting in according with situational demands (Avolio et al., 2009, p. 424).

Notably, the definition of authentic leadership requires that all four of the listed components needs to be true of the leader's thoughts and actions (Gardner et al., 2005, Ilies et al., 2005) in order for follower's to perceive the leader as authentic (Weischer, Weibler, & Petersen, 2013). The four components are furthermore proposed to have an additive effect on one another, which would mean that the four components displayed together are greater than the sum of the individual parts. Authentic leaders show to others that they have a genuine desire to grow in self-awareness and understand their own leadership in order to serve others more effectively (George, 2003). Authentic leaders would regulate their behaviour and act in accordance to deep personal values and convictions to build credibility, respect and trust in their followers. These authentic leaders would also practice balanced processing by encouraging diverse points of view, which have the capacity to build networks of collaborative relationships with followers (Walumbwa et al., 2008). When leading in this manner, the leader is perceived to be authentic (Avolio et al., 2004). To this extent it has been proposed (Walumbwa et al., 2008) and empirically confirmed (Caza et al., 2010) that authentic leadership is a second-order (or higher-order construct).

The question can be asked as to how authentic leadership is different from other leadership theories. Avolio et al. (2004) addressed this question by stating that authentic leadership can be described as a 'root' construct of leadership that can serve as grounding of other leadership frameworks, such as transformational, charismatic, integrity and or ethical leadership. Luthans and Avolio (2003) did indeed position authentic leadership, as a separate construct to ethics. Building on the idea of authentic leadership as a root construct, it means that the leader can be directive, authoritative or participative and that displaying these common leader behavioural styles would not indicate whether the leader is authentic or inauthentic. Rather, the leader's ability to act in accordance to own values, to build credibility and respect in their followers, to actively encourage diverse points of view and foster relational transparency would be deemed authentic (Avolio et al., 2004). Leaders can consequently be described as transformational, charismatic or transactional in addition to being described as authentic (Avolio & Mhatre, 2012). Avolio, Gardner, and Walumbwa (2005) subsequently claim that authentic leadership is the "root construct of all positive, effective forms of leadership" (p. xxii).

Erickson (1995) does heed researchers with a warning that authenticity can be described on a continuum ranging from highly inauthentic to highly authentic. Thus, this implies that individuals are not either completely authentic or completely inauthentic. It is also possible that individuals may exhibit more authenticity in certain situations, and hence, the state-like nature of authentic leadership is emphasised (Walumbwa et al., 2008). Authentic leadership is therefore not proposed as a style of leadership, but rather an approach to leadership.

The literature on authentic leadership also differentiates between authentic leadership as a construct and the theoretical framework associated with the authentic leadership process (Avolio & Mhatre, 2012). The definition of authentic leadership (as will also be used in the present study) described by Luthans and Avolio (2003) is "a process that draws from both positive psychological capacities and a highly developed organizational context, which results in both greater self-awareness, and self-regulated positive behaviours on the part of the leaders and associates, fostering positive self-development" (p. 243).

On the other hand, Avolio and Gardner (2005) propose that the authentic leadership process consists of nine facets. These facets include positive PsyCap (including the components of efficacy, hope, optimism, and resilience); positive moral perspective; leader self-awareness; leader self-regulation; leadership processes/behaviours; follower self-awareness/regulation; follower development; organisational context; and veritable and sustainable performance beyond expectations.

Utilising the authentic leadership process, Gardner et al. (2005) focus on the more dynamic process of authentic leadership and followership. These authors introduced the concept of authentic followership which offers a multi-level self-based perspective of authentic leadership that also includes follower development.

2.5.2 Antecedents of authentic leadership

Antecedents of authentic leadership are often hard to describe as it is not solely dependent upon formal interventions or workplace factors. For instance, one's personal history and reaction to trigger events may influence authentic leadership (Avolio & Luthans, 2006). Therefore, Caza and Jackson (2011) broadly defined the sources of authentic leadership into environmental factors and individual differences.

From the environmental antecedents categorisation, antecedents of authentic leadership include facilitative support through established norms of authenticity (Chan, Hannah, & Gardner, 2005) as well as a positive organisational context (Avolio et al., 2004; Gardner et al., 2005). Furthermore, active environmental factors such as role-models (Gardner et al., 2005) and direct intervention through training (Avolio & Luthans, 2006) could also initiate or enhance the development of authentic leadership.

Individual differences that are antecedents to authentic leadership include personal history (Gardner et al., 2005) and certain life triggers that may shape an individual's approach to leadership (Avolio & Luthans, 2006). Furthermore, a highly developed personal morality and a propensity towards concern for others with regard to holding transcendent values could also enhance authentic leadership (Hannah, Lester, & Vogelgesang, 2005). Authentic

leadership theory moreover places emphasis on the leader's PsyCap (Luthans & Avolio, 2003), self-knowledge and self-consistency (Peus, Wesche, Streicher, Braun, & Frey, 2012). Jensen and Luthans (2006b) reported that a leader's level of PsyCap contributes to his/her level of authentic leadership.

2.5.3 Consequences of authentic leadership

The consequences of authentic leadership are evident in the potential benefits it offers to the authentic leader him/herself, as well as for followers and the organisation as a whole. From the leader's perspective, authentic leaders are likely to experience more positive emotions, improved wellbeing (Chan et al., 2005; Gardner et al., 2005) and psychological wellbeing (Toor & Ofori, 2009), as well as greater leadership effectiveness (Eigel & Kuhnert, 2005; Walumbwa, Luthans, et al., 2011). With regard to groups and organisations, authentic leadership have been shown to foster a positive culture or climate (Gardner et al., 2005; Mazutis & Slawinsky, 2008; Woolley et al., 2011). Authors furthermore reported relationships between authentic leadership and organisational learning (Mazutis & Slawinsky, 2008), entrepreneurial success (Jensen & Luthans, 2006a) and firm financial performance (Clapp-Smith, Vogelgesang, & Avey, 2009).

The authentic leadership process suggests that authentic leadership is linked to followers' attitudes and behaviours (Avolio et al., 2004) and that the most important outcomes of authentic leadership are those for individual followers (Caza & Jackson, 2011). The authentic leader's influence is created through a sense of personal and social identification between leader and follower (Avolio et al., 2004). For instance, authentic leaders would use role-modelling to display high moral standards to their followers in order for the follower's values and beliefs to become more similar to that of the leader (Gardner et al., 2005). Another example would be the leader and follower's transparent and genuine discussion of his/her own vulnerabilities, thereby emphasising the constant focus on growth and development of the follower as well as the leader (Avolio et al., 2004). By adding a multilevel layer to the authentic leadership process, leaders could also create an organisational climate of honesty and integrity which will create a sense of pride for followers to belong to the organisation. Therefore, followers would not only identify with their authentic leader, but also with the leader's group or organisation.

The personal and social identification with authentic leaders on the part of the follower have been shown to lead to higher levels of hope (Snyder, Irving, & Anderson, 1991) and trust (Avolio et al., 2004; Chan et al., 2005; Dirks & Ferrin, 2002; Gardner et al., 2005). Furthermore, positive emotions (Avolio et al., 2004; Chan et al., 2005; Dasborough & Ashkanasy, 2005) and positive states (Luthans, Youssef, & Avolio, 2007a), including higher levels of PsyCap (Avolio et al., 2004; Avolio & Luthans, 2006; Gardner & Schermerhorn, 2004; Ilies et al., 2005; Woolley et al., 2007) have also resulted from this identification. More consequences of authentic leadership include higher levels of follower commitment (Avolio et al., 2004; Jensen & Luthans, 2006a; Walumbwa et al., 2008), job performance (Avolio & Luthans, 2006; Chan et al., 2005; Walumbwa et al., 2008; Wong & Cummings, 2009), organisational citizenship behaviour (Walumbwa et al., 2008), workplace wellbeing (Avolio & Luthans, 2006), creativity (Ilies et al., 2005), job satisfaction (Jensen & Luthans, 2006a), meaningfulness (Walumbwa, Wang, et al., 2010) and work engagement (Alok & Israel, 2012; Giallonardo et al., 2010; Walumbwa, Wang, et al., 2010). Authentic leadership is also negatively related to burnout (Laschinger, 2014; Wong & Cummings, 2009). A positive relationship has moreover been found between the behavioural integrity (Leroy, Palanski, & Simons, 2012) of authentic leadership behaviours shown and the job performance of followers. As much as these findings are a true report of the effect of authentic leadership, Leroy, Anseel, Gardner, and Sels (2012) report that such outcomes are shown to be a function not only of the leader, but also of the person being led as authentic leadership and authentic followership co-produce follower motivation and behaviour (Shamir, 2007).

Using hierarchical linear modelling, Walumbwa, Wang, et al. (2010) established that the relationship between authentic leadership behaviour on the organisational citizenship behaviour and work engagement of followers was mediated by the follower's level of identification with the leader and by the follower's feelings of empowerment. Furthermore, Hannah, Avolio, and Walumbwa (2011) report that the effect of authentic leadership on follower performance is fully mediated by the leader's influence on the follower's level of positivity.

When escalating the level of analysis to the group level, Clapp-Smith et al. (2009) report a significant positive relationship between the ratings of authentic leadership and outcomes that

include trust and performance. Authentic leadership is also reported to be related to team virtuousness, and in combination, authentic leadership and team virtuousness are potential facilitators of team success (Rego, Vitória, Magalhães, Ribeiro, & Pina e Cunha, 2013). Walumbwa, Luthans, et al. (2011) similarly report a group-level analysis with findings that collective PsyCap and trust mediated the relationship between ratings of authentic leadership, group citizenship behaviour and group performance whilst controlling for transformational leadership.

2.5.4 Criticisms of and controversies around authentic leadership

From reviewing the list of antecedents and consequences of authentic leadership, it can be seen that there is overlap in some areas (Caza & Jackson, 2011). For instance PsyCap has been reported as an antecedent as well as a consequence of authentic leadership. Furthermore, authenticity is being explored by Luthans, Youssef, and Avolio (2007a) for inclusion as a possible dimension of PsyCap, which may cause redundancy of the authentic leadership measure. These complexities and possible confusion of multi-functional relationships have been identified as an area that needs to be explored (Gardner et al., 2005; Gardner, Cogliser, Davis, & Dickens, 2011; Luthans & Avolio, 2009b).

The measurement and operationalization of the authentic leadership construct have also been a source of controversy in the academic literature. Typically, the empirical measurement of authentic leadership is done by capturing the observer attributions of followers, without including the leader's experience. This type of measure may be seen as contradictory to the definition of authenticity as a personal experience. By utilising followers' rating of their leader's authenticity, the results will indicate their attributions of that leader's authenticity, and these attributions may not necessarily be accurate (Douglas, Ferris, & Perrewe, 2005). Chan et al. (2005) has made the distinction between 'genuine' authentic leaders and 'pseudo' authentic leaders to explain this phenomenon. The conflict therefore seems to lie in the definition and operationalization of authentic leadership as the current definitions include the leader's experience of his or her own authenticity (Avolio & Gardner, 2005; Avolio et al., 2004; Harter, 2002), but also the dependence on follower responses where "followers authenticate the leader" (Gardner et al., 2005, p. 348). This controversy is further highlighted by the fact that the research focus of authenticity is often on the leader, even though authentic

leadership is recognised as a multilevel and relational concept (Algera & Lips-Wiersma, 2012; Cooper, Scandura, & Schriesheim, 2005; Yammarino, Dionne, Schriesheim, & Danserau, 2008).

Skepticism with regard to the ontological base of authentic leadership has also been expressed (Caza & Jackson, 2011). The question as to whether authenticity is even possible has been asked in psychology (Erickson, 1994), and now to organisational psychologists who work with authentic leadership (Sparrowe, 2005). Algera and Lips-Wiersma (2012) states that there is not yet clarity on what it is to be 'authentically human' and that this should be answered before shifting the focus to 'what it is to be an authentic leader' (p. 119). Guthey and Jackson (2005) justified that a leader's intentional actions to be authentic, challenges any possibility of achieving this said authenticity. Algera and Lips-Wiersma (2012) warns that failure to clarify the ontological base of authentic leadership may reduce the novel movement to a "management technique and would undermine the original objectives of enhancing meaningful work and ethical behaviour" (p. 129).

Caza and Jackson (2011) further highlights that the potential drawbacks of authenticity have not been expanded upon in the academic literature. The assumption of authentic leadership is that authenticity is a desirable characteristic for a leader and that it produces only positive outcomes. However, authenticity may not be beneficial in all situations. For example, inauthenticity may be important to effect positive change in some situations (Harter, 2002). It is also possible that a person can be too authentic, which might limit possibilities and produce negative results (Harter, 2002). These concerns have been noted for further research into the authentic leadership construct (Avolio & Mhatre, 2012).

2.5.5 Socio-demographic explanations of authentic leadership

Chan (2005) proposed that the meaning and effect of authentic leadership may vary depending on the context in which it is measured. For instance, the effects of authenticity may vary by gender (Harter, Waters, Whitesell, & Kastelic, 1998). Woolley et al. (2011) reported that comparable authentic leadership behaviours produced different outcomes among male and female followers in their sample of the New Zealand general population.

Eagly (2005) suggested that, apart from gender, differences such as ethnicity, occupational level, social class (Gardiner, 2011) and education may also be important in explaining the experience of authenticity and authentic leadership. However, to date, no empirical studies were found examining these demographic characteristics in relation to authentic leadership. The present study will therefore examine whether significant differences exist for socio-demographic characteristics of the sample in relation to authentic leadership.

2.5.6 Development of authentic leadership

Shamir and Eilam (2005) suggest that there is a distinction between the development of authentic leaders, and authentic leadership development. These authors suggest that the latter definition is more complex as it involves the development of an authentic relationship between leaders and followers. Avolio and Gardner (2005) however state that such a differentiation is not feasible as the development of authentic leadership is unlikely to be achieved by a training programme. Rather, the authentic leadership development process is complex in nature and involves an on-going process where leaders and followers gain self-awareness and develop mutual trusting relationships (Chan, 2005). It could also be possible that a change in societal norms can have an impact on the authentic leadership development process (George, 2003). Hence, authentic leadership development becomes a life programme, rather than a series of training programmes (Gardner et al., 2005). It is however acknowledged that the on-going process may partly be shaped by planned training interventions (Avolio, 2005).

With the complexity of authentic leadership and the authentic leadership process in mind, Luthans and Avolio (2009b) suggests that the focus should be moved from developing authentic leadership, to authentically developing leaders. The former approach involves developing the leader to have advanced capacities for self-awareness, self-regulation, internalised moral perspective, balanced processing, positive modelling, relational transparency and how to enact authentic behaviour in the workplace (Avolio & Gardner, 2005; Luthans & Avolio, 2003). When authentically developing leaders, the former actions are required, but by authentically developing leaders, the leaders will also need to learn to build the capacity to foster lateral interpersonal influence, followership skills, and the

capacity to build commitment and engagement in followers (Gardner et al., 2005; O'Connell, 2013).

O'Connell (2013) believes that authenticity as a root of leadership is not an inborn personality characteristic. Accordingly, authenticity is carefully developed in and by the leader incorporating numerous career and life events and triggers. Thus, authentic leadership is not only developed in the workplace, but is also influenced by personal life events. In order to be authentic, an individual needs to have a strong sense of personal identity (Kegan, 1994) and be able to reflectively draw on practices and experiences in various contexts over time (Chan, 2005; Shamir & Eilam, 2005).

In conclusion, the need for leadership development in organisations has become much more complex as leaders have to deal with unpredictable and interrelated global challenges (Uhl-Bien, Marion, & McKelvey, 2007). The occurrence of unethical leadership and ineffective leadership has strengthened the need for more genuine approaches to leadership (O'Connell, 2013). Walumbwa et al. (2011) posit that authenticity in leadership will be essential to maintain trust and respect and to allow for collaboration in the knowledge era. Authenticity of the leader would support consistent behaviour of leaders across cultures (Walumbwa et al., 2008) and as such authentic leaders can function autonomously and reliability in complex environments (Uhl-Bien et al., 2007). Eigel & Kuhnert (2005) endorses the need for authentic leadership by stating that authenticity if one of the highest level leadership skills.

2.6 RELATIONSHIPS BETWEEN THE VARIABLES IN THE PRESENT STUDY

Authentic leadership and PsyCap have been found to interrelate while both may facilitate employee creativity (Rego et al., 2012). In a sample of 828 working adults, authentic leadership was found to be positively related to followers' PsyCap development (Woolley et al., 2011). This relationship was confirmed by Walumbwa et al. (2011) who found that authentic leadership had an impact on the group-level PsyCap of employees. In a South African context, Munyaka (2012) also found a substantial relationship between authentic leadership and follower PsyCap. It is propositioned that a positive relationship between authentic leadership and PsyCap will also be found in the present study (Proposition 12, 21).

Effective leaders enable their followers to contribute to the success of an organisation (Baker, Mathis, & Stites-Doe, 2011). Gardner et al. (2005) argue that authentic leaders produce heightened levels of follower self-awareness and self-regulation and that this, in turn, leads to positive follower development and outcomes. Walumbwa et al. (2010) states that authentic leadership has an important role in the extent to which followers feel psychologically empowered. It is proposed in the present study that the leader's perceived level of authenticity will be related to exemplary follower behaviour (Proposition 13, 22).

Authentic leaders take great care in the development and empowerment of followers (George, 2003). Luthans and Avolio (2003) note that authentic leaders recognise and value individual differences and have the motivation and deep-rooted desire to employees' talents and help them build those talents into strengths. Authentic leaders are therefore able to enhance the engagement and satisfaction of employees by strengthening their identification with their task and purpose within the organization (Avolio et al., 2004). A significant positive relationship between authentic leadership and work engagement was reported by Alok and Israel (2012), Giallonardo et al. (2010) and Walumbwa, Wang, et al., (2010). It is proposed in the present study that the relationship between authentic leadership and work engagement will be confirmed (Proposition 14, 18).

To date, no research could be found in which the relationship between PsyCap and followership dimensions was explored. Woolley et al. (2011) found that followers in a more positive organisational climate demonstrated higher levels of PsyCap. They also suggested that authentic leadership created a more positive organisational climate. Higher levels of PsyCap have moreover been linked to higher employee creativity (Rego et al., 2012) which may, in turn, be seen as a component of exemplary followership. The PsyCap dimension self-efficacy could be argued to be important for the follower's independent critical thinking, as a level of confidence in one's own competence would be needed to question the status quo and the actions of the leader. Furthermore, hope and optimism are necessary components of setting goals and perceiving a positive future. These goals and positive view of the future could be important building blocks for a follower's active engagement in his/her role. If one considers that PsyCap has a positive influence on employee attitudes (Avey, Reichard, et al.,

2009), it is likely that higher levels of PsyCap will contribute positively to exemplary followership behaviour (Proposition 15, 23).

Avey, Reichard, et al., 2009 concluded after a meta-analysis of PsyCap, that PsyCap is positively related to desirable employee attitudes and negatively related to undesirable employee attitudes. If one considers that individuals with higher levels of PsyCap expect good things to happen at work (optimism), demonstrate a belief that they are able to create their own success (efficacy and hope) and are able to deal constructively with setbacks (resilience), it may be logically deduced that these individuals possess more positive attitudes. In turn, they are also more likely to engage themselves in their work and be enthusiastic about their tasks. Xanthopoulou et al. (2009) observed a positive relationship between PsyCap and work engagement in their study of work engagement, self-efficacy and optimism. Simons and Buitendach (2013) as well as Harris (2012) also reported positive relationships between PsyCap and work engagement in South African samples. It is, therefore, propositioned that a positive relationship between PsyCap and work engagement will be found in the present study (Proposition 16, 19).

Kelley's (1992) model of exemplary followership suggests that followers who are actively engaged will take the initiative and that they immerse themselves in their jobs. Exemplary followership may be theoretically linked to being absorbed in one's work, as defined by the work engagement construct. Accordingly, it is conceptually argued that exemplary followers who are actively engaged and demonstrate independent critical thinking at work will experience higher levels of work engagement (Proposition 17, 20).

Studies reporting the mediating effect of PsyCap have also been presented in the literature review. It can be derived from these studies that an employee's level of PsyCap could intervene in the relationship between broad contextual and leadership factors, such as organisational climate (Luthans, Norman, et al., 2008) and authentic leadership (Avey et al., 2008) and individual outcomes, such as organisational citizenship behaviour and work performance (Luthans, Norman, et al., 2008; Norman et al., 2010; Walumbwa, Luthans, et al., 2011). As PsyCap seems to be instrumental in facilitating the impact of a positive organisational context on various desirable outcomes (Youssef & Luthans, 2012), it is

proposed that PsyCap might mediate the relationship between authentic leadership and work engagement in the present study (Proposition 24).

The maturity of the followers with regard to their self-awareness and positive psychological traits may influence the resultant followership behaviour that is displayed (Kaak et al., 2013). Strong evidence suggests that authentic leadership is positively related to PsyCap development of followers (Walumbwa et al., 2011) and therefore, it is proposed that PsyCap will mediate the relationship between authentic leadership and followership (Proposition 25).

Furthermore, it has been reported that follower characteristics may have an influence on the effect of leadership on work engagement (Walumbwa, Wang, et al., 2010; Zhu et al., 2009). The effect of leadership on important workplace outcomes, such as work engagement, is likely to be dependent on the follower's identification with the leader, as well as the follower's disposition and behavioural style. Peterson et al. (2012) proposes that follower positivity could have a mediating effect between leadership and workplace outcomes. Zhu et al. (2009) also report the mediating effect of follower characteristics on the relationship between transformational leadership and work engagement. Therefore, it is proposed in the present study that authentic leadership will have a significant indirect effect on work engagement through followership (Proposition 26).

2.7 PROPOSED THEORETICAL MODELS AND PROPOSITIONS

It is anticipated that authentic leadership will have a significant impact on the levels of PsyCap and followership of the respondents in the sample, which individually and combined, will explain a significant proportion of the variance in work engagement. It is envisaged that the following tentative models of sequential relationships between the variables can be constructed and tested.

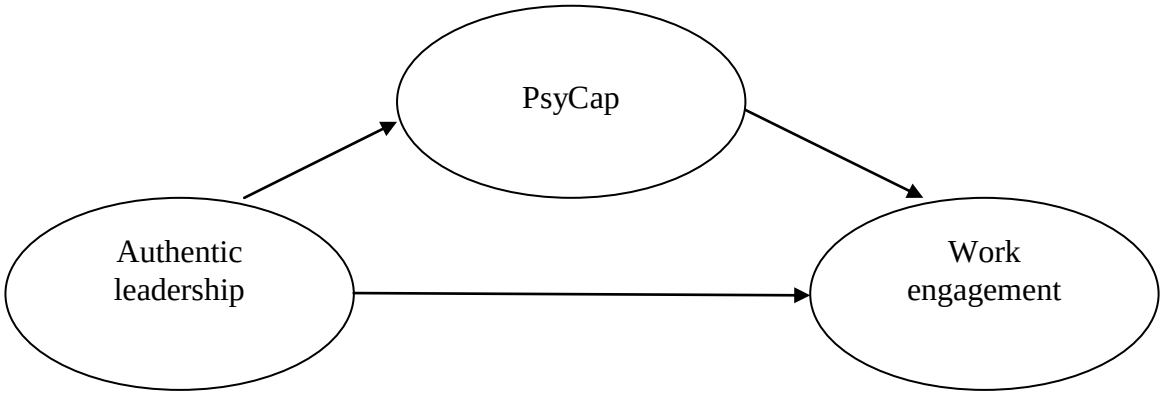


Figure 2.4 The mediation model of PsyCap between authentic leadership and work engagement

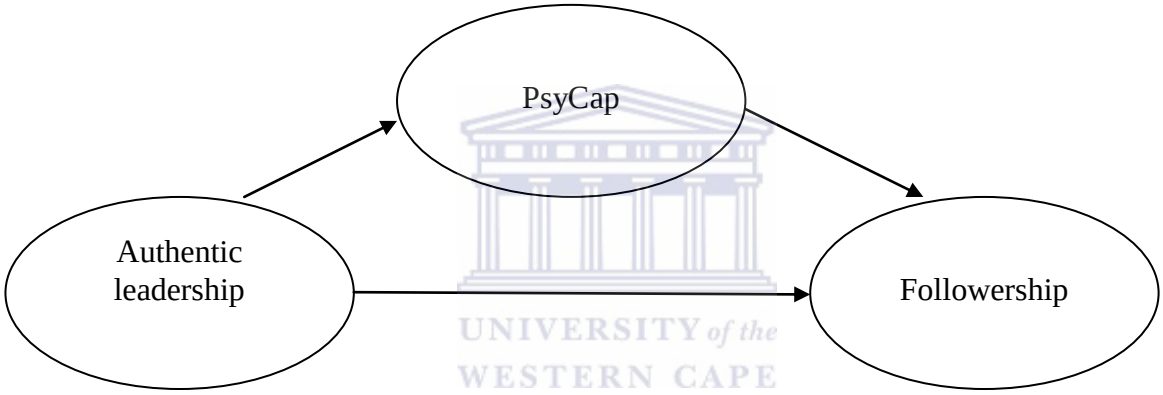


Figure 2.5 The mediation model of PsyCap between authentic leadership and followership

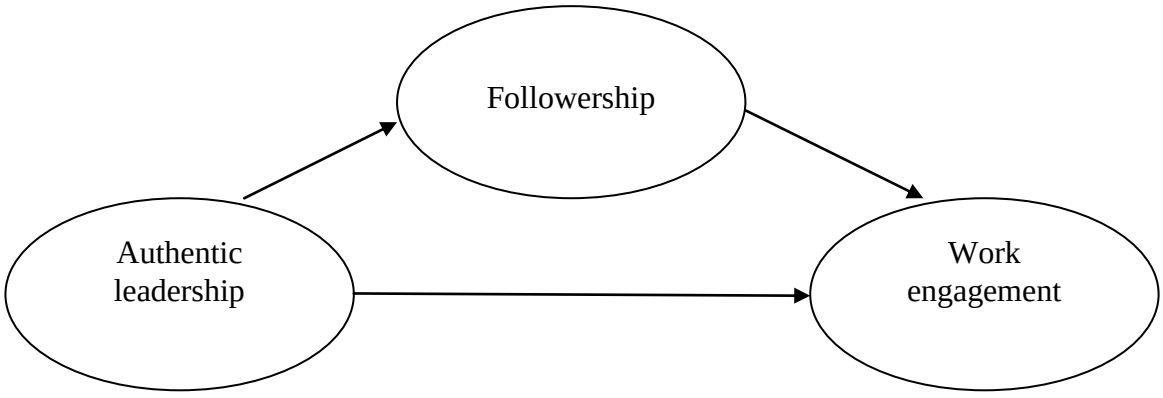


Figure 2.6 The mediation model of followership between authentic leadership and work engagement

The consolidated structural model for the present study, based on the theoretical support from the literature review, is displayed in Figure 2.7.

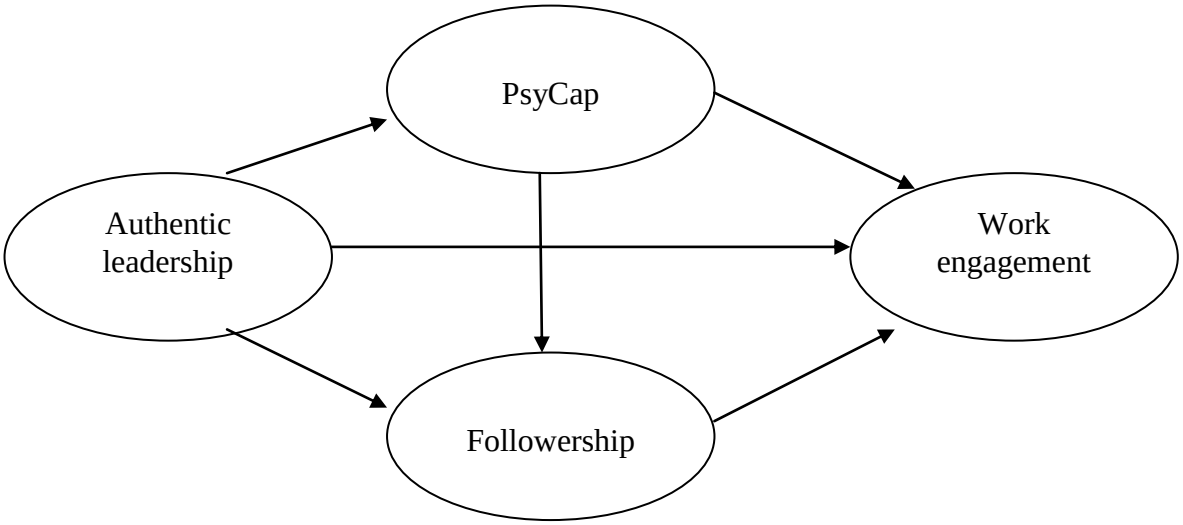


Figure 2.7 Proposed theoretical framework of the relationships between authentic leadership, PsyCap, followership and work engagement.

Based on the literature overview and the proposed theoretical models, the following propositions were developed and are presented in Table 2.1

The sequence of testing these propositions is important. Propositions 1 to 4 form the basis of evaluating which factor structures are applicable to the current sample. Since the operationalised measures of the variables are from foreign studies, it is important to determine if a similar or different factor structure emerges within a South African sample. If a different structure emerges, it must be interpretable and understandable given the theoretical basis of the construct being measured. The factor structures identified in propositions 1 to 4 will be explained in Chapter 3 and used for further data analysis in the present study. The remaining research propositions are then tested on the basis of the identified factor structures applicable to the South African sample in Chapter 4.

Table 2.1 *Propositions to be tested in the present study*

Number	Propositions to be tested
Proposition 1	The work engagement scale (UWES-17) developed by Schaufeli & Bakker (2003) is portable to a South African organisational setting and it is possible to demonstrate acceptable construct validity and internal reliability.
Proposition 2	The psychological capital scale (PCQ-24) developed by Luthans, Youssef, and Avolio (2007a) is portable to a South African organisational setting and it is possible to demonstrate acceptable construct validity and internal reliability.
Proposition 3	The followership scale developed by Kelley (1992) is portable to a South African organisational setting and it is possible to demonstrate acceptable construct validity and internal reliability.
Proposition 4	The authentic leadership scale (ALQ) developed by Avolio, Gardner, and Walumbwa (2005) is portable to a South African organisational setting and it is possible to demonstrate acceptable construct validity and internal reliability.
Proposition 5	A higher-order factor, i.e. PsyCap, underlies the four dimensions (hope, optimism, self-efficacy and resilience).
Proposition 6	A higher-order factor, i.e. Authentic leadership, underlies the four dimensions (transparency, moral/ethical, balanced processing and self-awareness).
Proposition 7	Work engagement, PsyCap, followership, and authentic leadership are factorially independent of one another.
Proposition 8	There are significant relationships between the composite and dimensional scores of work engagement and demographic variables (i.e. gender, occupational level, home language, educational level, English proficiency, manager's gender, age and working experience).

(table continues)

(Table 2.1 continues)

Number	Propositions to be tested
Proposition 9	There are significant relationships between the composite and dimensional scores of PsyCap and demographic variables (i.e. gender, occupational level, home language, educational level, English proficiency, manager's gender, age and working experience).
Proposition 10	There are significant relationships between the composite and dimensional scores of followership and demographic variables (i.e. gender, occupational level, home language, educational level, English proficiency, manager's gender, age and working experience).
Proposition 11	There are significant relationships between the composite and dimensional scores of authentic leadership and demographic variables (i.e. gender, occupational level, home language, educational level, English proficiency, manager's gender, age and working experience).
Proposition 12	There are significant relationships between the respective composite and dimensional scores of authentic leadership and PsyCap.
Proposition 13	There are significant relationships between the respective composite and dimensional scores of authentic leadership and followership.
Proposition 14	There are significant relationships between the respective composite and dimensional scores of authentic leadership and work engagement.
Proposition 15	There are significant relationships between the respective composite and dimensional scores of PsyCap and followership.
Proposition 16	There are significant relationships between the respective composite and dimensional scores of PsyCap and work engagement.
Proposition 17	There are significant relationships between the respective composite and dimensional scores of followership and work engagement.

(table continues)

(Table 2.1 continues)

Number	Propositions to be tested
Proposition 18	Authentic leadership and its dimensions explain a significant proportion of variance in work engagement.
Proposition 19	PsyCap and its dimensions explain a significant proportion of variance in work engagement.
Proposition 20	Followership and its dimensions explain a significant proportion of variance in work engagement.
Proposition 21	Authentic leadership dimensions explain a significant proportion of variance in PsyCap and its dimensions.
Proposition 22	Authentic leadership dimensions explain a significant proportion of variance in followership and its dimensions.
Proposition 23	PsyCap dimensions explain a significant proportion of variance in followership and its dimensions.
Proposition 24	PsyCap mediates the relationship between authentic leadership and work engagement.
Proposition 25	PsyCap mediates the relationships between authentic leadership and followership.
Proposition 26	Followership mediates the relationship between authentic leadership and work engagement.
Proposition 27	A theoretical framework of the relationships between work engagement, PsyCap, followership and authentic leadership can be shown through structural equations modelling to be a well-fitting model.

In addition to guiding the research methodology in the present study, the propositions also determined the data analysis techniques used. Appropriate data analysis methods to evaluate each of these propositions are discussed in Chapter 3.

2.8 CONCLUSION

From a review of the available literature on the four constructs included in the present study, certain conceptual similarities can be derived. Work engagement, PsyCap, followership and authentic leadership all orient from a positive focus on the workplace and individuals within the workplace. To a greater or lesser extent, all four variables have been empirically proven to have significant relationships with desirable workplace attitudes and behaviours; and also, are significantly influenced by positive organisational variables. Substantial evidence have been presented of the relationship between work engagement and organisational performance and cost-saving indicators such as reduced turnover, decreased absenteeism and improved emotional and physical wellbeing. Therefore, improving work engagement in the workplace has been empirically proven to hold individual and organisational benefits.

The history as well as the definition of each of the respective constructs was explicated in this chapter. The review of the literature included a summary of the antecedents, consequences and mediating effects of each of the variables within the positive organisational psychology arena. Emphasis was placed on research postulating that relationships will be found between the respective variables in the positive organisation behaviour field. The chapter was concluded with stating the research propositions and theoretical frameworks emanating from the literature review. These propositions will guide the research methodology and discussion of the results that will be discussed, respectively in Chapter 3 and 4.

3 RESEARCH METHODOLOGY

3.1 INTRODUCTION

This study is guided by the research aim of investigating whether relationships exist between the following positive organisational psychological constructs: authentic leadership, psychological capital (PsyCap), followership behaviour and work engagement experienced by respondents. To systematically provide answers to the research questions, an appropriate research design is required. This chapter starts by explaining the research design that was utilised for the study. Next, the sampling technique that was employed is explained, including the biographical characteristics of the sample. Furthermore, the measuring instruments that were administered to the sample are discussed. The research design and methodology is also not without limitation, and therefore these limitations are subsequently discussed. The subsequent section has as its focus the data gathering process and explicates the results of the pilot study as well as the appropriate measurement models to be utilised for the measuring instruments for the rest of the data analysis. The chapter is concluded with a discussion of the construct validity and internal reliability of the measuring instruments for the research sample.

3.2 RESEARCH DESIGN

The choice of the research design is governed by both the research problem and the research questions. The research questions are derived from the literature review and suggest the most appropriate methodology in order to solve the research problem. In order to achieve the objectives of this research, a quantitative approach was followed during the collection of primary data. The primary data includes observations from the respondents based on a survey questionnaire while the secondary data consists of literature sources that will be utilised as a theoretical grounding for the proposed relationships between the variables of the study.

It is suggested that a combination of a survey and a statistical modelling study (Babbie, 1998; Kerlinger & Lee, 2000; Mouton, 2001; Newman, 1997) is the most appropriate research design with which to evaluate the research questions and propositions in this study. The characteristics of these two types of studies are briefly discussed below.

3.2.1 Survey studies

In order to provide an answer to the research questions, the researcher decided on survey methodology in which standardised measuring instruments were used. A self-administered survey form (in which respondents independently complete questionnaires) was employed. This method is appropriate only in cases in which the population under study is adequately literate and, thus, English literacy was a requirement for participation in the study. The self-administered survey method has certain advantages: (a) It makes the analysis of large datasets through the use of computer technology possible, (b) It is relatively inexpensive and concise, thus enabling quick completion, (c) It minimises interviewer bias and has been shown to provide accurate information as it allows for anonymous and honest responses from the respondents. The disadvantages of survey research include: (a) The possible low response rate to the survey and an opportunity for significant response bias, (b) A lack of control on the part of the researcher over the conditions accompanying the completion of the questionnaire, (c) The possibility of incomplete questionnaires, and (d) The researcher's lack of observation with regard to the way in which respondents react towards both the questions and the research setting (Babbie & Mouton, 2001; Newman, 1997; Kerlinger & Lee, 2000).

In the first few decades of survey research, the most widely used methods included face-to-face interviews or mail surveys (Groves, Fowler, Couper, Lepkowski, Singer, & Tourangeau, 2009). Groves et al. (2009) report that the variety of survey methods have been increased with the introduction of computer based or computer assisted survey processes. These methods include computer-assisted personal interviewing, audio computer-assisted self-interviewing, computer-assisted telephone interviewing, interactive voice response, and web surveys (Groves et al., 2009). Joubert and Kriek (2009) maintain that the use of web-based surveys has increased incrementally since its introduction in psychological assessment. The advantages and disadvantages of the web-based method are discussed in the next section.

3.2.1.1 Web-based surveys

The web-based survey methodology has a number of practical and methodological advantages (Mikulsky, 2005; Solomon, 2001). From a practical perspective, the distribution of web-based surveys can be done in a quick, easy and inexpensive manner to a large group of respondents who are geographically dispersed (Mikulsky, 2005). If one had to compare

this methodology with the high postal cost of mail surveys or extensive travelling required for personal interviewing, it becomes apparent that the web-based survey has a relatively low cost with regard to the distribution of questionnaires.

For many participants, a web-based survey is easy to use (Mikulsky, 2005). This is because it is less cumbersome to complete than a paper-based survey and does not need to be sent back to the researcher (Mikulsky, 2005). From the researcher's perspective, the data capturing of web-based surveys is immediate and data-cleaning is efficient, which has subsequent positive implications for data analysis. In addition, the electronic collection of participants' responses allows quantitative data to be pre-coded and exported to the relevant analysis software application with ease. This helps to reduce researcher error in entering participants' survey responses by hand (Mikulsky, 2005).

There are also several methodological benefits to the web-based approach. The web-based survey used in the present study ensured participant anonymity as no password or unique identifying link was required to access the survey. According to Mikulsky (2005), computerised surveys can also create a sense of greater social distance, increasing the likelihood that people will be more candid in their responses. In this study, a number of questions were asked about an individual's leader as well as the respondents own engagement in their work. High anonymity is more likely to have elicited honest responses that were unfavourable about the immediate manager, where a paper-based survey may not have done so.

Furthermore, previous survey research has found that gender, age or education level variables did not explain any patterns in failure-to-complete rates of web-based surveys (Jeavons 1998, cited in Solomon, 2001). Therefore, the use of the survey methodology would lessen incomplete data on the basis of these demographic factors.

However, there are both practical and methodological problems with web-based surveys. Slow internet connections may negatively impact on response rates and possibly how respondents answer online surveys (Solomon, 2001). Another concern about web-based

surveys is that there is a risk that the same respondent could complete the survey more than once and skew the response data (Mikulsky, 2005). However, for the current study the length of the questionnaire was assumed to act as a deterrent to multiple completions. There was also no direct benefit or incentive for employees to complete the survey, hence limiting the possibility of multiple completions.

As previously discussed, an advantage of web-based survey methodology is that confidentiality can be ensured. However, potential participants may fear that information they provide via the internet may be traced back to them, thus breaching confidentiality (Mikulsky, 2005).

Finally, several studies have found that response rates for web-based surveys are lower than equivalent paper-based surveys (Manfreda, Bosnjak, et al., 2008; Mikulsky, 2005; Solomon, 2001). Manfreda, Bosnjak et al.'s meta-analyses results (2008) indicated that web-based surveys had an average of 11% lower response rate than other survey modes. However, response rates for web-based surveys are often hard to calculate (Mikulsky, 2005). It is, for instance, not always possible to tell how many people were absent from work or had viewed the email requesting participation in the survey and ignored it. Current web-based survey technology can however be utilised to obtain information on how many respondents started the questionnaire, but did not complete it.

Web-based survey methods are seen as valid measurements. The web-based surveys have been shown to yield similar results to measurements that were completed by utilising a paper-and-pencil approach (Martins, 2010). Therefore, based on the cost consideration, as well as the geographical spread of the research sample across South Africa, a web-based survey was deemed the most appropriate survey method for the study.

3.2.2 Statistical modelling studies

Although conventional survey studies provide a broad overview of the phenomenon being studied, they lack the ability to evaluate the theoretical models which would be developed on the basis of a literature review. However, in order to overcome this limitation, statistical

modelling studies may be combined with survey studies, provided that there is an assumed underlying theoretical model. The theoretical model is developed through a process of theorising about the relationships between the variables in the study, based on previous research studies. The data collected through the use of the survey studies is then used to validate the theoretical model quantitatively. Generally multivariate statistical analyses are used to evaluate and validate theoretical models. These analyses include multiple regression analysis and structural equation modelling (Kerlinger & Lee, 2000; Mouton, 2001).

Both survey and statistical modelling studies have in common the use of data based on the responses of a sample. This, in turn, highlights the importance of choosing a sample that is appropriate for the study with regard to sample size, level of education and other prerequisites of the study in question.

3.3 POPULATION AND SAMPLE

The study was carried out in a national private sector healthcare industry organisation. The aim of the organisation is to provide high quality service to their clients and to enhance the quality of life of not only their clients, but also that of their staff members. The organisation employs in excess of 15 000 staff members and is listed on the Johannesburg Stock Exchange.

The sample for the study was selected through purposive sampling. Purposive sampling is characterised by the judgement and deliberate effort to obtain a representative sample by including presumably typical groups in the sample (Kerlinger & Lee, 2000). To identify these groups, certain requirements were communicated to the research organisation with regard to the ideal sample for the study. The requirements that were set for participation in the study included: respondents job level should be at a Patterson grading C5 level and above (thus, typically individuals would be middle-, senior- or executive managers in the organisation), access to a computer and the Internet, and acceptable English literacy as the questions required respondents to be able to differentiate between fine nuances of behaviour described in words. Employees from all branches of the organisation were to be included. Eight hundred and fifty five people in the organisation met these characteristics and were invited to respond to the survey.

After the process of data gathering, 670 responses were recorded. However some of these responses were incomplete and had to be excluded from the sample. Therefore, the survey response rate of usable responses was calculated as 76% (N = 647).

3.3.1 Adequacy of the sample size

Babbie and Mouton (2001) recommended that the collection of workplace measures used in a study must be administered to a relatively large sample (approximately 100 subjects, depending on the number of the tests or instruments in the battery) in order to ensure the validity of the study. Based on Sekaran's population-to-sample-size table for research representivity (Sekaran, 2001), a representative sample of the population (estimated to comprise 15 000 people) was calculated to be 375 respondents. Hair, Black, Babin and Anderson (2010) indicate that a minimum sample size of 500 is required when working with models with large numbers of constructs which might have low communalities and / or that have fewer than three measured items. However, Hair et al. (2010) emphasizes that sample size must be based on whether it provides an adequate representation of the population of interest.

Based on the suggested sample sizes (Babbie & Mouton, 2001; Hair et al., 2010; Sekaran, 2001) it may be concluded that the sample size of 647 respondents is an adequate representation of the population of employees of the healthcare organisation. The sample size is also viewed as an acceptable sample size with which to conduct Structural Equations Modelling (SEM) and Confirmatory Factor Analysis (CFA) (Bagozzi & Yi, 2012).

3.4 MEASURING INSTRUMENTS

Standardised measuring instruments were utilised to measure the variables which have been identified. On the basis of the literature review, four instruments were identified as being reliable, valid and applicable for the purposes of the study. The four instruments – complemented by a biographical questionnaire – were combined into a consolidated electronic questionnaire. A general discussion of each instrument's properties in terms of content, structure and psychometric features, as presented in the literature, follows.

3.4.1 Biographical questionnaire

The biographical questionnaire, developed by the researcher, assists in describing the characteristics of the sample with the questions in the questionnaire aiming to elicit information on the respondents' gender, educational level, occupational level, years of work experience, tenure at current organisation and tenure of reporting relationship to current manager.

3.4.2 Utrecht Work Engagement Scale

The Utrecht Work Engagement Scale (UWES), developed by Schaufeli and Bakker (2003), was utilised to measure work engagement. The UWES-17 comprises 17 items that are responded to using a seven-point Likert scale with the responses ranging from 0 = Never to 6 = Always. The following three subscales are identified – the vigour subscale comprises six items (e.g. "At my work, I feel bursting with energy."), dedication is measured by five items (e.g. "My job inspires me.") while the remaining six items measure the absorption subscale (e.g. "Time flies when I am working.").

Confirmatory factor analysis established the three-factor structure of the UWES. This structure has been confirmed in samples from various countries such as South Africa (Barkhuizen & Rothmann, 2006; Rothmann & Jordaan, 2006; Simons & Buitendach, 2013; Storm & Rothmann, 2003), Portugal (Schaufeli, Martínez, Marques Pinto, Salanova, & Bakker, 2002), Sweden (Hallberg & Schaufeli, 2006) and China (Yi-Wen & Yi-Qun, 2005). However, De Bruin, Hill, Henn, and Muller (2013) utilised an item response modelling approach and suggested that a single summative score of the UWES items, thus a uni-dimensional structure, should be used. The item modelling response used by De Bruin et al. (2013) generated a trait measure and corresponding standard error for each person which demonstrated that respondent's positions on the latent trait remained constant across the different subscales.

Meta-analyses of the UWES have indicated good internal consistency for the subscales. Bakker and Leiter (2010) reported that an analysis across 33 samples (Total N = 19,940) from nine countries (South Africa, Australia, Sweden, Greece, Belgium, Finland, The Netherlands,

Norway, and Spain) had determined that the Cronbach alpha for the subscales of the UWES exceeded 0.80. The Cronbach alpha for the composite score is an average of 0.90 (range: α = 0.88 to α = 0.95). As part of the statistical analysis in the present study, the internal reliability of the UWES was determined and compared to that of other studies.

The mean scale score for the three UWES subscales was calculated by obtaining the average of the item scores on a particular subscale. The procedure was also followed to obtain the average total score per respondent (Schaufeli & Bakker, 2003).

Schaufeli and Bakker (2003) granted permission for the free use of the UWES for research purposes.

3.4.3 Psychological Capital questionnaire (PCQ)

Luthans, Avolio, et al. (2007) developed the psychological capital questionnaire (PCQ). The instrument consists of 24-items that are responded to on a six point Likert scale, ranging from 1 = Strongly disagree to 6 = Strongly agree. The instrument measures the four dimensions of psychological capital, namely, Hope (e.g. "At the present time I am energetically pursuing my work goals"), Self-efficacy (e.g. "I feel confident contacting people outside of the company (i.e. customers and suppliers) to discuss problems"), Resilience (e.g. "I can get through difficult times at work because I've experienced difficulty before") and Optimism. The PCQ was originally derived from four separate scales that measure the four dimensions of PsyCap, namely, (a) hope (Snyder et al., 1996); (b) resilience (Wagnild & Young, 1993); (c) optimism (Scheier & Carver, 1985); and (d) self-efficacy (Parker, 1998). The items were adapted from the four original scales to have a bearing on the workplace situation.

Luthans, Norman, et al. (2008) reported reliabilities of 0.89, 0.89 and 0.91 in three separate studies on the PsyCap instrument and it was assumed that this instrument possesses adequate reliability for use in the present study. Similar findings were obtained in South African studies, with Cronbach alpha of 0.91 for the PsyCap instrument, and a range of 0.67 – 0.90 for the subscales of the PCQ (Görgens-Ekermans & Herbert, 2013; Simons & Buitendach, 2013). The factor structure of the PCQ has demonstrated four distinct factors quite

consistently (Dawkins, 2013). This was confirmed in studies on South African samples where the original factor structure of the PCQ demonstrated good fit (Görgens-Ekermans & Herbert, 2013; Simons & Buitendach, 2013). Harris (2012) maintains that the PCQ provided a good fit of a four-factor structure; however a number of the PCQ items loaded on different factors than what is indicated in the original structure of the instrument. Furthermore, Du Plessis and Barkhuizen (2011) found a three-factor structure for the PCQ provided a better fit to their sample of 131 respondents. Based on these findings, the importance of conducting factor analysis to determine the appropriate factor structure of the PCQ for the sample is emphasised.

In order to obtain the subscale PsyCap scores, the six responses for each of the four dimensions were summed and an average item score calculated. Furthermore, the individual item values were added and averaged in order to obtain the composite PsyCap score of each respondent.

Despite the fact that the PsyCap questionnaire had been published (Luthans, Youssef, & Avolio, 2007a) the researcher had to request permission to use the questionnaire for research purposes. This permission was granted. The terms of use however only permits the researcher to give examples of no more than three items in the questionnaire.

3.4.4 Followership instrument

For the purposes of the study, followership was measured using Kelley's (1992) 20-item instrument. The responses are presented on a seven point Likert scale, ranging from 1 = Rarely, to 7 = Almost always. The instrument consists of two subscales, namely, active engagement (e.g. "When you are not the leader of a group project, do you still contribute at a high level, often doing more than your share?") and independent critical thinking (e.g. "Do you independently think up and champion new ideas that will contribute significantly to the goals of either your departmental chairperson or your department?").

Even though Kelley's followership instrument has been used in some studies, there remains a shortage of published research reporting the reliability and factor structure of the instrument

(Baker, 2006). Cronbach alpha reliability was reported in two studies (Tanoff & Barlow, 2002; Vandoren, 1998) where the reliability coefficients were 0.68 and 0.74 for the independent thinking scale and 0.84 and 0.87 for the active engagement scale, respectively. Blanchard et al. (2009) conducted exploratory factor analysis on the followership instrument using a sample of faculty members at a large, south-eastern university in the United States of America (Total $N = 331$). Their analysis did not validate Kelley's (1992) two-factor model as their analysis produced a three-factor structure. However, two of the three factors corresponded closely to the followership behaviours of active engagement and independent critical thinking. Colangelo's (2000) study also did not find support for the two factor structure of the followership instrument as suggested by Kelley, but instead yielded a four factor structure. Blanchard et al. (2009) suggested that researchers need to validate the instrument when using it in order to avoid being misled. This was done as part of the data analysis for the purposes of the present study.

3.4.5 Authentic Leadership questionnaire (ALQ)

Authentic leadership in the study was measured using the Authentic Leadership Questionnaire (ALQ), developed by Avolio, Gardner, and Walumbwa (2007). The 16-item questionnaire measures the four subscales of authentic leadership based on a five-point Likert scale with the item responses ranging from 0 = Not at all, to 4 = Frequently. Examples of the questions as they relate to the subscales include self-awareness (e.g. "My leader seeks feedback to improve interactions with others"), relational transparency (e.g. "My leader says exactly what he or she means"), internalised moral perspective (e.g. "My leader demonstrates beliefs that are consistent with actions"), and balanced processing.

Walumbwa et al. (2008) confirmed that the ALQ scales manifest both convergent and discriminant validity with respect to other leadership constructs such as transformational and ethical leadership. They reported a Cronbach's alpha of 0.91 for the ALQ measure. In a South African study, Roux (2010) reported $\alpha = 0.92$ for the total ALQ scale score, and 0.85 (self-awareness), 0.77 (relational transparency), 0.69 (balanced processing), and 0.83 (internalised moral perspective) for the respective dimensions. Walumbwa et al.'s (2008), as well as Roux's (2010) results demonstrated acceptable fit of the four dimensional structure of

authentic leadership. Furthermore, Walumbwa et al. (2008) conducted a second-order factor model in which the four factors loaded on a second-order latent authentic leadership factor.

For the purposes of this study, the respondents reported on their perceptions of their leader/direct supervisor's authentic leadership. Permission was requested and granted to use this questionnaire for research purposes.

In order to obtain the authentic leadership dimension scores, the responses for each of the four subscales were summed and then divided by the number of items in the subscale to get the raw score for the subscale.

3.5 LIMITATIONS OF THE RESEARCH METHODOLOGY

During the present study, all efforts were made to obtain high quality data that effectively answer the research questions. However, the researcher is aware of possible limitations as a result of using the research design described and the research instruments chosen.

Firstly, the Likert scale ranges for the validated instruments are not identical and this may have caused some confusion and misunderstanding on the part of the respondents. However, in order to limit the impact of this, each instrument was presented on an individual electronic page in order to trigger an awareness of a new set of instructions. The method of completion was also varied from 'clicking' the desired response button, utilising drop-down menus, and sliders. These different methods were used to limit mono-method response bias and possible confusion experienced by the participant.

Secondly, the respondents completed the instruments at a specific point in time. The benefit of this approach is that any variation in external factors is unlikely to have an impact on the results. However, completing extended questionnaires may result in central tendency and response bias. The researcher endeavoured to limit this by including reverse scored items. In addition, as recommended by Podsakoff, MacKenzie, Lee, and Podsakoff (2003), the data

analysis included an exploratory factor analysis in order to determine how the items group together.

Thirdly, with the exception of the Authentic Leadership Questionnaire (ALQ), the respondents were required to provide a self-rating. Self-ratings are prone to social desirability (Blake, Valdiserri, Neuendorf, & Nemeth, 2006) that may confound the results. Thus, in order to protect the integrity of the data, a social desirability index (The Social Desirability Scale, SDS-17) was included in the pilot study questionnaire. The result of the measuring instruments proneness to social desirability will therefore be discussed in section 3.6.1.1.

Lastly, the research instruments were all presented in English and required a fair degree of proficiency in English and, thus, those respondents without a good grasp of English might not understand either the questions or the fine nuances that differentiated the questions. Misunderstanding the questions or the fine nuances that differentiated the questions may lead to an increased level of central tendency in the responses (Harzing, 2006). In order to limit the occurrence of misunderstandings, the second page of the survey included a question about the respondent's English ability. ANOVA was conducted to determine whether there were significant differences in individuals' responses based on their self-reported English proficiency. In this way the researcher aimed both to limit the occurrence of misunderstanding as a result of language difficulties and to protect the integrity of the data.

3.6 PROCEDURE

The preceding sections of this chapter provided an elaboration on 'who' was included in the sample by describing the population and sample in section 3.3. Furthermore, the measuring instruments that were utilised for the purpose of gathering data reflecting the 'what' was measured during the data gathering process was discussed in section 3.4. The following section will elucidate the 'how' of the study, by making reference to the pilot study and the procedure for data gathering and ensuring ethical practice.

3.6.1 Pilot study

In order to determine the feasibility of the consolidated questionnaire, a pilot study was conducted. The purpose of the pilot study was to test the adequacy of the research instruments and also to identify any logistical problems which may occur when the proposed methods are used. In addition, basic statistical analyses were performed.

The pilot group consisted of 30 respondents who met the requirements as regards taking part in the research study (as discussed in section 3.3). The pilot group consisted of colleagues and friends of the researcher. Of the respondents, 66.7% were female (n = 20) and 33.3% were male (n = 10). On average, respondents were 38 years of age and had been employed by their current organisation for eight years. With regard to educational level, 80% (n = 24) of the respondents had a University or Postgraduate degree.

The first benefit derived from the pilot study was related to the administration of the survey. Pilot study respondents indicated that the web-based survey used was not as user-friendly as was initially perceived and that due to some technical difficulties, it created confusion in answering some of the longer questionnaires. This led the researcher to explore other hosted options for web-based surveys. The Qualtrics Survey Software was chosen as an alternative. The new survey link was sent to the members of the pilot study sample who had not responded yet. These individuals gave feedback that the system was easy to use, had no delays in buffering or uploading, and was visually appealing.

Basic statistical analysis was performed to determine whether the data obtained from the pilot study was interpretable. Responses were exported to an SPSS file for analyses. The analyses included observing the properties of the data by analysing the range, mean scores, skewness and kurtosis of each variable. Furthermore, a reliability analysis was completed and correlations between the variables were computed. Due to the small sample size, only the total scores of each variable was utilised for analyses.

Table 3.1 *Descriptive statistics of the pilot study (N = 30)*

Variable	Range		*M*	*SD*	α	Skewness	Kurtosis
	Min	Max					
Work engagement	1.53	5.71	5.23	0.31	0.922	-0.685	0.584
PsyCap	2.54	5.75	4.69	0.60	0.918	-1.229	4.847
Followership	3.50	6.95	4.65	0.69	0.877	1.127	3.007
Authentic leadership	1.06	3.88	3.77	0.80	0.937	-0.903	0.158

The results of the descriptive statistics for the pilot study are presented in Table 3.1. The Cronbach alpha reliability coefficients for the four measuring instruments utilised in the pilot study range from 0.877 – 0.937, indicating a high level of reliability. With regard to the skewness statistic, PsyCap and followership demonstrated substantial skewness based on the 'greater or less than 1' rule of thumb. Based on the kurtosis statistics for the variables, it can be observed that PsyCap and followership have a positive kurtosis which could indicate that the data distribution varies from normality. The skewness and kurtosis statistics of the pilot study highlight the need to test for the normality of the study data.

Furthermore, a Pearson analysis of relationships between work engagement, PsyCap, followership, and authentic leadership, as well as the relationship of these variables with a test of social desirability was completed. The SDS-17 Social Desirability Scale consists of 17 items that measure a person's general tendency to act in a socially desirable manner. Stöber (2001) reported that the SDS-17 is a reliable and valid measure that can be used for adults from 18-80 years.

Table 3.2 *Correlation analysis of the pilot study (N = 30)*

	1	2	3	4
1. Work engagement	-	-	-	-
2. PsyCap	0.732**	-	-	-
3. Followership	0.000	0.074	-	-
4. Authentic leadership	0.446*	0.419*	0.228	-
5. Social desirability	-0.308	0.066	0.153	-0.127

† ** = $p < 0.01$; * = $p < 0.05$

Even though the results of the correlation analyses are of interest, the purpose of the analyses was to determine whether statistical analyses of the results from the measuring instruments would be feasible. As can be observed in Table 3.2, the correlation analyses yielded interpretable results and therefore, the pilot study was successful in its purpose.

What is important to note is the result of the Pearson correlation analyses between the four variables of the study and social desirability. The relationships between the variable and social desirability range from r = -0.308 to r = 0.153. Furthermore, none of these relationships were statistically significant, indicating the measurement instruments can be interpreted as being free from social desirability bias.

The learning from the pilot study included the following: (i) the use of the Qualtrics survey collection software could be utilised for the study data collection, (ii) it is important to test for the normality of the study data, and (iii) the measuring instruments may be interpreted as free from social desirability bias. As a result of this learning, the SDS-17 was excluded from the questionnaire that was administered to the research sample. The process of data gathering is discussed in the next section.

3.6.2 Data gathering

Prior to data gathering taking place, the executive leadership of the research organisation was approached to obtain permission to conduct the study in the organisation. A letter of request, supported with an abbreviated version of the research proposal was sent to the organisation for consideration. Permission to access the organisation for research purposes was granted by the National Human Resources Executive, and a contact person from the organisation was designated to act as link between the researcher and the organisation.

This study took the form of a cross-sectional survey design and a sample of individuals who met the criteria for participation in the research where identified. The e-mail addresses of the individuals were used by the research organisation to create a distribution list for sending the link to the electronic survey. Before sending the survey link to the respondents, the designated contact person and select colleagues from the research organisation's human resources department tested the survey to ensure that it was easily accessible from the participating organisation's server. All parties confirmed that the link was working and that there were no time delays or logistical problems with the web-based survey. After this testing period, the responses were deleted from the survey databse in order to ensure that the research database would only contain the data of the actual respondents.

The designated contact person from the participating organisation distributed the survey to the respondents. The link was part of an e-mail explaining the purpose of the study, what would be expected of respondents, as well as an endorsement from the company to support the research. This e-mail was drafted by the researcher and slightly adapted for use by the designated contact person from the research organisation. The contents of this e-mail reiterated the information about the study that was also given on the first page of the research questionnaire.

Participants then had the opportunity to click the link for the research survey which opened in a new tab in their Internet browser. The survey did not require a unique key or any identifying information from the respondent to be accessed. The first page of the survey reiterated information about the survey. This included the purpose of the study, the amount of time needed for completion, an explanation of the voluntary nature of the research,

confidentiality of the information as well as the researcher, research supervisor and the Dean of the Faculty Economic and Management Sciences of the University of the Western Cape's full contact details. Individuals were then offered the choice whether they consent to take part in the research or not. By clicking "Yes", the individual was directed to the next page with subsequent questions of the survey. If the individual clicked "No", he or she was redirected to the end of the survey without completing any of the questions.

In the initial e-mail invitation participants were given a deadline date for responding to the survey. This deadline date was three weeks after the initial e-mail was sent. On a weekly basis, a reminder was sent to encourage respondents to complete the questionnaire. As the Qualtrics software allowed the researcher to track the responses as they came in, it was possible to see that the number of completed responses peaked on the day that reminders were sent, with also a high number of responses being received the day after. As only the researcher had access to the data that was gathered, updates on the number of responses was communicated to the designated contact person from the research organisation on a weekly basis.

At midnight of the deadline date for completion the survey collection was closed and the link to the survey became inactive. At the time of closing the survey, 670 completed responses were recorded.

Throughout the process of data gathering, upholding ethical principles was of utmost importance. The ethical considerations that was taken into account will be discussed in the next section.

3.6.2.1 Ethical considerations

As a first step in the present study, it was important to obtain consent from the University of the Western Cape's (UWC) ethical committee to carry out this study. An application for registration of the research project was approved by the following levels of authority at UWC: the Department of Industrial Psychology for approval of the topic, measurement instruments and general contribution to the field; the Economic and Management Sciences

Faculty Higher Degrees committee for approval of the ethical considerations related to the study; and lastly, by Senate Higher Degrees and Research Ethics committee for University level approval of the study. Subsequently, the project was approved and registration number 13/5/36 was issued by the UWC Research office.

In an effort to conform to the Health Professions Council of South Africa's (HPCSA) Ethical Code of Professional Conduct (2004), the information page and informed consent contained in the electronic questionnaire utilised for the data collection at the participating organisation assisted to ensure ethical practice. Firstly, it provided an explanation of the nature and rationale for the research. Secondly, it informed participants that their participation in the research study is voluntary and that they may withdraw from the study at any time prior to submission of their responses. Participants were also informed that their non-participation or withdrawal from the research would not be known to anybody other than themselves, and therefore, that there would be no consequences should they decide not to participate. Thirdly, the information page explained that the responses are anonymous and that it is not possible, in any way, to trace the responses back to individuals. If the participants wanted to discuss any aspect related to the research, the contact details of both the researcher and the research supervisor was given.

The consolidated questionnaire consisted of reliable and valid instruments. All these instruments have been used in similar studies and have yielded reliable results. This, in turn, minimises any possible bias on the part of the researcher. The researcher, where needed, obtained permission from the authors of the questionnaires to use the questionnaires and took all possible steps to meet the requirements as set by the authors of the questionnaires.

The data was gathered at a moment in time, rather than over a period of time. This ensured complete anonymity of the respondents as no traceable information was obtained during the data gathering process. Thus, the respondents were confidently assured that their participation in the research study will have no adverse effects on their employment, health or general wellbeing. In addition, information regarding individual responses was not made available to anybody apart from the researcher.

3.6.3 Data analysis

The data in the study was analysed by means of quantitative techniques. These quantitative techniques include factor analysis, reliability assessment, Pearson product-moment correlation analysis, multiple regression analysis and ANOVA and also structural equation modelling.

As a first step in the process, a confirmatory factor analysis (CFA) was conducted to confirm the observed structure of the constructs. If the fit statistics indicated that the factor structure of the observed variables did not provide a good fit with the data, exploratory factor analysis was utilised. Exploratory factor analysis was used to explore the data, revalidate the research instruments and gain information on the number of factors needed to best represent the data. In terms of exploratory factor analysis (EFA), all measured variables are related to every other factor by a factor loading estimate (Hair, Black, Babin, Anderson, & Tatham, 2006). The factor analysis method employed to extract factors in the present research study is principal axis factoring with oblique rotation (Bless & Higson-Smith, 2000; Field, 2005; Hair et al., 2006; Kerlinger, & Lee, 2000). In this method, the factor rotation is computed in such a way that the extracted factors are correlated. Rather than arbitrarily constraining the factor rotation to an orthogonal solution, the oblique rotation identifies the extent to which each of the factors are correlated (Hair et al., 2006). This method is deemed suitable "if the ultimate goal of the factor analysis is to obtain several theoretically meaningful factors or constructs" (Hair et al., 1998, p.110).

The internal reliability of each measuring instrument was assessed by calculating Cronbach alpha coefficients for each of the factors and for the scales. This was used to evaluate the internal consistency between the items that measure the theoretical model. The aim of this process is to confirm the reliability of the measuring instruments for the current sample, as well as of the subscales of each instrument.

Pearson product-moment correlation and multiple regression analyses were used to determine the bivariate and multivariate relationships between the variables and their subscales. An analysis of variance (ANOVA) and regression were also performed to calculate the

relationships and effect size (Cohen's *d*) between of the demographic variables and authentic leadership, psychological capital, followership and work engagement.

Mediating effects were calculated with regression analyses. Mediating analysis calculates the indirect effect of a mediator (M) on the relationship between the independent (X) and the dependent variable (Y), and therefore, helps to explain why the independent and dependent variables are correlated. The Baron and Kenny (1986) approach for calculating mediation was used in the present study. This method involves the following series of regression analyses: (1) the regression of X → Y, ignoring the mediator; (2) the regression of the X → M is; (3) the regression of M → Y; (4) a multiple regression analysis with X and M predicting Y. Baron and Kenny (1986) stated that mediation is conditional on establishing significant relationships between the variables in steps 1 to 3. Assuming that there are significant relationships in the first three steps, step 4 will provide information on whether X and M remain significant predictors of Y. If X is no longer significant when M is added, the finding supports full mediation. If both X and M is significant, partial mediation is indicated. The significance of the mediation is then calculated using Sobel's (1982) test of significance. The formula for the Sobel test is presented in Figure 3.1 where *a* is the regression coefficient for the relationship between the independent variable and the mediator, and *b* is the coefficient for the relationship between the mediator and the dependent variable. SE is the standard error of the respective relationships (as indicated by *a* and *b*).

$$z = \frac{ab}{\sqrt{(b^2\mathrm{SE}_a^2) + (a^2\mathrm{SE}_b^2)}}$$

Figure 3.1 Sobel test formula

Lastly, structural equation modelling (SEM) was used to evaluate the relationships between the variables explored in the study in order to test the proposed theoretical model. The data was analysed by means of a series of maximum likelihood confirmatory analyses. The researcher relied on the evaluation of the fit between the proposed model and the observed data on a series of fit indexes in order to explain the covariance between the specified theoretical model and its variables.

The Statistical Package for the Social Sciences (SPSS, Version 21) was utilised to describe the descriptive statistics; conduct exploratory factor analysis, determine the reliability of each measuring instrument; determine the relationships between the variables (by means of correlation analysis); and to conduct ANOVA and regression analysis. In addition, the AMOS Software (Version 21) was used to conduct factor analysis and structural equation modelling.

3.6.4 Determining the appropriate measurement model

As a first step in the data transformation process, the structure and reliability of the measuring instruments utilised in the current study were revalidated for the sample. This was done by utilising CFA and EFA (where appropriate). The following actions were taken for the work engagement, PsyCap, followership and authentic leadership instruments.

Confirmatory Factor Analysis procedures

- The original factor structure of the instruments, as conceptualised by their respective authors, were consulted to determine which items belong to each subdimension of the instrument.
- Where a subdimension had five or more items that corresponded to a single factor, item parcelling was done. For the original measurement model, an EFA was conducted on each dimension of the psychometric variables, specifying a one-factor solution. From the results of this EFA, the factor loadings of the items were identified, which were then used to calculate the item parcels. For the new measurement model, the item factor loadings of the EFA was used. Parcels were created by bundling highest loading with lowest loading, then second highest loading with second lowest loading, and so forth continuing in this manner until all items were included in a parcel of fewer than five items.
- The preceding two steps specify the measurement model to be tested. The measurement model was then entered into the AMOS Software as an input diagram. The result of the test is given in the form of goodness of fit statistics.
- The goodness of fit statistics was scrutinised to determine how well the factor structure fits the data. Hair et al. (2010) suggest that researchers should report at least one

incremental fit index (i.e. NFI or CFI) and one absolute fit index (i.e. RMSEA, RMR or SRMR) in addition to the chi square statistics. The goodness-of-fit statistics and their respective interpretation guidelines (in square brackets) that were therefore considered are:

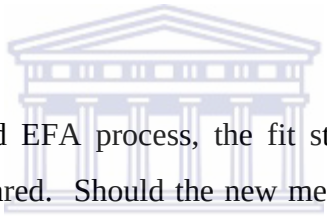
- Chi square (χ^2) / degrees of freedom (*df)* [A value below 2 is preferred. Values between 2 and 5 are acceptable.]
- Root mean square error of approximation (RMSEA) [Values between 0.05 and 0.08 are acceptable.]
- Root mean square residual (RMR) [Lower values present better fit; higher values poorer fit.]
- Normed fit index (NFI) [A prefect fit would produce a value of 1.]
- Comparative fit index (CFI) [Values of 0.90, and above, usually show good model fit.]

- If the fit indices demonstrated acceptable fit, the original conceptualisation of the measuring instruments was deemed appropriate for use to analyse the data from the research sample. If the indices demonstrated poor fit, EFA was conducted.

Exploratory Factor Analysis procedures

- Before determining how many factors could be extracted, it was important to first determine if the identified construct could be factor analysed. This was done by calculating the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. The KMO statistic varies between 0 and 1. The cut-off value that was utilised in this study was 0.7.
- Principal axis factoring with direct oblimin rotation was selected as the method of factor reduction.
- In deciding whether a factor in the factor analysis is statistically important enough to extract from the data for interpretation purposes, the decision is made on the eigenvalue associated with the factor. The eigenvalue (or Kaiser's criterion) is based on the idea of retaining factors with associated eigenvalues greater than 1.
- The scree plot was consulted in the decision of extraction by looking at the point of inflection of the curve.

- A principal factor analysis was conducted on the results of the structure matrix. In determining acceptable factor loadings the general rule was used that items should have a loading of ≥0.3 to be accepted. In the event of a two-factor (or more) structure, items were also inspected for possible cross-loadings. That means that the difference between the item factor loadings must be more than 0.250 for the higher loading to be accepted. Items that did not meet these criteria were omitted from further evaluation.
- After omitting items, the EFA process was repeated by evaluating the KMO statistic and eigenvalues, utilising the same rules as previously discussed. Factor analysis was then performed again to determine any items that does not meet the criteria for inclusion. These items would then be excluded and the process was repeated until the items converged satisfactorily on the factors and all problematic items had been removed.
- Once this was completed, CFA was carried out to examine the fit of the new measurement model.



As a conclusion to the CFA and EFA process, the fit statistics for the original and new measurement models were compared. Should the new measurement model provide a better fit to the data, the new model will be used for all subsequent data analyses.

3.6.4.1 Utrecht Work Engagement Scale (UWES)

As a first step in the factor analysis process, CFA was carried out to determine how well the original measurement model of the UWES fitted the data of the South African sample. However, before this could be done, the researcher deemed it necessary, in some cases, to perform item parcelling. Item parcelling refers to combining measured items into sets of parcels by summing or averaging the items, in other words, a mathematical combination summarising multiple variables into one. This method provides a way of dealing with an unmanageable number of items measuring a specific dimension per construct.

There has been much debate in the academic literature on the feasibility of item parcelling (Little, Cunningham, Shahar, & Widaman, 2002; Meade & Kroustalis, 2005). Some proponents of not parcelling items maintain that parcelling enters a subjective component into the data analysis as the researcher decides on which items to group together. Supporters of

item parcelling challenge this view by stating that a research process is followed rigorously and therefore, the choices made by the researcher with regard to parcelling are clearly justified, and accepted by editors, reviewers and ultimately the field of study (Little et al., 2002).

In the ensuing debate, most proponents agree that item parcelling is useful when the purpose is mainly to tests whether factors fit the model, or when testing various structural models. Furthermore, when working with a large number of items, researchers are often left with the dilemma of estimation problems when there are too many items. Thus, the choice would be to reduce the number of observed variables (by e.g. item parcelling) or not doing CFA at all.

As the current study dataset also has numerous items (observed variables) combined with a large sample size, the choice was made to utilise item parcelling and report the process rigorously. Item parcelling was done both for the original and new measurement models of each variable. Table 3.3 provides an explication of the item parcels that were created for the original UWES.

Table 3.3 *Item parcelling for the original UWES measurement model*

Factor	Dimension	Item parcels
Factor 1	Vigour	[8, 17, 1] + [4, 15, 12]
Factor 2	Dedication	[5, 13, 10] + [7, 2]
Factor 3	Absorption	[14, 16, 11] + [9, 6, 3]

As shown in Table 3.4, the χ^2 / *df* ratio of the original UWES measurement model is higher than the recommended guideline of 2–5 and the RMSEA is 0.135. Even though the incremental fit indices demonstrate acceptable fit, the χ^2 / *df* and RMSEA indicates a poor model fit. This suggests that the original structure of this measurement model does not fit the South African healthcare industry sample well.

Table 3.4 *Results of the CFA for the original UWES measurement model*

	Indices		
	Goodness-of-fit	Absolute	Incremental
χ^2	76.719		
df	6		
p	0.00		
χ^2 / *df*	12.787		
AIC	106.719		
RMSEA		0.135	
RMR		0.190	
NFI			0.972
CFI			0.974

In order to determine a more appropriate factor structure for the UWES for the current sample, the described steps for EFA were performed. The results of the EFA is displayed in Table 3.5.

Table 3.5 *Initial Eigenvalues of the UWES during the first round of EFA*

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	8.261	48.597	48.597
2	1.458	8.577	57.174
3	.906	5.328	62.502
4	.815	4.791	67.293
5	.726	4.269	71.562
6	.650	3.824	75.386
7	.606	3.568	78.953
8	.537	3.156	82.110
9	.481	2.831	84.941
10	.421	2.476	87.416
11	.410	2.412	89.828
12	.352	2.070	91.899
13	.345	2.031	93.929
14	.316	1.861	95.790
15	.302	1.774	97.564
16	.225	1.322	98.886
17	.189	1.114	100.000

For the first round of EFA on the UWES measurement model, the KMO statistic was calculated as 0.95. This statistic indicates that the data can be factor analysed. Furthermore, the first round of EFA utilised principal axis factoring and presented two factors with Eigenvalues larger than 1.0 which are indicators of the number of possible factors. The Eigenvalues were 8.26 and 1.46 respectively. As can be seen in Table 3.5, Factor 1 is responsible for 48.597% of the variance explained, with the two identified factors explaining 57.174% of the total variance.

The next step in the process was to conduct a factor analysis to determine any problematic items in the measurement instrument.

Table 3.6 *UWES – Item loadings in the first round of EFA*

Item	Factor	
	1	2
WE5	.890	.554
WE7	.838	.553
WE8	.792	.475
WE4	.792	.482
WE2	.787	.449
WE1	.766	.495
WE9	.715	.612
WE10	.714	.614
WE3	.607	.571
WE14	.499	.773
WE12	.560	.717
WE11	.597	.679
WE15	.463	.637
WE17	.479	.554
WE13	.507	.525
WE6	.446	.519
WE16	.222	.511

Inspection of the UWES items during the first round of EFA indicated significant cross-loadings of a number of the items. More than half of the items (indicated with shading in Table 3.6) would need to be elimated in order to meet the inclusion criteria for further analysis. The high cross-loadings led the researcher to examine the correlation matrix of the two factors. The correlation of the proposed Factor 1 and Factor 2 was $\alpha = 0.627$, indicating that the two factors are highly interrelated and not distinct. Based on these findings, the distinctiveness of the proposed UWES factors is not confirmed and therefore the two-factor solution is rejected. A uni-dimensional structure is proposed and factor analysis was performed to determine whether all items loaded satisfactorily on such a structure.

Table 3.7 *UWES – Item loadings on a one-factor solution in the first round of EFA*

Item	Factor
WE5	.843
WE7	.809
WE9	.749
WE10	.749
WE4	.747
WE8	.744
WE1	.736
WE2	.729
WE11	.685
WE12	.669
WE3	.655
WE14	.638
WE15	.570
WE13	.564
WE17	.554
WE6	.517
WE16	.348

Upon inspection of the communalities of the UWES items in Table 3.7, it can be seen that all items load satisfactorily on the uni-dimensional structure. The uni-dimensional factor structure explains 48.597% of the variance in work engagement. Whilst this percentage is quite low, inspection of the scree plot (Figure 3.2) indicates the point of inflection and curve to indicate a uni-dimensional solution.

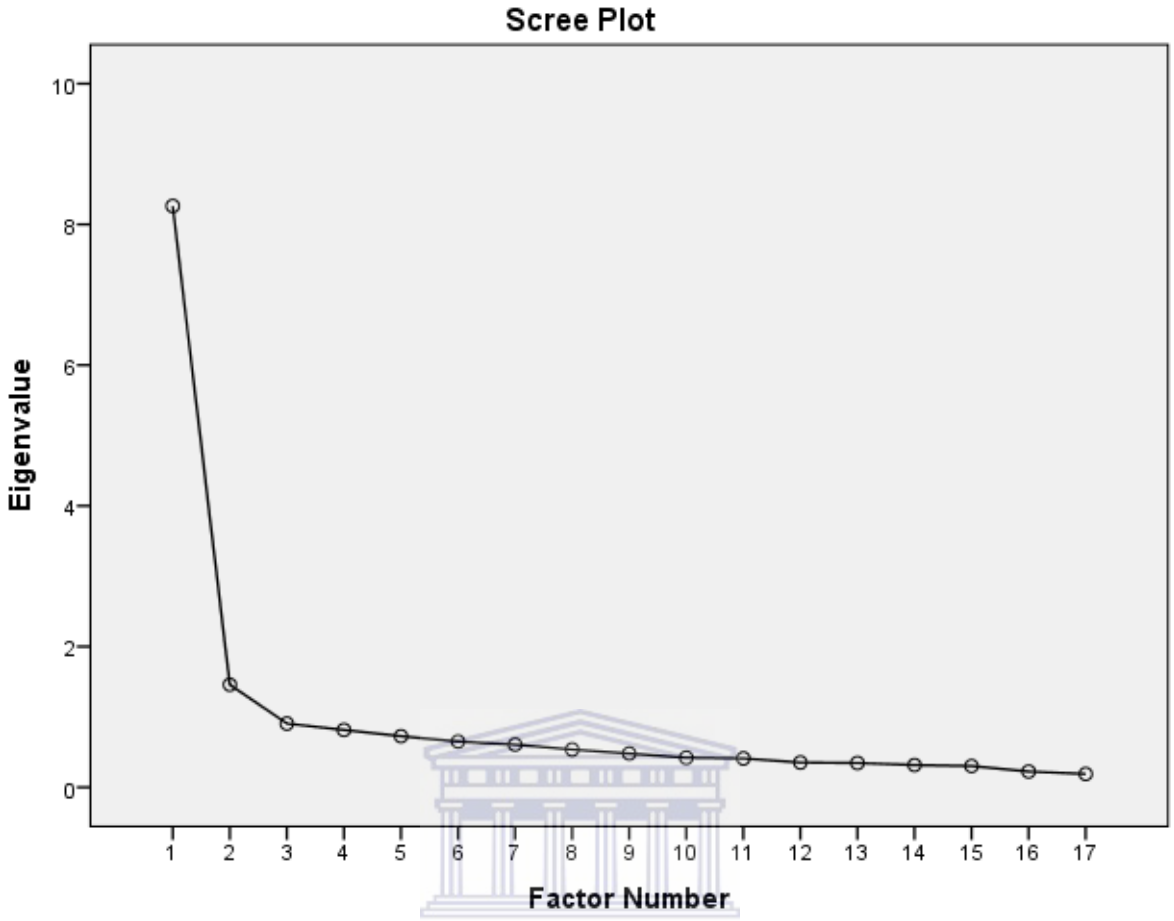


Figure 3.2 UWES Uni-dimensional scree plot

A CFA was utilised to test the assertion of uni-dimensionality. Firstly, it was considered necessary to create item parcels based on the communalities between the items. The construction of the parcels were done in the following pattern: [5,16, 7, 6] + [9, 17, 10, 13] + [1, 3, 14] + [4, 15, 8] + [2, 12, 11].

Table 3.8 *Results of the CFA for the uni-dimensional UWES measurement model*

	Indices		
	Goodness-of-fit	Absolute	Incremental
χ^2	22.498		
df	5		
p	0.00		
χ^2 / *df*	4.5		
AIC	42.498		
RMSEA		0.074	
RMR		0.102	
NFI			0.991
CFI			0.993

As presented in Table 3.8, the CFA for the uni-dimensional factor structure of the UWES demonstrated acceptable fit. The χ^2 / *df* index falls within the guideline of 2–5 and the incremental fit indices indicate very good fit. The RMSEA of 0.074 also indicates a good model fit.

Table 3.9 *Comparison of original and new measurement models for the UWES*

	Factor Structure	
Index	Original	Uni-dimensional
χ^2	76.719	22.498
df	6	5
p	0.00	0.00
χ^2 / *df*	12.787	4.5
AIC	106.719	42.498
RMSEA	0.135	0.074
RMR	0.190	0.102
NFI	0.972	0.991
CFI	0.94	0.993

When comparing the measurement model for the original structure of the UWES and the new uni-dimensional structure of the UWES it can be seen in Table 3.9 that the AIC statistic for the uni-dimensional structure (42.498) is lower than that of the original structure (106.719). When comparing competing models, a lower AIC statistic demonstrates better fit as it produces lower sums of squares fit without sacrificing degrees of freedom by adding too many parameters. Furthermore, the fit indices for the uni-dimensional model provide better fit for all the reported indices. Therefore, the uni-dimensional factor structure of the UWES was utilised for all subsequent data analysis of the responses of the sample.

3.6.4.2 Psychological Capital questionnaire (PCQ)

Utilising the same steps of CFA and EFA as for the UWES, the PCQ original measurement model was tested to determine how well it fitted the responses of the South African sample. Prior to entering the items into CFA, item parcelling was done as the PsyCap dimensions all have six items in the original conceptualisation of the model. The parcels are displayed in Table 3.10.

Table 3.10 *Item parcelling for the original PCQ*

Factor	Dimension	Item parcels
Factor 1	Efficacy	[4, 5, 2] + [3, 6, 1]
Factor 2	Hope	[11, 7, 10] + [8, 9, 12]
Factor 3	Resilience	[17, 13, 14] + [18, 15, 16]
Factor 4	Optimism	[21, 24, 19] + [22, 20, 23]

The results of the CFA on the original structure of the PCQ is displayed in Table 3.11. The χ^2/df of 2.151 and the RMSEA of 0.042 both demonstrate acceptable fit of the model. This is supported by the NFI and CFI that is above 0.9, approaching 1.0. Based on the good fit that was found, the original factor structure of the PCQ was maintained for subsequent data analysis for the sample.

Table 3.11 *Results of the CFA for the original PCQ measurement model*

	Indices		
	Goodness-of-fit	Absolute	Incremental
χ^2	30.111		
df	14		
p	0.070		
χ^2 / *df*	2.151		
AIC	74.111		
RMSEA		0.042	
RMR		0.097	
NFI			0.987
CFI			0.993

3.6.4.3 Followership instrument

The original conceptualisation of the followership instrument indicates a two-factor structure. This structure was tested by utilising CFA to determine the appropriateness of this conceptualisation for the South African sample.

Each factor is measured by ten items, and therefore, item parcelling was done before proceeding with the CFA. The item parcels are explicated in Table 3.12.

Table 3.12 *Item parcelling for the original followership instrument*

Factor	Dimension	Item parcels
Factor 1	Active engagement	[10, 2, 3] + [9, 7, 15] + [6, 4, 13, 8]
Factor 2	Independent thinking	[12, 1, 16] + [5, 17, 19] + [11, 18, 14, 20]

Table 3.13 *Results of the CFA for the original followership measurement model*

	Indices		
	Goodness-of-fit	Absolute	Incremental
χ^2	165.197		
df	8		
p	0.000		
χ^2 / *df*	20.650		
AIC	191.197		
RMSEA		0.174	
RMR		0.567	
NFI			0.920
CFI			0.924

The results of the CFA for the followership instrument is displayed in Table 3.13. From the indices it can be observed that the model represents poor fit based on the high RMSEA of 0.174, as well as the high χ^2 / *df* of 20.650. In order to determine whether a model with better fit can be created, EFA was conducted.

The KMO statistic during this first round of analysis was 0.939, indicating that EFA was plausible. Three Eigenvalues above 1.0 were extracted. As exhibited in Table 3.14, the Eigenvalues above 1.0 were 7.729, 1.767 and 1.257, respectively. The first factor explained 38.647% of the variance, whilst the three factors cumulatively explained 53.768% of the total variance.

Table 3.14 *Initial Eigenvalues of the Followership instrument during the first round of EFA*

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	7.729	38.647	38.647
2	1.767	8.834	47.482
3	1.257	6.286	53.768
4	.948	4.738	58.506
5	.829	4.145	62.651
6	.767	3.834	66.485
7	.698	3.492	69.977
8	.659	3.293	73.270
9	.631	3.156	76.427
10	.559	2.797	79.223
11	.512	2.562	81.786
12	.499	2.493	84.279
13	.473	2.365	86.644
14	.458	2.288	88.931
15	.438	2.189	91.121
16	.415	2.074	93.195
17	.387	1.934	95.129
18	.340	1.698	96.827
19	.338	1.688	98.515
20	.297	1.485	100.000

As a next step, factor analysis was conducted to examine the loading of items on the factors and to determine any problematic items that needed to be removed from further analysis. The results of the EFA are displayed in Table 3.15. Two problematic items were identified due to the cross-loadings on Factor 1 and Factor 2 (FOL14) and Factor 1 and Factor 3 (FOL16). These items are highlighted in Table 3.15 and were excluded from further analysis.

Table 3.15 *Followership – Item loadings of the first round of EFA*

Item	Factor		
	1	2	3
FOL10	**.769**	.246	.415
FOL11	**.759**	.314	.397
FOL9	**.755**	.245	.380
FOL12	**.735**	.429	.384
FOL6	**.710**	.307	.518
FOL5	**.682**	.419	.485
FOL13	**.679**	.332	.368
FOL8	**.674**	.387	.394
FOL15	**.650**	.418	.481
FOL14	**.648**	.445	.391
FOL7	**.594**	.220	.396
FOL4	**.588**	.204	.587
FOL16	**.585**	.318	.532
FOL20	.425	**.698**	.219
FOL19	.125	**.595**	.035
FOL18	.267	**.492**	.119
FOL17	.283	**.470**	.098
FOL3	.533	.149	**.770**
FOL2	.366	.100	**.676**
FOL1	.244	.078	**.494**

The second round of factor analysis also presented three Eigenvalues of greater than 1.0. The Eigenvalues greater than 1.0 explained 54.969% of the total variance as displayed in Table 3.16.

Table 3.16 *Initial Eigenvalues of the followership instrument during the second round of EFA*

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	6.946	38.589	38.589
2	1.713	9.516	48.105
3	1.235	6.864	54.969
4	.945	5.252	60.221
5	.805	4.474	64.695
6	.742	4.120	68.815
7	.641	3.559	72.375
8	.599	3.330	75.705
9	.579	3.216	78.921
10	.535	2.970	81.891
11	.504	2.798	84.690
12	.465	2.583	87.273
13	.449	2.494	89.767
14	.438	2.435	92.202
15	.404	2.245	94.447
16	.350	1.943	96.390
17	.338	1.880	98.269
18	.312	1.731	100.000

A second round of factor analysis was carried out to examine the loadings of the remaining items.

Table 3.17 *Followership – Item loadings of the second round of EFA*

	Factor		
	1	2	3
FOL10	**.770**	.237	.405
FOL9	**.758**	.236	.367
FOL11	**.758**	.310	.371
FOL12	**.737**	.421	.361
FOL6	**.714**	.300	.510
FOL5	**.681**	.416	.453
FOL13	**.677**	.321	.336
FOL8	**.673**	.378	.376
FOL14	**.650**	.437	.372
FOL15	**.645**	.402	.435
FOL7	**.592**	.209	.373
FOL20	.431	**.703**	.211
FOL19	.133	**.601**	.038
FOL18	.275	**.487**	.116
FOL17	.286	**.464**	.071
FOL2	.364	.092	**.732**
FOL3	.528	.145	**.729**
FOL1	.243	.074	**.487**

During the second round of item analysis, the following items had cross-loadings differing less than 0.250 on two factors: FOL6, FOL5, FOL14, FOL15, FOL7, and FOL3. These items are highlighted in Table 3.17 and were excluded from the third round of EFA.

The third round of EFA was conducted with the 12 remaining items. Three Eigenvalues were greater than 1.0. The Eigenvalues were 4.385, 1.581 and 1.141 respectively. The three factors explained 59.217% of the total variance. Subsequently, an EFA was done to determine any further problematic items.

Table 3.18 *Followership – Item loadings of the third round of EFA*

	Factor		
	1	2	3
FOL10	**.791**	.256	.347
FOL9	**.761**	.256	.311
FOL11	**.755**	.316	.358
FOL12	**.740**	.417	.305
FOL8	**.688**	.394	.291
FOL13	**.661**	.310	.285
FOL20	.427	**.701**	.156
FOL19	.127	**.621**	-.008
FOL18	.256	**.488**	.116
FOL17	.260	**.460**	.127
FOL1	.205	.081	**.647**
FOL2	.354	.102	**.572**

During the third round of EFA on the responses of the items in the followership instrument, item FOL2 was identified as loading on Factor 1 and Factor 3. The item is highlighted in Table 3.18 and was excluded from further analysis.

A fourth round of EFA was carried out in search of a factor structure that fits the followership instrument for the South African sample. The EFA results indicated a three-factor structure with Eigenvalues of 4.243, 1.531 and 1.003, respectively. These three factors explained 61.611% of the total variance.

Table 3.19 *Followership – Item loadings of the fourth round of EFA*

	Factor		
	1	2	3
FOL10	**.789**	.125	.266
FOL9	**.764**	.111	.297
FOL11	**.761**	.127	.428
FOL12	**.736**	.283	.349
FOL8	**.688**	.316	.231
FOL13	**.660**	.187	.293
FOL1	.214	-.013	.213
FOL20	.422	**.685**	.304
FOL19	.120	**.664**	.201
FOL18	.254	.396	.382
FOL17	.263	.334	**.704**

The results of the fourth round of item analysis are displayed in Table 3.19. The item FOL1 did not load significantly on any of the factors and item FOL18 loaded onto Factor 2 and Factor 3. Hence, these two items were excluded from further analysis. The fifth and final round of EFA will be reported next.

Table 3.20 *Initial Eigenvalues of the Followership instrument during the fifth round of EFA*

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	4.065	45.166	45.166
2	1.377	15.298	60.463
3	.817	9.075	69.538
4	.628	6.983	76.521
5	.522	5.801	82.322
6	.486	5.396	87.718
7	.420	4.662	92.379
8	.360	3.997	96.376
9	.326	3.624	100.000

The results of the fifth round of EFA (displayed in Table 3.20) demonstrate a two-factor solution for the nine remaining items. The two factors explain 60.463% of the total variance.

Table 3.21 *Followership – Item loadings of the fifth round of EFA*

	Factor	
	1	2
FOL10	**.786**	.224
FOL9	**.763**	.221
FOL11	**.760**	.286
FOL12	**.741**	.391
FOL8	**.684**	.375
FOL13	**.662**	.284
FOL20	.434	**.708**
FOL19	.131	**.677**
FOL17	.272	**.384**

The results from the fifth round of EFA on the followership instrument indicated that all retained items meet the criteria for inclusion. The items that load on the respective factors are highlighted in Table 3.21. Factor 1 had six items and Factor 2 had three. Factor 2 is made up of the independent thinking dimension items of the original measurement model and will therefore remain "independent thinking". Factor 1 comprises of items 8, 9, 10, and 13 from the original "active engagement" dimension and items 11 and 12 from the original "independent thinking" dimension. These items focus on independent actions, doing more than what is expected, championing new ideas, and helping colleagues. These items highlight the notion of stepping forward and acting independently. This is conceptually distinct from the independent thinking dimension that is more focussed on challenging the leader and asserting own views. Factor 1 is therefore renamed to "Initiative".

The new factor structure was tested with CFA in order to determine the goodness of fit of the new measurement model for the research sample. The items that contribute to Factor 1 were parcelled into two parcels. However, the CFA model did not converge as it was underidentified. In order to address this, the items were included in the CFA without parcels.

Table 3.22 *Results of the CFA for the new two-factor Followership measurement model*

	Indices		
	Goodness-of-fit	Absolute	Incremental
χ^2	153.304		
df	26		
p	0.000		
χ^2 / *df*	5.896		
AIC	191.304		
RMSEA		0.087	
RMR		0.087	
NFI			0.929
CFI			0.940

The goodness-of-fit statistics for the new followership instrument measurement model are displayed in Table 3.22. The χ^2 / *df* statistic is slightly above the guideline of 2–5 at 5.896. Similarly, the RMSEA is 0.087 which is slightly above the upper end of the guideline (0.08). The CFI and NFI indices results demonstrated acceptable model fit as both were greater than 0.9.

Table 3.23 *Comparison of original and new measurement models for the Followership instrument*

	Factor Structure	
Index	Original	New
χ^2	165.197	153.304
df	8	26
p	0.000	0.000
χ^2 / *df*	20.650	5.896
AIC	191.197	191.304
RMSEA	0.174	0.087
RMR	0.567	0.087
NFI	0.920	0.929
CFI	0.924	0.940

A comparison of the original factor structure and the new factor structure of the followership instrument (Table 3.23) indicated a better model fit of the new factor structure. Although the AIC statistic is nominally higher for the new structure suggesting better fit by the original structure, this is only by a marginal difference of 0.107. However, the RMSEA is acceptable in the new structure whereas it represented poor model fit for the original structure. The same argument holds true for the χ^2 / *df*. Therefore, the new two-dimensional factor structure for the followership instrument, namely "initiative" and "independent thinking" was utilised for the rest of the data analysis for the sample.

3.6.4.4 Authentic Leadership questionnaire (ALQ)

The original factor structure of the ALQ suggests four dimensions with between three and five items each. No parcelling was done for the dimensions with three and four items. However, two parcels were created for the "transparency" dimension. The parcels were allocated as follow: [3, 5, 4] + [2, 1]. Subsequently, an input diagram was created in AMOS to facilitate the CFA process and calculate fit statistics for the original ALQ measurement model.

Table 3.24 *Results of the CFA for the original ALQ measurement model*

	Indices		
	Goodness-of-fit	Absolute	Incremental
χ^2	351.683		
df	59		
p	0.000		
χ^2 / *df*	5.961		
AIC	415.683		
RMSEA		0.088	
RMR		0.063	
NFI			0.949
CFI			0.957

The goodness-of-fit statistics for the original structure of the ALQ are presented in Table 3.24. The χ^2 / *df* of 5.961 and the RMSEA of 0.088 demonstrated marginally acceptable fit of the data to the model. The NFI and CFI are above the guideline of 0.9. Based on the acceptable levels of fit, the original structure of the ALQ was utilised for subsequent data analysis for the sample.

However, the levels of fit for the ALQ are only marginally acceptable which led the researcher to conduct EFA in order to understand the reason for the less than perfect fit indices. The results of the first round of EFA on the ALQ are displayed in Table 3.25.

Table 3.25 *Initial Eigenvalues of the ALQ during the first round of EFA*

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	9.479	59.242	59.242
2	.961	6.007	65.250
3	.811	5.071	70.320
4	.700	4.376	74.697
5	.545	3.406	78.103
6	.519	3.244	81.347
7	.476	2.976	84.323
8	.362	2.264	86.587
9	.349	2.180	88.767
10	.335	2.093	90.860
11	.306	1.915	92.775
12	.292	1.825	94.600
13	.266	1.665	96.266
14	.240	1.498	97.763
15	.197	1.231	98.995
16	.161	1.005	100.000

The first round of factor analysis presented one Eigenvalue of greater than 1.0. The Eigenvalue greater than 1.0 explained 59.242% of the total variance as displayed in Table

3.25. This finding may be explained by Walumba et al. (2008) comment that the four first-order factors of the ALQ does not assess entirely separate and distinct constructs.

3.6.4.5 Conclusion of factor analysis

Table 3.26 provides a summary of the structural equivalence results and goodness-of-fit statistics of each of the constructs based on the new measurement models.

Table 3.26 *Summary table of structural equivalence results*

Construct	Number of dimensions	χ^2 / *df*	RMSEA	NFI	CFI
Work engagement	1	4.500	0.074	0.991	0.993
PsyCap	4	2.151	0.042	0.987	0.993
Followership	2	5.896	0.087	0.929	0.940
Authentic leadership	4	5.961	0.088	0.949	0.957

According to Table 3.26, the RMSEA values generally show an acceptable fit or marginally higher than preferable (0.05–0.08) (Hair et al., 2010). The NFI and CFI shows acceptable fit of >0.9 for each of the constructs. Similarly, the χ2 / df statistics for the constructs also show acceptable model fit for work engagement and PsyCap, but marginally higher than the guideline for followership and authentic leadership (Hair et al., 2010). This shows that the revalidated and new structures of the constructs are robust enough when used on this particular sample. The new factor structures for work engagement and followership also demonstrates better suitability to the data when compared to the original measurement model. The internal reliability for the measurement models are presented in the next section.

3.7 RELIABILITY

In order to determine whether the measuring instruments would produce consistent results, a reliability analysis was performed. This was determined by calculating the Cronbach's coefficient alpha for each measuring instrument, as well as the subscales. Through the exploratory factor analysis completed in the preceding section, problematic items in the

instruments were removed. In this regard, the followership instrument lost 11 items. The factor structures of the UWES and followership instrument were also adapted based on the results of CFA and EFA.

Table 3.27 *Comparison of the reliability of the original and new measuring instruments and their subscales*

	Original			New		
Instrument	Subscale	α	Items	Subscale	α	Items
UWES	Total score	0.924	17	Total score	0.924	17
	Vigour	0.830	6			
	Dedication	0.865	5			
	Absorption	0.775	6			
PCQ	Total score	0.891	24	Total score	0.891	24
	Efficacy	0.854	6	Efficacy	0.854	6
	Hope	0.824	6	Hope	0.824	6
	Resilience	0.694	6	Resilience	0.694	6
	Optimism	0.661	6	Optimism	0.661	6
Followership	Total score	0.888	20	Total score	0.793	9
	Active engagement	0.876	10	Initiative	0.872	6
	Independent thinking	0.766	10	Independent thinking	0.591	3

(table continues)

(Table 3.27 continues)

Instrument	Original			New		
	Subscale	α	Items	Subscale	α	Items
ALQ	Total score	0.953	16	Total score	0.953	16
	Transparency	0.842	5	Transparency	0.842	5
	Moral / ethical	0.880	4	Moral / ethical	0.880	4
	Balanced processing	0.810	3	Balanced processing	0.810	3
	Self awareness	0.904	4	Self awareness	0.904	4

As can be observed from Table 3.27, the internal consistency for the overall scales as well as the subscales for the original and new measurement models are above the recommended lower limit of for Cronbach's alpha of 0.70 (Hair et al., 2006). A reliability indicator of 0.60 and higher could also be considered as a satisfactory indicator of reliability (Malhotra, 2010). Two of the PsyCap subscales, namely resilience (0.694) and optimism (0.661) are below 0.7, but based on Malhotra's (2010) interpretation statistic, these dimensions can still be seen as reliable. The Cronbach alpha results for the new independent thinking subscale of the followership instrument is 0.591, which would just fall short of the 0.6 interpretation criteria. The reliability coefficients for the total score as well as the subscales of the new followership instrument is less than that of the original structure. However, this is probably due to the reduction of items in the total scale and subscales.

In the next section, the corrected item to total correlations for the new measurement models for work engagement and followership as well as its subscales will be discussed. The purpose of the item total correlations is to further demonstrate the degree of internal consistency of the measures. Corrected item total correlations evaluate the correlation between an item and the rest of the revised measuring instrument, without that item being part of the instrument. Based on the result of the item total correlations, a decision is then made to exclude or include items based on their influence on the reliability of the scale.

3.7.1 Item-total correlations: UWES

Item to total correlations were calculated for the new, uni-dimensional UWES measurement model.

Table 3.28 *Item-total statistics for the UWES*

Item	Scale Mean if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
WE1	94.333	.693	.918
WE2	93.880	.680	.918
WE3	93.466	.630	.920
WE4	94.109	.697	.918
WE5	93.832	.791	.915
WE6	94.304	.505	.923
WE7	94.109	.768	.916
WE8	94.253	.699	.918
WE9	93.747	.711	.918
WE10	93.421	.706	.919
WE11	93.889	.666	.919
WE12	93.728	.652	.919
WE13	94.002	.553	.922
WE14	94.288	.651	.919
WE15	94.106	.565	.921
WE16	94.935	.352	.930
WE17	93.750	.536	.922

The UWES scale has a Cronbach alpha of 0.924, indicating that it is a reliable measure. As can be seen in Table 3.28, all items in the UWES measuring instrument demonstrated corrected item total correlations higher than 0.250, and can thus be retained. The item total correlations for this scale range between 0.352–0.791, indicating a moderate correlation between the items. Item WE16 had the lowest item weight at 0.352. However, this did not affect the reliability of the scale. Upon examination of the Cronbach alpha if an item is

deleted results, it is apparent that there will be no substantial improvement in the reliability of the scale should an item be removed. Therefore, all items in this scale was retained.

3.7.2 Item-total correlations: Followership and subscales

The corrected item-total correlations for the new followership measurement model and its subscales were calculated next. The new followership measure results indicate a Cronbach alpha of 0.793 for the total scale, and 0.872 (initiative) and 0.591 (independent thinking) for the respective subscales. The item-total statistics for the initiatve subscale will be presented first.

Table 3.29 *Item-total statistics for the initiative subscale*

Item	Scale Mean if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
FOL8	24.529	.635	.857
FOL9	24.839	.700	.846
FOL10	24.706	.720	.844
FOL11	25.127	.696	.848
FOL12	24.729	.687	.848
FOL13	24.676	.618	.860

The results from Table 3.29 indicate the item weights for the initiative subscale range between 0.618 – 0.720, indicating a moderate to acceptable correlation. Deleting any item from the scale would not make a significant improvement to the reliability of the new subscale. Thus, all items in this subscale were retained.

Table 3.30 *Item-total statistics for the independent thinking subscale*

Item	Scale Mean if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
FOL17	8.489	.314	.616
FOL19	8.173	.429	.449
FOL20	7.849	.477	.397

The result of the reliability analysis for the independent thinking subscale was 0.591. Upon examining the results of the item total correlations for the subscale, it can be observed that the item weights are between 0.314 – 0.477. Item FOL17 had the lowest item total correlation of 0.314. The results of Table 3.30 indicate that it would improve the Cronbach alpha of the scale if the item is deleted, but the improvement would only be a marginal 0.025. Bearing in mind that at least three items is needed to form a subscale (Costello & Osborne, 2005; Raubenheimer, 2004), the marginal difference in the Cronbach alpha if item FOL17 is deleted is not feasible. Therefore, all items in the independent thinking subscale are retained.

As a final step in the reliability analysis, the corrected item total correlations were calculated for the new summated followership measurement model.

Table 3.31 *Item-total statistics for the new followership scale*

Item	Scale Mean if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
FOL8	36.785	.600	.764
FOL9	37.095	.572	.763
FOL10	36.962	.587	.765
FOL11	37.383	.610	.757
FOL12	36.985	.641	.757
FOL13	36.932	.543	.770
FOL17	38.211	.342	.802
FOL19	37.895	.274	.819
FOL20	37.570	.542	.765

The new followership scale has a Cronbach alpha of 0.791, demonstrating that it is a reliable scale. The corrected item total correlations (based on the results of Table 3.31) range between 0.274 – 0.610, demonstrating small to moderate item weights. The item FOL19 has an especially small item weight of 0.274, however it still falls within the guideline of being 0.250 or more. As can be seen in Table 3.31 the items contribute to the measurement of followership in this scale and if any of the items were removed, it would not necessarily improve the internal consistency. Therefore, all items were retained.

3.8 CONCLUSION

In this chapter, an overview of the methodology used for the present study was provided. The methodology included both a survey and statistical modelling approach. Emphasis was placed on using both confirmatory and exploratory factor analysis to identify and verify interpretable and understandable factor structures associated with each of the measured constructs.

The techniques that will be used for data analysis, including correlation analysis and multiple regression analysis, were also discussed. The chapter provided support for the use of structural equation modelling in evaluating the theoretical model depicting the relationships between the constructs that are investigated in this study.

In Chapter 4, the results of data analyses conducted using the methodology explained in Chapter 3 will be presented. Emphasis will be placed on statistically describing the correlations between the measured constructs (emphasising Pearson's *r*), explaining significant differences in the results based on biographical characteristics, statistically explaining the modelling of the relationship between the constructs (emphasising structural equations modelling), as well as statistically predicting the sequential relationship between the constructs (emphasising multiple regression analysis).

4 RESEARCH FINDINGS AND ANALYSIS

4.1 INTRODUCTION

The main aim of the present study, as stated in Chapter 1, was to examine the relationships between work engagement, psychological capital (PsyCap), followership and authentic leadership. In Chapter 3, the research methodology employed in the present study was discussed. Chapter 4 presents the results of the analyses of the data utilising both descriptive and inferential statistical analyses. Furthermore, Chapter 4 will provide preliminary conclusions of the propositions testing, based on the results of the data analyses utilising the SPSS and Amos statistical analysis software. For ease of reference, the proposition being tested is presented with the results of the analysis. The chapter is concluded by a discussion of the implications of the results of the data analyses for the acceptance or rejection of the propositions.

4.2 MISSING VALUE TRANSFORMATION

Missing values can be a problem in the analysis of specifically multivariate data as it could reduce the representativeness of the sample. In multivariate analysis, cases with missing values are excluded from the analysis as the missing values can distort inferences about the population.

Missing values can often be prevented in online surveys by setting the questionnaire to force respondents to respond to an item before proceeding to the next set of items. In the present study this was not done as it was seen as an ethical violation to force respondents to answer an item. However – after each set of items – the online questionnaire used for the present study did alert the respondent that all items in that section were not answered. It then presented respondents with the option to answer those items before proceeding. Respondents could however ignore this warning and proceed without completing all the items.

As a result of the option to proceed without completing all questions, it was expected in the present study that some missing data would be found. Therefore, missing value analysis was carried out and missing values were replaced with the series mean. The number of missing

values per item that were replaced ranged from zero to 14, with an average of two responses per item.

It should be kept in mind that missing responses for an item could be completely random, but it might also hold some meaning as to why a respondent chose not to answer the question. The item with most missing values was item 10 of the ALQ, namely "My leader solicits views that challenge his or her deeply held positions". It may be possible that some respondents struggled to understand the word 'solicits', or that the question in its entirety could be difficult to understand.

4.3 THE VALIDITY OF THE MEASURING INSTRUMENTS FOR THE SAMPLE

The validity of a measuring instrument indicates the extent to which the instrument measures what it is supposed to measure. For instance, if certain variables should be measures of distinct phenomenon, discriminant validity is of importance. In the case where measuring instruments were developed in a different context to where the instrument is administered, construct validity is important to determine the structural soundness and portability of the instrument to the research setting. The following sections will elaborate on the validity analysis of the measuring instruments for the healthcare industry sample utilised in the present study.

4.3.1 Pilot study and social desirability analysis

In order to determine whether the consolidated questionnaire utilised for the present study provided interpretable results, a pilot study was conducted (as elaborated upon in section 3.6.1.). An important contribution of the pilot study was the addition of a social desirability measure to the composite research questionnaire.

Social desirability is a common methodological problem in self-report measuring instruments. Respondents may present themselves in a more favourable light when reporting on their own behaviours and attitudes, which in turn, might create incorrect relationships between variables or disguise the true nature of the relationships between the studied constructs (Podsakoff et al., 2003).

Based on the results of the pilot study, it can be concluded that the work engagement, PsyCap, followership and authentic leadership measuring instruments were not affected by social desirability bias. None of these variables were significantly related to social desirability. As a result, social desirability in itself does not seem to cause a common method variance problem in the present study.

4.3.2 Portability of the measuring instruments

For each of the measuring instruments used to measure the different constructs, exploratory and confirmatory factor analyses were completed. This was done to determine whether the original structure of the constructs would be the same in a South African context – and also whether the construct has sound factorial validity to be portable to the South African context.

Proposition 1	The work engagement scale (UWES-17) developed by Schaufeli & Bakker (2003) is portable to a South African organisational setting and it is possible to demonstrate acceptable construct validity and internal reliability.
Proposition 2	The psychological capital scale (PCQ-24) developed by Luthans, Youssef, and Avolio (2007a) is portable to a South African organisational setting and it is possible to demonstrate acceptable construct validity and internal reliability.
Proposition 3	The followership scale developed by Kelley (1992) is portable to a South African organisational setting and it is possible to demonstrate acceptable construct validity and internal reliability.
Proposition 4	The authentic leadership scale (ALQ) developed by Avolio, Gardner, and Walumbwa (2005) is portable to a South African organisational setting and it is possible to demonstrate acceptable construct validity and internal reliability.

Based on the results of the CFA and EFA performed on the four variables as described in Chapter 3, it may be concluded that not all the original factor structures of the instruments are equally portable to a sample of healthcare industry employees in South Africa. The two instruments that were found to be portable to the South African sample were the PsyCap (PCQ) and authentic leadership (ALQ) instruments. The PCQ and ALQ maintained their original factor structures for the present study sample and all items were maintained. Therefore, propositions 2 and 4 can be accepted.

The UWES was initially conceptualised as a three-factor structure, but for the present study, a one-factor solution was identified. Based on the high communalities between the items, too many items would have been excluded in the factor analysis process to present a multi-dimensional construct. Therefore, a one-factor solution was proposed and tested through CFA. The CFA analysis provided acceptable fit indices for the one-factor solution. Therefore, the UWES in its original structure may not be fully portable to the South African healthcare industry sample. However, the new conceptualisation of the one-dimensional structure of the UWES did demonstrate acceptable fit, as well as acceptable internal reliability statistics. Consequently, the UWES-17 questionnaire is portable to a South African sample, but not in the original form as conceptualised by the Bakker & Schaufeli (2003). Accordingly, Proposition 1 is only partially accepted.

Similarly, the analysis of responses to the items in the followership instrument yielded a two-factor structure which is consistent with the original factor structure conceptualisation. However, five rounds of EFA revealed that a number of items had to be eliminated due to high cross-loadings. As a result the new two factor structure does not consist of the same items as the original factor structure of the instrument. Acceptable reliability and fit was however found for the new factor structure, and as a result, Proposition 3 is partially accepted.

4.3.3 The higher-order factor structures of PsyCap and authentic leadership

Proposition 5	A higher-order factor, i.e. PsyCap, underlies the four dimensions (hope, optimism, self-efficacy and resilience).

Luthans, Avolio, et al. (2007) maintain that PsyCap is not only characterised by the dimensions of hope, efficacy, resilience and optimism, but also as a higher-order or second-order factor structure. To test the higher-order factor structure of PsyCap, CFA was conducted by using the four dimensions of the instrument as "items" in the higher-order PsyCap. The estimates of model fit are presented in Table 4.1.

Table 4.1 *Results of the CFA for the higher-order PsyCap measurement model*

	Indices		
	Goodness-of-fit	Absolute	Incremental
χ^2	3.100		
df	2		
p	0.212		
χ^2 / *df*	1.550		
AIC	19.100		
RMSEA		0.029	
RMR		0.166	
NFI			0.996
CFI			0.999

The results of the CFA on the higher-order structure of PsyCap (as presented in Table 4.1) demonstrate good fit of the model. The χ^2 / *df* of 1.550 and the RMSEA of 0.029 both demonstrate good fit of the model. This is supported by the NFI and CFI that are close to 1.0.

Even though CFA of the PsyCap higher-order measurement model demonstrated good fit, an EFA was conducted to confirm whether the dimensions of PsyCap load onto a single higher-order construct. The first round of the factor analysis presented one Eigenvalue greater than 1.0, as can be seen in Table 4.2.

Table 4.2 *Initial Eigenvalues of the PsyCap higher-order construct during EFA*

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	2.518	62.952	62.952
2	.585	14.620	77.573
3	.504	12.594	90.166
4	.393	9.834	100.000

For the first round of EFA on the PsyCap higher-order measurement model, the KMO statistic was calculated as 0.790. As can be seen in Table 4.2, only one Eigenvalue larger than 1.0 was extracted and all the dimensions of PsyCap loaded satisfactorily onto one factor. These factor loadings can be seen in Table 4.3. The single factor is responsible for 62.952% of the variance explained.

Table 4.3 *Factor loadings on the PsyCap dimensions and higher-order factor*

Item	Factor loadings
Efficacy	0.400
Hope	0.471
Resilience	0.307
Optimism	0.388

Based on the results of the good fit of the higher-order measurement model of PsyCap, as well as the EFA results stating that the higher-order factor explains 62.952% of the variance in PsyCap, the higher-order factor structure of PsyCap seems to hold true for the responses of the sample in the present study. Proposition 5 can therefore be accepted.

Proposition 6	A higher-order factor, i.e. Authentic leadership, underlies the four dimensions (transparency, moral/ethical, balanced processing and self-awareness).

Caza et al. (2010) and Luthans, Avolio, et al. (2007) suggest that authentic leadership should also be treated as a higher-order or second-order aggregate, rather than analysing each of the dimensions individually.

To test this assertion, CFA was performed to estimate the model fit of a higher-order authentic leadership factor.

Table 4.4 *Results of the CFA for the higher-order ALQ measurement model*

	Indices		
	Goodness-of-fit	Absolute	Incremental
χ^2	30.806		
df	2		
p	0.000		
χ^2 / *df*	15.403		
AIC	46.806		
RMSEA		0.149	
RMR		0.012	
NFI			0.986
CFI			0.987

The fit indices for the ALQ higher-order factor structure (presented in Table 4.4) are quite high for the χ^2 / *df* = 15.403 and the RMSEA of 0.149. These two indicators represent poor fit of the higher-order ALQ. The RMR (0.012) and the incremental fit indices indicated good model fit.

In order to understand the poor model fit, an EFA was conducted to determine whether the dimensions of authentic leadership load onto a single higher-order factor. The EFA presented one Eigenvalue greater than 1.0, as can be seen in Table 4.5.

Table 4.5 *Initial Eigenvalues of the authentic leadership higher-order construct during EFA*

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	3.336	83.408	83.408
2	.259	6.482	89.890
3	.242	6.046	95.936
4	.163	4.064	100.000

For the EFA on the authentic leadership higher-order measurement model, the KMO statistic was calculated as 0.847. As can be seen in Table 4.5, only one Eigenvalue larger than 1.0 was extracted and all the dimensions of authentic leadership loaded satisfactorily onto one factor. The single factor is responsible for 83.408% of the variance explained.

The factor loadings of the authentic leadership factors were 0.707 (transparency), 0.700 (moral/ethical), 0.728 (balanced processing), and 0.751 (self-awareness). The intercorrelations between the factors are also high and ranged from $r = 0.745$ to $r = 0.816$.

Based on the finding of less than perfect model fit of the higher-order ALQ factor, further analyses in the present study using this indicator should be interpreted with caution. Judgement is therefore withheld for Proposition 6.

4.3.4 Factorial independence of the instruments

Proposition 7	Work engagement, PsyCap, followership, and authentic leadership are factorially independent of one another.

As the present study is largely concerned with measuring positive organisational constructs, the question may arise as to whether the respondents in the study could differentiate between the different components included in the study. To determine the independence of each of the constructs, a second-order EFA was carried out on the responses to the new and original measurement models. The results of the analyses will be discussed in the subsequent sections.

4.3.4.1 New measurement models

The new factor structure of the variables utilised in the present study consist of: one factor for work engagement; four factors for PsyCap; two factors for followership; and four factors for authentic leadership. Before an EFA could be conducted, the KMO statistic was calculated. The KMO value of 0.871 inidicated that factor analysis was possible and the analysis was carried out. A principal axis factoring extraction method with direct oblimin rotation was utilised. The results of the initial eigenvalue analysis is presented in Table 4.6.

Table 4.6 *Initial Eigenvalues of the second-order EFA on the new dimensions*

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	4.481	40.740	40.740
2	2.392	21.744	62.484
3	.941	8.558	71.042
4	.663	6.026	77.068
5	.542	4.928	81.996
6	.525	4.770	86.766
7	.435	3.958	90.723
8	.379	3.445	94.168
9	.251	2.283	96.451
10	.232	2.105	98.556
11	.159	1.444	100.000

The first round of factor analysis (presented in Table 4.6) produced two Eigenvalues larger than 1.0. The Eigenvalues for the factors were 4.481 and 2.392 respectively. The two factors

explained 62.49% of the total variance. Next, the factor structure matrix was examined to determine which of the dimensions of the different measuring instruments loaded on the two identified factors.

Table 4.7 *Factor loadings of the new dimensions in the second order EFA analysis*

Dimension	Factor	
	1	2
AL_Self awareness	**.903**	.242
AL_Balanced Processing	**.882**	.224
AL_Transparency	**.878**	.247
AL_Moral/Ethical	**.865**	.250
PsyCap_Hope	.246	**.758**
PsyCap_Efficacy	.341	**.715**
PsyCap_Optimism	.320	**.697**
Fol_Initiative	.055	**.651**
Work engagement	.317	**.639**
PsyCap_Resilience	.153	**.621**
Fol_Independent thinking	.006	**.322**

Note: AL = Authentic leadership; Fol = Followership

As can be seen from Table 4.7, the four dimensions of authentic leadership load onto factor 1. The PsyCap and followership dimensions, as well as work engagement load onto Factor 2. Work engagement does load 0.317 on Factor 1 as well, but there is more than 0.250 difference in loading, hence indicating an acceptable loading of work engagement on Factor 2. The two obtained factors have a small correlation with one another (r = 0.26).

Based on the second-order factor analysis it is evident that respondents viewed their perception of their manager's authentic leadership as a distinct factor to their own PsyCap,

followership and work engagement. However, it seems that the respondents viewed their own PsyCap, followership and work engagement in the same way. This means that these three variables are not factorially independent of one another for the research sample. Consequently, Proposition 7 is rejected.

4.3.4.2 Original measurement models

In order to compare whether the new measurement model demonstrates more factorial independence among the variables included in the study, a second-order EFA process similar to the one described in 4.3.4.1 was carried out on the original dimensions of the variables. The KMO was calculated and the result of 0.879 indicated that EFA was feasible. Three factors with Eigenvalues larger than one emerged in the second-order EFA. The three factors explained 72% of the total variance. The results of the analysis are presented in Table 4.8.

Table 4.8 *Initial Eigenvalues of the second-order EFA on the original dimensions*

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	5.629	43.304	43.304
2	2.613	20.102	63.405
3	1.128	8.678	72.083
4	.802	6.173	78.256
5	.585	4.501	82.757
6	.499	3.841	86.598
7	.384	2.955	89.553
8	.293	2.253	91.805
9	.264	2.027	93.833
10	.238	1.831	95.664
11	.234	1.798	97.462
12	.173	1.333	98.795
13	.157	1.205	100.000

The EFA of the original model presented three factors (based on 13 dimensions) whilst the new measurement model presented two factors (based on 11 dimensions). To explore whether there were differences in the factor loadings for the new and original dimensions the factor structure matrix was inspected. The matrix is presented as Table 4.9.

Table 4.9 *Factor loadings of the original dimensions in the second order EFA analysis*

Dimensions	Factor		
	1	2	3
FOL_Active engagement	**.766**	.123	-.591
PsyCap_Hope	**.728**	.250	-.519
PsyCap_Efficacy	**.711**	.347	-.465
PsyCap_Optimism	**.682**	.320	-.524
FOL_Independent thinking	**.658**	.101	-.425
PsyCap_Resilience	**.618**	.161	-.341
AL_Self awareness	.257	**.901**	-.309
AL_Balanced processing	.240	**.883**	-.274
AL_Transparency	.270	**.876**	-.285
AL_Moral/ethical	.274	**.867**	-.269
WE_Vigour	.663	.300	**-.926**
WE_Dedication	.553	.309	**-.876**
WE_Absorption	.511	.239	**-.796**

Note: AL = Authentic leadership; Fol = Followership; WE = Work engagement

As can be seen in Table 4.9, the followership and PsyCap dimensions loaded onto Factor 1. The authentic leadership dimensions all loaded satisfactorily on Factor 2 and in the same manner, the work engagement dimensions loaded onto Factor 3. However, the factor loadings for the original dimensions of work engagement on Factor 1 are also quite high. Thus even

though the work engagement scale factors loads onto a separate factor, it is evident that the sample still perceived work engagement as somewhat similar to PsyCap and followership.

4.4 SURVEY RESULTS

In order to gain a better understanding of the sample, the researcher examined the biographical characteristics of the sample, as well as the sample total scores for each of the four variables.

4.4.1 Biographical details: Description of the sample

As discussed in Chapter 3, the research sample was drawn from a private organisation within the healthcare industry of South Africa. The sample consisted of 647 completed questionnaires. Table 4.10 provides a summary of the demographic characteristics of the sample.

Table 4.10 *Frequency distribution of the demographic characteristics of the sample*

Group	Sub-group	Frequency	Percentage
Gender	Male	126	22.6%
	Female	501	77.4%
Occupational level	Generally trained office worker / secretary	1	0.2%
	Vocationally trained crafts-person, technician, IT-specialist, nurse, artist or equivalent	13	2%
	Academically trained professional or equivalent (but not a manager of people)	71	11%
	Manager of one or more sub-ordinates (non-managers)	362	56%
	Manager of one or more managers	162	25%
	Other	38	5.9%

(table continues)

(Table 4.10 continues)

Group	Sub-group	Frequency	Percentage
Home language	Afrikaans	426	65.8%
	English	145	22.4%
	Afrikaans & English	22	3.4%
	North Sotho	7	1.1%
	Sepedi	6	0.9%
	Zulu	6	0.9%
	Tswana	6	0.9%
	Setswana	5	0.8%
	Others: German, Russian; Xhosa, Ndebele, Oshikwanyama, Shona, Tsonga, Venda and other indigenous languages.	24	3.8%
Educational level	Secondary school	2	0.3%
	Matric or equivalent	26	4%
	Post-school certificate or diploma	242	37.4%
	University degree	179	27.7%
	Postgraduate degree	162	25%
	Other	36	5.6%
English proficiency	English is my first language, I am fully proficient in this language.	172	26.6%
	I have a good understanding of English and seldom misunderstand words and meaning.	450	71.1%
	I have some understanding of English, but I often misunderstand words, meaning and fine nuances	15	2.3%
Manager gender	Male	275	42.5%
	Female	372	57.5%

As can be seen from Table 4.10, the sample was mostly female (77.4%). The female majority is consistent with the gender profile of the management level employees of the research organisation. Further to this, the largest portion of the sample were managers (81%), of which 56% of the sample were managers of other non-managers, or what is typically referred to as line managers. When responding to the question of current home language, 65.8% of the sample indicated their home language as Afrikaans. This was followed by English (22.4%). A number of other home languages were listed, with between one and seven respondents indicating the language as their current home language. The self-reported English proficiency of the respondents indicated that 26.6% of the sample selected English as their first language with full proficiency in the language. The majority of the sample (71.1%) did also indicate that they have a good understanding of English and seldom misunderstand words and meaning. Furthermore, the majority of the sample had a University undergraduate level degree (27.7%) or a Postgraduate degree (25%).

Table 4.11 provides a summary of the descriptive statistics for the sample for characteristics that was described in years.

Table 4.11 *Descriptive statistics for the demographic characteristics of the sample*

Characteristic	*N*	Minimum	Maximum	*M*	*SD*
Age	647	25	63	45.59	8.077
Work experience	640	2	45	23.197	8.752
Tenure in organisation	646	< 1	28	11.161	6.197
Reporting period to manager	618	< 1	25	4.655	4.046

Note: Characteristics are described in years.

From Table 4.11 it is evident that the mean age of respondents was 45 years of age (*SD* = 8.077). The mean of work experience is consistent with the mean age of the sample in that respondents have an average of 23 years work experience (*SD* = 8.752). Although some respondents were quite new to the organisation, the mean tenure of the respondents were 11

years (*SD* = 6.197). The mean reporting period to current manager of four years (*SD* = 4.046) also indicates a fairly stable workforce at the managerial level.

4.4.2 Work engagement: Description of the sample

Work engagement was measured on a Likert response scale ranging from zero to six. A low score would indicate a low level of work engagement and a high score indicates a high level of work engagement. The response values were summed and then averaged per respondent.

In order to interpret the work engagement levels for the research sample, the UWES-17 norm scales using the 'other language' norm scores published in the UWES Manual was utilised (Schaufeli & Bakker, 2003). Schaufeli and Bakker (2003) suggest statistical norms for the UWES using the categories: 'very low', 'low', 'average', 'high', and 'very high'. The norms are based on the following percentile scores: 'very low' is less than the 5th percentile; 'low' is between the 5th and 25th percentile; 'average' is scores that fall between the 25th and 75th percentile; 'high' scores fall between the 75th and 95th percentile and 'very high' indicated scores greater than the 95th percentile. Schaufeli and Bakker (2003) provide norm scores for the dimensions vigour, absorption and dedication as well as the total work engagement score. Table 4.12 displays only the total work engagement norm scores for the UWES-17 (*N* = 2313) as work engagement was measured as a uni-dimensional construct for the healthcare industry sample.

Table 4.12 *Norm scores for the UWES-17 (N = 2313)*

Interpretation	Item mean score
Very low	≤ 1.93
Low	1.94 – 3.06
Average	3.07 – 4.66
High	4.67 – 5.53
Very high	≥ 5.54
M	3.82
SD	1.10
SE	.01
Range	0.0 – 6.00

UWES Manual, (Schaufeli & Bakker, 2003, p.37).

Descriptive statistics for the UWES scores of the research sample are presented in Table 4.13.

Table 4.13 *Descriptive statistics of item scores on uni-dimensional work engagement scale (N = 647)*

Dimension	Minimum	Maximum	*M*	*SE*	*SD*	Skewness	Kurtosis
Work engagement	1.29	6.00	4.88	0.03	0.77	-1.100	1.583

The item mean of the item scores on the UWES as observed in Table 4.13 is *M* = 4.88 (*SD* = 0.77). When comparing the mean item score of the research sample with the norm scales provided in the UWES-17 manual, the healthcare industry sample can be described as – on average – having a high level of work engagement. A mean of 4.67 – 5.53 indicates that respondents feel engaged in their work "often" to "very often" or "once a week" to "a few times a week".

With regard to the skewness statistic, the work engagement scores demonstrated some skewness (-1.100) based on the 'greater or less than 1' rule of thumb (Hair et al., 2006). The negative skewness statistic is indicative of the tendency of the research sample to have a higher than average level of work engagement. This is confirmed by the high positive kurtosis statistic (1.583) that indicates a peaked distribution of the sample's responses. Therefore, the descriptive statistics of the uni-dimensional work engagement item scores indicate a slight negatively skewed, peaked distribution – there are more scores at the high side of the distribution than in a normal distribution.

4.4.3 PsyCap: Description of the sample

The PsyCap instrument, PCQ-24, consists of 24 items measuring the four dimensions of PsyCap, each containing six items. The instrument utilises a Likert scale ranging from one to six. Higher scores indicate higher levels of psychological capital.

Descriptive statistics for the PsyCap and PsyCap dimension scores for the research sample are presented in Table 4.14.

Table 4.14 *Descriptive statistics for scores on PsyCap and its dimensions (N = 647)*

Dimension	Minimum	Maximum	*M*	*SE*	*SD*	Skewness	Kurtosis
Efficacy	2.33	6	5.28	0.024	0.62	-1.148	2.010
Hope	2.33	6	4.98	0.027	0.68	-0.719	0.861
Resilience	1.67	6	4.90	0.024	0.61	-0.937	3.162
Optimism	2.00	6	4.66	0.026	0.67	-0.515	0.700
PsyCap Total	2.75	6	4.95	0.020	0.51	-0.552	0.630

As evident from Table 4.14, the concentration of high scores for efficacy is reflected in the skewness statistic (-1.148) and kurtosis (2.010) which indicate that the data for this dimension is negatively skewed. The skewness scores for hope (-0.719), resilience (-0.937),

optimism (-0.515), and the total PsyCap score (-0.552) are all within the -1.00 to +1.00 range as suggested by Hair et al. (2006). Statistically, the PsyCap instrument is therefore close to a normal distribution. With all skewness statistics indicated by negative signs, it means that the PsyCap respondents tended to score on the high side on all four dimensions of PsyCap as well as for the total PsyCap score.

4.4.4 Followership: Description of the sample

The new factor structure of the followership instrument was utilised for the calculation of descriptive statistics for the responses of the sample. The instrument measures followership behaviour on a scale from one to six, where six would indicate a response of 'almost always'. Consequently, higher scores indicate a higher level of exemplary followership.

Descriptive statistics for the followership and the new followership dimensions, namely initiative and independent thinking, are presented in Table 4.15.

Table 4.15 *Descriptive statistics for scores on followership and its dimensions (N = 647)*

Dimension	Minimum	Maximum	*M*	*SE*	*SD*	Skewness	Kurtosis
Initiative	1.17	6.00	4.95	0.03	0.76	-0.903	1.403
Independent thinking	0.00	6.00	4.09	0.05	1.15	-0.547	1.403
Followership total	1.22	6.00	4.66	0.03	0.73	-0.703	1.196

In Table 4.15 it can be seen that the initiative dimension (M = 4.95) and the followership total scores (M = 4.66) were towards the high side of the scale. The independent thinking mean score (M = 4.09) was somewhat lower, suggesting that respondents tended to have more moderate responses to questions such as "Do you assert your own views on important issues, even though it might mean conflict with your group or reprisals from your leader?". The skewness statistic for the subscales as well as for the followership total score falls within the -

1.00 to 1.00 (Hair et al., 2006) guideline, indicating that the data can be seen as normally distributed. The fact that both the dimensions and the followership total score have negative symbols in the skewness statistic means that respondents tended to score towards the high side.

4.4.5 Authentic Leadership: Description of the sample

Authentic leadership was measured by the ALQ instrument, which consists of 16 items. Respondents score their answers on a scale from zero ("not at all") to four ("frequently, if not always").

Descriptive statistics for authentic leadership and the four dimensions of the scale are displayed in Table 4.16.

Table 4.16 *Descriptive statistics for scores on authentic leadership scale items and its dimensions (N = 647)*

Dimension	Minimum	Maximum	*M*	*SE*	*SD*	Skewness	Kurtosis
Transparency	0.00	4.00	2.78	0.03	0.87	-0.606	-0.231
Moral / Ethical	0.00	4.00	3.03	0.03	0.88	-0.842	0.097
Balanced processing	0.00	4.00	2.78	0.04	0.95	-0.658	-0.235
Self awareness	0.00	4.00	2.59	0.04	1.01	-0.579	-0.348
Authentic leadership total	0.00	4.00	2.80	0.03	0.84	-0.621	-0.263

As presented in Table 4.16, the respondents scored the moral/ethical component of their leader's behaviour the highest. With regard to the skewness statistic, the four dimensions and the total score of authentic leadership presented statistics ranging from -0.579 to -0.842. This falls within the acceptable range of -1.00 to +1.00 (Hair et al., 2006). Again all the skewness

statistics are indicated by a negative notation, which indicates that the respondents tended to score the items towards the high end of the scale.

In conclusion, the results of the descriptive analysis of the sample responses in 4.4.2 – 4.4.5 indicate that respondents tended to have high levels of work engagement, PsyCap and followership. The respondents also tended to score their leaders as having high levels of authentic leadership.

4.5 DIFFERENCES BETWEEN DEMOGRAPHIC GROUPS IN THE SAMPLE

An analysis of the differences between demographic groups in a sample and the groups' responses to the survey items provides valuable information to understand which groups might have higher levels of i.e. work engagement, PsyCap, followership and perceptions of authentic leadership behaviour displayed by their leaders.

For the present study, the statistical significance of differences was determined by examining variations in the mean scores of the demographic groups. Where only two categories were presented (e.g. gender), a t-test was used to determine whether there were significant differences. In the cases where more than one category was present (e.g. educational level) ANOVA was used to determine significant differences between groups.

Further to the ANOVA analysis, post hoc tests were performed in the instances where significant differences existed between the various categories. This is a necessary step as ANOVA only indicates that significant differences exist, but does not indicate between which groups the differences are evident. For the present study, the Scheffé post hoc assessment was utilised as it is flexible, conservative and able to handle complex comparisons of more than one mean at a time.

The scores of all the demographic variables were examined for differences in mean scores, but only the variables where significant differences were found will be presented. Only in the case of statistically significant differences, Cohen's *d* was calculated to determine the

practical significance of such differences. Cohen's *d* can be interpreted to explain a trivial (≤ 0.2), small (≥ 0.2), moderate (≥ 0.5), or large (≥ 0.8) effect size (Cohen, 1988). The analyses sought to answer propositions 8 to 12.

Proposition 8	There are significant relationships between the composite and dimensional scores of work engagement and demographic variables (i.e. gender, occupational level, home language, educational level, English proficiency, manager's gender, age and working experience).
Proposition 9	There are significant relationships between the composite and dimensional scores of PsyCap and demographic variables (i.e. gender, occupational level, home language, educational level, English proficiency, manager's gender, age and working experience).
Proposition 10	There are significant relationships between the composite and dimensional scores of followership and demographic variables (i.e. gender, occupational level, home language, educational level, English proficiency, manager's gender, age and working experience).
Proposition 11	There are significant relationships between the composite and dimensional scores of authentic leadership and demographic variables (i.e. gender, occupational level, home language, educational level, English proficiency, manager's gender, age and working experience).

4.5.1 Gender

Gender is composed of two categories, namely male (*n* = 146) and female (*n* = 501). The results of the t-test based on the scores on the variables and their respective dimensions are presented in Table 4.17.

Table 4.17 *Results of the t-tests for gender differences*

Constructs	Dimensions	*M*		*t*	*df*	*p*	Cohen's *d*
		Male	Female				
Work engagement	Work engagement Total	4.80	4.90	-1.43	645	0.18	
PsyCap	Efficacy	5.37	5.25	2.07	645	0.83	
	Hope	5.02	4.96	0.89	645	0.18	
	Resilience	4.94	4.89	0.87	645	0.45	
	Optimism	4.70	4.64	0.90	645	0.96	
	PsyCap Total	5.01	4.94	1.48	645	0.32	
Followership	Initiative	4.94	4.96	-0.32	645	0.67	
	Independent thinking	4.29	4.03	2.44	645	0.59	
	Followership Total	4.72	4.65	1.05	645	0.67	
Authentic Leadership	Transparency	2.94	2.74	2.45	645	0.57	
	Moral / Ethical	3.15	2.99	1.90	645	0.92	
	Balanced processing	3.05	2.70	4.44	282.99	0.00	0.44
	Self-awareness	2.78	2.54	2.51	645	0.06	
	Authentic leadership Total	2.97	2.75	2.88	645	0.46	

The results of the t-test for significant differences in gender (displayed in Table 4.17) indicate that there is only one significant difference at the 0.05 significance level. This difference is evident in male and female perceptions of the leader's balanced processing abilities.

Reflecting on the mean scores for this dimension, it can be seen that males provided a higher rating for the balanced processing dimension (M = 3.05) than did females (M = 2.70). Furthermore, to determine the strength of the difference, Cohen's effect size value was calculated as d = 0.44, suggesting a small practical significance.

4.5.2 Occupational level

The results for the ANOVA based on the scores of the occupational category groups are presented in Table 4.18. The demographic questionnaire specified six occupational categories, but a decision was made to only include categories in the analysis that have 30 or more respondents. Therefore, only three of the original categories will be used for analysis based on the low number of individuals in the other three categories. These categories include academically trained professionals or equivalent (n = 71), managers of one or more subordinates (n = 362), and managers of one or more managers (n = 162).

Table 4.18 *Results of ANOVA for occupational category*

Constructs	Dimensions	*df*	*F*	*p*
Work engagement	Work engagement Total	2, 592	9.33	0.00
PsyCap	Efficacy	2, 592	8.52	0.00
	Hope	2, 592	3.51	0.03
	Resilience	2, 592	1.16	0.31
	Optimism	2, 592	8.58	0.00
	PsyCap Total	2, 592	7.72	0.00
Followership	Initiative	2, 592	12.51	0.00
	Independent thinking	2, 592	13.52	0.00
	Followership Total	2, 592	18.13	0.00

(table continues)

(Table 4.18 continues)

Constructs	Dimensions	*df*	*F*	*p*
Authentic Leadership	Transparency	2, 592	0.33	0.72
	Moral / Ethical	2, 592	0.40	0.67
	Balanced processing	2, 592	1.54	0.22
	Self-awareness	2, 592	0.11	0.90
	Authentic leadership Total	2, 592	0.35	0.71

As can be seen in Table 4.18, there are a number of significant differences at the $p < 0.05$ level between the occupational categories and the variables of the present study.

Scheffé's post hoc analysis was carried out to determine which of the occupational groups differed from each other. Only statistics for significant differences are reported in Table 4.19. The standard deviations are reported in parenthesis below the means.

Table 4.19 *Results of Scheffé's post hoc analysis for occupational categories*

		Occupational groups				
Construct	Dimension	Academically trained profession or equivalent (but not a manager of people)	Manager of one or more sub-ordinates (non-managers)	Manager of one or more managers	*p*	Cohen's *d*
Work engagement	Work engagement total score	4.71 (0.81)		5.08 (0.60)	0.003	0.43
			4.80 (0.81)	5.08 (0.60)	0.001	0.29

(table continues)

(Table 4.19 continues)

Construct	Dimension	Occupational groups			*p*	Cohen's *d*
		Academically trained profession or equivalent (but not a manager of people)	Manager of one or more sub-ordinates (non-managers)	Manager of one or more managers		
PsyCap	Efficacy	5.19 (0.61)	5.22 (0.67)		0.017	0.38
			5.22 (0.67)	5.45 (0.50)	0.000	0.28
	Hope		4.94 (0.69)	5.10 (0.61)	0.047	0.18
	Optimism	4.52 (0.75)		4.83 (0.60)	0.004	0.41
			4.60 (0.66)	4.83 (0.60)	0.001	0.28
	PsyCap Total	4.87 (0.51)		5.08 (0.46)	0.014	0.40
			4.91 (0.52)	5.08 (0.46)	0.001	0.26
Followership	Initiative	4.80 (0.90)		5.19 (0.61)	0.002	0.50
			4.86 (0.78)	5.19 (0.61)	0.000	0.33
	Independent thinking		3.89 (1.20)	4.44 (0.94)	0.000	0.35
	Followership total	4.59 (0.91)		4.94 (0.56)	0.003	0.61
			4.54 (0.74)	4.94 (0.56)	0.000	0.40

As can be seen from Table 4.19 there are a number of differences between the occupational groups. Notably, the 'manager of one or more managers' mostly had the highest mean scores on all of the dimensions and the 'academically trained profession, but not a manager of people' group had the lowest mean scores. As the 'manager of one or more managers' group is typically a senior management position, it may be assumed that the scores of the dimensions are likely to be higher based on the hierarchical level of the manager in the organisation. The effect size values mostly indicated a small practical significance, except for initiative and the total score for followership that demonstrated moderate practical significance.

4.5.3 Home language

For the question about home language in the survey, respondents had the opportunity to type in their home language due to the variety of possible home languages. Most respondents indicated that Afrikaans was their home language (n = 421) and the second largest group of respondents indicated English (n = 144). Other languages were also listed by the respondents. However, utilising the criteria of at least 30 respondents to be included in tests for significant difference, only the Afrikaans and English groups' responses were included in the analysis.

A t-test was carried out to determine whether any significant differences existed between Afrikaans and English home language groups. The results of the analysis are presented in Table 4.20.

Table 4.20 *Results of the t-tests for home language differences*

Constructs	Dimensions	*M*		*t*	*df*	*p*	Cohen's *d*
		Afrikaans	English				
Work engagement	Work engagement Total	4.83	4.86	-0.38	563	0.58	
PsyCap	Efficacy	5.25	5.34	-1.54	563	0.98	
	Hope	4.90	5.06	-2.41	563	0.77	
	Resilience	4.89	4.98	-1.60	563	0.09	
	Optimism	4.65	4.67	-0.24	563	0.19	
	PsyCap Total	4.92	5.01	-1.78	563	0.57	
Followership	Initiative	4.97	4.93	0.62	563	0.78	
	Independent thinking	4.06	4.28	-2.07	563	0.24	
	Followership Total	4.67	4.71	-0.67	563	0.39	
Authentic Leadership	Transparency	2.73	2.87	-1.65	563	0.81	
	Moral / Ethical	3.04	3.04	-0.02	220	0.01	-0.002
	Balanced processing	2.78	2.76	0.27	222	0.01	0.03
	Self-awareness	2.58	2.55	0.28	220	0.02	0.03
	Authentic leadership Total	2.78	2.81	-0.40	222	0.04	-0.04

The results of the t-test for significant differences in home language (displayed in Table 4.20) indicate that there are differences in the authentic leadership dimensions and the total score at the 0.05 significance level. Upon inspection of the mean scores for the home language groups on the identified dimensions, it is not clear where the differences lie. However, the standard deviation provides more clarity to explain the differences. As the mean difference

for the home language groups does not differ greatly, it can be concluded that the significant difference between these groups originate from more consistency of scores in the Afrikaans group as compared to the English group. This conclusion is based on the lower standard deviations associated with the mean scores of the Afrikaans group. However, the practical significance of the differences is trivial.

4.5.4 Educational level

An ANOVA was also carried out based on the scores of the Educational level groups and the results are presented in Table 4.18. The demographic questionnaire specified five educational level categories as well as an option for other. The category for 'secondary school' only had two respondents and will therefore be excluded from the ANOVA analyses. Furthermore, the 'other' category is also excluded based on the difficulty of interpreting this category.

Table 4.21 *Results of ANOVA for educational level*

Constructs	Dimensions	*df*	*F*	*p*
Work engagement	Work engagement Total	3, 605	0.02	1.00
PsyCap	Efficacy	3, 605	3.06	0.03
	Hope	3, 605	0.89	0.45
	Resilience	3, 605	1.92	0.12
	Optimism	3, 605	0.39	0.76
	PsyCap Total	3, 605	1.93	0.12
Followership	Initiative	3, 605	2.12	0.10
	Independent thinking	3, 605	6.93	0.00
	Followership Total	3, 605	5.68	0.00

(table continues)

(Table 4.21 continues)

Constructs	Dimensions	*df*	*F*	*p*
Authentic Leadership	Transparency	3, 605	0.68	0.57
	Moral / Ethical	3, 605	0.18	0.91
	Balanced processing	3, 605	0.67	0.57
	Self-awareness	3, 605	0.53	0.66
	Authentic leadership Total	3, 605	0.33	0.80

As can be seen from the ANOVA results displayed in Table 4.21, there are significant differences at the $p < 0.05$ level between the educational level groups on efficacy, independent thinking, and the total score for followership total.

Scheffé's post hoc analysis was carried out to determine which of the occupational groups differed from each other. Cohen's *d* was also calculated. Only statistics for significant differences are reported.

Table 4.22 *Results of Scheffé's post hoc analysis for educational level*

Construct	Dimension	Educational level				*p*	Cohen's *d*
		Matric or equivalent	Post-school certificate or diploma	University degree	Post-graduate degree		
Followership	Independent thinking	3.40 (1.13)		4.25 (1.12)		0.005	0.55
		3.40 (1.13)			4.24 (1.10)	0.006	0.56
			3.94 (1.13)	4.25 (1.12)		0.049	0.26
	Followership total	4.25 (0.91)		4.75 (0.71)		0.014	0.50
		4.25 (0.91)			4.76 (0.69)	0.011	0.50

Note: Standard deviations are indicated in parenthesis below the means.

The results displayed in Table 4.22 indicate the means and standard deviations of educational level groups on the followership dimension, independent thinking, as well as the total score for followership revealing mostly moderate practical significance. Even though the PsyCap dimension efficacy demonstrated an overall significant difference at the $p < 0.05$ level (as displayed in Table 4.21), the Scheffé post hoc analysis did not reveal any significant differences between any paired groups for this dimension. It is again notable how the means of the different education groups differ for the variables listed. The respondents with a postgraduate degree scored significantly higher than individuals with a matric, post-school certificate or diploma as well as those who hold University degrees on independent thinking and the total score for followership. This may suggest that – as level of education increases – independent thinking and exemplary followership behaviour tend to increase as well.

4.5.5 Respondent English proficiency

Asking respondents to reflect on their English proficiency may not be a common occurrence in biographical questionnaires. However, South Africa is a country with 11 official languages, and even though English is understood in most urban areas and is the official language at the research site, only 9.6% of the South African population has English as their first language ("Tongues under threat", 2011). In recent doctoral dissertations (Harris, 2012; Munyaka, 2012) in which constructs, such as PsyCap, were investigated language proficiency was listed as a possible survey limitation. Hence, the present study included language proficiency as a self-report question in order to see if it explains any significant differences in the variables. The results of the ANOVA analysis for English proficiency are displayed in Table 4.23.

As can be seen from the ANOVA results displayed in Table 4.23, the significant differences are mostly related to PsyCap and dimensions of PsyCap. Harris (2012) highlighted that the PsyCap questionnaire in its current format might be misinterpreted by South African respondents. For instance, a phrase such as "in a jam" is not a typically South African phrase. Scheffé's post hoc analysis was carried out to determine which of the English proficiency groups differed from each other.

Table 4.23 *Results of ANOVA for English proficiency*

Constructs	Dimensions	*df*	*F*	*p*
Work engagement	Work engagement Total	2, 644	0.73	0.48
PsyCap	Efficacy	2, 644	9.00	0.00
	Hope	2, 644	8.71	0.00
	Resilience	2, 644	8.11	0.00
	Optimism	2, 644	0.94	0.39
	PsyCap Total	2, 644	9.04	0.00

(table continues)

(Table 4.23 continues)

Constructs	Dimensions	*df*	*F*	*p*
Followership	Initiative	2, 644	1.52	0.22
	Independent thinking	2, 644	0.29	0.75
	Followership Total	2, 644	1.20	0.30
Authentic Leadership	Transparency	2, 644	1.03	0.36
	Moral / Ethical	2, 644	0.17	0.84
	Balanced processing	2, 644	0.77	0.46
	Self-awareness	2, 644	0.23	0.80
	Authentic leadership Total	2, 644	0.00	1.00

Only statistics for significant differences are reported in Table 4.24.

Table 4.24 *Results of Scheffé's post hoc analysis for English proficiency*

		English proficiency				
Construct	Dimension	English is my first language, I am fully proficient in this language	I have a good understanding of English and seldom misunderstand words and meaning	I have some understanding of English, but I often misunderstand words, meaning and fine nuances.	*p*	Cohen's *d*
PsyCap	Efficacy	5.39 (0.61)		4.73 (0.64)	0.000	0.81
			5.25 (0.61)	4.73 (0.64)	0.006	0.79
	Hope	5.13 (0.65)	4.93 (0.68)		0.004	0.26
		5.13 (0.65)		4.54 (0.53)	0.005	0.79
	Resilience	5.00 (0.69)		4.37 (0.49)	0.001	0.77
			4.88 (0.57)	4.37 (0.49)	0.005	0.75
	PsyCap Total	5.05 (0.52)	4.93 (0.50)		0.032	0.27
		5.05 (0.52)		4.52 (0.39)	0.001	0.81
			4.93 (0.50)	4.52 (0.39)	0.009	0.79

Note: Standard deviations are indicated in parenthesis below the means.

It can be observed that respondents with English as their first language, tended to score higher on the PsyCap items. From an examination of the means of the different English proficiency groups, it seems that the level of PsyCap of the respondents decrease as their English proficiency decreases. Specifically, when groups with more advanced English proficiency are paired with the group "I have some understanding of English, but I often misunderstand words, meaning and fine nuances", the practical significance of the differences can be seen as large. This might possibly be influenced by the difficulty in interpreting the questionnaire items, rather than being a reflection of actual levels of PsyCap.

4.5.6 Manager' gender

Respondents were asked to indicate the gender of their manager. The manager's gender category is composed of male (n = 275) and female (n = 372). The results of the t-test based on the scores on the variables and their respective dimensions are presented in Table 4.25.

Table 4.25 *Results of the t-tests for manager's gender differences*

Constructs	Dimensions	*M*		*t*	*df*	*p*	Cohen's *d*
		Male	Female				
Work engagement	Work engagement Total	4.93	4.83	1.63	645	0.12	
PsyCap	Efficacy	5.40	5.18	4.44	645	0.30	
	Hope	5.06	4.91	2.75	645	0.22	
	Resilience	4.96	4.86	2.09	645	0.20	
	Optimism	4.77	4.58	3.58	645	0.39	
	PsyCap Total	5.05	4.88	4.06	645	0.97	
Followership	Initiative	5.06	4.88	2.98	645	0.78	
	Independent thinking	4.31	3.92	4.28	645	0.93	
	Followership Total	4.81	4.56	4.30	645	0.76	
Authentic Leadership	Transparency	2.90	2.70	2.92	623	0.01	0.23
	Moral / Ethical	3.14	2.95	2.78	645	0.70	
	Balanced processing	2.94	2.66	3.93	631	0.00	0.31
	Self-awareness	2.71	2.51	2.54	621	0.04	0.20
	Authentic leadership Total	2.92	2.71	3.21	645	0.10	

The results of the t-test for significant differences in managers' gender (displayed in Table 4.25) indicate that there are significant differences in some of the authentic leadership dimensions at the 0.05 significance level. These differences have a small practical

significance. It should be noted that respondents were each asked to rate their respective manager's level of authentic leadership in the present study. Reflecting on the mean scores for these dimensions of authentic leadership, it can be seen that male managers/leaders were perceived to have higher levels of transparency (M = 2.90), balanced processing (M = 2.94) and self-awareness (M = 2.71) than their female counterparts.

To summarise the above results, it was found that there were statistically significant differences between some of the demographic groups on some of the variables (and their respective dimensions) included in the present study. The differences were mostly of a small practical significance. After discussing the relationships between demographic characteristics and the variables in the next section, a summary table of the differences and relationships are presented in Table 4.28.

4.6 RELATIONSHIPS BETWEEN DEMOGRAPHIC CHARACTERISTICS AND THE VARIABLES

This section investigates how the variables work engagement, PsyCap, followership and authentic leadership and their respective dimensions relate to demographic characteristics of the sample. The demographic characteristics that were measured on a continuum (i.e. age measured in years, working experience, organisational tenure and reporting period to manager), rather than categorical (e.g. gender, educational level, etc.), were included in the analysis. Product moment correlations and multiple regression analysis were used to determine the relationship and estimated variance that is explained in the variables based on the sample demographic characteristics. The variables and their respective dimensions were added as dependent variables and the demographic variables as independent variables.

The results of the analysis between respondents' age as well as their work experience and the variables are discussed in 4.6.1 to 4.6.2. The relationship between the variables and the demographic characteristics 'tenure in the organisation' and 'reporting period to current manager' was also examined. No significant relationships were found.

4.6.1 Respondent age

Rather than to provide pre-identified age categories, the survey item requested respondents to provide their age in years. Respondents' ages ranged from 25 to 63, with a mean age of *M* = 45.59 (*SD* = 8.08). The results of the relationships between the psychometric variables of the present study and respondent age are displayed in Table 4.26.

Table 4.26 *Results of regression analysis with age as independent variable (N = 647)*

Construct	Dimension	*r*	R^2	*F*	*df*	*p*
Work engagement	Work engagement Total	0.14	0.02	12.19	1/645	0.00
PsyCap	Efficacy	-0.01	0.00	0.11	1/645	0.74
	Hope	0.03	0.00	0.55	1/645	0.46
	Resilience	0.01	0.00	0.03	1/645	0.87
	Optimism	0.07	0.01	0.01	1/645	0.09
	PsyCap Total	0.03	0.00	0.57	1/645	0.45
Followership	Initiative	0.05	0.00	1.68	1/645	0.20
	Independent thinking	0.04	0.00	1.15	1/645	0.28
	Followership Total	0.06	0.00	2.12	1/645	0.15
Authentic Leadership	Transparency	0.02	0.00	0.32	1/645	0.57
	Moral / Ethical	0.04	0.00	0.80	1/645	0.37
	Balanced processing	0.01	0.00	0.13	1/645	0.72
	Self-awareness	0.04	0.00	1.00	1/645	0.32
	Authentic leadership Total	0.01	0.00	0.07	1/645	0.79

Based on the results displayed in Table 4.26, it is evident that only work engagement is significantly related to respondent age at the $p < 0.05$ level. The correlation coefficient between age and work engagement was calculated as $r = 0.14$. This represents only a slight, almost negligible relationship with trivial practical significance, albeit statistically significant. Age therefore explained 2% of the variance in work engagement.

4.6.2 Respondent working experience

The work experience of the sample respondents ranged from two years to 45 years. The average length of work experience was 23 years ($SD = 8.75$). The result of the relationship between the variables of the present study and respondent age is displayed in Table 4.27.

Table 4.27 *Results of regression analysis with work experience as dependent variable (N = 645)*

Construct	Dimension	*r*	R^2	*F*	*df*	*p*
Work engagement	Work engagement Total	0.14	0.02	12.32	1/638	0.00
PsyCap	Efficacy	0.02	0.00	0.20	1/638	0.66
	Hope	0.05	0.00	1.53	1/638	0.22
	Resilience	0.01	0.00	0.10	1/638	0.75
	Optimism	0.05	0.00	1.34	1/638	0.25
	PsyCap Total	0.03	0.00	0.56	1/638	0.46
Followership	Initiative	0.09	0.01	5.58	1/638	0.02
	Independent thinking	0.09	0.01	5.18	1/638	0.02
	Followership Total	0.11	0.01	7.98	1/638	0.01

(table continues)

(Table 4.27 continues)

Construct	Dimension	*r*	R^2	*F*	*df*	*p*
Authentic Leadership	Transparency	0.02	0.00	0.33	1/638	0.56
	Moral / Ethical	0.03	0.00	0.68	1/638	0.41
	Balanced processing	0.01	0.00	0.01	1/638	0.90
	Self-awareness	0.04	0.00	1.18	1/638	0.28
	Authentic leadership Total	0.01	0.00	0.11	1/638	0.74

Table 4.27 confirms that there is not only a significant relationship between age and work engagement (as displayed in Table 4.26), but also between years of work experience and work engagement. The correlation coefficient between work experience and work engagement was calculated as $r = 0.14$, which again represents only a slight, almost negligible relationship with trivial practical significance. It is also expected that years of work experience and age will correlate, hence the similarity in the findings. Furthermore, work experience explained only 1% of the variance in followership and its respective dimensions at the $p < 0.05$ significance level.

Based on the significant differences that were found between some demographic characteristics and each of the variables (as summarised in Table 4.28), propositions 8, 9, 10 and 11 are partially accepted.

Table 4.28 *Summary of relationships and practical significance of the differences between demographic characteristics and the variables in the present study*

Variable	Significant differences/relationships	Practical significance
Work engagement	Work engagement is higher among more senior/higher occupational categories.	Small
	Work engagement and age are positively related.	Trivial
	Work engagement and years of work experience are positively related.	Trivial
PsyCap	Efficacy, hope, optimism and total PsyCap differ across occupational levels. Respondents in more senior occupational categories demonstrated higher levels of PsyCap.	Small
	Respondents with higher levels of English proficiency tended to have higher levels of PsyCap.	Moderate to large
Followership	Initiative, independent thinking and followership total scores are higher among more senior occupational categories.	Small to moderate
	Independent thinking and followership total scores are higher among more advanced educational levels.	Small to moderate
	Initiative, independent thinking and followership total scores are positively related to years of work experience.	Trivial
Authentic leadership	Male respondents perceived a higher level of balanced processing in their leaders.	Small
	Afrikaans followers demonstrated a more consistent perception of authentic leadership of their managers.	Trivial
	Respondents' perceptions of their managers' transparency, balanced processing and self-awareness were higher for male managers.	Small

4.7 RELATIONSHIPS BETWEEN THE PSYCHOMETRIC VARIABLES

The Pearson product-moment correlation coefficient is a standardised measure of the strength of the relationship between variables and is used in the present study to determine the strength of the relationship between the constructs work engagement, PsyCap, followership and authentic leadership and their respective dimensions.

It should be kept in mind that large sample sizes may inflate the number of correlations that show statistical significance. This makes it more difficult to interpret the relationships between the variables in a meaningful manner. However, by utilising accepted interpretation guidelines such as the one provided by Guilford (1956, cited in Harris, 2012), the usefulness of correlations can be better described. Guilford's guidelines are presented in Table 4.29.

Table 4.29 *Guilford's guidelines to explain and interpret correlation coefficients*

Correlation coefficient category	*Explanation*
< 0.20 = < 4%	Slight, almost negligible relationship.
0.20 – 0.40 = 4 – 16%	Low correlation. Definite, but small relationship.
0.40 – 0.70 = 16 – 49%	Moderate correlation. Substantial relationship.
0.70 – 0.90 = 49 – 81%	High correlation. Clear, discernible relationship.
> 0.90 = 81%+	Very high correlation. Dependable relationship.

To get a perspective on the level of a correlation, it was also decided to use the coefficient of determination (r^2) for this purpose where $100r^2$ indicates the percentage of common variance between the two variables.

As the sample size in the present study (N = 647) is quite large, correlations ranging between 0.00 – 0.20 will be excluded from discussion. Statistically non-significant relationships will be indicated in italics in the respective correlation tables.

4.7.1 Authentic leadership and PsyCap

Proposition 12	There are significant relationships between the respective composite and dimensional scores of authentic leadership and PsyCap.

The relationships between the authentic leadership and PsyCap scales and their respective dimensions were analysed in order to determine significance or non-significance of the relationships. Significant relationships were calculated at the $p < 0.01$ level. The results of the analysis are presented in Table 4.30.

Table 4.30 *Results of correlational analysis between the dimensions of authentic leadership and PsyCap (N = 647)*

Variable	1	2	3	4	5	6	7	8	9
Authentic leadership									
1. Transparency	—								
2. Moral / Ethical	0.78	—							
3. Balanced processing	0.75	0.78	—						
4. Self awareness	0.80	0.76	0.82	—					
5. Authentic leadership Total	0.92	0.90	0.90	0.93	—				
PsyCap									
6. Efficacy	0.35	0.31	0.29	0.30	0.34	—			
7. Hope	0.24	0.20	0.19	0.24	0.24	0.59	—		
8. Resilience	0.13	0.16	0.16	0.13	0.16	0.44	0.49	—	
9. Optimism	0.30	0.30	0.27	0.29	0.32	0.49	0.56	0.46	—
10. PsyCap Total	0.32	0.31	0.29	0.30	0.34	0.79	0.84	0.74	0.80

The results of the correlation analysis indicated that all relationships between the variables and their respective dimensions were significant at the 0.01 level. Based on the results in

Table 4.30, there appears to be a low correlations between the total scores of authentic leadership and PsyCap, with a percentage of 11.5% common variance. There are also low correlations between the dimensions of PsyCap and the dimensions of authentic leadership. The relationship between optimism and all dimensions of authentic leadership ranges from $r = 0.13$ to $r = 0.16$ and falls within the slight relationship category.

To conclude the above results, it was found that there are statistically significant, albeit small, relationships between authentic leadership scores and PsyCap scores and their respective dimensions. Therefore, Proposition 12 is accepted.

4.7.2 Authentic leadership and followership

Proposition 13	There are significant relationships between the respective composite and dimensional scores of authentic leadership and followership.

The correlations between authentic leadership and followership scales and dimensions were also calculated. The results can be seen in Table 4.31.

Table 4.31 *Results of correlational analysis between the dimensions of authentic leadership and followership (N = 647)*

Variable	1	2	3	4	5	6	7
Authentic leadership							
1. Transparency	—						
2. Moral / Ethical	0.78	—					
3. Balanced processing	0.74	0.78	—				
4. Self awareness	0.80	0.76	0.82	—			
5. Authentic leadership Total	0.92	0.90	0.90	0.93	—		
Followership							
6. Initiative	*0.05*	*0.08*	*0.06*	*0.06*	*0.07*	—	
7. Independent thinking	*-0.01*	*0.05*	*-0.01*	*0.01*	*0.01*	0.35	—
8. Followership Total	*0.03*	*0.08*	*0.04*	*0.05*	*0.05*	0.87	0.76

Note: Italicised correlations are not statistically significant at the 0.01 level. Underlined correlations are statistically significant at the 0.05 level.

The results presented in Table 4.31 indicate that there are no significant relationships between the dimensions and total scores of authentic leadership and followership at the 0.01 level. There were only significant relationships at the 0.05 level between moral/ethical and initiative (r = 0.08), and moral/ethical and followership total (r = 0.08). The correlations between the four dimensions of the authentic leadership scale are quite high. The two dimensions of the followership scale are on the other hand correlated only 0.35 with each other.

The slight correlation coefficient between the dimensions and total scores of the authentic leadership and followership scales indicates an almost negligible relationship with the highest percentage of common variance at 0.64%. Therefore, it can be concluded that there are no practical or meaningful statistically significant relationships between the authentic leadership and followership scales and their respective dimensions. Hence, proposition 13 is rejected.

4.7.3 Authentic leadership and work engagement

Proposition 14	There are significant relationships between the respective composite and dimensional scores of authentic leadership and work engagement.

The relationship between authentic leadership and work engagement, as well as the respective relationships between the authentic leadership dimensions and work engagement was analysed. The results of the correlation analyses are presented in Table 4.32.

Table 4.32 *Results of correlational analysis between the dimensions of authentic leadership and work engagement (N = 647)*

Variable	1	2	3	4	5
Authentic leadership					
1. Transparency	—				
2. Moral / Ethical	0.78	—			
3. Balanced processing	0.75	0.78	—		
4. Self awareness	0.80	0.76	0.82	—	
5. Authentic leadership Total	0.92	0.90	0.90	0.93	—
Work engagement					
6. Work engagement total	0.29	0.27	0.28	0.31	0.31

The results in Table 4.32 indicate that there are statistically significant relationships between the total score and all dimensions of authentic leadership and work engagement. There is a definite, albeit a small relationship between the constructs authentic leadership and work engagement. Furthermore, the dimensions of authentic leadership correlate significantly with work engagement, ranging from $r = 0.27$ (moral/ethical) to $r = 0.31$ (self awareness). Based on the consistency of significant relationships found between authentic leadership and work engagement, Proposition 14 is accepted. It should however be noted that the common variances between all the dimensions and total score of the authentic leadership and work engagement scale are very low (less than 10%).

4.7.4 PsyCap and followership

Proposition 15	There are significant relationships between the respective composite and dimensional scores of PsyCap and followership.

The results of the correlation analyses between total PsyCap and followership scores, as well as the correlation coefficients of all the PsyCap and followership dimensions are displayed in Table 4.33.

Table 4.33 *Results of Correlational analysis between the dimensions of PsyCap and followership (N = 647)*

Variable	1	2	3	4	5	6	7
PsyCap							
1. Efficacy	—						
2. Hope	0.59	—					
3. Resilience	0.44	0.49	—				
4. Optimism	0.49	0.56	0.46	—			
5. PsyCap Total	0.79	0.84	0.74	0.80	—		
Followership							
6. Initiative	0.45	0.43	0.40	0.39	0.53	—	
7. Independent thinking	0.23	0.17	0.23	0.16	0.25	0.35	—
8. Followership Total	0.43	0.39	0.39	0.36	0.49	0.87	0.76

The results of the correlation analysis between PsyCap and followership indicated that all relationships between the total scores and the dimensions scores of these two variables were statistically significant. Table 4.33 indicates that there is a moderate correlation between the constructs PsyCap and followership, with a common variance of 24%. The relationship between initiative and PsyCap total was also found to be moderate, however there was only a small relationship between independent thinking and PsyCap. Apart from efficacy which

shows a moderate relationship and common variance of 6.3% with followership, the other three PsyCap dimensions only present small relationships with followership.

In summary, there are statistically significant, small to moderate relationships at the 0.01 significance level between PsyCap and followership as well as their respective dimensions. Proposition 15 is accepted.

4.7.5 PsyCap and work engagement

Proposition 16	There are significant relationships between the respective composite and dimensional scores of PsyCap and work engagement.

Through the CFA analysis, work engagement was concluded to be a uni-dimensional construct. Therefore, the relationships between PsyCap and its four dimensions and the work engagement construct (with no dimensions) will be presented in Table 4.34.

Table 4.34 *Results of correlational analysis between the dimensions of PsyCap and work engagement (N = 647)*

Variable	1	2	3	4	5
PsyCap					
1. Efficacy	—				
2. Hope	0.59	—			
3. Resilience	0.44	0.49	—		
4. Optimism	0.49	0.56	0.46	—	
5. PsyCap Total	0.79	0.84	0.74	0.80	—
Work engagement					
6. Work engagement total	0.46	0.51	0.34	0.51	0.58

The relationships between PsyCap and its dimensions and work engagement are displayed in Table 4.34. All relationships are statistically significant at the 0.01 level with common variances between 11.6% and 33.6%. The correlation coefficient between PsyCap and work engagement demonstrates a substantial relationship between these two constructs. Furthermore, the PsyCap dimensions also demonstrate small to moderate correlations with work engagement. Therefore, Proposition 16 can be confidently accepted.

4.7.6 Followership and work engagement

Proposition 17	There are significant relationships between the respective composite and dimensional scores of followership and work engagement.

The last correlation analysis that was carried out was to determine the relationship between followership and its dimensions, and work engagement. The result of the analysis is displayed in Table 4.35.

Table 4.35 *Results of correlational analysis between the dimensions of followership and work engagement (N = 647)*

Variable	1	2	3
Followership			
1. Initiative	—		
2. Independent thinking	0.35	—	
3. Followership Total	0.87	0.76	—
Work engagement			
4. Work engagement total	0.44	0.13	0.37

From Table 4.35, it is evident that there is a definite relationship between the followership and work engagement constructs, with 13.7% common variance. The relationship between initiative and work engagement is also substantial. However, the relationship between

independent thinking and work engagement is slight (r = 0.13). All of these correlations are signficicant at the 0.01 level. As a result, Proposition 17 is accepted.

4.8 PREDICTING THE LEVEL OF DEPENDENT VARIABLES

As part of the data exploration, multiple regression analysis was utilised to determine whether any of the predictor variables or their dimensions explained the variance in the dependent variables. The results of the multiple regression analysis will assist in predicting the sequential nature of the manifestation of the respective constructs which will be utilised for testing the statistical model through structural equations modelling. Hence, the regression analysis will be discussed based on the sequential relationships in the theoretical framework.

4.8.1 Predictors of Work Engagement

Proposition 18	Authentic leadership and its dimensions explain a significant proportion of variance in work engagement.
Proposition 19	PsyCap and its dimensions explain a significant proportion of variance in work engagement.
Proposition 20	Followership and its dimensions explain a significant proportion of variance in work engagement.

The propositions – respectively authentic leadership (Proposition 18), PsyCap (Proposition 19), and followership (Proposition 20) – of the present study indicate that authentic leadership, PsyCap and followership dimensions will respectively explain a significant proportion of the variance in work engagement.

The results of the multiple regression analysis, with work engagement as the dependent variable can be seen in Table 4.36.

Table 4.36 *Results of multiple regression analysis with work engagement as dependent variable*

Independent variables	β	*SE*β	*t*	*p*	*R*	R^2
(Constant)	1.39	0.24	5.79	0.00		
Authentic leadership	0.14	0.03	4.57	0.00		
PsyCap	0.69	0.06	11.83	0.00	0.60	0.36
Followership	0.02	0.00	3.81	0.00		

$F(3, 643) = 122.92$; $p < 0.01$; Std Error of estimate: 0.614

As can be seen in Table 4.36, the multiple linear regression analysis with work engagement as the dependent variable and authentic leadership, PsyCap and followership as independent variables, produced an $R^2 = 0.36$, $F(3, 634) = 122.92$, $p < 0.01$. This result can be interpreted as indicating that authentic leadership, PsyCap and followership together explain 36% of the variance observed in work engagement. The value of the beta coefficients suggests that PsyCap (β = 0.69) makes the strongest unique contribution in explaining the variance in work engagement, when the variance explained by the other variables are controlled for. However, the beta coefficients of authentic leadership and followership are also statistically significant, implying that these variables also explain a meaningful variance in work engagement.

In the next step of the analysis, the dimensions of authentic leadership, PsyCap and followership were regressed on work engagement. The results are displayed in Table 4.37.

.

Table 4.37 *Results of multiple regression analysis with the dimensions of authentic leadership, PsyCap and followership as independent variables and work engagement as dependent variable*

Independent variables	β	*SE*β	*t*	*p*	*R*	R^2
(Constant)	1.60	0.24	6.64	0.00		
Efficacy	0.11	0.05	2.04	0.04		
Hope	0.23	0.05	4.74	0.00		
Resilience	-0.01	0.05	-0.20	0.84		
Optimism	0.27	0.05	5.76	0.00		
Initiative	0.23	0.04	5.96	0.00	0.63	0.40
Independent thinking	-0.02	0.02	-1.05	0.30		
Transparency	0.02	0.05	0.30	0.76		
Moral / Ethical	-0.01	0.05	-0.22	0.83		
Balanced processing	0.03	0.05	0.62	0.54		
Self-awareness	0.09	0.05	1.93	0.05		

$F(10, 636) = 42.842$; $p < 0.01$; Std Error of estimate: 0.599

From the results of regressing the dimensions of the variables on work engagement, it is evident from the beta coefficients that optimism, hope, and initiative make the greatest contribution to explaining the variance in work engagement. The contributions of these dimensions are statistically significant at the 0.01 level (and shaded in grey in Table 4.37). Efficacy and self-awareness had a significant beta coefficient at the 0.05 significance level. Therefore, only one dimension of authentic leadership makes a contribution. Of the four PsyCap dimensions, three make a significant contribution.

From the results displayed in Table 4.36 and Table 4.37 it can be concluded that the total scores for authentic leadership, PsyCap and followership explain a significant proportion of the variance in work engagement. Furthermore, respective dimensions of each of these

constructs, to a greater or a lesser extent, does explain a proportion of the variance in work engagement. Therefore, propositions 18, 19 and 20 are accepted.

4.8.2 Predictors of PsyCap

Proposition 21	Authentic leadership dimensions explain a significant proportion of variance in PsyCap and its dimensions.

The next proposition (Proposition 21) that was tested related to whether the dimensions of authentic leadership explained a significant proportion of the variance in PsyCap and its dimensions. The results of these analyses are presented in Table 4.38 and Table 4.39.

Table 4.38 *Results of multiple regression analysis with PsyCap total as dependent variable*

Independent variables	β	*SE*β	*t*	*p*	*R*	R^2
(Constant)	4.37	0.07	61.41	0.00		
Transparency	0.09	0.04	2.19	0.03		
Moral / Ethical	0.06	0.04	1.62	0.11	0.34	0.11
Balanced processing	0.02	0.04	0.40	0.69		
Self-awareness	0.04	0.04	1.04	0.30		

$F(4, 642) = 20.55$; $p < 0.01$; Std Error of estimate: 0.482

Table 4.38 indicates that the dimensions of authentic leadership explain a combined 11% of the variance in the total PsyCap score ($R^2 = 0.11$, $F(4, 642) = 20.55$, $p < 0.01$). When consulting the beta coefficients, it can be seen that only the transparency dimension of authentic leadership (β = 0.09) explains a unique statistically significant proportion of the variance in PsyCap.

In order to further the analyses, multiple regression was computed with the dimensions of authentic leadership as predictors of respectively, the dimensions of PsyCap.

Table 4.39 *Results of multiple regression analyses with PsyCap dimensions as dependent variables*

Independent variables	β	*SE*β	*t*	*p*	*R*	R^2
Dependent variable: Efficacy						
(Constant)	4.52	0.09	52.65	0.00		
Transparency	0.17	0.05	3.57	0.00	0.35	0.13
Moral / Ethical	0.07	0.05	1.40	0.16		
Balanced processing	0.01	0.05	0.30	0.76		
Self-awareness	0.01	0.05	0.23	0.82		
F(4, 642) = 22.97; *p* < 0.01; Std Error of estimate: 0.582						
Dependent variable: Hope						
(Constant)	4.47	0.10	46.09	0.00		
Transparency	0.10	0.05	1.78	0.07		
Moral / Ethical	0.01	0.05	0.23	0.82	0.26	0.07
Balanced processing	-0.04	0.05	-0.83	0.41		
Self-awareness	0.12	0.05	2.37	0.02		
F(4, 642) = 11.25; *p* < 0.01; Std Error of estimate: 0.657						
Dependent variable: Resilience						
(Constant)	4.55	0.09	51.52	0.00		
Transparency	-0.01	0.05	-0.25	0.80		
Moral / Ethical	0.08	0.05	1.59	0.11	0.17	0.03
Balanced processing	0.07	0.05	1.53	0.13		
Self-awareness	-0.02	0.05	-0.44	0.66		
F(4, 642) = 4.951; *p* < 0.01; Std Error of estimate: 0.599						

(table continues)

(Table 4.39 continues)

Independent variables	β	*SE*β	*t*	*p*	*R*	R^2
Dependent variable: Optimism						
(Constant)	3.93	0.09	41.99	0.00		
Transparency	0.09	0.05	1.77	0.08	0.32	0.10
Moral / Ethical	0.10	0.05	1.90	0.06		
Balanced processing	0.02	0.05	0.36	0.72		
Self-awareness	0.04	0.05	0.90	0.37		
$F(4, 642) = 18.02$; $p < 0.01$; Std Error of estimate: 0.635						

Table 4.39 displays the results of the variance explained by the authentic leadership dimensions on each of the respective PsyCap dimensions. The authentic leadership dimensions explain, respectively, 13% of the variance in efficacy, 7% of the variance in hope, 3% of the variance in resilience, and 10% of the variance in optimism. Transparency significantly predicted efficacy at the $p < 0.01$ level. At the $p < 0.05$ level, self-awareness predicted hope.

From the above results, it is evident that authentic leadership and its dimensions explain a statistically significant, albeit small, proportion of the variance in PsyCap total score, as well as in efficacy, hope, resilience and optimism. Thus, Proposition 21 is accepted.

4.8.3 Predictors of followership

Proposition 22	Authentic leadership dimensions explain a significant proportion of variance in followership and its dimensions.
Proposition 23	PsyCap dimensions explain a significant proportion of variance in followership and its dimensions.

It is proposed in the present study that, respectively, authentic leadership and PsyCap explain a significant proportion of the variance in followership. In order to test these propositions, multiple regression analysis was completed in two stages. Firstly, the authentic leadership and PsyCap dimensions were entered as independent variables and followership total score as dependent variable. Secondly, the authentic leadership and PsyCap dimensions were regressed on the followership dimensions, namely initiative and independent thinking.

Table 4.40 *Results of multiple regression analysis with followership total score as dependent variable*

Independent variables	β	*SE*β	*t*	*p*	*R*	R^2
(Constant)	8.82	2.24	3.93	0.00		
Transparency	-1.33	0.48	-2.78	0.01		
Moral / Ethical	0.71	0.46	1.52	0.13		
Balanced processing	-0.54	0.45	-1.20	0.23		
Self-awareness	0.06	0.44	0.14	0.89	0.53	0.28
Efficacy	3.05	0.48	6.41	0.00		
Hope	0.96	0.45	2.11	0.03		
Resilience	2.01	0.44	4.52	0.00		
Optimism	1.15	0.43	2.65	0.01		

$F(8, 638) = 30.42$; $p < 0.01$; Std Error of estimate: 5.646

Table 4.40 indicates that the dimensions of authentic leadership and PsyCap together explain a significant proportion of the variance in followership. This model therefore suggests that 28% of the variance in followership is explained by the dimensions of authentic leadership and PsyCap. In examining the beta coefficients, it can be seen that the PsyCap dimensions each is responsible for a significant proportion of the variance in followership.

Transparency of the leader (β = -1.33) had a significant, albeit negative, impact on the level of followership. This is in contrast to the positive correlation that was found between these

two variable ($r = 0.03$, $p < 0.05$). A possible explanation of this finding is provided by Cohen, Cohen, West, and Aiken (2003) who state that if two variables have a near zero correlation and the sign changes from positive to negative in the regression analysis, the independent variable may be seen as a suppressor variable. In other words, the suppressor variable (i.e. transparency) increases the regression coefficient as a result of its intercorrelation with other independent variables (Tzelgov & Henik, 1991). Therefore, the suppressor variable raises the R^2 as it accounts for the residuals in the model and not due to its association with the dependent variable.

The next table will display the results of the multiple regression analysis on the followership dimensions, initiative and independent thinking.

Table 4.41 *Results of the multiple regression analyses with followership dimensions as dependent variables*

Independent variables	β	*SE*β	*t*	*p*	*R*	R^2
Dependent variable: Initiative						
(Constant)	5.78	1.52	3.81	0.00		
Transparency	-0.77	0.32	-2.39	0.02		
Moral / Ethical	0.16	0.31	0.52	0.60		
Balanced processing	-0.06	0.30	-0.18	0.86		
Self-awareness	-0.08	0.30	-0.27	0.79	0.55	0.30
Efficacy	1.99	0.32	6.19	0.00		
Hope	0.99	0.31	3.23	0.00		
Resilience	1.20	0.30	3.99	0.00		
Optimism	0.99	0.29	3.38	0.00		
$F(8, 638) = 34.514$; $p < 0.01$; Std Error of estimate: 3.820						

(table continues)

(Table 4.41 continues)

Independent variables	β	*SE*β	*t*	*p*	*R*	R^2
Dependent variable: Independent thinking						
(Constant)	3.03	1.31	2.31	0.02		
Transparency	-0.56	0.28	-1.99	0.05		
Moral / Ethical	0.54	0.27	1.99	0.05		
Balanced processing	-0.48	0.26	-1.84	0.07		
Self-awareness	0.14	0.26	0.55	0.58	0.30	0.09
Efficacy	1.06	0.28	3.79	0.00		
Hope	-0.03	0.27	-0.12	0.90		
Resilience	0.81	0.26	3.11	0.00		
Optimism	0.16	0.25	0.62	0.54		
$F(8, 638) = 7.836$; $p < 0.01$; Std Error of estimate: 3.306						

From Table 4.41 it can be seen that the dimensions of authentic leadership and PsyCap significantly explain 30% of the variance in initiative. Efficacy, hope, resilience and optimism, with beta coefficients ranging between 0.99 and 1.99, all explain a significant proportion of the variance in initiative at the $p < 0.01$ level. Transparency (β = -0.77) does have a significant influence on initiative at the $p < 0.05$ level. It could however be that transparency is a suppressor variable in this case.

Furthermore, the authentic leadership and PsyCap dimensions only explain 9% of the variance in independent thinking. The statistically significant beta coefficient of efficacy (β = 1.06) is notable as it presents the strongest predictor of independent thinking. This would conceptually make sense as an individual who have confidence and belief in his/her own competence would be more likely to step forward and take initiative.

Based on the evidence provided in Table 4.40 and Table 4.41 it can be concluded that dimensions of authentic leadership and PsyCap explain a statistically significant proportion

of the variance in followership, as well as in the followership dimensions. However, the possible impact of suppressor variables with regard to the relationship between authentic leadership and followership seems to be present. Subsequently, judgement is withheld for Propositions 22 and Proposition 23 is accepted.

4.9 MEDIATION EFFECTS

Multiple regression analyses were conducted to assess each component of the proposed mediation models. Baron and Kenny's (1986) procedure and conditions for testing mediation in the social sciences were followed.

4.9.1 PsyCap as mediator between authentic leadership and work engagement

Proposition 24	PsyCap mediates the relationship between authentic leadership and work engagement.

Several regression analyses were conducted to assess each component of the mediation model proposed in Proposition 24. The independent variable for the analyses was authentic leadership (X), the dependent variable was work engagement (Y) and PsyCap was the proposed mediator (M). Following the four steps of mediation analysis as proposed by Baron and Kenny (1986) the following results were obtained.

In step 1 (the regression of X → Y, ignoring the mediator), it was found that authentic leadership was positively associated with work engagement ($\beta = 0.29$, $SE\beta = 0.03$, t (1, 645) = 3.14, $p < 0.001$). In step 2 (the regression of the X → M) it was also found that authentic leadership was positively related to PsyCap ($\beta = 0.20$, $SE\beta = 0.02$ t (1, 645) = 9.03, $p < 0.001$). In step 3 (the regression of M → Y), results indicated that the mediator, PsyCap, was positively associated with work engagement ($\beta = 0.87$, $SE\beta = 0.05$, t (1, 645) = 17.972, $p < 0.001$). Figure 4.1 provides a display of the results.

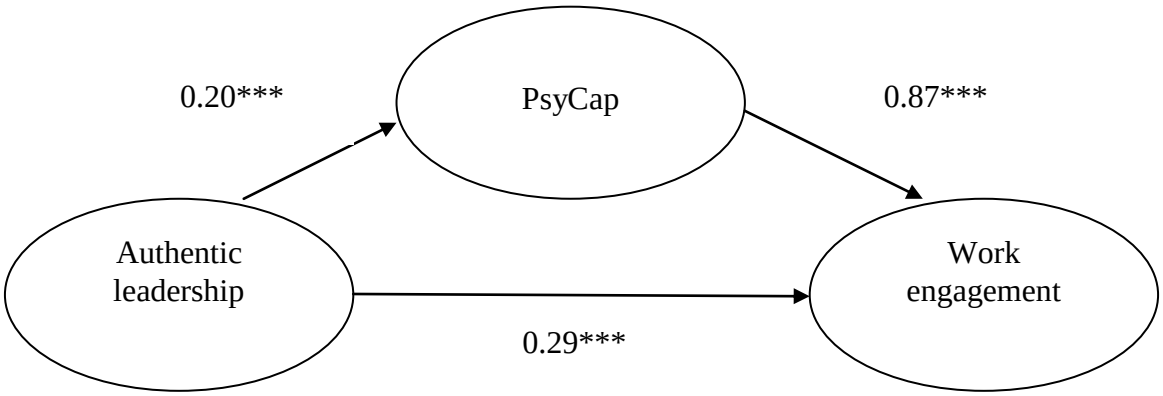


Figure 4.1 Mediation model of PsyCap between authentic leadership and work engagement

Note: *$p < .05$, ** $p < .01$, ***$p < .001$

Step 4 of Baron and Kenny's (1986) procedure for mediation analyses suggests that a multiple regression analysis with X and M predicting Y is carried out. The regression results indicate that both authentic leadership ($\beta = 0.12$, t (2, 644) = 4.040, $p < 0.001$) and PsyCap ($\beta = 0.80$, t (2, 647) = 15.00, $p = 0.0000$) remain as significant predictors of work engagement. Therefore, PsyCap partially mediates the relationship between authentic leadership and work engagement. The Sobel test indicates that the partial mediation is statistically significant ($z = 8.67$, $p = 0.00$). Proposition 24 is therefore accepted.

4.9.2 PsyCap as mediator between authentic leadership and followership

Proposition 25	PsyCap mediates the relationships between authentic leadership and followership.

Multiple regression methods was also utilised to test whether PsyCap (M) mediates the relationship between authentic leadership (X) and followership (Y) (Proposition 25). A graphical representation of Proposition 25 is presented in Figure 4.2.

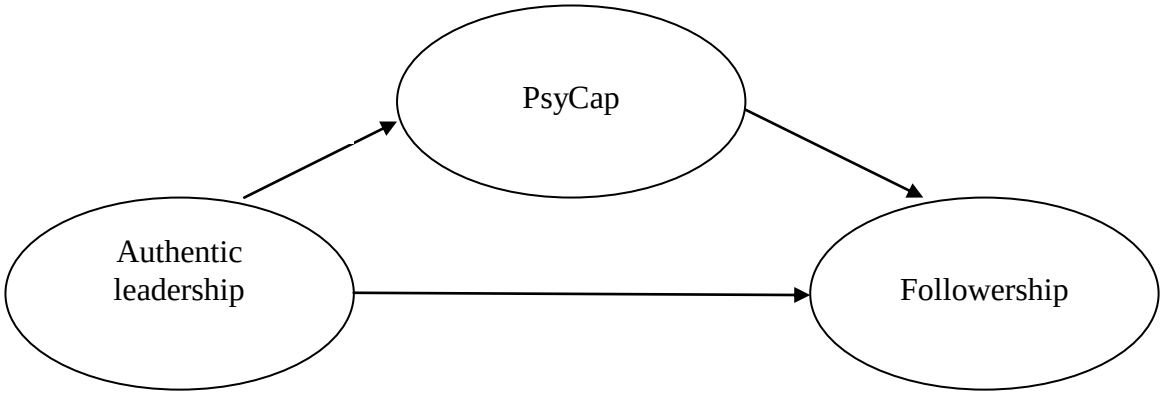


Figure 4.2 Proposed mediation model of PsyCap between authentic leadership and followership

The results of the regression analysis indicate that authentic leadership was not significantly associated with followership (β = 0.04, *t* (1, 645) = 1.294, *p* = 0.196). Baron and Kenny (1986) state that for mediation to be possible, there needs to be a significant relationship between the independent and the dependent variable. As such a relationship does was not found between authentic leadership and followership, mediation was not possible for Proposition 25.

4.9.3 Followership as mediator between authentic leadership and work engagement

Proposition 26	Followership mediates the relationship between authentic leadership and work engagement.

The last indirect effect that was tested concerns the mediating effect of followership (M) on the relationship between authentic leadership (X) and work engagement (Y) (related proposition 26). The same process as followed in 4.9.1 and 4.9.2 was also utilised for this analysis.

In step 1 (the regression of X → Y, ignoring the mediator), authentic leadership was found to be significantly positively associated with work engagement (β = 0.29, SEβ = 0.03, *t* (1, 645) = 3.14, *p* < 0.001). In step 2 (the regression of the X → M), the results indicated that authentic leadership is not significantly associated with followership (β = 0.04, *t* (1, 645) =

0.04, p = 0.196). Step 3 (the regression of M → Y) indicated that followership and work engagement was found to be significantly associated (β = 0.39, SEβ = 0.04, t (2, 647) = 10.19, p < 0.001). As all three paths in the mediation model were not found to be statistically significant, it was found that followership is not a mediator of the effect of authentic leadership on work engagement.

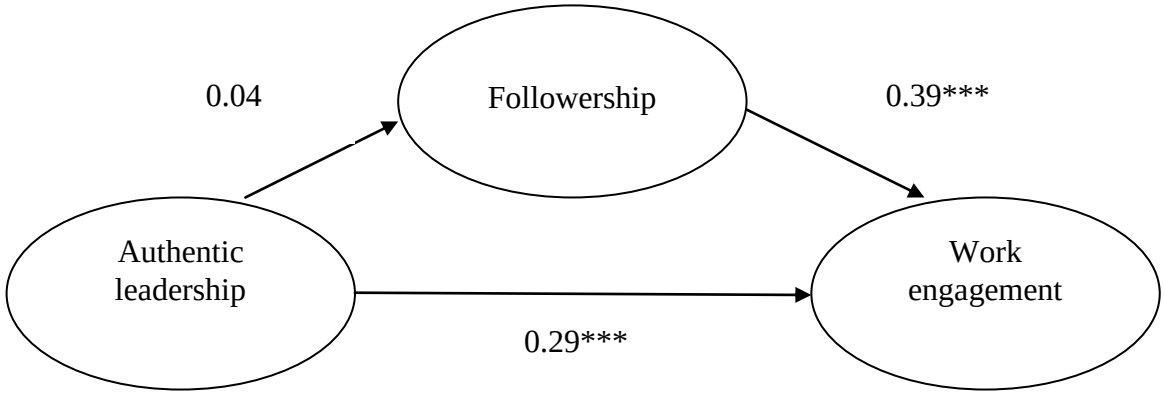


Figure 4.3 Mediation model of followership between authentic leadership and work engagement

Note: *p < .05, ** p < .01, ***p < .001

Based on the non-significance of the indirect relationship of authentic leadership on work engagement via followership, Proposition 26 is rejected.

4.10 TESTING THE STRUCTURAL MODEL

Proposition 27	A theoretical framework of the relationships between work engagement, PsyCap, followership and authentic leadership can be shown through structural equations modelling to be a well-fitting model.

The structural model was built based on the measurement model of each of the respective variables that was confirmed and reported on in Chapter 3. For ease of reference the theoretical framework of the relationships between the variables is reflected again in Figure 4.4.

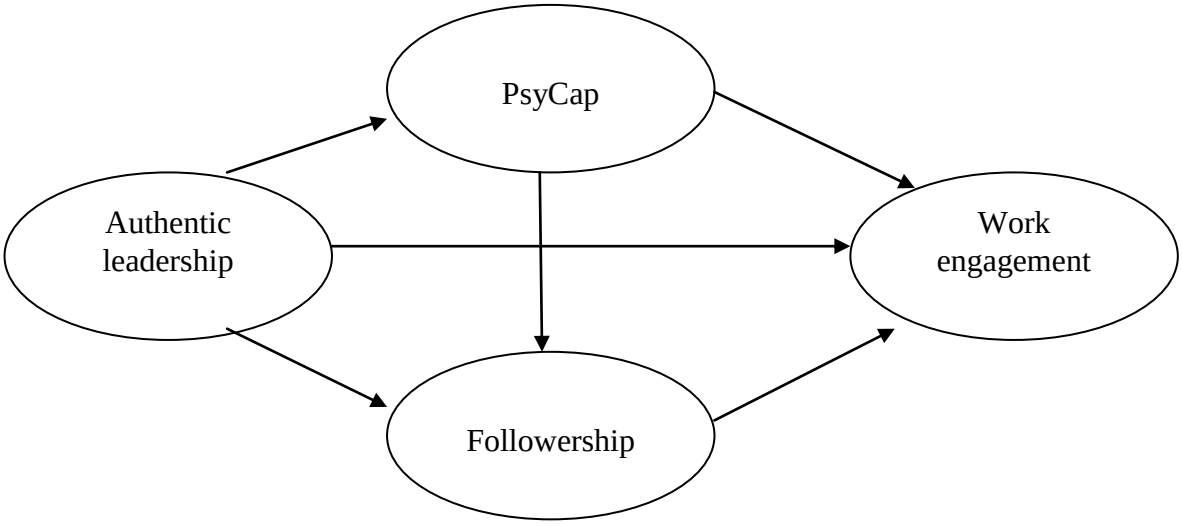


Figure 4.4 The theoretical model of the relationships between the variables

4.10.1 Testing of the structural model

In order to analyse the structural model, the averaged item scores of the respective dimensions of the variables were used as observed variables. The model therefore consisted of four latent variables, namely:

1. Authentic leadership, consisting of four observed variables: transparency moral/ethical, balanced processing, and self awareness.

2. PsyCap, consisting of four observed variables: efficacy, hope, resilience and optimism.

3. Followership, consisting of two observed variables: initiative and independent thinking.

4. Work engagement, consisting of five observed variables. These five observed variables are the averaged totals of the five parcels created to confirm the factor structure of the UWES for the current sample (refer to 3.6.4.1).

Paths were drawn from authentic leadership to respectively, PsyCap, followership and work engagement. Furthermore, a path was drawn from PsyCap to respectively, work engagement and followership. Lastly, a path was drawn from followership to work engagement. The parameter of one of the observed variables per latent variable was constrained to 1. The results of the parameter testing to determine the fit of the structural model can be seen in Table 4.42.

Table 4.42 *Fit statistics of the structural equations model*

	Indices		
	Goodness-of-fit	Absolute	Incremental
χ^2	227.565		
df	84		
p	0.00		
χ^2 / *df*	2.709		
AIC	299.565		
RMSEA		0.051	
RMR		0.069	
NFI			0.965
CFI			0.977

The results in Table 4.42 present overall good fit of the structural equations model for the sample. The RMSEA of 0.051 falls within the range of 0.05 – 0.08 representing good fit. Furthermore, the χ^2 / *df* is 2.709 which also falls within the good fit guideline of 2 – 5. The incremental fit indices are both greater than 0.9, which indicates good fit. The good fit of the model implies that the model has some value in the healthcare industry sample to explain the sequential relationships between the variables. The standardised path coefficients between the respective variables are displayed in Figure 4.5.

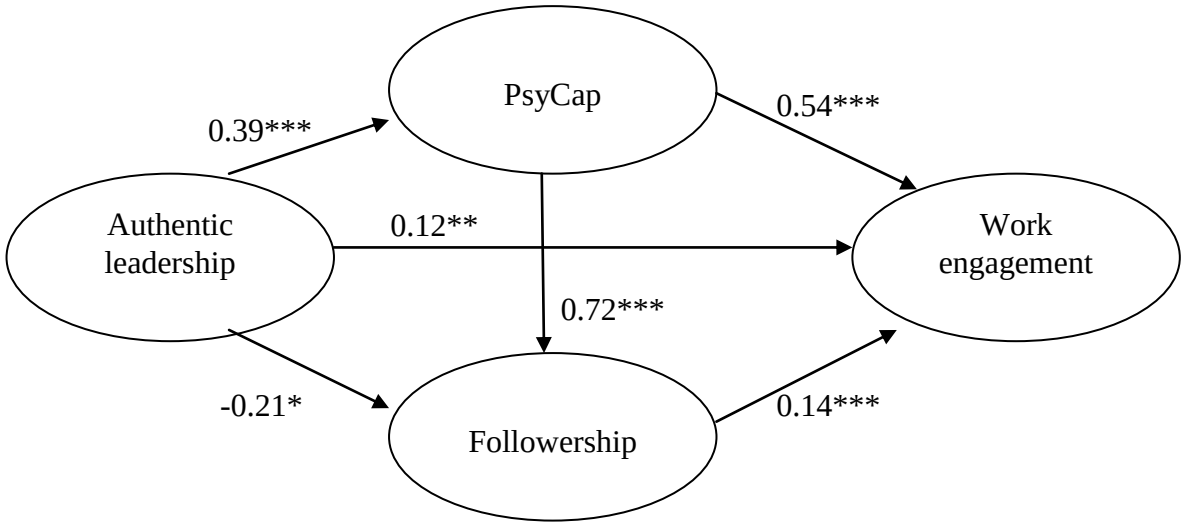


Figure 4.5 Diagram of the SEM model with path coefficients
Note: *p < .05, ** p < .01, ***p < .001

All paths between the latent variables were significant at the 0.001 level of significance, apart from the path between authentic leadership and work engagement that was only significant at the 0.01 level, and followership and work engagement that was only significant at the 0.05 level.

4.10.2 Testing of a competing structural model

Through the testing of the theoretical model, as well as the correlation and regression analyses carried out in the present study, it was observed that the relationship between authentic leadership and followership demonstrates a low level of statistical and practical significance. Hence, a competing empirical structural model was proposed.

The same four latent variables with respective observed variables as entered into the first structural model were utilised. The only change to the model specification was the exclusion of the path between authentic leadership and followership. The results of the parameter testing to determine the fit of the competing empirical structural model can be seen in Table 4.43.

Table 4.43 *Fit statistics of the competing structural equations model*

	Indices		
	Goodness-of-fit	Absolute	Incremental
χ^2	250.674		
df	85		
p	0.00		
χ^2 / *df*	2.949		
AIC	320.674		
RMSEA		0.055	
RMR		0.074	
NFI			0.961
CFI			0.974

From the results of the parameter testing, displayed in Table 4.43, it is observed that the competing structural equations model also presented good fit. The RMSEA of 0.055, as well as the χ^2 / *df* ration of 2.949 are indicators of good fit. The standardised path coefficients between the respective variables are displayed in Figure 4.6. All paths between the latent variables in the competing structural model are significant at the 0.001 level.

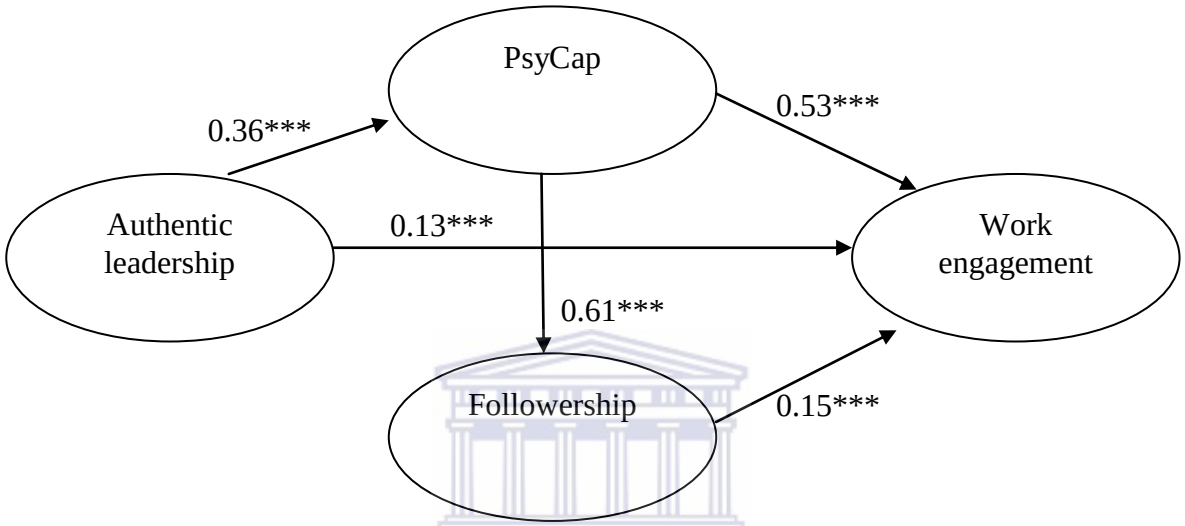


Figure 4.6 Diagram of the competing SEM model with path coefficients
Note: *$p < .05$, ** $p < .01$, ***$p < .001$

According to Hair et al. (2010) good fit statistics of a model does not mean that the model is the only way to explain the observed sample covariance matrix. Hair et al. (2010) propose that, even when good model fit has been obtained, equivalent or competing models should be tested and then compared to the fit statistics obtained for the originally theorised model. To this extent, the fit statistics of the structural model and the competing empirical structural model is compared in Table 4.44.

Table 4.44 *Comparison of the fit statistics of the structural model and competing empirical structural model*

Index	Structural model	Competing empirical model
χ^2	227.565	250.674
df	84	85
p	0.00	0.00
χ^2 / *df*	2.709	2.949
AIC	299.565	320.674
RMSEA	0.051	0.055
RMR	0.069	0.074
NFI	0.965	0.961
CFI	0.977	0.974

From the results displayed in Table 4.44 it can be seen that the original structural model demonstrates better fit to the sample data than the competing empirical model. The AIC statistic for the original model (299.565) is lower than the AIC statistic for the competing model (320.674), hence indicating more parsimonious fit. This is supported by the RMSEA of 0.051 versus 0.055.

As the proposed theoretical model demonstrated good fit – as well as better fit than a competing structural model – it can be concluded that the model and respective path coefficients succeeds in explaining the sequential relationships between the variables for the current sample. Thus, proposition 27 is accepted.

4.11 SUMMARY OF PROPOSITIONS TESTING

A number of propositions were tested and reported in this chapter. The propositions, as formulated in Chapter 2 are listed again in Table 4.45 for ease of reference. In the outcome column, the result of the proposition testing is indicated by the following indicators: accepted (meaning that the results indicate evidence that agrees with the proposition); partially accepted (meaning that the results agree partly with the proposition); rejected (which

indicates that the results contradict the proposition); and judgement withheld (when the results are unclear).

Table 4.45 *Summary of propositions testing*

Number	Propositions to be tested	Outcome
Proposition 1	The work engagement scale (UWES-17) developed by Schaufeli & Bakker (2003) is portable to a South African organisational setting and it is possible to demonstrate acceptable construct validity and internal reliability.	Partially accepted
Proposition 2	The psychological capital scale (PCQ-24) developed by Luthans, Youssef, and Avolio (2007a) is portable to a South African organisational setting and it is possible to demonstrate acceptable construct validity and internal reliability.	Accepted
Proposition 3	The followership scale developed by Kelley (1992) is portable to a South African organisational setting and it is possible to demonstrate acceptable construct validity and internal reliability.	Partially accepted
Proposition 4	The authentic leadership scale (ALQ) developed by Avolio, Gardner, and Walumbwa (2005) is portable to a South African organisational setting and it is possible to demonstrate acceptable construct validity and internal reliability.	Accepted
Proposition 5	A higher-order factor, i.e. PsyCap, underlies the four dimensions (hope, optimism, self-efficacy and resilience).	Accepted
Proposition 6	A higher-order factor, i.e. Authentic leadership, underlies the four dimensions (transparency, moral/ethical, balanced processing and self-awareness).	Judgement withheld

(table continues)

(Table 4.45 continues)

Number	Propositions to be tested	Outcome
Proposition 7	Work engagement, PsyCap, followership, and authentic leadership are factorially independent of one another.	Rejected
Proposition 8	There are significant relationships between the composite and dimensional scores of work engagement and demographic variables (i.e. gender, occupational level, home language, educational level, English proficiency, manager's gender, age and working experience).	Partially accepted
Proposition 9	There are significant relationships between the composite and dimensional scores of PsyCap and demographic variables (i.e. gender, occupational level, home language, educational level, English proficiency, manager's gender, age and working experience).	Partially accepted
Proposition 10	There are significant relationships between the composite and dimensional scores of followership and demographic variables (i.e. gender, occupational level, home language, educational level, English proficiency, manager's gender, age and working experience).	Partially accepted
Proposition 11	There are significant relationships between the composite and dimensional scores of authentic leadership and demographic variables (i.e. gender, occupational level, home language, educational level, English proficiency, manager's gender, age and working experience).	Partially accepted
Proposition 12	There are significant relationships between the respective composite and dimensional scores of authentic leadership and PsyCap.	Accepted

(table continues)

(Table 4.45 continues)

Proposition 13	There are significant relationships between the respective composite and dimensional scores of authentic leadership and followership.	Rejected
Proposition 14	There are significant relationships between the respective composite and dimensional scores of authentic leadership and work engagement.	Accepted
Proposition 15	There are significant relationships between the respective composite and dimensional scores of PsyCap and followership.	Accepted
Proposition 16	There are significant relationships between the respective composite and dimensional scores of PsyCap and work engagement.	Accepted
Proposition 17	There are significant relationships between the respective composite and dimensional scores of followership and work engagement.	Accepted
Proposition 18	Authentic leadership and its dimensions explain a significant proportion of variance in work engagement.	Accepted
Proposition 19	PsyCap and its dimensions explain a significant proportion of variance in work engagement.	Accepted
Proposition 20	Followership and its dimensions explain a significant proportion of variance in work engagement.	Accepted
Proposition 21	Authentic leadership dimensions explain a significant proportion of variance in PsyCap and its dimensions.	Accepted
Proposition 22	Authentic leadership dimensions explain a significant proportion of variance in followership and its dimensions.	Judgement withheld

(table continues)

(Table 4.45 continues)

Proposition 23	PsyCap dimensions explain a significant proportion of variance in followership and its dimensions.	Accepted
Proposition 24	PsyCap mediates the relationship between authentic leadership and work engagement.	Accepted
Proposition 25	PsyCap mediates the relationships between authentic leadership and followership.	Rejected
Proposition 26	Followership mediates the relationship between authentic leadership and work engagement.	Rejected
Proposition 27	A theoretical framework of the relationships between work engagement, PsyCap, followership and authentic leadership can be shown through structural equations modelling to be a well-fitting model.	Accepted

4.12 CONCLUSION

The current chapter provided a report on the results of the present study, as well as a link between these results and the propositions set to answer the research questions. For the most part, the propositions that were tested were accepted based on the evidence from the statistical analyses. However, some propositions were rejected or only partially accepted, which leads to some noteworthy findings. Chapter 5 is dedicated to interpreting the significant results, as well as inferring reasons for the non-significant results that were found. The implications of these findings, as well as recommendations for further research are discussed in Chapter 5.

5 CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

In the preceding chapters, the research problem and objectives for the present study were set out. This was followed by a review of the relevant literature relating to the psychometric variables of the study, namely work engagement, PsyCap, followership and work engagement. Chapter 3 provided an explanation of the research design and methodology utilised to test the propositions that were formulated based on the literature review. In Chapter 4 the results of the statistical analyses were presented in order to answer the research questions of the present study and to reach conclusions regarding the viability of each of the propositions. The present study aimed to establish whether work engagement is related to authentic leadership, PsyCap and followership, and if relationships were found, to construct a sequential model of the relationships between these variables. Although the findings are based on the cross-sectional nature of the data, it does provide promising conclusions on the antecedents of work engagement within the South African context. It is hoped that this research will add value to organisational knowledge of how to improve work engagement within the workplace.

This chapter will comprise of a discussion of the most salient results of the study with regard to the relevant literature presented in earlier chapters. This discussion will include a summary of the main findings and conclusions that can be drawn based on the results of the data analyses. Furthermore the limitations of the present study will be discussed, followed by the implications for existing theory and recommendations for implementation. The chapter will be concluded with suggestions for future research.

5.2 SUMMARY OF THE MAIN FINDINGS

The main findings of the present study include conclusions related to the factor structures of the measuring instruments and the relationships between the variables of the present study. In the following sections, these findings will be explained and contextualised. The discussion will be linked to the proposition that was tested for ease of interpretation.

5.2.1 Portability of the measuring instruments

The positive organisational variables utilised in the present study are relatively novel constructs and in most cases, stem from a single Western cultural background. For instance, the measurement instruments for PsyCap, authentic leadership and followership were all developed in the United States of America. The work engagement instrument (UWES-17) was developed in the Netherlands, but have subsequently been validated and normed in a number of other countries. Nevertheless, it was important to determine the portability of the four instruments to a culturally diverse, non-Western environment in order to make inferences from the results of the measuring instruments in a South African environment.

5.2.1.1 Discussion of proposition 1

Proposition 1	The work engagement scale (UWES-17) developed by Schaufeli & Bakker (2003) is portable to a South African organisational setting and it is possible to demonstrate acceptable construct validity and internal reliability.	Partially accepted

The work engagement instrument (UWES-17) was conceptualised as a three-dimensional construct by Schaufeli and Bakker (2003). The three-dimensional factor structure was confirmed in nine countries, as well as South Africa (Barkhuizen & Rothmann, 2006; Rothmann & Jordaan, 2006; Simons & Buitendach, 2013; Storm & Rothmann, 2003). In the present study, the UWES did not conform to its originally conceptualised factor structure. Instead, a uni-dimensional factor structure was found with one strong general factor explaining work engagement. This finding is consistent with De Bruin et al.'s (2013) suggestion that the UWES should be interpreted with a single summative score (i.e. uni-dimensional factor structure). With reference to South African studies, a uni-dimensional factor structure was also found in a sample of nurses (Beukes & Botha, 2013), and in a sample of three occupational groups, namely electricity provider, professional and enrolled nurses and police officers (Rothmann, Jorgenson, & Marais, 2011). Christian and Slaughter's (2007) meta-analysis of work engagement research reports that high inter-item correlations, ranging from 0.88 to 0.95 between the respective dimensions of work engagement, were consistently found. As a result of the high inter-item correlations, Schaufeli, Bakker, and

Salonova (2006) also propose that the total score for the UWES should be used as an indicator of work engagement.

The internal reliability of the UWES in the present study was $\alpha = 0.924$. The Cronbach alpha reliabilities that have been reported for the UWES range from 0.88 to 0.95. Therefore, the UWES indicates acceptable reliability for the sample utilised in the present study, and moreover the reliability coefficient is consistent with results of previous studies.

It is concluded that the UWES-17 is portable to a South African sample with demonstrated construct validity and internal reliability. However, the instrument does not seem to be portable in its original three-dimensional conceptualisation. Based on the number of South African studies that have indicated work engagement as a uni-dimensional construct, including the results of the present study, a composite measure of work engagement (using a single summative score) is likely to have greater construct integrity in a South African context.

5.2.1.2 Discussion of proposition 2

Proposition 2	The psychological capital scale (PCQ-24) developed by Luthans, Youssef, and Avolio (2007a) is portable to a South African organisational setting and it is possible to demonstrate acceptable construct validity and internal reliability.	Accepted

The psychological capital questionnaire (PCQ) measuring the respondents' levels of PsyCap maintained its original four-dimensional factor structure (Luthans, Youssef, & Avolio, 2007a) in the present study. This is consistent with the international findings (Avey et al., 2008; Caza et al., 2010), as well as the South African findings (Görgens-Ekermans & Herbert, 2013; Simons & Buitendach, 2013). This means that the sample was able to distinguish between the four components of PsyCap, namely efficacy, optimism, hope and resilience as originally conceptualised by Luthans, Youssef, and Avolio (2007a).

There are also South African studies where the original conceptualisation of the PCQ instrument was not confirmed. Harris (2012) maintains that a four factor structure for the PCQ was found in automotive dealership sample, but that the sample did not understand the factors, specifically relating to hope and optimism, as presented in its original structure. Du Plessis and Barkhuizen's study (2011) did not include a confirmatory factor analysis; however, the results of their exploratory factor analysis indicated that the original four factor structure of the PCQ would not make sense for their sample of Human Resource professionals.

The results of the reliability analysis were in agreement with the analyses reported in United States of America (USA) and non-USA samples. The Cronbach alpha reliability scores for efficacy ($\alpha = 0.854$) and hope ($\alpha = 0.824$) comfortably met the >0.7 criterion for reliability as proposed by Nunnally and Bernstein (1994). However the resilience ($\alpha = 0.694$) and optimism ($\alpha = 0.661$) subscales fell short of the criteria. Similarly, the resilience and optimism subscales have been found to have less internal consistency than the efficacy and hope subscales in USA samples (Avey, Luthans, & Youssef, 2010; Luthans, Avolio, et al., 2007), as well as South African samples (Görgens-Ekermans & Herbert, 2013).

One possible explanation for the lower internal reliability coefficients of resilience and optimism is that both of these dimensions include reverse-scored items. There are only three reverse-scored items in the PCQ, of which one item is part of the resilience subscale and the other two are part of the optimism subscale. Reverse-scored items can reduce scale reliability (Schmitt & Stults, 1985), especially in the case where the testing language may influence the respondents' ability to interpret the negatively worded items (Marsh, 1996). This seems to be the case for the reverse scored items of the PCQ as these items have been identified as having a negative influence on the reliability of the subscale (Gooty, Gavin, Johnson, Frazier, & Snow, 2009; Görgens-Ekermans & Herbert, 2013; Harris, 2012). Therefore, some respondents in the present study may have experienced difficulty in interpreting the negatively worded items.

In conclusion, the contradictory findings relating to the psychometric properties of the PCQ support the need to determine the portability of the PsyCap instrument to South African

settings. Furthermore, the reverse-scored items in the resilience and optimism subscales may be problematic for scale internal reliability and might need to be reconsidered for samples with diverse home languages and differing levels of skills in understanding and interpreting English. Moreover, there may be nuance interpretation differences across different cultural settings. In addition, alternative conceptualisations of PsyCap that have demonstrated measurement invariance across countries and cultures should be considered for future research interventions.

5.2.1.3 Discussion of proposition 3

Proposition 3	The followership scale developed by Kelley (1992) is portable to a South African organisational setting and it is possible to demonstrate acceptable construct validity and internal reliability.	Partially accepted

The followership instrument as developed by Kelley (1992) consists of a two factor structure with the dimensions 'active engagement' and 'independent critical thinking'. In the present study, a two-dimensional factor structure was found for the instrument. EFA advocated the loss of eleven of the 20 items of the questionnaire. Furthermore, responses of the members of the sample did not yield the factors as presented in the original factor structure. Therefore, one of the factors was renamed "initiative" in order to describe the themes of doing more than what is expected, championing new ideas and helping colleagues. The new factor structure still included the appropriate number of items (i.e. three or more items per dimension). The newly conceptualised factor structure did demonstrate acceptable fit statistics for the sample.

Blanchard et al. (2009) and Colangelo (2000) suggested that the followership instrument's original factor structure is not as robust as conceptualised. In Blanchard et al.'s (2009) study three factors were initially extracted after deletion of two items. Blanchard et al. (2009) sought to align their EFA results with the active engagement and independent critical thinking components of Kelley's model, and could relate two of the three factors found in their EFA to Kelley's (1992) original conceptualisation of followership. The additional factor (consisting of items 1, 2, 3 and 4 of the followership instrument) that emerged was synthesised to indicate attitudes and affect of followership, but not behaviour. Blanchard et al. (2009) argued that this additional factor is not an appropriate measure of behaviour-based

followership and excluded this factor from further analysis. Unfortunately Blanchard et al. (2009) did not report CFA findings. Similarly, Colangelo (2000) reported only EFA for the followership instruments. In Colangelo's (2000) study, four factors with Eigenvalues greater than 1.0 were found after excluding one item. Colangelo (2000) named two of the factors active engagement and independent critical thinking as per the original conceptualisation of the factors, and added "passion" and "team-mindedness" as names for the other two factors that were found.

With regard to the reliability of the instrument, the Cronbach alpha coefficient for the composite followership scale was $\alpha = 0.793$. The initiative subscale, consisting of six items, had an acceptable reliability coefficient of $\alpha = 0.872$. However, the independent thinking subscale, consisting of three items, only had a Cronbach alpha coefficient of 0.591. As the configuration of the items in the subscales were reorganised in the present study, comparison of reliability coefficients with previous studies is not warranted.

As an organisational consultant and facilitator, Kelley administered the followership instrument to large numbers of convenience samples (VanDoren, 1998). Kelley created the questionnaire in order to help individuals to build awareness of their followership style, and to identify their strengths and weaknesses in followership skills (Kelley, 1992). VanDoren (1998) reported personal communication with Kelley where he indicated that the questionnaire was developed for exploratory purposes. Hence, little effort had been made to measure the reliability and validity of the instrument.

The present study attempted to validate Kelley's (1992) followership instrument by utilising not only EFA as per previous research, but confirming the factor structure with CFA. An interpretable factor structure was found that demonstrated acceptable levels of fit for the healthcare industry sample. However, more than half of the items were deleted and the original factor structure of the instrument could not be confirmed. It appears that the followership instrument would need to be reconceptualised in order to improve the psychometric properties of the instrument. This would include reconceptualization of the construct and its dimensions to clearly discern followership behaviour from follower affect and attitude. Furthermore, it could be useful to include more dimensions of followership

behaviour as subscales in order to allow for descriptive and inferential analysis of followership in relation to other organisational variables.

As the present study is the first attempt to use the followership instrument in a South African context, it may be concluded that the instrument may not be fully portable to a South African sample, specifically a sample within the healthcare industry.

5.2.1.4 Discussion of proposition 4

Proposition 4	The authentic leadership scale (ALQ) developed by Avolio, Gardner, and Walumbwa (2005) is portable to a South African organisational setting and it is possible to demonstrate acceptable construct validity and internal reliability.	Accepted

In the present study, the original four-dimensional factor structure conceptualisation was confirmed for the healthcare industry sample. Although the CFA produced only marginally acceptable fit statistics it was deemed as the best fit of the model for the sample. EFA indicated that 59.242% of the variance in authentic leadership was explained by one factor.

Both internationally (Walumbwa et al., 2008) and in South Africa (Roux, 2010) acceptable fit for the four dimensions of authentic leadership were found. Conversely, Munyaka's (2012) study in a South African manufacturing organisation indicated a two factor structure of authentic leadership.

The reliability coefficients of the ALQ and dimensions in the present study are aligned to results from previous studies. The internal reliability of the composite ALQ measure was high at $\alpha = 0.953$, with the coefficients for the dimensions ranging between 0.810 and 0.904. In a South African study Roux (2010) reported $\alpha = 0.92$ for the composite ALQ and coefficients for the dimensions ranging from 0.69 (balanced processing) to 0.85 (self-awareness).

It can be concluded that the authentic leadership questionnaire is portable to the South African healthcare industry sample utilised in the present study. Nonetheless, the contradictory evidence found by Munyaka (2012) needs to be taken into account. The authentic leadership questionnaire has not been extensively used in South Africa and it is suggested that studies should include validation of the construct until such time as its factor structure can be confirmed within the South African context.

5.2.1.5 Discussion of proposition 5

Proposition 5	A higher-order factor, i.e. PsyCap, underlies the four dimensions (hope, optimism, self-efficacy and resilience).	Accepted

Luthans, Avolio, et al. (2007) reported that overall PsyCap (i.e. PsyCap as a higher order factor) is more consistently related to performance and satisfaction than the individual dimensions of PsyCap. Görgens-Ekermans and Herbert (2013) attempted to test the higher-order factor structure of PsyCap in a South African sample, but unfortunately their Lisrel model did not converge. Harris (2012) reported that preliminary testing with a second-order EFA indicated that all factors loaded satisfactorily onto the one overall PsyCap factor. Reichard, Dollwet, and Louw-Potgieter (2013) did find support for the higher-order factor structure among staff in a tertiary institution.

The results of the present study confirmed the higher-order factor PsyCap for the healthcare industry sample. Although both the original four factor structure and the higher-order factor structure of the PCQ demonstrated good fit, the results of the CFA on the higher-order factor structure (χ^2 / df = 1.550; RMSEA = 0.029; CFI = 0.999) indicate a better fit for the sample than the original four-factor structure (χ^2 / df = 2.151; RMSEA = 0.042; CFI = 0.993). Thus, although the four first-order factors are psychometrically valid on their own, they should be interpreted as markers of an underlying multidimensional construct (i.e. PsyCap) that represents psychological resources consisting of motivated energy towards goal striving.

According to Wernsing (2013), the higher-order factor structure of PsyCap was confirmed across 12 national cultures, including South Africa. In her study of employees working in a large transnational company across major world cultures, Wernsing (2013) found that the employees' responses converge into one second-order factor. However, it should be noted that Wernsing's (2013) study utilised the 12-item version of the PCQ and a further three items (specifically relating to the optimism dimension) were excluded during further analyses. Nevertheless, Wernsing's (2013) study is valuable in identifying the portability of the PCQ-12 higher-order PsyCap factor to a South African setting.

5.2.1.6 Discussion of proposition 6

Proposition 6	A higher-order factor, i.e. Authentic leadership, underlies the four dimensions (transparency, moral/ethical, balanced processing and self-awareness).	Judgement withheld

As with PsyCap, it is proposed that the higher-order factor authentic leadership would be more consistently related to organisational outcomes than any of the four individual dimensions, namely transparency, moral/ethical, balanced processing, and self-awareness of the leader (Caza et al., 2010; Luthans, Avolio, et al., 2007). Walumbwa et al. (2008) confirmed this assertion by finding a good fit for a higher-order factor of authentic leadership.

The results of the present study indicated less than acceptable fit statistics for the higher-order factor authentic leadership (χ^2 / *df* = 15.403; RMSEA = 0.149). Although the absolute fit indices (RMR = 0.012) and incremental fit indices (NFI = 0.986; CFI = 0.987) indicated good model fit, the results for the higher-order authentic leadership factor in the present study were not conclusive. EFA indicated that 83.408% of the variance in authentic leadership is explained by a single factor. However, the high communalities and intercorrelations between the authentic leadership dimensions might be more indicative of a uni-dimensional structure than a higher-order factor structure.

No published South African studies examining the higher-order factor structure of authentic leadership could be found. Therefore, the present study presents a first attempt at understanding the higher-order factor structure of the construct in South Africa. As the findings of the higher-order model fit are inconclusive, it is suggested that future studies should examine this proposition across different samples and different occupational levels. Furthermore, the present study utilised the rater version of the ALQ, indicating the subordinate's perception of his/her leader's authentic leadership behaviour. The results of self-reported authentic leadership may yield different results.

5.2.1.7 Discussion of proposition 7

Proposition 7	Work engagement, PsyCap, followership, and authentic leadership are factorially independent of one another.	Rejected

In order to determine whether the sample in the present study viewed the variables (namely work engagement, PsyCap, followership and authentic leadership) as distinct constructs, EFA was conducted. The results indicated that the four dimensions of authentic leadership (self-awareness, balanced processing, transparency, and moral/ethical) loaded onto one factor. The second factor had loadings of the four PsyCap dimensions (hope, efficacy, optimism, and resilience), two dimensions of followership (initiative and independent thinking), as well as the uni-dimensional work engagement construct. This may imply that the respondents tended to view their own PsyCap, followership and work engagement in the same way.

An overlap between work engagement and other constructs was stated by Saks (2008). Harris (2012) concurred with this finding as her results did not indicate factorial independence of the PsyCap and work engagement dimensions. Furthermore, in Blanchard et al.'s (2009) article they interpret the 'active engagement' dimension of followership and 'work engagement' synonymously. The question can therefore be asked whether followership is a distinct construct from PsyCap and work engagement, or if it is rather part and parcel of these two established constructs.

In order to further understand the results of the factorial independence testing of the present study, the original conceptualisation of the instruments was entered into EFA. In this analysis, three factors were identified. Again, the four dimensions of authentic leadership loaded onto one factor. Secondly, the four dimensions of PsyCap as well as the two dimensions of followership loaded on one factor. Thirdly, the dimensions of work engagement loaded on a single factor, however with high factor weights on Factor 1 (consisting of PsyCap and followership dimensions).

It therefore seems that the sample did not view PsyCap and followership as factorially distinct constructs. Respondents consequently viewed their efficacy, hope, resilience and optimism in the same manner as their active engagement and independent critical thinking. Wang et al. (2014) suggested that the employee's psychological strengths (i.e. PsyCap) and their general positivity may have an impact on their exemplary followership and performance. Based on the sample's responses on the PsyCap and followership measures, the question can be raised as to whether PsyCap has an influence on followership; or whether followership should rather be considered as a component of PsyCap and therefore, as a psychological strength. In other words, it might be that followers saw their active engagement and independent critical thinking as part of their psychological strengths; hence, their possible inability to discern the difference between these constructs when reflecting on their own behaviour.

Further research is required in order to investigate whether followership could be included as a component of PsyCap. Alternatively, the followership measure would need to be reconceptualised in order to refer to followership behaviour, rather than as a psychological strength. After these recommendations are effected, it would be important to determine the independence of each of the constructs again.

5.2.2 Survey results

The descriptive results of each of the psychometric variables provided insight into the mean levels of work engagement, PsyCap, followership and authentic leadership of the sample. Furthermore, the statistics also indicate to what extent there is differentiation from the mean

score, i.e. to what extent there are differences in points of view within the sample. The following sections will aim to place the survey results into context.

5.2.2.1 Work engagement survey results

Of the four psychometric instruments that were used in the present study, the UWES questionnaire is the only one that has published norms available for comparison of the mean scores across samples. The norm scores were published in the UWES manual (Schaufeli & Bakker, 2003) and the norms for 'other countries' were used. These norm scores are based on a sample (N = 2313) of respondents from various industries. When comparing the mean work engagement score of the present study to the norm, it is evident that the respondents tended to have – what can be described as – a high level of work engagement. Schaufeli and Bakker (2003) categorised high scores as falling within the 75th to 95th percentile of the norm.

A high level of work engagement within the management level of the healthcare industry organisation implies that the individuals would tend to have high levels of energy in performing their job tasks, be willing to invest effort into their work and be able to persist when faced with difficult circumstances. These behaviours would be quite useful as the organisation faces increased competition within the industry and are currently undergoing a reorganisation process. Furthermore, the employees would tend to feel enthusiastic and proud about the job they are doing and obtain a sense of significance from their work. If one considers that the aim of the organisation is to, amongst others, enhance the quality of life of their clients and staff members, it would seem that the respondents experienced a sense of significance of their work in influencing the quality of life of those around them.

From an organisational point of view the consequence of having a high level of work engagement could be that organisational performance is enhanced. This would be evident in the completion of the individuals' agreed tasks and duties, but also in their extra-role efforts. For instance, it is likely that the employees would help other colleagues even when it is not part of their job description, act as ambassadors for the company, and take initiative to help improve the organisation. Furthermore, high levels of work engagement could affect the service climate of the organisation and increase customer satisfaction amongst the external and internal clients. The increase in customer satisfaction is of particular importance to the

healthcare industry as previous studies have found that low levels of dissatisfaction negatively affect the quality of care provided to clients (Al-Mailam, 2005; Atkins et al., 1996).

From an individual perspective the high level of work engagement is likely to lead to better health and less absenteeism of employees (Schaufeli & Bakker, 2004; Schaufeli et al., 2009; Shirom, 2003), the experience of more positive emotions (Schaufeli & Salanova, 2007b) and an improved mobilisation of own resources. Work engagement is also transferred amongst colleagues (Bakker et al., 2006) and therefore, it could be expected that the managerial group that was surveyed in the present study could have an impact on group level work engagement within the organisation. Lastly, highly engaged employees are less likely to leave the organisation (Bakker & Demerouti, 2008; Bhatnagar, 2012; Schaufeli & Bakker, 2004; Van Schalkwyk et al., 2010) and as a result, would result in the retention of valued employees.

Compared to other samples that utilised the UWES in a South African setting, the healthcare industry sample in the present study had quite a high mean score for work engagement (M = 4.88). Storm and Rothmann (2003) reported a mean score of M = 3.88 for their study conducted in the police force. In a South African chemical organisation, De Waal and Pienaar (2013) administered the UWES at two occasions. De Waal and Pienaar (2013) reported a mean score for work engagement as M = 3.64 (Time 1) and M = 3.49 (Time 2). Means found in other samples are as follows: information and communication technology industry, M = 4.5 (De Bruin et al., 2013), female academics, M = 4.11 (Bezuidenhout & Cilliers, 2010), and a government and manufacturing organisation sample, M = 4.09 (Stander & Rothmann, 2010). Beukes and Botha (2013) reported a mean score of M = 4.25 for a sample of permanent and non-permanent nurses at private hospitals. It can therefore be concluded that the sample in the present study are one of the few samples that demonstrated a high level of work engagement when compared numerically with findings of other published studies within South Africa. As an individual's work engagement is open to development, one could assume that the healthcare industry organisation in which the present study was carried out may have several of the antecedents of work engagement (e.g. job resources, personal resources, etc.) embedded in their organisational culture. Further discussion of the sequential model of relationships will elaborate on which of the proposed antecedents of work

engagement in the present study may have explained the biggest proportion of the variance in creating the high level of work engagement.

5.2.2.2 Psychological capital survey results

Respondents in the present study tended to score highly for their self-reported PsyCap. The respondents tended to score themselves higher on self-efficacy (M = 5.28) with the lowest score for optimism (M = 4.66). The skewness statistic, while still within acceptable guidelines for a normal distribution, indicated that respondents tended to score themselves highly on the dimensions of PsyCap.

Employees with high levels of PsyCap tend to perform better than employees with low levels of PsyCap (Luthans, Avolio, et al., 2007). This is likely to happen as a result of the combined motivational tendencies of self-efficacy, hope, optimism and resilience. For example, an individual with high levels of self-efficacy is likely to be a good performer because he/she accepts challenging tasks and expends the needed effort to achieve goals. If this employee also has a high level of hope, then he/she would not only expend the needed effort to achieve success in the task, but will also proactively identify subgoals and pathways to achieve such goals. If the individual also has a high level of resilience, he/she would be able to cope with adversity in their pursuit of the goal. Optimism would help the individual to be more confident about a positive outcome and therefore to persist in their pursuit of the goal. Therefore, the respondents in the present study who scored high on all dimensions of PsyCap, may have higher levels of performance, job satisfaction and work engagement.

In terms of the literature, the managers that were surveyed in the present study are likely to be able to deal with the demands of their jobs, feel more proficient (Luthans, Youssef, & Avolio, 2007a), deal with stress (Avey, Reichard, et al., 2009) and burnout (Laschinger, 2014), and cope efficiently with organisational change (Avey et al., 2008) as a result of the high levels of PsyCap. Furthermore, the managers would be less likely to be cynical about their work or have intentions to leave the organisation (Avey, Luthans, & Youssef, 2010). When considering that the sample respondents have an average tenure within the research organisation of eleven years, it seems plausible that the high levels of PsyCap may have contributed to the retention of valued employees.

5.2.2.3 Followership survey results

The results indicated that respondents perceived that they have high overall exemplary followership as well as initiative. This would suggest that they see themselves as self-starters who manage themselves well, who are committed to the organisational goals, and who would build their own competence and exert focussed effort to succeed in their tasks. It is also likely that they would choose to cooperate with one another rather than compete for leadership or power.

On the other hand, the survey results for the independent thinking dimension of followership indicated a lower item mean score than the initiative dimension. This may indicate that respondents may not give constructive criticism or perceive the freedom to voice their own thoughts as often as they would display the other followership behaviours. Kelley (1998) indicates that individuals with a high level of active engagement and a low level of independent thinking may sometimes act as bystanders who rely on the leader's judgement and thinking. However, this interpretation would not be completely true for the present study as the respondents scored moderately (not low) on the independent thinking items. It should also be noted that a number of the original items of the independent thinking dimension was excluded during factor analysis of the instrument. As a result, this dimension was measured by only three items. Examples of these items are "Do you make a habit of internally questioning the wisdom of the leader's decision rather than just doing what you are told?" and "Do you assert your own views on important issues, even though it might mean conflict or reprisals from the leader?". As these items could have been interpreted differently by respondents, it is difficult to draw conclusions about the meaning of the moderate score. For instance, it could mean that the organisational culture and disciplinary system might perceive such behaviours as insubordination of the leader, and therefore, that employees rated themselves somewhat lower on this dimension. Alternatively, the way the question is posed may have implied a disrespectful response to the leader. The questions are also double-barrelled which is likely to lead a respondent to rather submit a more moderate response as they may agree with some part of the statement, but not with the full statement. It is therefore suggested that the moderate independent thinking result could also be as a result of measurement issues.

5.2.2.4 Authentic leadership survey results

For the measurement of authentic leadership, respondents were asked to indicate their perception of their direct manager's authentic leadership behaviours. Respondents perceived a high level of overall authentic leadership behaviours of their managers. The dimension of authentic leadership that was perceived as the highest is the moral/ethical component of authentic leadership. This means that respondents perceived their managers/leaders' behaviour as self-determined and regulated rather than dictated by situational demands. The transparency and balanced processing dimension were also rated towards the high side. These high scores can be interpreted as the perception that leaders in the organisation evaluate information objectively, balance it with their own beliefs, and practise appropriate self-disclosure in genuinely presenting themselves to others. It is likely that these types of leadership behaviour would lead to credibility, trust and respect from employees. These actions could also lead to the creation of a positive organisational culture (Gardner et al., 2005) and personal identification of the follower with the leader (Avolio et al., 2004).

The respondents rated their perception of their manager/leader's self-awareness more moderately. Self-awareness related to the leaders' self-knowledge of strengths, weaknesses and worldview. Self-awareness, as dimension of authentic leadership, is demonstrated as a desire to grow in self-awareness and own leadership style in order to serve others more effectively (George, 2003). As self-awareness is an internal process for the leader, it might be difficult for employees to accurately perceive their leader's level of self-awareness, therefore resulting in a more moderate survey result.

Authentic leadership behaviours have shown to contribute to healthy work environments. These healthy environments are characterised by respect, trust and support (Heath, Johanson, & Blake, 2004). As critical nursing shortages exist globally and in South Africa (Newman et al., 2001; Pillay, 2009; Shirey, 2006) authentic leadership may be useful for the research organisation to create a healthy and supportive organisational climate where professional and administrative talent is retained.

5.2.3 Differences between demographic groups in the sample

The analyses of significant differences and relationships between the psychometric variables and socio-demographic groups indicated a number of mean differences. Exploring these differences, as well as the pattern of differences across the psychometric variables, may help to better understand the positive variables that are being studied.

5.2.3.1 Work engagement and socio-demographic characteristics (Proposition 8)

Proposition 8	There are significant relationships between the composite and dimensional scores of work engagement and demographic variables (i.e. gender, occupational level, home language, educational level, English proficiency, manager's gender, age and working experience).	Partially accepted

Work engagement amongst the sample respondents was positively related with age. This finding is consistent with the general picture emerging in the literature. However, where previous relationships of work engagement and age were found, the relationship was mostly marginal with low practical significance (e.g. Avery et al., 2007). This is also true for the present study where work engagement and age only has a slight correlation (r = 0.14) with low practical significance. Therefore, it does seem that work engagement may increase with age, but empirical research has found that this increase is only marginal with low practical significance.

Work engagement was also related to tenure within the organisation in the present study (r = 0.14). This finding also suggests only a slight relationship, which holds low practical significance. Avery et al. (2007) likewise found only a marginal correlation between work engagement and tenure.

Further results indicate that work engagement differs between the different occupational levels. The results of the present study indicate that the higher the occupational level, a

higher mean score for work engagement was found. For instance, the category 'manager of one or more managers' had the highest mean score (M = 5.08). Smulders (2006) concurs with this finding by indicating that higher levels of work engagement has been found in complex, professional occupations in contrast to jobs that involve more routine work. Professional and challenging jobs offer more skill variety and autonomy than more routine-based jobs, therefore professional and challenging jobs have greater potential for meaningfulness. Hackman and Oldman (1975) defined meaningful work as a job that the employee experiences as valuable and worthwhile. Empirical research has found that meaningfulness of work may impact an individual's level of work engagement (Geldenhuys, Laba, & Venter, 2014; May, Gilson, & Harter, 2004; Van den Heuvel, Demerouti, Schreurs, Bakker, & Schaufeli, 2006).

As reported in Chapter 2, previous studies have also indicated significant differences between work engagement based on gender (Avery et al., 2007; Coetzee & De Villiers, 2010; Mauno et al., 2007; Schaufeli et al., 2007) and educational levels (Barkhuizen & Rothmann, 2006). In the present study, no significant differences were found for these socio-demographic groups.

5.2.3.2 Psychological capital and socio-demographic characteristics (Proposition 9)

Proposition 9	There are significant relationships between the composite and dimensional scores of PsyCap and demographic variables (i.e. gender, occupational level, home language, educational level, English proficiency, manager's gender, age and working experience).	Partially accepted

To date, very little has been reported on the relationship between socio-demographic groups and PsyCap. Caza et al. (2010) found that no significant differences were found for gender and level of PsyCap. Some significant differences have however been found between the dimensions of PsyCap and gender (Bonanno, 2004; Caza et al., 2010; Kling et al., 1999). However, no significant differences for gender and the total score for PsyCap or PsyCap dimension scores were found in the present study.

With regard to the relationship between PsyCap and educational levels, Luthans et al. (2005) reported higher PsyCap levels for groups with higher educational levels for the Chinese sample used. In the present study the PsyCap dimension efficacy did however indicate significant differences across educational levels. Furthermore, overall PsyCap as well the dimensions of efficacy, hope and optimism were found to differ – with small practical significance – across occupational levels. The trend that emerged indicated that respondents in higher / more senior occupational categories demonstrated higher levels of PsyCap.

Hollenbeck and Hall (2004) proposed that individuals' self-efficacy is developed and heightened as their perceptions of their capabilities change. Therefore, as individuals take on tasks and challenges, e.g. studying for an advanced degree or taking on more leadership responsibility, mastery of the task will enhance their perception of their self-efficacy. The development of self-efficacy is critical to leadership effectiveness and performance (Luthans, Youssef, & Avolio, 2007a), and hence, would explain why respondents in more advanced occupational categories tended to have higher levels of PsyCap. Jensen and Luthans (2006b) also report that hope and optimism is related to leadership. Hope may be a predictor of effective leadership as leaders with high levels of hope are reported to have significantly better fiscal performance and influence employee retention and satisfaction in the organisation than those with low levels of hope (Luthans, Youssef, & Avolio, 2007a; Peterson & Luthans, 2003). Optimism also contributes to effective leadership as an individual high in optimism will have a greater willingness to take risks, and will be motivated to help others to succeed and develop their own optimism (Luthans, Youssef, & Avolio, 2007a).

Furthermore, the present study concurs with previous studies (e.g. Beal III et al., 2013) that no significant relationship was found between age and organisational tenure and PsyCap.

5.2.3.3 Followership and socio-demographic characteristics (Proposition 10)

Proposition 10	There are significant relationships between the composite and dimensional scores of followership and demographic variables (i.e. gender, occupational level, home language, educational level, English proficiency, manager's gender, age and working experience).	Partially accepted

The review of the literature revealed only one published study by Blanchard et al., (2009) that explored the relationship between socio-demographic variables and Kelley's (1992) measurement of followership. However, comparison of the findings with that of the present study is problematic as the measurement model derived through CFA and EFA for the respective studies are not the same. Nevertheless, the findings of these two studies will be discussed for exploratory purposes.

Blanchard et al. (2009) reported a significant relationship between the independent critical thinking dimension of followership and tenure within the organisation. In the present study this relationship was not confirmed. However, a relationship with trivial practical significance was found between years of working experience and followership and respectively, both dimensions of followership as well. Most of the respondents in the present study had more years of working experience (average of 23 years) than they had years of tenure within the organisation (average of 11 years). The relationship of followership with years of work experience, but not with tenure in the organisation, could mean that respondents' perception of their level of followership behaviour is seen as a personal characteristic, rather than a state originating from their current working environment.

An interesting finding was that initiative, independent thinking and overall followership scores were significantly different – with small to moderate practical significance – based on occupational categories. In examining the mean scores for the different groups, it was found that higher / more senior occupational groups demonstrated higher levels of exemplary followership behaviour. Kelley (1998) argued that leaders have to display the followership

role more often than the leadership role, for instance when attending committee meetings or when taking direction from the Board of Directors.

A further finding indicated independent critical thinking and overall followership scores were higher for individuals with higher educational levels. As the academic system requires increasing levels of critical analysis and discourse from undergraduate to postgraduate studies, it could be assumed that the skill of academic critical discourse may enhance an individual's independent critical thinking behaviour in the workplace.

Furthermore, the present study confirms Blanchard et al.'s (2009) finding that there were no significant differences in followership behaviour based on gender. The present study also found no relationship between age and followership behaviours, home language and followership, or the manager's gender and the respondents' followership behaviour.

5.2.3.4 Authentic leadership and socio-demographic characteristics (Proposition 11)

Proposition 11	There are significant relationships between the composite and dimensional scores of authentic leadership and demographic variables (i.e. gender, occupational level, home language, educational level, English proficiency, manager's gender, age and working experience).	Partially accepted

The present study found no relationship between age, tenure in the organisation, and working experience with perceived authentic leadership behaviour. In a South African study, Munyaka (2012) did find a significant relationship between perceptions of authentic leadership behaviour and respondents' organisational tenure. However, the correlation coefficients were low and meaningful conclusions could not be drawn from the slight relationships between the variables.

There were also no significant relationship between the respondents' reporting period to their current manager and their perceptions of the leader's authentic leadership behaviours. Authentic leadership is proposed to heighten the self-awareness and self-regulatory processes of followers, which over time would develop authentic followership behaviours (Avolio et al., 2004). Leaders and followers take time to develop authentic leadership as authenticity grows from the open and positive exchanges between leaders and followers (Gardner et al., 2005). In the present study, the average reporting period to the leader was four years, with some respondents who have been reporting to their leader for less than one year and others who have been reporting to their current manager for 25 years. As there was not a significant relationship between reporting period and perceptions of authentic leadership behaviours in the present study, it would be interesting to see whether a relationship is found in cases where the average reporting period to the leader is longer. This information, coupled with longitudinal research could shed led on the time period that is needed for leaders to be perceived as authentic leaders by their followers.

Chan et al. (2005) heeded that the study of authentic leadership may vary based on the context in which it is measured. These contextual factors may include organisational power and politics, organisational structure, gender, and organisational culture (Avolio et al., 2004). The present study can therefore only offer findings on how respondents perceive the authentic leadership behaviours of their managers and whether socio-demographic characteristics have an influence on these perceptions. As the findings cannot be corroborated with self-ratings from the leader him/herself or controlled for by contextual factors, the results that will be presented based on gender and home language are exploratory and speculative, as other factors such as personal values, belief systems and gender stereotypes about leadership may have influenced the respondents' perceptions.

With regard to gender, male respondents perceived a higher level of balanced processing behaviour in their leaders than did female respondents. Stereotypical perceptions of men include that they value objectivity and rational, thinking perspectives. It may therefore be that men are more aware of and place value on the leader's balanced processing abilities than females, and therefore, would provide a higher rating for this dimension. Another interesting finding is that male managers/leaders were rated by the respondents to have higher levels of

transparency, balanced processing and self-awareness. Although it could be true that male leaders displayed higher levels of authentic leadership behaviours, the finding may also be influenced by South African cultural values that tend to value the male role and masculinity in leadership slightly more than female roles (Booysen & Van Wyk, 2008).

Lastly, there was a significant difference, with trivial practical significance, in Afrikaans and English respondents' perception of their leaders' authentic behaviour. As the Afrikaans and English groups' mean difference score for their perception of their leaders' authentic behaviours did not show great variation, the standard deviations were consulted. The standard deviation indicated that there was less differentiation from the mean for the Afrikaans group, and hence, it can be concluded that the group of Afrikaans respondents may have had a more consistent or uniform view of their managers. Munyaka (2012) also reported differences in perception of authentic leadership behaviours by Afrikaans, English and Xhosa home language groups.

5.2.3.5 Summary of the socio-demographic analyses

From the analyses of the psychometric variables in relation to the socio-demographic characteristics of the sample, a few patterns were observed. In general, gender of the respondent did not explain significant differences in work engagement, PsyCap and followership. Age was only related to work engagement, and years of work experience was related to work engagement and followership. A general pattern indicated that respondents' with higher levels of education and fulfilling higher / more senior occupational roles tended to have higher levels of work engagement, PsyCap and followership.

Due to the differences and relationships between the psychometric variables and socio-demographic groups in the sample, propositions 8 to 11 were accepted. The findings related to PsyCap and followership offer particular value in expanding the academic literature.

5.2.4 Relationships between the variables

The relationships between the psychometric variables included in the present study were analysed with correlation analysis, multiple regression analysis and by building a structural

equations model. These analyses presented results explaining the strength of the relationship between the respective variables. The following sections will elaborate on the relationships that were found in the present study compared to results from previous studies.

5.2.4.1 The relationships with work engagement

The analysis of work engagement as the dependent variable of the present study indicated that relationships exist between the three predictor variables, namely authentic leadership, PsyCap and followership and work engagement. Each of the predictor variables in relation to work engagement will be discussed in the following sections.

Proposition 14	There are significant relationships between the respective composite and dimensional scores of authentic leadership and work engagement.	Accepted

The results indicate a definite, albeit a small relationship between the constructs authentic leadership and work engagement (r = 0.31) indicating 9.6% common variance between the two variables. This finding is consistent with previous empirical studies on authentic leadership and work engagement (Alok & Israel, 2012; Giallonardo et al., 2010; Walumbwa, Wang, et al., 2010). The more respondents perceived that their leader displayed self-awareness, balanced processing of information, having an internalised moral perspective and practising relational transparency, the more they displayed engagement in their work. All dimensions of authentic leadership had a significant, although small, relationship with work engagement. Of the authentic leadership dimensions, self-awareness of the leader had the highest correlation at r = 0.31 with work engagement.

Proposition 16	There are significant relationships between the respective composite and dimensional scores of PsyCap and work engagement.	Accepted

PsyCap was positively associated with work engagement. The relationship between these constructs are substantial (r = 0.58) and indicates that as an individuals' positive capabilities and motivation for efficacy, hope, resilience and optimism increase, so does engagement in

work increase. The relationship between PsyCap and work engagement has been well established and also confirmed in a South African environment (Harris, 2012; Simons & Buitendach, 2013).

Studies also indicated relationships between the dimensions of PsyCap and work engagement (Arakawa & Greenberg, 2007; Rothmann, 2003; Roux, 2010; Salanova et al., 2011; Simons & Buitendach, 2013). Roux (2010) reported a positive relationship between self-efficacy and work engagement. This relationship was also found in the present study (r = 0.46). However, hope and optimism (both with r = 0.51) had the strongest relationships with work engagement.

Proposition 17	There are significant relationships between the respective composite and dimensional scores of followership and work engagement.	Accepted

The results of the present study indicated a definite relationship between followership and work engagement (r = 0.37). The relationship between initiative and work engagement was also substantial (r = 0.44). Blanchard et al. (2009) reported that followership is positively related to organisational commitment and job satisfaction, which are factors that have been established to be strongly related to work engagement (Bakker & Demerouti, 2008; Burke & El-Kot, 2010; Field & Buitendach, 2011; Hakanen et al., 2006; Wefald et al., 2011). As no previous research in which the relationship between work engagement and followership had been studied, the finding of the present study presents a new contribution to the body of knowledge on positive organisational constructs.

After examination of the relationships between the predictor variables of work engagement, it can be concluded that the total and dimensional scores of authentic leadership, PsyCap and followership were significantly related to work engagement. Thus propositions 14, 16 and 17 were accepted.

The results of the multiple regression analysis indicated that authentic leadership, PsyCap and followership explain a combined 36% of the variance in work engagement. It is therefore clear that these variables have value in explaining the level of work engagement. The results of the regression analyses are discussed next.

Proposition 18	Authentic leadership and its dimensions explain a significant proportion of variance in work engagement.	Accepted

The total authentic leadership scale score explained a significant proportion of the variance in work engagement. This finding therefore confirms that by Giallonardo et al. (2010). Of the authentic leadership dimensions, only self-awareness explained a statistically significant proportion of the variance in work engagement when controlling for the influence of the other authentic leadership, PsyCap and followership dimensions. Avolio and Gardner (2005) state that perceptions of self-awareness are a result of open and positive communication exchange between leaders and followers. These exchanges would possible assist the individual to find meaning and purpose in their job, craft a job that best suits their strengths and the leader would also encourage the individual to persist in their work related efforts. These actions may result in enhancing employees' vigour, dedication and absorption in their work. Therefore, authentic leadership and specifically self-awareness behaviour of the leader may be an important antecedent of follower work engagement. Proposition 18 was accepted.

Proposition 19	PsyCap and its dimensions explain a significant proportion of variance in work engagement.	Accepted

Of the three predictors of work engagement, PsyCap ($\beta = 0.69$) was found to be the strongest unique contributor in explaining the variance in work engagement, when the influence of authentic leadership and followership were controlled for. Harris (2012) similarly found that PsyCap dimensions explained 53% of the variance in work engagement. PsyCap can be seen as part of the personal resources that form part of the Job-Demands-resources model (Bakker, 2009; Bakker & Demerouti, 2007). These personal resources assist engaged employees to control and impact their work environment in a positive manner (Luthans, Norman, et al., 2008).

Of the PsyCap dimensions, hope and optimism explained the biggest unique proportion of the variance in work engagement. The unique contribution of efficacy was also significant, but only at the $p < 0.05$ level. Hope may influence work engagement by motivating an individual to set goals, determine ways to reach the goals, persevere towards those goals and/or focus on alternative methods in order to attain the goals (Luthans, Youssef, & Avolio, 2007a). Such hopeful behaviour could have an impact on the employees work engagement behaviour which would include a willingness to invest effort in their work, persisting in the face of difficulty and dedication to the task. The relationship between optimism and work engagement was correspondingly confirmed by Arakawa and Greenberg (2007) as well as Simons and Buitendach (2013). Optimism can be seen as a goal-based cognitive process that operates when a task or outcome is perceived to have value for the individual (Snyder, 2002). Engaged employees find purpose in their jobs and are proud of the work they do, and hence, optimism would act as a goal-based motivational process in the achievement of their valued goals.

Proposition 20	Followership and its dimensions explain a significant proportion of variance in work engagement.	Accepted

The results indicated that followership is a statistically significant predictor of work engagement. However the value of the beta coefficient ($\beta = 0.02$) suggests that followership only explains a small proportion of the variance in work engagement when controlling for the influence of authentic leadership and PsyCap. Of the dimensions of followership, initiative explained the biggest unique proportion of the variance in work engagement ($\beta = 0.23$). The beta coefficient of initiative is the same as for the PsyCap dimension hope, which indicates that initiative also plays a significant role in explaining work engagement.

Initiative refers to independent actions on the part of the follower which would lead them to engage in extra-role behaviour such as helping colleagues and championing new ideas. Individuals, who display initiative would likely display high levels of zest while working, feel enthusiastic about their jobs and display a willingness to invest effort in their work. These behaviours would imply that these individuals are engaged in their work.

5.2.4.2 The relationship with PsyCap

Proposition 12	There are significant relationships between the respective composite and dimensional scores of authentic leadership and PsyCap.	Accepted
Proposition 21	Authentic leadership dimensions explain a significant proportion of variance in PsyCap and its dimensions.	Accepted

Avolio et al. (2004) suggested that authentic leadership is linked to followers' attitudes and behaviours. Empirical research has confirmed this link and a statistically significant relationships between authentic leadership and PsyCap have been reported (Avolio et al., 2004; Avolio & Luthans, 2006; Caza et al., 2010; Gardner & Schermerhorn, 2004; Ilies et al., 2005; Munyaka, 2012; Woolley et al., 2007). With regard to the sequential relationship between authentic leadership and PsyCap, standardised path coefficient have been reported as 0.67 (Rego et al., 2012) and 0.37 (Amunkete & Rothmann, 2014).

The findings of the present study confirm the reported relationship between authentic leadership and PsyCap. The correlation coefficient (r = 0.34) indicated a statistically significant correlation, albeit a small relationship. The relationships between the dimensions of the variables mostly fell within the low correlation category (r = 0.13 to r = 0.34). Furthermore, the dimensions of authentic leadership explained a combined 11% of the variance in PsyCap. Munyaka (2012) reported that 20.4% of the variance in PsyCap was explained by authentic leadership. Furthermore, the path coefficient of 0.12 between authentic leadership and PsyCap was also found to be statistically significant.

Authentic leadership and the dimensions of PsyCap also demonstrated a positive relationship, whilst transparency and efficacy had the strongest relationship (r = 0.35) of the dimensions. Transparency made the largest unique contribution to efficacy ($\beta = 0.17$). Transparency refers to the leader's openness in sharing of information and self-disclosure. The relational openness of the leader would mean that the leader is a role-model of communication and may also result in the leader providing feedback and encouragement to the follower. These behaviours form part of the developmental sources of self-efficacy as proposed by Bandura (1989). Therefore, it may be concluded that authentic leadership behaviour is related to

PsyCap and that transparency may have particular value in explaining the variance in efficacy. Propositions 12 and 21 were accepted.

5.2.4.3 The relationships with followership

The relationships between authentic leadership and followership and PsyCap and followership will be elaborated upon in the next section.

Proposition 13	There are significant relationships between the respective composite and dimensional scores of authentic leadership and followership.	Rejected

The results of the present study indicated that authentic leadership and followership were not associated at the $p < 0.01$ level. As the sample size of the current study is quite large, correlation coefficients smaller than 0.20 were not considered to have useful statistical or practical significance.

Conceptually it could be expected that there would be a relationship between leadership and followership behaviour. Specifically, authentic leadership emphasises positive and developmental interactions between leaders and followers (Peterson et al., 2012). George (2003) stated that followers who are led by authentic leaders feel more empowered and take greater ownership of their work; both behaviours that are seen as part of exemplary followership. However, authors have suggested that specific leadership styles may be more effective for some followers than others (Conger & Kanungo, 1998; Pillai & Meindl, 1998) and hence, the follower's characteristics would act as a moderator of the influence of the leader. On the other hand, Zhu et al. (2009) found that the perceptions of the qualities, attributes and characteristics of followers by the leader and the follower may have an impact on the effectiveness of leadership.

Conversely, the present study did not find support for Avolio et al.'s (2004) statement that authentic leadership is linked to followers' attitudes and behaviours. There may be various explanations for this finding, which may include the impact of follower characteristics on their perception of authentic leadership (Leroy et al., 2012; Shamir, 2007), the situational

context in which authentic leadership behaviours are displayed (Avolio et al., 2004; Chan, 2005), or the personal and social identification with the leader (Snyder et al., 1991). Furthermore, the absence of a significant association between authentic leadership and followership may also be attributed to the conceptualisation of the followership construct and instrument. Further studies utilising different conceptualisations of followership may need to be conducted to explore this finding.

Proposition 22	Authentic leadership dimensions explain a significant proportion of variance in followership and its dimensions.	Judgement withheld

The result of the regression analysis indicated that transparency of the leader (β = -1.33) explained a significant proportion of the variance in followership as well as the dimensions of followership. Conceptually a possible interpretation of this result could be that a leader in his/her transparency may present a strong opinion and belief system towards a given task. Coupled with feedback from the leader that is in line with this opinion or belief, it may be possible that the employee would not utilise as much initiative as possible in fear of criticism or non-acceptance of the novel idea by the leader. Furthermore, this would discourage the employee from voicing their independent critical thinking and challenging the leader's beliefs or opinions. However, as there is not enough evidence in the literature on the association between authentic leadership and Kelley's (1992) conceptualisation of followership, these conclusions cannot be drawn.

What has, however, become apparent in the present study is that the followership conceptualisation and instrument may not be valid and reliable as a research instrument. Therefore, the notion that transparency may have acted as a suppressor variable in the regression analysis may be a more plausible finding than drawing conceptual interpretations of the results. Consequently, judgement was withheld on Proposition 22.

Proposition 15	There are significant relationships between the respective composite and dimensional scores of PsyCap and followership.	Accepted

Contrary to the relationship between authentic leadership and followership, PsyCap and followership demonstrated a moderate correlation (r = 0.49). The relationship between initiative and PsyCap was also found to be moderate (r = 0.53). Wang et al. (2014) suggested that an employee's psychological strengths may be associated with follower characteristics. However, no previous studies have reported on the relationship between PsyCap and followership and therefore the finding on the present study offers a new contribution to the empiral study of followership.

Proposition 23	PsyCap dimensions explain a significant proportion of variance in followership and its dimensions.	Accepted

PsyCap, as well as all four of the PsyCap variables explain a signficant proportion of the variance in followership. Followers who are high in efficacy may be more confident in independently stepping forward to take initiative and voice their thoughts which may be contrary to the status quo. Furthermore, the goal-directed behaviour that is evident in individuals with high levels of hope and optimism would influence followership behaviours which is seen as an active and participative role.

In contextualising the relationship between PsyCap and followership it is important to keep in mind that the present study was not able to prove the factorial invariance of PsyCap and followership dimensions. It may therefore be that the strong relationship between PsyCap and followership is as a result of the factorial indistinctiveness of the constructs. Further empirical research, both qualitative and quantitative, would need to be conducted to clarify this matter.

5.2.4.4 Mediating relationships between the variables

The analysis of mediating relationships between the variables was carried out by means of a series of regression analyses, as well as the calculation of statistical significance with the Sobel test.

Proposition 24	PsyCap mediates the relationship between authentic leadership and work engagement.	Accepted

The results indicated that PsyCap was a partial mediator of the relationship between authentic leadership and work engagement. This finding is consistent with previous findings of PsyCap as a mediator between authentic leadership and important workplace outcomes (Walumbwa, Luthans, et al., 2011; Wang et al., 2014). Although no other studies have reported on the mediating role of PsyCap between authentic leadership and work engagement, PsyCap has been found to mediate the relationship between authentic leadership and intact work groups' performance, organisational citizenship behaviour (Walumbwa, Luthans, et al., 2011) and performance (Wang et al., 2014). Avey et al. (2008) stated that employees with higher levels of PsyCap tend to proactively facilitate positive changes in the organisation. Therefore, it seems that PsyCap is important in facilitating the impact of a positive organisational context on desired workplace outcomes.

Authentic leadership does have a direct influence on work engagement. However, this influence is increased as a result of the mediating role of PsyCap. In practical terms this means that an individual's perception of the authentic leadership behaviours of their leader will, to some extent, influence their level of work engagement. If this individual would however also have efficacy, hope, optimism and resilience, then they may interpret their leader's behaviour more positively and therefore, have an increased influence of such leadership behaviour on their work engagement. Walumbwa, Wang, et al. (2010) did suggest that follower characteristics may influence the effect of leadership on work engagement. Therefore, PsyCap as a followership characteristic has been found to influence the relationship between authentic leadership and work engagement.

Proposition 25	PsyCap mediates the relationships between authentic leadership and followership.	Rejected

The results of the present study indicated that mediation was not possible as the direct relationship between authentic leadership and followership was not statistically significant. Rather, it is more prudent to then analyse the direct effect of PsyCap on followership. Thus, individuals with high levels of self-efficacy, hope, optimism and resilience may be more confident, goal-directed and spirited in showing initiative in the workplace and using their own mental processing abilities to direct actions towards desired organisational goals.

Wang et al. (2014) proposed that PsyCap may be a substitute for authentic leadership. This would mean that individuals with a high level of positive psychological capacities would not be dependent on the leader's efforts to grow and develop his/her followers, his/her evaluation and processing of information in a balanced manner, and his/her feedback and self-disclosure that is shared in an open manner in order to influence desired workplace outcomes. This argument is however partly plausible for the present study as authentic leadership does still have a direct relationship with PsyCap. Therefore, PsyCap would possibly rather have a supplementary, rather than a substitutive, role to authentic leadership as the leader's influence is enhanced by the employees' PsyCap.

Proposition 26	Followership mediates the relationship between authentic leadership and work engagement.	Rejected

The results indicate that a mediation analysis was also not possible for Proposition 26 as there was not a significant direct relationship between authentic leadership and followership. Although this series of relationships have not been tested before, Zhu et al. (2009) did find that follower characteristics mediated the relationship between transformational leadership and work engagement.

Possible explanation of the results inlude that the follower's identification with the leader as well as their own dispositional style may influence to what extent the follower is open to the influence of the leader. As mentioned earlier, the followership instrument and

conceptualisation may also need to be revised in order to more clearly indicate follower characteristics or follower behaviour in order to clarify the relationship between authentic leadership and followership.

5.2.5 The sequential model of relationships between the variables

The theoretical framework of the relationships between the variables was tested via structural equations modelling.

Proposition 27	A theoretical framework of the relationships between work engagement, PsyCap, followership and authentic leadership can be shown through structural equations modelling to be a well-fitting model.	Accepted

The model, as derived from theory, presented good fit to the data and the path coefficients highlight possible causal relationships between the variables. Due to the cross-sectional nature of the data causality cannot be implied. However, the path coefficients indicate that authentic leadership, PsyCap and followership can be seen as antecedents of work engagement. Furthermore, the interaction of the antecedents also has an indirect effect on the change in work engagement. By implication, individuals who experience the result of authentic leadership behaviour, who are confident, hopeful, and goal-oriented towards a positive future, who show initiative and independent critical thinking abilities will tend to be more vigorous, dedicated and absorbed in their work.

A competing empirical model was also tested with structural equations modelling. The competing model was specified in the same way as the original model built from the theory, however, the path between authentic leadership and followership was deleted. Compared to the original model built from theory, the competing model indicated poorer fit. Therefore, even though the relationship between authentic leadership and followership is spurious, the exclusion thereof does not improve the fit of the model to the data.

No previous studies have confirmed the relationships between the specific combination of variables as tested in the current study. Therefore, the structural model of the relationships between the variables is a new contribution to the literature and may be used to suggest organisational development interventions to improve work engagement.

5.3 LIMITATIONS OF THE PRESENT STUDY

Whilst efforts were made to minimise the limitations of the present study, it is important to acknowledge the possible impact of such limitations on the findings of the study. The limitations of the research design (as discussed in 3.5) include survey completion at one moment in time rather than over an extended period. As the research questionnaire included in excess of 90 items, mono-method response bias may have influenced the participant reactions. However, an effort was made to utilise different technological methods (i.e. drop-down menus, sliders, button clicks, etc.) for the electronic survey to reduce the impact of such bias. The relatively normal distributions of the data and relatively different distribution of the responses obtained to the different questionnaires also suggest that response bias may have been limited.

The respondents answered the questionnaire at one point in time. The cross-sectional nature of the data therefore limited the causal inferences that could be made about the relationships between the variables. For that reason, these relationships remain exploratory and could be studied further with repeated measures or longitudinal research designs. As the psychometric variables in the current study were defined as state-like, rather than trait-like, it is not certain whether the respondent's state would be the same if they answered the questionnaire at a different time of day, or even a different day of the week. Some empirical evidence exists relating to the relative stability of work engagement as measured at daily or weekly intervals (Bakker & Bal, 2010; Xanthopoulou et al., 2009). However, this information is not available for all of the positive variables, and hence, limits the reliability of the findings over time. Utilising a longitudinal and or experimental research design in future studies may help to overcome this limitation.

The present study purposively selected respondents who formed part of the managerial level of the organisation. Therefore, it would not be possible to generalise the results of the study

to the organisation as a whole. Furthermore, the non-probability sampling technique utilised to invite responses to the survey would have an impact on the generalisability of the findings. To this extent, anonymity of the respondents was valued above generalisability. It may be that the individuals who chose not to respond may have different reactions to the items in the survey than those who did respond. As random sampling was not utilised, the possibility of such different reactions remains an unknown factor. However, with a response rate of 76%, it could be concluded that the results of the present study may capture the perception of the majority of the managerial employees in the healthcare industry organisation.

A further limitation of the present study may have been caused by the language of the questionnaire. The research questionnaire was only presented in English. For both the PsyCap and authentic leadership questionnaires, the original authors of the instruments prescribe that changing the wording of items or translating the questionnaire is not allowed (www.mindgarden.com). Therefore, some items such as "when I find myself in a jam at work" was retained in the questionnaire. Harzing (2006) reported that where respondents do not fully understand the language and items in a questionnaire, central tendency in responses might result. Responses to the items may therefore be moderated by language proficiency, rather than being a true reflection of actual perceptions. Based on the differences that were found between language proficiency and levels of PsyCap, it may be prudent to revisit the language of the PsyCap questionnaire for a South African context.

5.4 SUMMARY OF CONTRIBUTIONS

In South African organisations, new ways of thinking and management is needed to assist in creating healthy and productive environments for employees (Du Plessis & Barkhuizen, 2011; Luthans, Van Wyk, & Walumbwa, 2004). Positive organisational behaviour may be a relevant leadership approach and paradigm in order to facilitate the creation of such supportive organisational climates where employees are equipped with psychological strengths and experience vigour, dedication and absorption in their work. The present study was a first attempt to study the relationships between the specific combination of variables, namely authentic leadership, PsyCap, followership and work engagement.

A theoretical model of the relationships between the variables in the present study were constructed and tested. The structural model that was confirmed in the present study offers a contribution to existing theory in the unique combination of variables that were included. Confirming the direct impact of authentic leadership, as well as PsyCap on work engagement adds to the empirical findings on the antecedents of work engagement. Additionally, the mediating impact of PsyCap on the relationship between authentic leadership and work engagement also helps to explain the facilitative role of follower personal resources and psychological capacities that may enhance the impact of leadership on work engagement. As a result, OD interventions relating to training and development, as well as organisational practices and procedures were suggested to enhance the levels of work engagement of employees.

Furthermore, the confirmation of the higher-order factor structure of PsyCap, as well as the portability of the research instruments to a South African context offers opportunities for future research.

The results of the present study indicated that the followership construct and instrument as conceptualised by Kelley (1988, 1992) may not be a fully reliable and valid measure of followership behaviour in the workplace. When the items of the followership instrument were subjected to an informal expert review, the experts perceived that the instruments measured components of initiative, personality factors, pro-activity, critical thinking and other behaviours. However, it is not clear how these components link together to accurately describe followership behaviours in the workplace. In the present study followership behaviour was factorially indiscriminate from PsyCap. Hence, this could mean that followership behaviour could be incorporated as a possible dimension of PsyCap. Therefore, for the further study of followership, it is recommended that significant theory building and conceptualisation of the followership construct needs to take place before meaningful inferences can be made about its relationship with other organisational variables.

Moreover, when considering the suggestion that PsyCap has a greater influence on followership style than leadership, self-leadership may be more accurate in describing the differences in follower behaviour and desired workplace outcomes than leadership. When

viewing this finding through the lens of the JD-R model, the question could be asked whether leadership could be a component of job resources. Job resources would then, in combination with personal resources, assist in explaining the variance in work engagement.

Furthermore, one of the secondary aims of the present study was to provide an understanding of the relationship between authentic leadership and followership behaviours. This relationship has not been explored before and hence, the finding that there is only a slight relationship between these two variables offers opportunities for further research.

5.5 RECOMMENDATIONS FOR IMPLEMENTATION

One of the objectives of the present study was to develop a model of the relationships between the variables in order to inform organisational development practices to improve the level of work engagement in the workplace. These recommendations will be divided into two categories, namely training and development, and organisational policy and practice.

5.5.1 Recommendations for training and development to enhance work engagement

The results of the present study indicate that PsyCap explains the biggest unique proportion of the variance in work engagement when controlling for the influence of the other variables. Therefore, PsyCap training and micro-interventions could impact the level of work engagement in a positive manner.

Drawing from the PsyCap Intervention process (Luthans, Youssef, & Avolio, 2007a), the theory of authentic leadership (Luthans & Avolio, 2003) and the outcomes of authentic leadership (Amunkete & Rothmann, 2014; Avolio et al., 2004), it is proposed that authentic leadership affects psychological capital by displaying behaviour listed in Table 5.1.

Table 5.1 *Development of PsyCap through authentic leadership*

The leader:	Leads to development of:
Emphasises growth of employees.	Self-efficacy
Allows opportunities for experimentation and testing of behaviour.	
Observes exemplary behaviour and employee strengths.	
Gives the employee constructive feedback.	
Intends to grow employees which facilitate employees' creation of pathways towards personal and career growth.	Hope
Is motivated towards self-regulation which promotes follower feedback and inclusion.	
Creates identification with the follower through authentic sharing and self-disclosure.	Optimism
Encourages positive emotions.	
Promotes good interpersonal relationships which serve as social support during challenging times.	Resilience
Tolerates mistakes and encourages learning from mistakes.	
Creates a sense of ownership in the organisation through inclusion and identification with the employee.	

Furthermore, the impact of authentic leadership on work engagement is enhanced by the indirect effect of follower PsyCap. The recommendation would therefore be to focus on PsyCap development of all employees, both through leadership processes (as suggested in Table 5.1) as well as direct PsyCap training and development interventions.

For example, the development of self-efficacy in a new workplace manager can be achieved by gradually increasing the complexity of tasks after the manager has achieved success or mastery in the preceding task, allowing the manager to observe a successful manager in the workplace and engaging in visualising themselves being successful (Maddux, 2002). Furthermore, even if the new manager is building confidence, this could be further internalised by providing positive feedback, recognition and empowerment and a sense of work-life balance (Luthans, Youssef, & Avolio, 2007b).

Development activities such as the Psychological Capital Intervention (Luthans, Youssef, & Avolio, 2007a; Luthans, 2012) could be used as short training sessions. These sessions could be facilitated as group learning processes and experiential exercises. The content would include activities such as goal-setting, generating pathways and options to attain the set goals, considering possible obstacles to attainment of the goal, sharing the goal with other participants and being encouraged through their feedback, and reflection on past successes and stressors to build resilience.

Other activities could include group sessions where a major problem is identified and participants are forced to give only positive answers and solutions to overcome the problem (Luthans, 2012). Furthermore, questions could also be posed to the group through the lens of hope, optimism, efficacy and resilience to assist in finding positive solutions to the problem. For instance, by asking "What positive outcomes could result from this problem?" could be a question to create optimism about the future.

Individual coaching and mentoring would also be a viable method to develop PsyCap (Luthans, Youssef, & Avolio, 2007a). By following a typical coaching model such as GROW (Whitmore, 2009) the components of hope, resilience, optimism and self-efficacy

may be enhanced. GROW is an acronym for the process of setting goals, reality checking, option generation and way forward. An example of coaching questions to develop each of these components is presented in Table 5.1.

Table 5.2 *Coaching questions to develop PsyCap components*

Step in GROW model	Coaching questions	PsyCap dimension influenced
Goal setting	• What do you hope to achieve? • What goal would you like to set for yourself? • Where do you see yourself in the next five years? • What is the next level of success you want to attain? • What current challenge can you see yourself overcoming right now?	Hope
Reality checking	• What is already working for you with regard to your goal? • What is not working for you with regard to your goal? • What previous situations have you successfully faced that you can draw from for your situation? • What is the worst thing that could happen with regard to your goal?	Resilience
Option generation	• What are the 3-5 best options to achieve your goal? • If a trusted mentor / friend could give you advice, what do you think he/she would say?	Optimism

(table continues)

(Table 5.2 continues)

Way forward	• What actions / steps can you take to achieve your goal? • What actions /steps will you take? • Who/what would you need as support to achieve your goal? • Who can you contract with to keep you accountable and provide feedback on your actions?	Efficacy

Interventions to enhance work engagement levels in the organisation could also be focused on enhancing vigour, dedication and absorption directly. Bakker's (2009) 'Engagement Monitor' is one such example where employees would receive personal feedback and benchmarking of their engagement scores. Areas of low levels of engagement that are identified through this process can then be addressed in individual coaching sessions with the employee. Schaufeli and Salanova (2007b) furthermore suggest training programmes in organisational health and individual wellbeing as methods to enhance work engagement levels in the workplace.

5.5.2 Recommendations for organisational policies and practice to enhance work engagement

A sustained organisational effort is needed to promote work engagement (Bakker et al., 2011; Tims et al., 2011). These efforts include leadership practices and individual interventions, such as building personal resources and PsyCap (Bakker et al., 2011). However, there are also implications for job design, psychological contracts and the management of job demands that would play a role in employee work engagement.

First, efforts could be made to enhance the person-job fit (Schaufeli & Salanova, 2007b). Job crafting, which is a movement that acknowledges an employee's own agency in shaping their work (Wrzesniewski & Dutton, 2001) may be one option for increasing the person-job fit. Job crafting changes an individual's perception of the meaning of their work as they are able

to change job tasks or relationships in ways that provide a new view on the purpose and experience of the work. As an example, The Center for Positive Organizations (http://positiveorgs.bus.umich.edu) has developed the Job Crafting Exercise™ to facilitate the process on an individual level. Leana, Appelbaum, and Shecvhuk (2009) furthermore introduced "collaborative crafting" as a group collective effort to craft more engaging jobs.

Second, managers would need to receive training on creating psychological contracts with employees that link the employees' personal goals to organisational resources (Schaufeli & Salanova, 2007b). Additionally, managers would also need to be trained in coaching and referral skills to be able to intervene in areas of low levels of work engagement.

Third, a positive moral climate is required within the workforce (Taghipour & Dezfuli, 2013). Regular feedback should be obtained from employees to gauge the impact of job demands on important work outcomes as well as on individual wellbeing (Schaufeli & Salanova, 2007b). A supportive organisational climate will also create the context for effective authentic leadership (Avolio et al., 2004; Gardner et al., 2005) which in turn, may lead to enhanced effect of leadership on work engagement directly, or through the indirect effect of PsyCap. Such an organisational climate, where opportunities are created for interdependence and partnership between leaders and followers, may also enhance the exemplary followership behaviour of employees (Kelley, 1991; Lundin & Lancaster, 1990).

5.6 RECOMMENDATIONS FOR FURTHER RESEARCH

During the present study, the portability of the measuring instruments for work engagement, PsyCap followership and authentic leadership to a South African context was explored. The findings suggest that further research is needed to conceptualise and clarify the followership instrument. Furthermore, the conceptualisation of exemplary followership may not be generalizable across industries, different organisations or different cultural contexts. In its current conceptualisation, the followership instrument seems to have low face validity and construct validity. It is suggested that future research adopt an exploratory approach to understand the dimensions of exemplary followership behaviour and whether these dimensions can be generalised across different cultural and organisational contexts.

The language of the PsyCap instrument may also need to be revisited in future research and validation of the instrument. In the present study, a difference – with large practical significance – was found between the PsyCap levels of respondents who speak English as their first language and those who do not. Further research would be needed to determine whether the language of the questionnaire may be a methodological constraint.

The discussion of the relationships between the psychometric and socio-demographic variables has shed light on the impact of context on the variables. It is therefore suggested that future research should take the role of cultural values into account. Cultural values have an effect on the followers' perspective of authority relations, specifically relating to the degree of dependency and obedience that the leader expects from the followers (Hofstede, 1984). Culture in organisations and in terms of organisational success has become a subject of interest in contemporary business as economic change necessitates global business interactions (Furmańczyk, 2010). Muethel and Hoegl (2010) stated that a strong learning culture is possible where the leaders and followers have shared power in the organisation. In these cultures, the cultural values support the empowerment of followers. In view of the fact that authentic leadership values the empowerment of followers, the cultural context in which such leadership is displayed may explain the variance in perceptions of authentic leadership.

With regard to methodological choices for future research, it is suggested that longitudinal studies are done to determine the relationships between the POB variables over time. One of the characteristics of PsyCap and work engagement is that it is state-like in nature. Both variables have been shown to be stable over a period of time. However, further research is needed to determine whether there is also stability in the relationships between the variables over time.

Furthermore, hierarchical levels of analysis can also be utilised. This could include studying the leadership impact on work engagement by utilising nested models that would measure the impact of a specific leader's behaviour on the work engagement of employees. Moreover, studying the psychometric variables at the group and organisational level can also offer valuable insights to understanding positive employee behaviour in the workplace. For

instance, it is suggested that a team work engagement measure (Costa, Passos, & Bakker, 2014) is used to supplement the analysis of individual work engagement.

Finally, an intervention to develop authentic leadership, PsyCap, followership and work engagement levels within the organisation should be tested. An experimental design, with pre and post intervention assessments, may shed light on the effectiveness of such interventions in the workplace.

5.7 CONCLUSION

Empirical evidence has suggested that, when positive factors are given more attention than negative factors, individuals and organisations tend to flourish (Cameron & Spreitzer, 2012). Furthermore, academics, corporate leaders and organisational practitioners all agree that engaged employees are needed now more than ever before. Work engagement is therefore seen as a promising strategy to increase retention, decrease absenteeism and improve productivity.

In the present study, authentic leadership, PsyCap and followership were found to be antecedents of work engagement. These constructs share a positive lens when thinking about the future and taking action towards positive change. This lens would put strengths, capabilities and opportunities as a focal point, and weaknesses, problems or threats to the background (Cameron & Spreitzer, 2012). Such an affirmative bias may lead to improved resourcefulness of employees, greater psychological and physiological wellbeing as well as improved engagement in work.

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