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Psychological capital and work-related attitudes: the moderating role of a supportive organisational climate

Vandana Naran

A research project submitted in partial fulfilment of the requirements for the degree of MA by coursework and Research Report in the field of Industrial Psychology in the Faculty of Humanities, University of the Witwatersrand, Johannesburg.

March 2013

Declaration

I declare that this research report is my own, unaided work. It has not been submitted before for any other degree or examination at this or any other university.

Vandana Naran

Date

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Abstract

This study aimed to investigate the relationship between psychological capital and the work-related attitudes of job satisfaction and organisational commitment recognising the hierarchical nature of the data. This relationship was examined in light of a supportive organisational climate as defined by supervisor support which played the role of a moderator in this relationship. Data was gathered using a number of structured questionnaires which were distributed to employees via an online link. The Psychological Capital Questionnaire (Luthans, Youssef & Avolio, 2007), Organisational Commitment Questionnaire (Mowday, Steers & Porter, 1982), Warr, Cook and Wall's (1979) measure of job satisfaction and Eisenberger's (1986) adapted measure of supervisor support were administered. A total of 14 departments participated in the study and 50 employees completed the questionnaires. A Hierarchical Linear Model analysis (HLM) was used to analyse the data along with Pearson product moment correlations and a two-way ANOVA. Results indicated that psychological capital was related moderately and positively to job satisfaction but was not related to organisational commitment. Supervisor support was related to both job satisfaction and organisational commitment. Finally supervisor support moderated the relationship between psychological capital and job satisfaction but no interaction was found for the relationship between psychological capital and organisational commitment as moderated by supervisor support. This paper concludes with a discussion of the results, implications of the findings, limitations and directions for future research.

Keywords: Psychological capital, supervisor support, supportive organisational climate, job satisfaction, organisational commitment, hierarchical linear model

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Chapter 1: Introduction

A number of theorists have argued that research in psychology has focused extensively on the negative aspects of human functioning such as mental illness and distress (Luthans, 2002; Gable & Haidt, 2005). Particularly, within organisations, a similar trend has occurred, where research has focused on negative aspects of organisational functioning such as resistance to change, burnout, stress, conflict between employee and manager and the like (Luthans, 2002). However, emerging research in the field of positive psychology has focused largely on developing the strengths and virtues of individuals rather than dwelling on and repairing their weaknesses (Luthans, 2002).

Luthans (2002) thus argues that a more positive approach is needed in the workplace in order to help both employers and employees deal with the turbulence, uncertainty and challenges that characterise the world today. As a result, a lens or framework through which positive psychology can be extended into the workplace has been developed. This lens is known as Positive Organisational Behaviour (POB). Within this framework Luthans and colleagues define a core construct, known as Psychological Capital (PsyCap) which can be defined as an individual's positive state of development characterized by hope, confidence, optimism and resilience (Luthans, Luthans & Luthans, 2004). PsyCap has been found to be related to two widely researched employee attitudes in organisational research, namely job satisfaction and organisational commitment. Preliminary research has found that individuals who have higher levels of psychological capital are more satisfied and committed to their jobs (Larson & Luthans, 2006; Luthans, Norman, Avolio & Avey, 2008; Luthans, Avolio, Avey & Norman, 2007). However research on the relationship between PsyCap and job satisfaction and organisational commitment is inadequate.

Job satisfaction and commitment are said to be antecedents for a wide range of desirable organisational outcomes such as performance and absenteeism as well as turnover intentions (Chugtai & Zafar, 2006; Cohrs, Abele & Dette, 2006). Castro and Martins (2010) argue that organisations need to make sure that employees who contribute to the organisation's functioning will desire to remain with the organisation and continue to work to their full potential to benefit the organisation. As a result, employers need to consider the organisational benefits of having hopeful, confident, optimistic, resilient, satisfied and committed employees.

However, it is not enough to just examine individual levels of PsyCap or the role of PsyCap in determining employee attitudes such as job satisfaction and commitment. Luthans (2002) therefore argues that future research needs to be devoted to the identification of moderating variables in the PsyCap-outcome relationships. Prior studies have focused on the mediating role of PsyCap in a supportive organizational climate-employee performance relationship (Luthans, Norman, Avolio & Avey, 2008), service climate as a moderator between PsyCap and employee performance (Walumbwa &Peterson, 2010), and organisational identity as a moderator between PsyCap and employee and organisational citizenship behaviours (Norman, Avey, Nimnicht & Pigeon, 2010). Through this mini literature review it is evident that research conducted on moderated relationships has focused primarily on performance as an outcome variable. Studies on the relationship between PsyCap and job satisfaction and commitment in particular have not been examined in light of moderating variables.

That being said, organisations need to ensure that they provide sufficient support by considering their employees' well-being and valuing their contributions in order to ensure that their employees are satisfied and committed. In other words, organisations that create climates that their employees perceive as being compassionate and supportive, "are seen as a key source of competitive advantage" (Brown & Leigh, 1996 as cited in Castro & Martins, 2010, p.1). This is essential if organisations in South Africa want to remain relevant or to retain staff.

Because psychological capital is a new and emerging field very little research has been conducted around the topic and most existing research is preliminary and has been conducted by Luthans on more or less the same types of samples. As a result very little is known about PsyCap outside of the United States. Only two studies were conducted in China (Luthans, Avey, Clapp-Smith & Li, 2008; Luthans, Avolio, Walumbwa & Li, 2005) and two were reported to have been conducted in the South African context. Of the studies that were conducted in the South African context one was a study on psychological capital as a requisite for organisational performance in South Africa (duPlessis and Barkhuizen, 2012) while the other was a disseration titled *The relationship between intention to quit, psychological capital and job satisfaction in the tourism industry in the Western Cape* (Appollis, 2010). The current study aimed to add to a growing body of research on PsyCap in the South African context by examining how applicable the construct is for South African employees and organisations.

This study therefore aims to examine the moderating role of a perceived supportive climate, as defined by supervisor support, on the PsyCap-job satisfaction/commitment relationships while simultaneously recognising the hierarchical nature of the data. Individuals are nested within departments or organisational units. PsyCap, job satisfaction and organisational commitment apply to individuals rather than departmental units, whereas supervisor support is conceptualised in this study as a departmental level variable. This study has thus employed a hierarchical linear model in order to analyse the realtionship between the variables under investigation at both the unit and individual levels. A hierarchical linear model is appropriate when data is analysed in organisations as it explicitly models the hierarchical structure of data in organisations (Bryk & Raudenbush, 2002).

The South African Context

In addition to the theoretical and methodlogical contributions, this study is particularly unique to the South African context. Post-apartheid South Africa and particularly South African organisations are faced with a multitude of challenges, from managing workplace diversity, to developing skills and competencies while at the same time trying to remain relevant and competitive. Studies on psychological capital within the South African context have been limited and are necessary to ensure that employees have the necessary psychological resources to cope with the turbulent and ever changing environment within which they find themselves. As previously mentioned, the current study was situated in the South African context and aims to add to the limited number of studies conducted around psychological capital in the workplace.

Chapter 2: Literature Review

Human and Social Capital: A Broader Framework

Organisations are constantly finding themselves in the midst of an ever changing, competitive business environment. In order for organisations to remain relevant, leaders need to ensure that key resources need to be effectively managed for organisations to achieve a competitive advantage (Hitt & Duane, 2002). Traditionally, these resources have often taken the form of economic capital which has been defined in terms of both "financial and tangible assets such as plant and equipment" (Luthans, Luthans & Luthans, 2004). The term 'capital' has stemmed from economics and refers to those resources which are extracted from consumption and are subsequently "invested for future anticipated returns" (Luthans et al., 2004, p.45).

However, management has recognised the need for a focus on more intangible assets or what has been termed human capital. Human capital refers to an individual's knowledge, skills, experience and education (Hitt & Duane, 2002). It involves selecting the right individuals to help the organisation reach its full potential, through training programmes for developing individual skills and knowledge within the organisation (Larson & Luthans, 2006). Retaining human capital has been found to have positive implications for an organisation's competitive advantage (Luthans et al., 2004). Human capital has thus been argued to be an organisations most unique resource that often sets it apart from its competitors (Hitt & Duane, 2002).

Organisations, however, have moved beyond valuing and managing employee strengths by solely and simply investing in economic and human capital. Larson and Luthans (2006) argue that investing in physical and tangible assets such as machine, equipment and finances (economic capital) as well developing intangible assets such as knowledge, skills and experience (human capital) may not be the sole contributors to a firm's competitive advantage and to valuing human resources. As a result, they suggest that social capital can be considered vital in enhancing both economic and human capital. Social capital can be defined as "the value of relationships between people and the value of different networks which individuals are included in and develop over time" (Larson & Luthans, 2006, p.47). Like human capital, social capital has been found to have positive implications for a firm's competitive advantage and has formed part of an organisations strategy to achieve this (Arregle, Hitt, Sirmon & Very, 2007).

Social capital creates a context for human capital to flourish, as it involves the interaction of individuals to complete a task or solve a problem (Larson & Luthans, 2006). It is a resource that can be used inside and outside the organisation (Luthans et al., 2004). Inside the organisation, social capital is defined in terms of the relationships that exist between employees and often has positive implications for creativity and knowledge creation (Hitt & Duane, 2002; Arregle et al., 2007). Outside the organisation, however, social capital is defined in terms of those relationships which organisations have with individuals who assist in furthering the organisation's interests, thus improving the formation of strong alliances between organisations (Hitt & Duane, 2002; Arregle et al., 2007). Without social capital, organisations would diminish as individuals often rely on one another, both directly and indirectly to complete work (Larson & Luthans, 2006).

However, Luthans et al. (2004, p.49) argue that "who I am (positive psychological capital)" is just as important as what I have, "what I know" and who I know." As a result, the notion of psychological capital has emerged as an extension to economic, human and social capital and is becoming a widely recognised way to embrace, manage and develop human resources in organisations (Larson & Luthans, 2006). It is essential to note that the concept of psychological capital has been rooted extensively in theory on positive psychology and positive organisational behaviour which has formed part of the major theoretical framework for this particular study.

Positive Psychology: An Appraisal

For most of the 20th century, it has been argued that psychological research has focused primarily on the negative aspects of human functioning which take the form of depression, racism and irrationality, human dysfunction and mental illness (Gable & Haidt, 2005; Seligman & Csikszenthmihaly 2000). As a result, a focus on the positive aspects and strengths of an individual has been largely neglected. The emergence of the field of positive psychology has thus been widely recognised for acknowledging the importance of optimising and positively enhancing human strengths and qualities in both individuals and groups.

Positive psychology can therefore be defined as the study of human strengths and virtues (Money, Hillenbrand & da Camara, 2008). It is the scientific "study of the conditions and processes that contribute to the flourishing or optimal functioning of people, groups, and

institutions" (Gable & Haidt, 2005, p.104). The aim of positive psychologists was to move away from focusing solely on repairing faults to developing, optimising and nurturing the strengths, positive qualities and abilities at the subjective, individual and group levels (Seligman & Csikszentmihaly 2000).

At the subjective experience level, positive psychology has been concerned primarily with well-being and satisfaction, in the past, happiness and joy in the present and hope, confidence and faith for the future (Seligman, 2002). At the individual level this involves building on positive traits such as interpersonal skill, originality, spirituality and wisdom (Luthans, 2002). At the group level, however, it is concerned with those institutions that help individuals move towards being responsible, encouraging, altruistic and civil as well as tolerant (Luthans, 2002).

The positive psychology movement grew largely as a result of a perceived imbalance in the field of clinical psychology where research has focused primarily on psychological illnesses and disorders rather than positive aspects of human functioning (Gable & Haidt, 2005). This imbalance, however, is not be made explicit by researchers in other fields of psychology but should nevertheless be highlighted in a number of disciplines as reviewed by Gable and Haidt (2005). For example, they argue that in the field of social psychology, research has focused on discrimination, prejudice and the adverse impacts of low levels of self-esteem (Gable & Haidt, 2005). Cognitive psychology has looked at the biases and errors that cloud our judgments while health psychology has looked at the environmental factors that affect an individual's physiological development (Gable & Haidt, 2005).

Although there has been evidence of an imbalance where research in psychology has focused insufficiently on the positive aspects of human functioning, positive psychologists do not deny the existence of negative aspects of human functioning. Rather, they aim to examine the entire spectrum of human functioning by looking at both the positive and the negative aspects such as illness, dysfunction, well-being and fulfillment (Linley, Joseph, Harrington & Wood, 2006).

Seligman, who is the pioneer of positive psychology, thus argues for a new conceptualization of the concept by focusing on factors which buffer against pathologies which he defined as "positive human traits" (Seligman, 2002, p.5). Seligman's views, thus, aim to challenge the

excessive focus on the negative aspects of human functioning by creating a platform upon which psychology can embrace positivity and positive aspects of human functioning. This proposition is once again based on the assumption that psychology has focused primarily on the negative rather than positive aspects of human functioning.

It is important to note however, that prior to Seligman's conceptualisation of positive psychology there have been extensive references to the term [positive psychology] in both psychology and philosophy. This position of novelty, which Seligman embraces, has been critiqued by a number of theorists who argue that the positive psychology is not a new concept. For example, humanistic psychology and notions around meaningfulness, motivation, positivity, and human experience have stemmed from the philosophical underpinnings of existentialism which is based in methods of phenomenology.

Phenomenology initially involved the study of consciousness-the relationship between objective reality and that which the individual experiences in thought (Misiak & Sexton, 1973). The philosophical theory later extended into the realm of psychology and was concerned with a qualitative exploration of mans experiences in relation to others, the world and to himself (Misiak & Sexton, 1973). Existentialism is a philosophical theory that draws from phenomenology and studies the individual in the "concrete actuality of his existence" while stressing the importance of man, who is in a constant state of evolution (Clemence, 1966, p.502). Existentialism therefore argues that scientific thinking is not sufficient for understanding human existence (Clemence, 1966).

Humanistic psychology has thus drawn from these two philosophical theories and stresses that the study of human nature should be more than the reductionist view adopted by behaviourism (that human behaviour could be learned) and psychoanalysis (that human behaviour is controlled by a series of unconscious forces) (Misiak & Sexton, 1973). Psychologists who supported these humanistic views of studying man believe that the existence of man and man's nature should be the focus of study. Humanistic theorists who support existentialist and phenomenological philosophies believe that the quest for meaning and life's purpose has become the "major motivation in human functioning" (Maddi, 2004, p.280). It is evident that implicit reference to positive psychology or the study of man and man's experiences has been derived from the philosophical foundations of existentialism and phenomenology, further illustrating that positive psychology is argued to be "old wine…packaged in new bottles" (Robbins, 2008, p.100).

Further examples of critiques of Seligman's position of novelty can be seen in research conducted by Linely et al. (2006). Linely et al. (2006) for example, state that positive psychology has paved its way throughout the field of psychology but has passed as unfamiliar and uncelebrated. For instance, reference to positive psychology has been made in humanistic approaches to psychology such as Maslow's theories on happiness, motivation and self-actualisation. Maslow, (1954, p. 354 as cited in Linley et al., 2006, p.5) has noted that

> "The science of psychology has been far more successful on the negative than on the positive side. It has revealed to us much about man's shortcomings, his illness, his sins, but little about his potentialities, his virtues, his achievable aspirations, or his full psychological height. It is as if psychology has voluntarily restricted itself to only half its rightful jurisdiction, and that, the darker, meaner half"

With this in mind, Robbins (2008) argues that both positive psychology and humanistic psychology share common ground through their view of "the good life," their critique of the medical model of disease and illness and their study of positive human qualities such as hope, wisdom and authenticity (Robbins, 2008, p.102).

Within the field of health psychology Aaron Antonovsky (1979) aimed to move psychology's focus away from pathologies and mental illnesses. Antonovsky (1979) argues that medical research has been dominated by studies on pathologies and pathogenesis; the origins of disease. Research conducted by Antonovsky (1979, p.36) aimed to understand why some individuals go through life, experiencing less pain and suffering than others. The heart of Antonovsky's research centred around those factors that promote human health and well-being rather than illness and disease. He argued that health movement lies on a continuum from "total ill-health (dis-ease) and total health (ease)" (Lindstrom & Eriksson, 2005, p.440). Along this continuum, Antonovsky (1979) aimed to examine which factors compelled an individual toward either end of the continuum.

The term salutogenesis was thus proposed to"describe processes and experiences that subserve positive physical and mental health outcomes" (Cowen & Kilmer, 2002, p.452). Antonovsky argues that an individual's sense of coherence is reflective of their health (Golembiewski, 2012). In other words, sense of coherence is an important factor that aids in promoting health.

Sense of coherence is comprised of three important facets, namely comprehensibility, manageability and meaningfulness (Cilliers & Kossuth, 2002; Golembiewski, 2012). Comprehensibility refers to the extent to which the individual perceives stimuli in a given environment to be consistent, predictable and understandable (Golembiewski, 2012). Manageability refers to the extent to which individuals perceive resources to be easily available to them when confronting a demanding stimulus (Cilliers & Kossuth, 2002). Lastly, meaningfulness is the motivational element of sense of coherence and refers to the extent to which an individual perceives the demands and problems which they face as challenges rather than problems (Cilliers & Kossuth, 2002). Meaning creates a sense of hope in the individual that they will be able to overcome the most trying cirsumstances and situations (Golembiewski, 2012). More recently, Antonovsky proposed that self-efficacy and locus of control were also important factors contributing to salutogenic functioning (Cooper & Payne, 1991 as cited in Cilliers & Kossuth, 2002).

Similarly, the concept of hardiness emerged as an "existential theory of personality" (Soderstrom, Dolbier, Leiferman & Steinhardt, 2000, p.312). Hardiness is a concept which was proposed by Kobasa (1979 as cited in Maddi & Khoshaba, 1994, p.265) and refers to an individual's internal perception of commitment, control and challenge that helps them to cope with stressful situations. Individuals who have a strong sense of commitment are able to meaningfully transform situations which they experience as being stressful (Maddi & Khoshaba, 1994). Those who are strong in control believe that they have the conviction to change their situation and influence events around them (Maddi & Khoshaba, 1994). Lastly, individuals who are strong in challenge believe that growth occurs through learning from experience (Maddi & Khoshaba).

Several studies have found hardiness to be negatively related to self-reported mental health factors such as depression and anxiety while in other studies, hardiness was found to act as a buffer between stress and illness (Maddi & Khoshaba). Soderstrom et al. (2000) argue that hardy individuals have an internal sense of mastery and believe that they are able to find and implement solutions to their problems rather than lacking in self-confidence or feeling helpless. As a result individuals high on hardiness engage in more health promoting behaviours than individuals low on hardiness (Soderstrom et al., 2000). This personality characteristic shares similarities with Antonovsky's construct, sense of coherence.

In addition to the research conducted on positive psychology internationally, it is important to acknowledge that there has been a significant body of research on the topic in the South African context as well. The prime proponent of this avenue of research has been D.J Strmpfer who extended Antonovsky's conceptualistion of the term salutogenesis and laid claim to the term fortigenesis. The term fortigenesis is derived from the latin word fortis which means strong (Strumpfer, 2006). Fortigenesis then, refers to the study of the origins of psychological strength (Strumpfer, 1995). This particularly refers to why and how some individuals find strength to overcome difficult circumstances while others do not (Strumpfer, 1995). Strumpfer identifies a number of concepts that act as metaphors for strength and includes concepts such as hardiness (Kobasa, 1979), Stamina (Thomas,198; Colerick, 1985), potency (Ben-Sira, 1985) as well as self-efficacy (Bandura, 1989) (as cited in Strumpfer, 1995).

As previously stated Antonovsky's research was primarliy concerned with the origins of health and on those factors that promote health through a salutogenic paradigm. Strumpher, however, argued that Antonovsky struggled with a much broader problem, "namely the sources of strength in general" (Strumpfer, 1995, p.81). Antonovsky made explicit in a number of works, the importance of strengths and grappled with the question: "whence the strength" (Strumpfer, 1995, p.81).

Although the main focus of Antonovsky's work was around health, research conducted by Antonovsky and colleagues focused a great deal on how strength in the form of coping and generalised resistance resources (GRR's), impacted on ease/dis-ease variables such as disability and retirement (Pretorius, 2004). GRR's are described as any "characteristic of the person, the group, the subculture or society that facilitates avoiding, or combating of a wide variety of stressors" (Strumpfer, 1995, p.81). These include for example, material GRR's such as money and shelter, cognitive GRR's such as knowledge and intelligence, as well as GRR's in the form of social support and macrosociocultural support such as religion (Strumpfer, 1995). As a result, Strumpfer (2006) argued that the term fortegenesis is more descriptive of Antonovsky's work than salutogenesis because the content of Antonovsky's work was more indicative of strength than health.

Drawing from Strumpfer's works Wissing and van Eeden (1997) recently introduced psychofortology as a new sub-discipline which studies not only the origins of psychological well-being but the "nature, manifestations, and consequently ways to enhance psychological well-being and develop human capacities" (Strumpfer, 2006, p.13) They derived the term fortology from Strumpfer's conceptualisation of the term fortigenesis. Given the fact that fortology refers to the study of the origins of strengths the concept appears to form part of Seligman's positive psychology framework which deals with the classification and study of human strength itself (Strumpfer, 2006). However, it is important to note that fortology has not been limited to the discipline of psychology alone. The importance of strength has made strides in other disciplines such as social work, nursing and architecture. Unlike positive psychology, fortology is mentioned and studied across disciplines. This is much needed in the field of social sciences.

The examples mentioned above thus refute and challenge Seligman's position that positive psychology is in fact a new and emerging field of study. Antonovsky's term was said to be a precursor to modern day psychology's reference to positive psychology and Maslow made further reference to the term 'positive psychology' for the title of a chapter in the 1950's (Froh, 2004; Cowen & Kilmer,2002).

Although Seligman has been a prime proponent in the conceptualisation of positive psychology, reflecting on and understanding its origins is crucial for being critical of the fact that positive psychology is in fact not a new concept. Seligman has been heavily criticised for not giving humanistic psychology credit for laying the foundation for positive psychology. He does, however, acknowledge that positive psychology has paved its way throughout the study of psychology and has recognized humanistic psychology as the pioneer of positive psychology (Robbins, 2008; Taylor, 2001). However, Seligman argues that research in this field has failed to "attract a cumulative and empirical body of research to ground their ideas" (Seligman, 2000, p.7). His stance has some merit as positive psychologists have distanced themselves from humanistic psychology particularly because they believe its methodology lacks scientific vigour (Seligman, 2000; Froh, 2004). For example, humanistic psychologists adopt more qualitative and phenomenological methods of analysing human experience, while positive psychologists adopt quantitative methods (Froh, 2004). As a result, Froh (2004) suggests that humanistic and positive psychology should join forces in order to create a more meaningful and powerful psychology.

Despite its absence in fields such as social and personality psychology, it is increasingly evident that positive psychology has also recently extended into the realm of organisational psychology and has been used as a basis upon which Luthans and colleagues forge the notion of Positive Organisational Behaviour (Money et al., 2008).

The Emergence of Positive Organisational Behaviour (POB)

Luthans extends the argument of Seligman and other theorists mentioned above into the realm of organisational psychology. He argues that research in the workplace has focused primarily on the negative aspects of individual and group behaviour (Luthans, 2002). For example, Luthans states that a wide array of research has disproportionately concentrated on negative constructs such as resistance to change, negative affectivity, burnout and problems between managers and employees as opposed to individual strengths and virtues, such as positive affectivity and eustress which can be used to optimise and improve performance and productivity (Luthans, 2002). Considering today's turbulent environment, increasing political unrest and the changing nature of work, the likelihood and prevalence of stress and disease is great (Luthans, 2002). Luthans therefore suggests that the enforcement of more positive approaches to work and work behaviour is necessary in order to help organisations flourish and remain relevant.

It is important to note however, that the critiques of Seligman (that positive psychology is new) also applies to Luthans. There have been a number of studies that have looked at positive psychology in organisations prior to Luthans both internationally and in the South African context. For example, the concepts of sense of coherence, self-efficacy and resilience have been studied extensively in the South African workplace. This can be seen in the work of Cilliers (2011), Bezuidenhout & Cilliers (2010), Coetzee, Viviers and Visser (2006) Muller and Rothmann (2009), Rothmann, Jackson and Kruger (2003), Nel, Crafford and Roodt (2004), van der Colff and Rothmann (2009), Shein, Crous and Schepers (2010), Urban (2006). Internationally, for example, hope, resilience and self-efficacy has been studied extensively in the workplace as seen in the work of Adams, Snyder, Rand, King, Sigman and Pulvers (2002 as cited in Luthans, Avolio, Avey and Norman, 2007), Coutu (2002), Harland, Harrison, Jones, & Reiter-Palmon (2005), Waite & Richardson, (2004), and Zunz, (1998) as well as Medlin and Green (2009) and Jackson, Firtko and Edenborough (2007). A meta-analysis conducted by Stajkovic and Luthans (1998) also investigated a number of studies that were conducted around self-efficacy and work-related performance.

Although research on psychological capital, outlined in the section Psychological Capital, is a relatively new and emerging field of study both internationally and in the South African context, there is substantial evidence of the study of positive psychology in the workplace prior to Luthans in both contexts. Luthans does to some extent acknowledge that the capacities which are included in the Positive Organisational Behaviour (POB) framework already exist and have been research extensively. This will be made evident in the section on Psychological Capital. Furthermore, Luthans like Seligman did not claim to have discovered a new avenue for research by emphasising the positive over the negative in the workplace. Rather, as will be described below, the establishment of the framework of POB has emphasised the need for more "focused theory building, research, and effective application of positive traits, states, and behaviors of employees in organizations" (Bakker & Schaufeli, 2008, p.148).

Luthans, the pioneer of 'Positive Organisational Behaviour' (POB), defined the framework as "the study and application of "positive human capacities and strengths that can be "measured, developed and managed" in order to have an impact on some work related outcome such as performance (Luthans & Church, 2002, p.59). Luthans (2002) developed specific inclusion criteria in order to distinguish POB from other popular psychology approaches and particularly for including those positive human capacities that meet the definition of POB. These capacities have to be measurable and grounded in theory, state-like and have to have a unique, positive impact on outcomes such as performance and satisfaction (Luthans et al., 2007)

One of Luthan's criterions is that the capacities included within the framework of POB should be measureable and grounded in theory. This criterion ensures that POB is measured scientifically and thus distinguishes it from other forms of positive approaches such as self-help books (Youssef & Luthans, 2007).

Luthans (2002) also proposes that the capacities to be included in POB should be state-like and hence open to development. Luthans (2002) argues that many positive approaches focus on characteristics that are trait-like, dispositional states. In their study on the impact of hope, optimism and resilience on desired work-place outcomes, Youssef and Luthans (2007) distinguish between trait and state-like dispositions on a continuum. Trait-like dispositions represent the one extreme of the continuum and are primarily defined in terms of relatively stable characteristics that develop over long periods of time i.e. across an individual's life-

span (Youssef & Luthans, 2007). They are extremely difficult to change and consist of traits such as those of the Big Five, which include neuroticism, openness, agreeableness, extraversion and conscientiousness. Traits such as intelligence and talents also fall along this end of the continuum and are relatively "hard-wired" (Youssef & Luthans, 2007, p.776).

States on the other hand have traditionally been defined as temporary and very erratic and include facets such as moods and positive emotions which change erratically (Luthans et al., 2007, p.776). These exist on the other extreme of the trait-state continuum. However, Luthans and colleagues have used the term 'state-like' to distinguish the positive capacities that fall under the POB framework from merely positive states such as moods and positive emotions mentioned above (Luthans et al., 2007). Thus the 'state-like' capacities included in the POB framework, are not as hard-wired as traits, and are more malleable thus making them more open to change (Luthans et al., 2007). However, the state-like capacities are more stable than pure states which are momentary and erratic (Luthans et al., 2007). Given the developable and changeable nature of state-like capacities, it has been argued that state-like dispositions could potentially have greater practical implications specifically in terms of intervention implementation in the workplace (Luthans et al., 2007).

Luthan's final criterion is to ensure that the capacities included within the POB framework must have a performance or some workplace outcome or impact. This will be discussed subsequently in relation to the work attitudes of job satisfaction and commitment which has been the focus of this study.

POB is the overarching framework for understanding positivity and positive behaviour in the workplace. It is a framework that includes building on aspects such as organisational justice and justice perceptions, organisational commitment and job satisfaction as well as organisational citizenship behaviours among others (Youssef & Luthans, 2007). The negative aspects of individual functioning such as resistance to change and burnout, as mentioned above, can and will have detrimental effects for both the individual and the organisation. If the positive aspects of individual functioning are enhanced and developed, as stated in the definition, then the positive implications for both the individual and organisation will be numerous.

Psychological Capital

Luthans and colleagues have explored a number of capacities which could potentially meet the POB criteria of being grounded in theory, scientifically measureable, having a state-like disposition and having a performance improvement impact. The capacities of subjective well-being and happiness were initially included in Luthan's earlier version of POB (Luthans, 2002). However, Luthans aimed at including capacities that were relatively unique to the field of Organisational Behaviour (OB) (Luthans, 2002). As a result, only four capacities have been considered unique to the field of OB and were successful in meeting the POB criteria namely hope, confidence, optimism and resilience. When measured together these four capacities make up the core construct of Psychological Capital (PsyCap). Luthans draws on the work of a number of theorists in order to define these capacities and conceptualise the construct of PsyCap. This section briefly describes each of these constructs and the core construct of PsyCap. The implications these may have for the outcomes of job satisfaction and commitment have also been discussed.

Hope.

Hope has been extensively researched by Synder and colleagues (1991as cited in Helland & Winston, 2005). They define hope as a "positive motivational state" that is comprised of agency (will power), pathway (way power) and goal components (Helland & Winston, 2005, p.42). The agency component involves having the motivation or will power to reach the desired goal (Helland & Winston, 2005). The pathway component on the other hand does not only involve the identification of goals and their respective sub-goals but also recognizes alternative pathways to reach those goals (Helland & Winston, 2005). Helland and Winston (2005) state that during times of hardship and difficulty, hope allows an individual to work towards a successful future and to set and reach goals.

Synder (2002 as cited in Luthans et al., 2007) proposes then that individuals with high levels of hope are more likely to engage in planning for the future, are more likely to anticipate obstacles and thus set alternative pathways to meet their goals. Research has focused extensively on the impact of hope on both athletic and academic performance, however little research has been conducted on the impact of hope on workplace performance and in relation to work-place outcomes (Luthans et al., 2004).

Confidence.

Confidence is another capacity which meets the POB criteria of being scientifically measurable, grounded in theory, state-like and that has been found to have a performance or work-related outcome impact. Confidence has been drawn extensively from Bandura's (1977) research on self-efficacy. Bandura's (1977) concept of self-efficacy, or Luthan's (2002) simple reference to the concept as confidence, has been one of the most researched capacities in psychological literature, however it has rarely been mentioned in research around organisational behaviour (Luthans, 2002; Luthans & Church, 2002). Confidence has been defined as "an individual's beliefs about their ability to "mobilise the motivation, cognitive resources, and courses of action needed to successfully execute a specific task within a given context" (Larson & Luthans, 2006, p.50). In other words individual's high in confidence are able to generate various pathways to attain their goals, act on those goals and successfully attain them.

Optimism.

Optimism on the other hand refers to an individual's conviction to attain a desired goal and avoid undesirable ones (Avey, Wernsing & Luthans, 2008). Carver and Scheier (2002, as cited in Avey et al., 2008) used attribution theory in order to classify optimism as a trait/disposition. Using attribution theory, they identify a concept called dispositional optimism, which classifies individuals into two categories: an optimist, someone who anticipates positive outcomes and a pessimist someone who expects negative outcomes to occur. However, Carver and Scheier's (2002, as cited in Larson & Luthans, 2006) portrayal of optimism as a trait is more consistent with the state-like conception described by Seligman (1998 as cited in Larson & Luthans, 2006).

Buchanan and Seligman (1995, as cited in Peterson, 2000) have proposed a conceptual framework for understanding optimism as an explanatory style and being more state-like. Explanatory style refers to the way in which an individual explains an event (Peterson, 2000). For example optimists often make personal, secure and stable and global attributions for successes and "external, unstable and specific attributions for failures" (Avey et al., 2008, p.54). Therefore optimists attribute failures to external events that are temporary and specific to the situation at hand, while pessimists make opposite attributes by downplaying the positives (i.e. success) and exacerbating the negatives (i.e. failures) (Avey et al., 2008).

Theory on explanatory style has been drawn from Abrahamson, Seligman and Teasdale's (1978 as cited in Peterson, 2000) learned helplessness model. The learned helplessness model is a reformulation of Carver and Scheier's (2002) attribution theory and states that after individuals or animals experience experiencing unmanageable events, they become "helpless—passive and unresponsive—presumably because they have "learned" that there is no contingency between what they do (their actions) and consequences (Maier & Seligman, 1976 as cited in Peterson, 2000, p.13).

Seligman's concept of learned optimism distinguishes the concept of optimism from Carver and Scheier's conceptualisation of optimism as being trait-like (Larson & Luthans, 2006). Optimism, for Seligman, is thus considered to be flexible, realistic and complex and can be learned, cultivated and developed hence moving it away from the trait side towards the state side of the continuum (Seligman, 1991, p.24 as cited in Peterson, 2000; Luthans et al., 2007).

Resilience.

Today's work environment is becoming increasingly stressful due to a number of factors such as the changing nature of work, job insecurity as a result of downsizing, restructuring and competition (Avey et al., 2008). The last capacity that meets the POB criteria mentioned above is resilience. Resilience can be defined as an individual's ability to bounce back or rebound from hardships, uncertainty or ambiguity, change or even positive events (i.e. progress and increased work autonomy) (Avey et al., 2008). For Luthans (2002), then, resilience is an important capacity to have and develop in order to deal with both positive and negative changes. Resilient employees therefore have the ability to adapt to change and flourish under challenging circumstances which thus has an impact on work-related outcomes and attitudes (Avey et al., 2008).

The concept of resilience has been drawn from Masten's (2001) research on factors that influence resiliency. Masten (2001) addresses three of these factors namely asset factors, risk factors and influence processes. Asset factors are those factors that augment resilience and have no effect on the individual's resilience if they are not present (Luthans, Vogelgesang & Lester, 2006). These include factors such as a stable home environment and education (Luthans et al., 2006). Risk factors are those features that bring about decreased levels of resilience and can occur at a macro or micro level (Luthans et al., 2006). At the macro level,

these factors are external and include, for example, economic instability and at the micro-level these factors are internal such as an abusive home environment (Luthans et al., 2006). These risk factors have undesirable outcomes but will not have any effect on the individual's resilience if they are not present (Luthans et al., 2006). Risk and asset factors are said to lie along a continuum where an increase in asset factors will lead to a decline in risk factors (Masten, 2001). Lastly, influence processes or adaptation processes are factors that also affect resilience. These adaptive processes allow the individual to cope with and adapt to adversity (Masten, 2001).

Psychological Capital: A Higher Order Construct

Despite their conceptual distinctiveness, research has found evidence for the convergent and discriminant validity of these capacities both conceptually and empirically (Luthans et al., 2007). According to Helland and Winston (2005) optimism for example, is conceptually distinct from hope yet they are related in some ways. While hope requires the agency and pathways to attain a positive future goal or outcome, optimism requires the agency, the pathways and the ability to envision desirable outcomes and/or while simultaneously avoiding undesirable goals and/or outcomes (Helland & Winston, 2005). Similarly confidence differs from hope in that a confident individual has the belief that they will successfully attain their goals while hope provides a mechanism to act on the attainment of their goals through willpower (Helland & Winston, 2005). Resilience on the other hand differs from the other capacities (confidence, optimism and hope) as it is considered to be a reactive, rather than proactive state (Larson & Luthans, 2006)

Although hope, confidence, optimism and resilience have been found to be conceptually distinct, research and evidence has also found a consistent pattern of positive relationships between these constructs suggesting that together they signify a higher order construct called psychological capital (PsyCap) (Luthans et al., 2008). Psychological capital can be defined as an individual's inner state and the sum of their experiences and components of hope, confidence, resilience and optimism (Luthans et al., 2007). PsyCap itself has been specifically defined as a construct that is comprised of

> ''an individual's positive psychological state of development that is characterized 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 (resiliency) to attain success'' (Luthans et al., 2007, p. 3).

PsyCap is additionally referred to as a higher order construct because as a whole, it has been found to predict outcomes such as performance, job satisfaction, commitment and absenteeism better than any of the four capacities individually (Luthans et al., 2007). Luthans et al. (2007), reiterate this argument, by suggesting that one of the main advantages of combining these discrete, yet similar capacities into a higher order concept, is the common motivational mechanisms which they share that contributes to an individual's ability to perform at higher levels than they would with just one capacity alone. This is primarily due to the fact that when combined, an individual's "cognitive and motivational states are expected to be enhanced" thus having a greater impact on work-related outcomes (Luthans et al., 2007, p.550).

Outcomes: Job Satisfaction and Organisational Commitment

The final criteria, as stipulated by Luthan's POB framework is that the respective capacities should have a performance impact or some work-related outcome. Various studies have examined the relationship between PsyCap and employee-related attitudes. A meta-analysis conducted by Avey, Reichard, Luthans and Mhatre (2011) divided these outcomes into desirable and undesirable attitudes. Research has illustrated, through evidence that PsyCap has been positively related to desirable employee attitudes and negatively related to undesirable employee attitudes (Avey et al., 2011). This could primarily be explained by the fact that individuals high in PsyCap are more optimistic and confident and resilient, therefore expecting good things to happen to them, as opposed to individuals with low levels of PsyCap who expect bad things to happen to them (Avey et al., 2011). Two desirable work attitudes that have been largely understudied in relation to PsyCap are job satisfaction and organisational commitment. Both job satisfaction and organisational commitment have been addressed and examined in light of PsyCap and a supportive organisational climate in the current study.

Job satisfaction.

Job satisfaction and commitment are two of the most widely researched work attitudes in organisational psychology and are usually measured in tandem with one another (Fisher, Katz, Miller & Thatcher, 2003). Work attitudes can be defined as an employee's "evaluation and opinions of their jobs and their commitment to the organisation" (Verquer, Beehr, & Wagner, 2003 as cited in Aarons & Sawitzky, 2006). There have been many conceptualizations around the concept of job satisfaction as a work attitude. Locke (1990 as cited in Aarons & Sawitzky, 2006) has defined job satisfaction as an employee's appraisal of their job, work experiences, practices and circumstances. Robbins, Judge, Odendaal and Roodt (2009, p.74) have defined job satisfaction as "a positive feeling about a job resulting from an evaluation of its characteristics." These characteristics include organisational policies and practices, relationships with others within the organisation and working conditions just to name a few (Robbins et al., 2009). Some measures of job satisfaction focus on overall positive emotions an employee has toward his/her job while other measures of job satisfaction are facet specific. This means that job satisfaction is measured in terms of facets such as pay or working conditions just to name a few (Fisher et al., 2003).

These facets are often understood in terms of intrinsic and extrinsic satisfaction, where intrinsic satisfaction refers to those aspects of an individual's job that are fundamental to the individual such as personal growth, task variety, prospects for developing individual skills and having considerable control over their own work processes (Fisher et al., 2003). Extrinsic satisfaction on the other hand refers to those factors which are specific to the work itself, such as pay and job security (Fisher et al., 2003). This study will particularly focus on a global measure of job satisfaction in order to understand feelings of overall job satisfaction experienced by employees.

There have also been various theories which have assisted in the evolution of the concept of job satisfaction. For example, Hertzberg, through his two-factor theory argued that job satisfaction and job dissatisfaction are different work-related conditions and are affected by different factors or needs (Stringer, 2006). These needs are broken down into hygiene and motivator needs. Hygiene needs refer to those factors that affect the context within which the employee's job is carried out (Stringer, 2006). These include, for example, supervision, the physical working, fair pay, benefits and job security. When these factors are absent from the employee's environment, the employee experiences dissatisfaction. However "when these

factors are present, only barriers to job satisfaction are removed" (Stringer, 2006, p.130). This theory therefore implies that when hygiene needs are fulfilled, complete job satisfaction does not ensue, but rather a neutral state of neither satisfaction nor dissatisfaction is achieved (Landy & Conte, 2007). In other words when employees receive adequate support from their supervisors, open communication, training and fair pay for example, merely those barriers that prevent the achievement of job satisfaction are removed (Stringer, 2006).

Motivator factors on the other hand refer to the nature of the work and consequences of carrying it out as a result and include for example, responsibility and work advancement, recognition of achievement and challenging assignments. The fulfilment of motivator factors results in job satisfaction but not job dissatisfaction (Landy & Conte, 2007). In other words, a neutral state is achieved when these factors are absent. However when motivator factors are present and hygiene factors are absent dissatisfaction may persist (Stringer, 2006).

In addition to Hertzberg's two-factor theory, Hackman and Oldham's job characteristics model plays a pivotal role in job satisfaction. They state that there are five job dimensions that can affect an individual's level of motivation and satisfaction, namely skill variety which refers to the extent to which the job requires different activities which allows an individual to employ their skills and talents to carry out the work; task identify which is the extent to which the job allows the individual to carry out the whole job and not pieces of work; task significance the extent to which the job has a meaningful impact on the life or work of others; autonomy the extent to which individuals are given freedom, independence and responsibility in carrying out and scheduling their work and feedback which is the degree to which individuals receive information about their performance on the job (Robbins et al., 2009). According to Saari and Judge (2004), the nature of an individual's job contributes strongly to overall job satisfaction. This includes factors such as job variety, job challenge and autonomy. Morris and Venkatesh (2010) further reiterate this view by stating that job characteristics have been found to create positive motivations in individuals which lead to job satisfaction.

Two dominant theories relating to job satisfaction include discrepancy theory and equity theory. Discrepancy theory proposes that job satisfaction is determined by "the discrepancies resulting from a psychological comparison process involving the appraisal of current job experiences against some personal *standards of comparison*" (Rice, McFarlin & Bennett, 1989). These standards of comparison include for example, what the employee wants, what

they actually receive, how much and what they actually receive (Rice et al., 1989). As a result two experiences arise from the act of comparison namely positive and negative discrepancies. Positive discrepancies refer to experiences of receiving an amount of a job facet (such as pay, support, job control etc.) that is greater than the individual's standard of comparison while negative discrepancies are experienced when the individual receives an amount of a job facet that is less than their standard of comparison (Rice et al., 1989).

Equity theory on the other hand refers to comparisons which employees make regarding their job inputs such as their experience, education and effort and the outcomes which they receive such as their salary, recognition and raises in relation to referent others-those individuals with whom employees compare the ratio of what they receive to what they expend (Robbins et al., 2009; Bolino & Turnley, 2008). Employees also engage in equity evaluations, which are the comparisons that individuals make in terms of whether they are over rewarded or under rewarded in comparison to others. These evaluations then result in psychological or behavioural action which employees take to "restore equity" (Bolino & Turnley, 2008, p.31). As a result, job satisfaction is a result of how fairly an individual is treated in relation to others (Worrell, 2004). These comparisons however are not limited to immediate co-workers but to individuals across organisations which are similar to that of the employee's (Worrell, 2004).

According to Robbins et al. (2009) employees who hold jobs that provide challenging work, favourable working conditions, control and autonomy, are overall more satisfied with their jobs. However Robbins et al. (2009) argue that an individual's satisfaction with their work is not merely determined by job conditions; personality also has an important role to play in this regard. They suggest that individuals with positive core-self evaluations tend to be more satisfied with their jobs as opposed to individuals with negative core self-evaluations, as they believe in their self-worth and competence and are more confident as a result (Robbins et al., 2009). As such, job satisfaction can be affected by both organisational or situational and personal factors.

A meta-analysis by Fried and Ferris (1987) revealed that organisational factors such as job characteristics as defined by the Job Characteristics Model relate substantially to job satisfaction. Furthermore individuals who experience low levels of job demands, high job control and high levels of support in the workplace have been shown to be substantially related to job satisfaction (Janssen, Peeters, de Jonge, Houkes, & Tummers, 2004; Pomaki,

Maes, & ter Doest, 2004 as cited in Cohrs, Abele & Dette, 2006). Warr (1999 as cited in Cohrs et al., 2006) also presented a comprehensive catalogue of organisational factors that have been shown to significantly predict job satisfaction. These include for example the availablity of money, physical security, supervisor support, skill and task variety and externally generated goals among others. However, according to Cohrs et al. (2006) these characteristics have not been tested consistently and it is unknown as to which are important in predicting and explaining job satisfaction. In terms of personal characteristics, positive relationships have been found between core-self evaluations and job satisfaction (Dormann, Fay, Zapf, & Frese, 2006; Judge & Bono, 2001; Judge, Locke, Durham, & Kluger, 1998 as cited in Cohrs et al., 2006). Judge and colleagues also found neuroticism, extraversion and conscientiousness to be predictors of job satisfaction.

In addition, job satisfaction has also been found to be related to the interaction of both organisational and personal characteristics. This means that the influence of organisational characteristics on job satisfaction is dependent on individual dispositions or personal characteristics. For example job characteristics and job satisfaction were found to be moderately to strongly and positively related to job satisfaction (.68) particularly for individuals with high growth need strength (GNS)-defined as the "strength of an individual's need for growth" (Loher, Noe, Moeller & Fitzgerald, 1985; Cohrs et al., 2006, p.366). For individuals who were low in GNS, the correlation was only .38. However more recent studies conducted by Tiegs, Tetrick, & Fried (1992) on a sample of 6,405 found no moderating effect of GNS on the job characteristics/job satisfaction relationship. Therefore, findings on the interactive effects of personal and organisational characteristics on job satisfaction have been proven to be inconsistent.

Luthans and collegues, however, have found evidence that PsyCap as a personal variable is positively related to job satisfaction. This means that individuals who have high levels of overall PsyCap (hope, confidence, resilience and optimism) are more satisfied with their jobs.

Psychological Capital and Job Satisfaction

As an early validation of the Psychological Capital construct Luthans et al. (2007) investigated this construct at a high tech manufacturing firm. This is best explained through research which was conducted by Luthans et al. (2007) on a high-tech manufacturing firm, consisting of one hundred and fifteen employees, and a midsized insurance service firm

consisting of 144 employees. They aimed to determine whether an employee's level of PsyCap will be positively related to their satisfaction (hypothesis1) and whether overall PsyCap will have a relatively stronger relationship with satisfaction than the individual capacities of hope, optimism, resilience and confidence (hypothesis 2) (Luthans et al., 2007). They used both the manufacturing and insurance firm to test both hypotheses.

The results indicated, for hypothesis 1 that an employee's level of PsyCap was positively and moderately related to satisfaction (*r*=.39), and in general this relationship was stronger for PsyCap as a whole than for any of the components (in one of the samples the correlation for Hope was marginally stronger than that of PsyCap). Hypothesis 2 was also supported and provided further evidence for the argument that PsyCap as a whole is more positively and strongly related to satisfaction than each individual construct (*r*=.36). Specifically using hierarchical regressions it was found, in general, that if PsyCap was entered first none of the components added additional variance when added to PsyCap. However, if any one of the components was added first, PsyCap as a whole when added second would result in a statistically significant addition of variance. Again in one of the samples this result was not consistently produced in that in some cases the capacities did add significant variance. This was not inconsistent with the pattern as in general PsyCap resulted in greater additional variance (Luthans et al., 2007). Thus overall PsyCap was more strongly related to satisfaction than each of the individual capacities.

Larson and Luthans (2006) also conducted a study to examine whether the relationship between work-related attitudes and overall PsyCap is stronger than the individual capacities of hope, confidence, resilience and optimism. They conducted their study on 74 workers from a Midwestern, medium-tech manufacturing firm and found that overall PsyCap was significantly but weakly to moderately correlated with job satisfaction (r=.37) and that individually, confidence and optimism were both not significantly correlated with job satisfaction (Larson & Luthans, 2006). In addition they found that resilience was correlated with job satisfaction but at a lower level than overall PsyCap (r=.25) (Larson & Luthans, 2006). However, they found that hope was correlated with job satisfaction at a slightly higher level than overall PsyCap (r=.38) (Larson & Luthans, 2006). This result will subsequently be discussed in relation to commitment which they also tested in this study.

Organisational commitment.

Commitment, like satisfaction, has been a widely researched construct. It, however, remains one of the most challenging concepts in organisational research (Cohen, 2007). Commitment provides some indication about an individual's feelings of attachment and connection toward their organisation. Mowday, Steers and Porter (1982) (as cited in La Mastro, 2000) have defined organisational commitment as the extent to which an individual has an affective bond with and are involved in their organisation. They argue that organisational commitment is characterised by "(a) strong belief in and acceptance of the organisation's goals and values; (b) a willingness to exert considerable effort on behalf of the organisation; and (c) a strong desire to maintain membership in the organisation" (Mowday, Steers & Porter., 1979, p.226). These characteristics speak to the general affective response to the organisation (Mowday et al., 1979). Although Mowday et al's. (1979) instrument, the Organisational Commitment Questionnaire (OCQ) is comprised of the three components mentioned above, most research on commitment has used the OCQ as a one dimensional tool (Cohen, 2007).

A number of definitions have been put forth around the concept of commitment. The dominant approach, however, has become the multi-dimensional proposal by Meyer and Allen (1991) (Cohen, 2007). Meyer and Allen (1991) aimed to further extend Mowday et al's. (1982) concept of organisational commitment, as defined by affective commitment, and developed a three-component model of organisational commitment (LaMastro, 2000). In addition to Mowday et al's. (1982) concept of affective commitment, Meyer and Allen (1991) argue that continuance and normative commitment are also part of the overall framework of commitment and together compose organisational commitment (La Mastro, 2000).

Affective commitment refers to an employee's emotional attachment to their job. Employees who are affectively committed to their organisation also identify strongly with and are highly involved in their organisation (Meyer & Allen, 1991). Continuance commitment on the other hand, refers to an employee's need to belong to their organisation (Meyer & Allen, 1991). Meyer and Allen (1991, p.67) explain that there are "costs associated with leaving the organisation." In other words, the employee remains with the organisation as a result of some perceive economic benefit or value (Robbins et al., 2009). Lastly, normative commitment refers to an employee's obligation to remain with their organisation which may arise out of moral or ethical reasons (Fisher et al., 2003). The three-component model of organisational

commitment thus draws from earlier and discrete streams of research on commitment (Becker, 1960; Buchanan, 1974; Kanter, 1968; Mathieu & Zajac, 1990; Mowday, Porter, & Steers, 1982; Salancik, 1977; Wiener, 1982; Wiener & Vardi, 1980 as cited in Solinger, van Olffen & Roe, 2008).

Meyer and Allen (1991) refer to these three dimensions as components of commitment rather than types as individual's can experience all three forms of commitment but at varying degrees. For example an employee might feel strong affective commitment, that is a strong desire to remain, with the organisation but may feel little obligation to actually do so (Meyer & Allen, 1991). As previously mentioned, the three-component model proposed by Meyer and Allen (1991) has been the dominant model used to measure commitment in research to date.

However, there have been arguments against its conceptual consistency and more particularly there have been problems and ambiguities surrounding the discriminability of the underlying concepts of the three-component model (Solinger et al., 2008; Cohen, 2007). In a recent meta-analysis conducted by Meyer, Stanley, Herscovitch and Topolyntsksy (2002 as cited in Solinger et al., 2008), for example, continuance commitment was found to be weakly and negatively correlated with affective commitment and other work-related outcomes such as job performance and organisational citizenship behaviours. Continuance commitment was also found to be negatively correlated with job satisfaction and a very low correlation of 0.03, with job involvement. For McGee and Ford (1987 as cited in Solinger et al., 2008) and Solinger et al. (2008), this raises questions about the convergent validity of the component continuance commitment.

Theoretically, affective, normative and continuance commitment are distinct components of commitment (Bergman, 2006). Although continuance commitment has been found to be conceptually distinct from affective and normative commitment, the same is not said to be true for the distinction between affective and normative commitment (Bergman, 2006). Studies have consistently found normative and affective commitment to be strongly related to each other, while other studies argue that it is difficult to separate affective from normative commitment (Ko, Price & Muller, 1997; Lee & Chulguen, 2005; Bergman, 2006). Ko et al. (1997) thus label the normative component of commitment redundant as certain antecedents correlated strongly with both the normative and affective components of commitment.

This study did not aim to examine and distinguish between the different components of commitment, as defined by Meyer and Allen (1991) but rather aimed to examine affective or overall commitment as defined by Mowday et al. (1982). Affective commitment has been widely supported to be the only form of commitment. Affective commitment has been found to have the strongest face and content validity and is considered to be the most reliable form of commitment (Meyer, Stanley, Herscovitch, & Topolnytsksy, 2002; Cohen, 2003; Dunham, Grube & Castaneda, 1994 as cited in Solinger et al., 2008). In addition, it was also found to correlate the strongest with other work-related outcomes such as job performance, organisational citizenship behaviours and absenteeism as compared to the continuance and normative components (Meyer et al., 2002). Commitment is more reflective of a mindset than behaviour and for this reason is considered to be an attitude rather than an intention (Cohen, 2007). For these reasons, affective commitment has been considered the most appropriate measure of commitment and has been used consistently by many authors (Solinger et al., 2008).

Like job satisfaction, organisational commitment can be affected by both organisational and personal factors (Fisher et al., 2003). Organisational or situational factors include variables such as the leadership in the organisation, job design and job characteristics such as feedback, autonomy and job challenge (Fisher et al., 2003; Johnson & Chang, 2007; Chughtai & Zafar, 2006). Personal factors on the other hand refer to those variables such as positive or negative affectivity, which are emotional states, Locus of Control and even age or tenure with the organisation (Fisher et al., 2003; Johnson & Chang, 2007). Organisational or situational factors have been found to have a stronger relationship with organisational commitment than personal factors (Johnson & Chang, 2007; Mathieu & Zajac, 1990).

However, in the studies conducted by Luthans and colleagues, commitment has consistently been shown to be related to PsyCap. With this argument in mind, PsyCap is motivational state that is considered to be an individual or personal variable. Therefore it would be expected that an employee's level of PsyCap can affect commitment to the degree that employees with higher levels of PsyCap are more likely to be committed to the organisation.

Psychological Capital and Organisational Commitment

Luthans and colleagues have also conducted research on the relationship between organisational commitment and PsyCap. In their study on seventy four workers from a Mid-western medium-tech manufacturing firm, for example, Larson and Luthans (2006) also

examined commitment as a work-related attitude in addition to job satisfaction. Like job satisfaction, overall PsyCap was found to be positively, moderately and significantly correlated with organisational commitment (r=.31) while optimism and confidence as individual constructs were not. Resilience was found to be significantly correlated with organisational commitment, but at a lower level than overall PsyCap (r=.25)

As with job satisfaction, the only construct which was found to have a slightly higher but not significantly different relationship with organisational commitment as opposed to the overall construct of PsyCap was hope (Larson & Luthans, 2006). No plausible explanation was provided for why hope was found to be significantly correlated with organisational commitment at a somewhat higher level that overall PsyCap. However a plausible explanation for this result could be that on a sample size of seventy four, the difference would have to be substantial to be relevant.

Even though a significant relationship was found between PsyCap and job satisfaction and PsyCap and organisational commitment in the studies reported above, it can be argued that there is little evidence to suggest that there is in fact some relationship between psychological capital and job satisfaction by simply reviewing three studies. Therefore, more research needs to be conducted in the relation to these two constructs in order to develop a sound body of research with respect to psychological capital and work-related outcomes such as job satisfaction. Part of this study aimed to determine whether there is in effect some relationship between PsyCap and job satisfaction and PsyCap and organisational commitment as found by Luthans and collegues.

However, in order to understand the strength between PsyCap and the work attitudes of job satisfaction and commitment, the relationship cannot be examined in isolation. Moderating variables might be useful in investigating the relationship and to determine what makes a difference to employees with varying levels of PsyCap. The current study has focused on a supportive organisational climate, as defined by perceived supervisor support, as a moderating variable in the PsyCap- job satisfaction/organisational commitment relationship. Organisational climate has been argued to be an important characteristic of an organisation that influences employee work attitudes (Aarons & Sawitzky, 2006). Specifically, it has been argued that positive organisational climates result in more positive work attitudes (Glisson & James, 2002 as cited in Aaron & Sawitzky, 2006).

Organisational Climate: A Framework

The climate-culture distinction.

Before delving into the concept of organisational climate and a supportive organisational climate, it is imperative to briefly distinguish between climate and culture as it has been unclear as to whether climate and culture are similar or distinct concepts (Denison, 1996). Patterson, West, Shackleton, Dawson, Lawthom, Maitlis, Robinson and Wallace (2005) reiterate this view by stating that climate and culture are concepts which are often used interchangeably in organisational literature. Researchers have agreed that culture and climate seem to be similar concepts as they refer to employees' perceptions of their work environment. However they differ in their conceptualisations of these perceptions. While culture refers to a "set of shared values and norms held by employees that guide their interactions with peers, management and clients" climate has been identified as the "surface manifestation of culture" (Patterson et al., 2005, p.380-381). Climate has specifically been used as a framework for this study as it refers to shared perceptions about various informal and formal aspects of the organisation. This has been defined subsequently.

The concept of climate.

A considerable amount of research has been conducted on the concept of organisational climate. Many studies conducted on organisational climate have used conflicting definitions and conflicting measures of climate. Organisational climate has been characterised "as a set of attributes that are specific to a particular organisation" (Waters, Batlis & Roach, 1974). However, a general consensus has been reached amongst researchers that climate is related to employees' subjective perceptions of their work environment (Patterson et al., 2005). Formally, organisational climate has therefore been defined as "employees' shared perceptions of organisational events, practices and procedures" (Patterson et al., 2005, p. 380). These perceptions are shared amongst members of the organisation in order to help them make sense and meaning of their work environment (Dickson, Resick & Hanges, 2006).

Shared perceptions involve an aggregation of individual perceptions of their work environment. In other words this refers to the average way in which people view or ascribe meaning to their organisation (James, Choi, Ko, McNeil, Minton, Wright & Kim, 2008). Patterson et al. (2005) argue that most research around organisational climate has been

conducted at the unit, group or departmental level. This argument is based on the premise that departments or units within an organisation have their own climates. Scores obtained are generally aggregated and used to represent climate at that specific level (Patterson et al., 2005). This will demonstrate differences in climate perceptions between and within units. The current study has particularly used climate as a framework for understanding shared employee perceptions within and between departments, which was the unit of analysis. Although Patterson et al. (2005) argue that climate has been measured at the unit level, an examination of the literature suggests that most studies on climate have been conducted at the individual level.These examples will be highlighted in the sections which describe the realtionship between perceived supervisor support and organisational attitudes (organisational commitment and job satisfaction).

Climate dimensions.

Furnham and Goodstein (1997) state that climate refers to the perception of the way things are in the organisation and this is based on a variety of dimensions. However different authors have identified a different number of dimensions which they consider important for measuring organisational climate that can apply to a variety of industries and contexts. For example James and James, (1989), James and McIntyre (1996) and James and Sells, (1981) have identified and described four dimensions namely (1) role stress and lack of harmony; (2) job challenge and autonomy; (3) leadership facilitation and support; and (4) work group cooperation, friendliness, and warmth (as cited in Patterson et al., 2005). Glick (1985 as cited in Patterson et al., 2005), on the other hand, reviewed a list of dimensions which have emerged through research. Some of these dimensions included open-mindedness and a leader's psychological distance (Payne & Mansfield, 1978), risk orientation (Lawler Hall & Oldham, 1974), and service quality (Schneider, Parkington & Buxton, 1980) just to name a few (as cited in Patterson et al., 2005). As seen from the brief review, a number of climate dimensions have emerged throughout the literature making it difficult for researchers to identify one set of universal dimensions that constitute climate.

Supportive Organisational Climate and Perceived Supervisor Support

The dimension chosen for this specific study, however, is a supportive organisational climate. A supportive organisational climate was specifically chosen to examine because it has been argued that an organisations treatment of its employees can have a substantial impact on their

attitudes toward their work and the organisation as a whole. Furthermore Pfeffer and Salancik (1978 as cited in Thomas & Fredericks, 1992) argue that employees' perceptions of their work environment have been found to have an influence on their motivational states. As a result both psychological capital and a supportive climate are needed in order to achieve growth and development and other work-related attitudes and behaviours such as commitment, satisfaction and performance (Luthans & Avolio, 2003 as cited in Luthans, Norman, Avolio & Avey, 2008).

The current study has defined a supportive organisational climate in terms of perceived organisational support and in particular perceived supervisor support. Employees form global beliefs about the extent to which their employer or organisation cares for their well-being and values their contribution (Rhoades & Eisenberger, 2002). This is known as Perceived Organisational Support (POS). Because this study has focused on departmental climate as opposed to organisational climate, it was pivotal to use supervisor support in order to understand employee perceptions of a supportive climate at the unit level. Perceived organisational support, for the purpose of this study, has therefore been conceptualised and operationalised in terms of the support employees perceive they receive from their supervisors or managers within their respective departments or divisions. This is known as Perceived Supervisor Support (PSS).

Supportive supervisors or leaders and a facilitative climate are antecedents of perceived organisational support. Just as employees develop perceptions of the organisation's appreciation of their work and concern for their well-being, employees also form perceptions about the extent to which their supervisor cares about their well-being and values their contribution (LaMastro, 2000). Within an organisation, the behaviours and actions of supervisors are often indicative of the organisation's intent rather than the motive of the supervisor themselves (Rhoades & Eisenberger, 2002). These supervisor behaviours and actions are often defined by the organisations norms, culture and policies "that provide continuity and prescribe role behaviors; and by the power the organization's agents exert over individual employees" (Rhoades & Eisenberger, 2002, p.698). As a result, employees use their supervisor as a representation of the organisation. Thus, they view favourable or unfavourable treatment on part of the supervisor as a sign that their organisation favours or does not favour them (Rhoads & Eisenberger, 2002).

Research has also shown that PSS leads to POS (Eisenberger, Stinglhamber, Vandenberghe, Sucharki & Rhoades, 2002). In other words employees' perceptions that their supervisor values their contribution and cares about their well-being might lead them to believe that their organisation cares for them and values their contribution. This means that the employee identifies the supervisor with the organisation and often results in feelings of obligation on the part of the employee to help the organisation meet its goals, thus feeling more committed to the organisation (Tuzun and Kalemci, 2012; Eisenberger et al., 2002). Yoon and Thye (2000) suggest that the relationship can also occur in the inverse i.e. POS leads to PSS. A path analysis conducted by Rhoades and Eisenberger (2002) found that supervisor support contributed strongly to POS when the other two antecedents, fairness and organisational rewards and conditions were controlled for. Examining the relationship between POS and PSS is beyond the scope of this study. This can nevertheless have important implications when determining any discrepancies that may arise in perceptions of supervisor support between and within departments and can potentially be relevant in understanding possible patterns in the way individuals within departments view the support of their supervisor.

The role of a supervisor is to care for the well-being of their subordinates, value their contribution, provide opportunities for skills development and assist them with work related issues (Maertz, Griffith, Campbell & Allen, 2007). Supervisors who provide ongoing support may surpass the organisation as a source for support thus making POS less important to the employee.

Social exchange theory is therefore, key in understanding the relationship that unfolds between a supervisor and their subordinates. Social exchange theory postulates that when employers provide their employees with sufficient care, fair treatment and high levels of support, employees are more likely to reciprocate positive behaviours and work attitudes (Dawley, Andrews & Bucklew, 2008). In particular supervisor support was shown to have positive implications for an employee's job satisfaction and commitment (Dawley et al., 2008). Tuzun and Kalemci (2012) reiterate this view by stating that greater levels of social exchange between the supervisor and their subordinate results in greater contributions on the part of the employee in the form of greater commitment, lower intentions to quit, and increased performance. This particular study has focused on the impact which supervisor support has on job satisfaction and overall commitment in particular.

Social support in the workplace has been shown to affect a number of work-related attitudes. Perceived supervisor support, as a particular form of social support, has been shown to have a substantial impact on a number of work-related outcomes including turnover and retention. This particular study has focused on the impact of supervisor support on the dependent variables of job organisational commitment and job satisfaction.

Perceived Supervisor Support and Organisational Commitment

As previously stated, organisational commitment has much to do with organisational factors such as leadership and job design as it does with personal factors such as motivation and for arguments sake, PsyCap. An employee's affective commitment to the organisation is extremely important for determining their dedication and loyalty. Affective commitment has been linked to increased involvement in organisational activities, a strong willingness to contribute to achieving organisational goals and a strong desire to remain with the organisation (Rhoades, Eisenberger & Armeli, 2001). Rhoades et al. (2001) argue that work experiences such as justice perceptions and supervisor support are more strongly associated with affective commitment than structural factors. Meyer and Allen (1997) (as cited in Rhoades et al., 2001) found a positive relationship between supervisor support and affective commitment. Research conducted by Hutchison (1997) (as cited in Dawley, Andrews & Bucklew, 2008) showed that supervisors' who cared and provided supportive treatment were strongly and positively associated with affective commitment.

Dawley et al (2008) also conducted a study to determine whether mentoring, supervisory support or perceived organisational support had an effect on organisational commitment and job search intentions. They conducted their study on employees from a medium-sized manufacturing firm. Three hundred and forty six out of 350 surveys were usable for this study. Using an Ordinary Least Square (OLS) regression model, they found a significant, positive relationship between supervisory support and affective commitment.

Rousseau and Aube (2010) conducted a study on a sample of 215 employees working in a health care organisation to test whether supervisor support and co-worker support additively affected affective commitment. Also using a hierarchical regression analysis, they found that both supervisor and co-worker support had a positive impact on affective commitment. However, while controlling for the other source of support (co-worker), they found that

supervisor support contributed more variance to affective commitment than co-worker support. As a result they concluded that supervisor support played a bigger role in employees' emotional attachment to their organisation.

In a meta-analysis conducted by Ng and Sorensen (2008) a significant, moderate and positive relationship was found between perceived supervisor support and affective commitment (r=.48), suggesting that supervisors play a vital role in the organisational lives of their employees, and in particular their work attitudes and evaluations of the organisation as a whole.

Perceived Supervisor Support and Job Satisfaction

Like commitment, an employee's satisfaction has also been shown to be related to supervisor support. Higher levels of supervisor support lead to higher levels of job satisfaction. In a study conducted by Babin and Boles (1996) on a sample of 261out of 300 and 80 respondents from full service restaurants found that the direct relationship between supervisor support and job satisfaction was significant, strong and positive. They argue that the strong relationship between supervisor support and job satisfaction is coherent with literature and research on climate and suggests that positive perceptions of supportive supervisors or managers directly influence feelings of personal well-being and lead to positive appraisals of their work environment (Babin & Boles, 1996).

Munn, Berber and Fritz (1996) conducted a study on one hundred and fifty six child life specialists in order to determine predictors of professional well-being as defined by burnout, job dissatisfaction and intentions to leave. Using a hierarchical multiple regression analysis, they aimed to determine which sets of predictor variables (individual, role stress, workload or social support) were the most predictive of each measure of professional well-being. They found that supervisors were an influential source of social support and found to be the best predictor of job dissatisfaction. In other words, child life specialists who received low levels of support from their supervisor were more dissatisfied with their jobs. In a meta-analysis conducted by (Ng & Sorensen, 2008) a significant and positive relationship was also found between perceived supervisor support and job satisfaction.

Acker (2004) conducted a study on two hundred and fifty nine mental health service providers from sixteen outpatient mental health agencies in the state of New York in order to determine whether certain job conditions had an effect on an employee's job satisfaction and intention to leave the organisation. One of the conditions which they examined was supervisor support. Using a multiple regression analysis Acker (2004) found a significantly positive relationship between supervisor support and job satisfaction, concluding that a supportive work-environment has positive implications for an employee's satisfaction with their job and commitment to their profession.

The studies reported above clearly illustrate support for the positive and significant relationship between supervisor support and the work-related attitudes of organisational commitment and job satisfaction. However it is also important to point out the analyses that were used to test this relationship in relation to climate. The studies above have either employed multiple hierarchical regression analyses, multiple regression analyses or ordinary least square regression models in order to examine the relationship between perceived supervisor support and the dependent variables of job satisfaction and organisational commitment. The gap in the research is thus a methodological one where most of the statistical analyses in the studies reported above looked only at the individual as a unit of analysis when studying climate. Because climate measured at the unit level and perceived supervisor support is a climate variable measured as a shared perception, this study has used a Hierarchical Linear Model as a multi-level approach to examine the relationship between psychological capital and the dependent variables job satisfaction and organisational commitment as moderated by perceived supervisor support. Hence supervisor support was seen as departmental level variable while psychological capital was an individual level variable.

Psychological Capital and a Supportive Organisational Climate

Research on the direct relationship between supervisor support and the constructs of job satisfaction and organisational commitment has been solid. However the impact which supervisory support may have on the relationship between PsyCap and work attitudes is yet to be determined. Luthans et al. (2008) conducted one study on the mediating role of psychological capital in the supportive climate-performance relationship.

Their findings showed full support for the mediated role that psychological capital plays in the supportive climate-performance relationship. The idea behind Luthan's research was to illustrate that a supportive climate is needed for PsyCap to flourish and PsyCap will in turn have positive implications for performance. In their study Luthans et al. (2008) also examined the relationship between supportive climate and job satisfaction and organisational commitment and PsyCap and job satisfaction and organisational commitment. However the attitudes of job satisfaction and organisational commitment were excluded from their mediation model. Findings of their study suggest that it is important to acknowledge that an employee's level of psychological capital may play an important role in adding to what a supportive organisational climate already contributes to performance (Luthans et al., 2008).

The current study aims to take Luthan's idea a step further and proposes that individuals already have a certain level of PsyCap. This study therefore aims to examine the relationship between psychological capital and the dependent variables of job satisfaction and organisational commitment which have not been examined in light of moderating variables. This relationship will be examined in light of a supportive organisational climate as defined by supervisor support which has been analysed at the departmental level.

The need for positive psychology in the workplace and psychological capital in particular is essential for the optimal functioning of individuals and groups in organisations. In addition, the provision of supportive and facilitative climates may not only have positive implications for individuals within the organisation but for the organisation as a whole where individuals are more likely to espouse attitudes such as increased job satisfaction and commitment to the organisation.

From the above literature review, the following questions were posed:

- What is the relationship between psychological capital and the dependent variables of job satisfaction and organisational commitment?
- What is the relationship between a supportive organisational climate and the dependent variables of job satisfaction and organisational commitment?
- Does a supportive organisational climate moderate the relationship between psychological capital and the dependent variables of job satisfaction and organisational commitment?

Chapter 3: Methodology

This chapter is concerned with the methodology used to investigate the relationship between the variables that were examined in this study. This section will first outline issues regarding the research design and secondly the sample and research procedure will be presented. The measuring instruments will be discussed as well as the various analyses that were used to answer the research questions posed. Lastly, ethical considerations will be taken into account.

Research Design

A quantitative methodological approach was used for this study as it involved examining the relationship between PsyCap and the dependent variables of job satisfaction and organisational commitment as moderated by perceived supervisor support. A quantitative methodological approach is concerned with drawing statistical conclusions about the relationships between variables in an objective and quantifiable manner. The data obtained using a quantitative method is in the form of numbers and measurements and was thus appropriately analysed using a number of statistical methods.

A series of statistical analyses were conducted on data which was obtained from departments in an organisation. Climate, as argued, has often been examined at the unit level, as collectives/units or groups within organisations are said to have their own climates (Patterson et al., 2005). Departments within organisations were thus used as a unit of analysis for this particular study in order to examine differences in climate perceptions both within and between departments.

All the organisations and specifically the departments were invited to participate voluntarily in this research. The research questions in the current study examined the relationship between a number of variables namely, psychological capital, organisational climate, job satisfaction and commitment. As a result a quantitative methodological approach was most appropriate to use.

The research design that was employed in this study is a non-experimental, ex-post facto, cross-sectional research design. As such individual's completed the questionnaires at one point in time (Rosenthal & Rosnow, 2008). As a result there was no random selection or random assignment and the independent variables in the study were not manipulated in anyway. In addition there was no experimental or control group. As a result, no strong causal

conclusions or inferences could be made in this study. The researcher simply aimed to examine relationships that existed between the variables under investigation. This specifically included examining the effects which supervisor support had on the relationship between PsyCap and the dependent variables of job satisfaction and organisational commitment. Perceived supervisor support acts as a moderator in this relationship thereby affecting the strength between PsyCap as the independent variable and the dependent variables of job satisfaction and organisational commitment.

Participants and Procedure

Participants.

The sample drawn for this particular study came from a variety of organisations and specifically included white-collar workers who had access to e-mail. The sample was small yet diverse and composed of participants of different ages, genders and races, from differing levels in the organisation and had different levels of education, with the minimum being a basic education. These demographics will be detailed in the preliminary results section. There were no predetermined or specific individual characteristics that were necessary for inclusion or exclusion in th e study.

However, only the departments had to meet certain criteria in order to be included in the study. The departments were specifically identified based on how independently they functioned in terms of their management and operation. In other words, those departments that had their own supervisors and operational structures were invited to participate in the study. Because supervisor support functions at the level of the department (i.e. departments have supervisors), it was necessary to identify departments that had these characteristics. Those departments in companies which assented to participate in the research were then used to investigate the research questions proposed.

The organisations that participated included both for profit and non-profit organisations, the majority being from the Gauteng province and one being from the KwaZulu-Natal region.The initial intention of this research was to use one large or medium organisation with a fair number of departments to conduct this study in. However, due to lack of responses from organisations, the researcher had to approach a number of small to medium organisations rather than one large organisation, in order to obtain a sufficient sample size. Some of the reasons for this lack of response were around concerns regarding confidentiality and anonymity and some organisations did not allow external individuals to carry out research

within their company. Also, some organisations were conducting their own internal surveys using similar questionnaires, at the time of data collection.

The researcher also used a combination of convenient and snowball sampling methods in order to obtain a sufficient number of departments. Convenient sampling involves obtaining samples' that are both in the network and are convenient to the researcher. As previously mentioned due to insufficeint responses from larger organisations, the researcher had to approach smaller companies to participate in the current study. Covenience sampling was thus used to the extent that it was difficuly to obtain a sample and as such samples were derived from companies that were willing to participate in the study. Snowball sampling was also used as individuals in organisations were approached and were requested to gather a few of their colleagues within their department to participate in the study and complete the online questionnaire.

However, both snowball and convenient sampling are not without their shortcomings. It is not possible to ensure the representativeness of the sample using either of these methods. For example early respondents would have been more likely to approach colleagues whom they felt would willingly complete the questionnaire. This could have potentially excluded individuals who may not have been satisfied or committed to their organisation and may not have been happy at work.

The initial sample size considered for this research was approximately 20 departments with as many employees in each department as possible. However, due to poor responses from organisations, the final sample consisted of 14 departments from various medium and small organisations with a total of 50 individual participants. Each department varied in terms of the number of employees that completed the questionnaire, some of which consisted of two employees and some of which consisted of nine employees. This will be described in detail, below. Out of the 50 responses only 40 were usable for this study. However, descriptive statistics revealed that the number observations per variable, varied. Fourty five responses were obtained on the PsyCap questionnaire after an outlier was removed, while 43 responses were obtained for supervisor support questionnaire. The number of responses obtained for job satisfaction (N=41) and commitment (N=41) were the same.

The different sample sizes obtained could potentially be due to the fact that participants had other commitments or busy work schedules which prevented them from completing the questionnaires fully. As a result the response rate was varied as were the population sizes.

Procedure.

The researcher approached a number of companies on an individual basis. Permission to conduct this research was obtained by contacting the Human Resource Director, for smaller companies or the CEO or a senior partner for larger companies, via e-mail or telephonically. An organisational access letter was forwarded to the HR director or CEO explaining the purpose, aims and ethics of the research. The organisational access is attached to Appendix A. Once permission was obtained, the HR Director/CEO offered to distribute the online link and participant information sheet (attached to Appendix B) to their respective departments. It was not possible for all the participants in each department to complete the questionnaires and coercion on the part of the researcher would have been considered unethical. Therefore only those participants that were willing to participate and had the time completed the questionnaire. Completion of the questionnaire was considered consent to participate in the study.

The researcher initially approached a non-profit research organisation in the KwaZulu-Natal region that consisted of five departments, one of which was combined subsequently creating 4 departments. The HR Director made participants aware of the research that was to be carried out at the organisation and appealed for their participation and cooperation. Once permission was granted, the HR Director in this organisation offered to distribute the participant information sheet and the online link containing the questionnaires as a pack to each department. On the demographic questionnaire, each participant was required to select the department which the belonged to from a drop down menu. Out of 36 employees in the company, a total of 17 employees completed the questionnaire in this particular organisation. The demographic breakdown by department will be discussed in the preliminary results section.

The researcher also approached a small consulting company in the Gauteng region that also consisted of five departments. A meeting was set up with an HR representative who volunteered to assist in order to discuss the structure of the company and the various departments. Plans were made as to how the questionnaires would be distributed to each department. As in the non-profit organisation, the researcher was also provided with the names of the departments simply for comparison purposes. Upon consent, a single link containing all the respective questionnaires were sent out to the respective individual who volunteered to distribute the link and participant sheet to each department in the organisation.

Each participant in this organisation was also required to select the department which the belonged to in the demographic questionnaire. This was achieved by virtue of a drop down menu which contained the names of the departments in the organisation. From the five departments that participated only three departments responded and eight participants completed the questionnaire in total.

The researcher also had to approach small organisations in which individuals all reported to one manager or the CEO. These organisations included a small accounting firm consisting of three individuals, a small IT firm consisting of four individuals and two small HR Consulting companies, one consisting of six individuals and the other consisting of ten individuals. The CEO or an HR representative, offered to distribute the link containing the questionnaires to colleagues within the company. A total of three responses were obtained from the accounting firm, two responses were obtained from the IT firm, nine from one of the HR consulting companies and four from the other.

Due to the difficulty experienced in obtaining a sample, the final three departments were acquired by the researcher's supervisor. These three departments remained completely anonymous to both the researcher and the researcher's supervisor and as a result, no information about the size of the organisations were acquired. The researcher sent six anonymous links to her supervisor who randomly distributed them to six different departments or organisations. Of the three companies that responded, two were IT companies and one was an NGO in the education sector.

Measures

For the purpose of this study a number of questionnaires were used to investigate the extent to which perceptions of a supportive organisational climate moderated the relationship between an employees' level of psychological capital and the dependent variables of job satisfaction and organisational commitment. A questionnaire, according to Buckingham and Saunders (2004, p.43), is a "prepared set of written questions, for the purposes of statistical compilation or comparison of the information gathered." Due to the quantitative nature of the research questions and the sample size (departments in an organisation) a structured questionnaire was considered the most appropriate instrument to use to collect the data. Four separate questionnaires, which were distributed as a pack via the online link, were used to collect data on psychological capital, employee perceptions of a supportive organisational climate as defined by perceived supervisor support, their satisfaction with their job and

commitment to their organisation. The following questionnaires were used to obtain information about the variables under investigation.

Demographic questionnaire.

A demographic questionnaire was constructed by the researcher in order to obtain information about the characteristics of the participants (refer to Appendix C). The questionnaire asked participants questions around their gender, age, racial grouping, educational level and tenure. Two companies were required to indicate on the questionnaire which department they belonged to by virtue of a drop down menu and specifically asked participants to identify the department within which they work. Demographics obtained were primarily used to describe the sample.

Psychological capital questionnaire.

Psychological Capital refers to an individual's positive state of development that is characterised by their hope, confidence, optimism and resilience. The Psychological Capital Questionnaire (PCQ) is the only questionnaire that currently exists in research around Psychological Capital and was therefore used to measure PsyCap in this study (refer to Appendix D). Luthans et al. (2007) have constructed the PCQ using widely recognised measures for each of the capacities that compose PsyCap namely hope (Snyder et al., 1996), confidence (Parker, 1998), resilience (Wagnild & Young, 1993) and optimism (Scheier & Carver, 1985). The PCQ was obtained with permission from www.mindgarden.com. Appendix E contains a letter granting permission to use the scale for this study.

The PCQ is a 24-item scale. The scale contains six items for each of the subscales of hope, resilience, confidence and optimism. Responses are placed onto a 6-point Likert type scale with categories of 1= strongly disagree, 2= disagree, 3=somewhat disagree, 4=somewhat agree, 5=agree and 6=strongly agree. The questionnaire asks individuals to indicate how they think about themselves "right now." Sample items include "I feel confident analysing a long-term problem to find a solution," "If I should find myself in a jam at work, I could think of many ways to get out of it," "When I have a setback at work, I have trouble recovering from it, moving on." Low scores indicate low levels of PsyCap while high scores indicate high levels of PsyCap. Reliabilities have not been consistently provided in studies that have employed this questionnaire. However the following were given in studies that have reported reliabilities: .95 (Avey, Wernsing & Luthans, 2008), .90 (Avey, Patera & West, 2006) to .89

(Luthans, Avolio, Avey & Norman, 2007). These reliabilities for overall PsyCap obtained for this particular study was 0.89. This is relatively high and confirms the reliabilities obtained in the previous studies reported above.

Reliability refers to the consistency of a test over time and the ability of the test to yield the same results over a period of time (Coetzee & Schreuder, 2010). Internal consistency reliability is a type of reliability that refers to the degree to which "each part of a test" is "consistent with all other parts" (Breakwell, Hammond, Fife-Schaw & Smith, 2006, p.194). One of the most common ways of assessing internal consistency reliability is through Cronbach's alpha. The higher the alpha the more likely it is that the items are measuring the same construct. Reliabilities need to be greater than .70 for the scale to be acceptable. Reliabilities of .80 or greater are considered to be high while those below .60 are considered to be low and unacceptable (Howell, 2008). Only one study conducted in South Africa utilised the PCQ, however, no reliabilities were provided for the overall scale.

As stated above, the PsyCap scale is composed of four component scales which have been drawn and adapted from widely recognised measures of confidence, hope, resiliency and optimism. It is therefore essential to examine the reliabilities of the four component scales that make up overall PsyCap.

An individual's levels of confidence are measured in question 1-6 on the PCQ. This component scale consists of 6 items that measure an individual's levels of confidence and have been adapted from Parker (1998 as cited in Luthans et al., 2007). Sample items include "I feel confident analyzing a long-term problem to find a solution" and "I feel confident in representing my work area in meetings with management." Low scores on this component scale indicate low levels of confidence while high scores indicate high levels of confidence. The confidence components in the current study yielded a reliability coefficient of .90. This is consistent with and slightly higher than reliabilities reported in a study conducted by Luthans et al. (2007), which were: .75,.84, .85 and.75 on four different samples used in one study on performance and satisfaction. In another study conducted by Avey et al. (2008) the confidence subscale yielded a reliability of .92 which is consistent with the reliability obtained in the current study.

Questions 7 to 12 on the PCQ measures the component of hope and consists of 6-items that measure an individual's levels of hope. Sample items include "If I should find myself in a

jam, I could think of many ways to get out of it" and "I can think of many ways to reach my current work goals." Low scores on this component scale indicate low levels of hope while high scores indicate high levels of hope. The hope component scale in this study yielded a reliability coefficient of .92. This is also consistent yet higher than the reliabilities reported by Luthans et al. (2007) which were also .72, .75, .80 and .76 on four different samples used in a study on performance and satisfaction. Avey et al. (2008) also obtained an internal reliability of .87 on the hope subscale which is consistent with the reliability obtained in the current study.

Questions 13 to 18 on the PCQ, measures the component of resilience and consists of 6-items that measure an individual's levels of resiliency. On this component scale, low scores indicate low levels of resiliency while high scores indicate high levels of resiliency. A sample item includes "I can get through difficult times at work because I've experienced difficulty before." Question 13 on this component scale, had to be reverse scored so that high scores indicated little difficulty in recovering from setback and low scores indicated much difficulty in recovering from setbacks. The resiliency component scale in this study yielded a reliability coefficient of .74. This is acceptable and consistent with reliabilities reported by Luthans et al. (2007) namely, .71, .71, .66 and .72 on four different samples used in a study on performance and satisfaction. Avey et al. (2008), however, obtained higher reliabilities on the resiliency subscale which was .83 respectively.

The last component, namely optimism, was measured through questions 19 to 24 on the PCQ and consists of 6-items that measure an individual's levels of optimism. Sample items include "I always look on the bright side of things regarding my job" and "I approach this job as if "every cloud has a silver lining." Low scores on this component scale indicate low levels of optimism while high scores indicate high levels of optimism. Question 20 and 23 had to be reverse scored. The optimism component scale in this study yielded a reliability coefficient of .74. This is also consistent with the reliabilities reported by Luthans et al. (2007) which were also .74, .69, .76 and .79 on four different samples used in a study on performance and satisfaction. Avey et al. (2008) also obtained a slightly higher reliability (.78) than that of the current study on the optimism subscale which is consistent with the reliabilities obtained by Luthans et al. (2007). From the above it is evident that the PCQ has high internal consistency reliability in the current study. This ensures that the tests used are of high quality and consistently measures what it purports to measure across time.

According to Rosenthal and Rosnow (2008, p.87), validity is the extent to which a measure is "appropriate or meaningful in the way they claim to be." In other words it is the degree to which a test measures what it purports to measure.

The validity of the PsyCap instrument was examined by Luthans et al. (2007) through the use of a confirmatory factor analysis. The instrument has been validated across multiple and diverse samples and has demonstrated strong psychometric fit to the data when modelled as a second-order factor" when each of the four constructs were added to the overall construct of PsyCap (Norman, Avey, Nimnicht & Pigeon, 2010, p.386). Research by Avey et al. (2008) and Luthans et al. (2007) have shown substantial factor-analytic fit for the PsyCap questionnaire. Similarly, Luthans et al. (2008, p.229) have also found "adequate fit indices for the "four-factor structure" where each of the six items loaded significantly on their relevant construct. The item loadings ranged from .89 to.98 and were all found to be significant. Each construct was also found to load high on the latent factor of PsyCap (loading at .99) (Luthans et al., 2008).

Perceived supervisor support questionnaire

The second questionnaire was used to measure supportive organisational climate which was specifically defined as an employee's perception of supervisor support. Perceived supervisor support refers to perceptions individuals have about the extent to which their supervisor values their contribution and cares about their well-being and growth. This study has employed Eisenberger et al's. (1986) Perceived Organisational Support Scale to measure supervisor support. Eisenberger et al's. (1986), 36-item Perceived Organisational Support scale has been shown to have high reliability. Therefore, using a shorter version which consists of 8 items did not appear problematic as the shorter version has shown to have considerable reliability (Eisenberger, 1986). As a result the shortened version of Eisenberger et al's. (1986) scale was utilised for the current study (refer to Appendix F). A number of studies have used the shorter version to measure perceived supervisor support by substituting the word *organisation* with *supervisor* as indicated in the sample questions below (Kottke &Sharafinski, 1988; Malatesta, 1995; Rhoades et al., 2001; Shore & Tetrick, 1991; Yoon, Han, & Seo, 1996; Yoon & Lim, 1999 as cited in Rhoades & Eisenberger, 2002).

The short version of the scale consists of 8 items which are measured on a 7-point Likert type scale. The categories range from 1=Strongly disagree, 2=Moderately disagree, 3=Slightly disagree, 4=Neither disagree nor agree, 5=Slightly agree, 6=Moderately agree, 7=Strongly agree. Sample items include "My organisation [supervisor] really cares about my well-being," "My organisation [supervisor] cares about my opinions" and "My organisation [supervisor] strongly considers my goals and values." There are three reverse scored items on this scale. Low scores indicate low levels of supervisor support and high scores indicate high levels of supervisor support. Reliabilities reported in previous studies that have used the short version of the scale to measure perceived supervisor support have generally been high ranging from .81 and .82 (Eisenberger, Stinglhamber, Vandenberghe, Sucharski & Rhoades, 2002) and α=.90 (Gibson, Grey & Hastings, 2009). A Google Scholar search revealed that no previous studies have reported to have used the adapted and shortened version of Eisenberger's (1986) Perceived Supervisor Support scale in the South African context. The reliability for the current study, which was conducted in the South African context, was .94. This is consistent and slightly higher than reliabilities reported in previous studies that utilised this scale.

Job satisfaction questionnaire.

Job satisfaction can be defined as an individuals' feeling/s towards their job. The job satisfaction scale that was used in this study is Warr, Cook and Wall's (1979) Job Satisfaction Scale (refer to Appendix G). The Job Satisfaction Scale has been widely used and taps into both intrinsic and extrinsic aspects of an individual's feelings of satisfaction as an indication of overall satisfaction. This scale has been shown to have considerable reliability as indicated below. The scale consists of 15 items. All 15 items are measured on a 7 point Likert-type scale with categories 1=extremely dissatisfied, 2=very dissatisfied, 3=moderately dissatisfied, 4=not sure, 5=moderately satisfied, 6=very satisfied and 7=extremely satisfied. Individuals are required to indicate, using the 7-point scale, the extent to which they are satisfied or dissatisfied with certain features of their job. Sample features include, "the physical working conditions in which you work," "your fellow workers," and "the amount of variety in your job." High scores on this scale indicated high levels of satisfactionwhile low scores indicate low levels of satisfaction or dissatisfaction. Reliabilities obtained in previous studies were high and ranged from .85 to.88 (Warr et al., 1979), .89 (Lu, While & Barriball, 2007) and .92 (Griffin, Patterson & West, 2001).

Warr, Cook and Wall's (1979) the Job Satisfaction Scale has also been shown to have merit in the South African context. On a sample of 91 employees in a number of organisations operating in the food industry in South Africa, Monji and Ortlepp (2011), aimed to examine the relationship between organisational trust, job satisfaction and intention to leave. They also employed Warr et al's. (1979) Job Satisfaction Scale which proved to have considerable reliability. A Cronbach's alpha of .95 was found in their study. The current study which was situated in the South African context, yielded a reliability coefficient of .90 which is consistent with the reliabilities obtained in previous studies conducted both in South Africa and abroad. In addition, the validity of the scale has been consistently reported (Warr et al., 1979; Sibbald, Enzer, Copper, Rout & Sutherland, 2000).

Organisational commitment questionnaire.

Commitment can be referred to as an individual's attachment or affective attachment to his/her job. Commitment, in this study was measured using Mowday, Steers and Porter's (1982) Organisational Commitment Questionnaire (see Appendix H). The questionnaire is comprised of 15 items that measure an employee's overall commitment to the organisation. Organisational commitment for Mowday et al. (1979, p.226) is characterised by the following: "a strong belief in and acceptance of the organisation's goals and values; (b) a willingness to exert considerable effort on behalf of the organisation; and (c) a strong desire to maintain membership in the organisation" The items are measured on a 7-point Likert type scale with responses ranging from 1=Strongly disagree, 2=Moderately disagree, 3= Slightly disagree, 4=Neither disagree or agree, 5=Slightly agree, 6=Moderately agree and 7=Strongly agree.

Five items on this scale have been reverse scored. Low scores on this scale indicate low levels of commitment while high scores indicate high levels of commitment. Sample items of this questionnaire include, "I feel very little loyalty to this company," "I am proud to tell people that I am part of this company" and "It would take very little change in my present circumstances to cause me to leave this company." Reliabilities obtained in previous studies were high and ranged from .82 to .93 (Mowday, Steers & Porter, 1979). Unpublished dissertations were the only papers that used this scale in the South African context . The dissertations that used the scale yielded reliabilities of .83 (Toga, 2011) and .88 (Mutsvunguma, 2010). The current study yielded a reliability of .65 which is fairly lower

than reliabilities obtained in previous studies but is still acceptable. The scale has also been validated extensively (Mowday et al., 1979).

Analysis

Due to the inherent quantitative nature of the study, it was appropriate to run descriptive statistics and conduct preliminary analyses in order to determine the nature of participant responses and the questionnaires used. These descriptive statistics included obtaining means and standard deviations, variances and the range in order to make the data more meaningful. Also, skewness and kurtosis coefficients were obtained in order to determine the normality of the data obtained. Frequencies were also obtained in order to describe the nature of the sample used in this study. In addition, assumptions for the various statistical analyses that were used were also tested. Three analyses were run to answer the research questions posed namely a Hierarchical Linear Model (HLM), simple Pearson-product moment correlations and a two-way ANOVA.

Hierarchical linear model.

The initial intention of this study was to analyse the data obtained using a Hierarchical Linear Model (HLM). According to Hoffman (1997), organisations are considered to be inherently hierarchical in nature. In other words, "data collected in organisations consist of nested entities" (Hoffman, 1997, p.723). Within organisations, for example, individuals are nested within work teams and work teams are nested within departmental units while departmental units are nested within organisations and organisations are nested within the larger environment (Hoffman, 1997). Hierarchical Linear Modeling (HLM) has thus become a popular way of assessing hierarchically structured data in organisations.

The data collected for this study was meant to be analysed using a Hierarchical Linear Model (HLM). Because departments were the unit of analysis for this study and the aim was to examine the variables at various hierarchical levels within the organisation it was sensible to use a HLM in order to answer the research questions posed. This statistical analysis aimed to examine the relationship between PsyCap as an independent variable and the dependent variables of job satisfaction and organisational commitment recognising the hierarchical nature of the data (Bryk and Raudenbush, 2002). In particular, employees are nested within departments and psychological capital applies to individuals within departments as opposed

to departments (Bryk and Raudenbush, 2002). In this instance, perceived supervisor support served as a level two variable applying to departments rather than individuals.

The HLM analysis consists of two models, one model that examines the relationships of variables within lower level units and the other examining how these relationships "vary between units" (Hoffman, 1997, p.726). The assumption underlying HLM is that individual's within groups are more similar to each other than to individuals in other groups.

Part of the HLM analysis includes the calculation of the The Interclass Correlation Coefficient's (ICC) for both dependent variables. The ICC is defined as "the proportion of total variance that is between the groups of the regression equation" (Roberts, 2004, p.32). In other words, the ICC provides information about how much of variance in job satisfaction (organisational commitment) can be explained by which department the individual belongs to. The phrase 'Interclass Correlation Coefficient' also point to an alternative, but equally valid interpretation of the ICC, namely that the ICC also represents the degree to which individuals in the same class (department) are correlated with each other. As such this indicates the degree to which the independence assumption of the simpler class of linear models is violated (Bryk & Raudenbush, 2002)

The ICC is calculated using the following equation:

$$ICC = \frac{\delta_0}{\sigma_0 + \delta_0}$$

Where δ_0 = between group variance and σ_0 = within group variance.

One of the key requirements of the HLM analysis is the need for a large sample size in order for the analysis to yield adequate power. Hoffman, Griffin and Gavin (2000) argue that two studies have revealed that in order for the test to yield sufficient significant effects and result, a sample of 30 groups with 30 individuals each is needed. However, it is important to not that there is no stipulated trade-off between the number of groups and number of individuals within each department. They further argue that the size of the group will also determine the number of individuals per group. For example the greater number of groups obtained, the fewer number of people are required within each group. The smaller the number of groups obtained, on the other hand, the greater the number of people required in each.

In the current study, the HLM analysis was run but the primary reason for discontinuing the analysis was the lack of evidence for interdependence between departments. This means that

the assumption of independence which would be violated by ordinary general linear model analysis regression/ANOVA are in fact met. Therefore continuing the HIM was not necessary.

Correlations.

Simple correlations were performed to examine the relationship between the variables that were under investigation in this study. In particular, Pearson's product-moment correlation analysis was used to establish the relationships between the independent variables (psychological capital and supervisor support) and the corresponding dependent variables (job satisfaction and organisational commitment). This analysis was used to address the first to research questions in the study, namely:

- What is the relationship between psychological capital and the dependent variables of job satisfaction and organisational commitment?
- What is the relationship between a supportive organisational climate and the dependent variables of job satisfaction and organisational commitment?

The correlation coefficient lies between +1 and -1 where the closer the value to each of these extremes, the stronger the relationship between the variables (Rosenthal & Rosnow, 2008). It is important to note that the positive or negative sign in front of the correlation denotes the direction of the relationship between the variables (Rosenthal & Rosnow, 2008). A positive correlation indicates that large values or scores in one variable are associated with large values/scores in the other value. A negative correlation on the other hand signifies indicates that large values/scores in one variable are associated with low values/scores in the other variable.

Two-way ANOVA.

The two-way ANOVA was used to answer the last research question:

- Does supervisor support moderate the relationship between psychological capital and the dependent variables of job satisfaction and organisational commitment?

A two-way ANOVA is used to examine interaction effects amongst variables. This specifically occurs when "the effects of one variable depend on the level of another independent variable" (Howell, 2008, p.419). Because, the last question aimed to examine moderator effects, a two-way ANOVA was most appropriate to use.

According to Baron and Kenny (1986, p.1174) a moderator is a "qualitative or quantitative variable that affects the direction and/or strength of the relation between the independent or predictor variable and a dependent or criterion variable." Figure 1 represents the aim of moderation as explained by Baron and Kenny (1986):

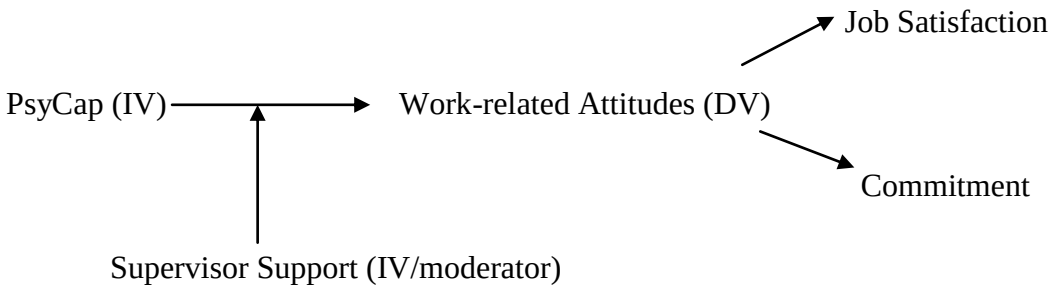


Figure 1: Model of moderation adapted from Baron and Kenny (1986).

There are three causal paths prevalent in moderation. First there is the impact of the independent variable (PsyCap) on the dependent variables (job satisfaction/commitment). The second path involves the impact of the second independent variable or moderator (supervisor support) on the dependent variables. The last path involves the interaction between the independent variable (PsyCap) and the moderator (supervisor support). From this it is important to note that moderation only exists if there is an interaction between PsyCap as the independent variable and supervisor support as the moderator.

A two-way ANOVA was the analysis used to indicate moderation in this study. It was first essential to conduct a median split on the independent variable and the moderator in order to categorise the variables into high and low levels of PsyCap and supervisor support. The median split was essential to carry out as two-way ANOVA's involve variables that have at least two levels. In a two-way ANOVA, "every level of one variable is paired with each level of the other variable" (Howell, 2008, p.419). This was achieved by finding the median of the scales and dividing the score into halves. Data above the 50^{th} percentile indicated high levels of PsyCap and high perceptions of supervisor support and individuals who scored below the 50^{th} percentile were considered to have low levels of PsyCap and low perceptions of supervisor support.

There are several important advantages of using a two-way ANOVA. First and most importantly, the analysis requires fewer participants than that of a one-way ANOVA (Howell, 2008). This is particularly because the effects of one variable are averaged across the levels of the other variable (Howell, 2008). Secondly, the analysis allows for the examination of

interactions which often yield significant and interesting results (Howell, 2008). Lastly the two-way ANOVA allows for greater generalisability and a broader interpretation of the results. This thus results in data that is more meaningful for the researcher to interpret (Howell, 2008).

Assumptions

In order to carry out the statistical tests used in this study, it is essential to ensure that certain parametric assumptions are being met.

Correlation.

In order for the researcher to carry out the correlation analysis both the variables that are being correlated need to be on the interval scale. All the variables in the study are on the interval scale of measure. Secondly, a linear relationship needs to exist between the variables being correlated. This was achieved by generating a scatterplot to examine linearity amongst the variables. The scatterplot generated for the PsyCap/organisational commitment and PsyCap/satisfaction relationship illustrated a positive linear relationship between the variables. The scatterplots generated for the erlationship between supervisor support and organisational commitment and supervisor support and job satisfaction showed a weak and slightly curved relationship. The assumption, however was not severly violated. In addition histograms revealed that the supervsior support variable was heavily skewed to the left and the mean score for the variable had to be transformed to reduce the degree of non-normality. The third assumption is that there should be no outliers present in the data set. There was one outlier present within the PsyCap data. This outlier was removed and the distribution of the data resumed to normal as a result. The plots and results for the assumptions will be presented in the results chapter.

Two-way ANOVA.

There are a number of assumptions that need to be taken into account particularly for the two-way ANOVA. Firstly there needs to be random and independent sampling. This means that each observation needs to be independent and should not be related to other observations in any way. The proposed HLM analysis does not require random and independent sampling particularly because individuals in groups are considered to be alike. The aim of this study was not to use an ANOVA, however due to methodological issues and constraints a two-way

ANOVA had to be used to analyse the data. It is important to note that all procedures require random sampling. HLM models are a particular form of non-independence, namely the correlation of individuals in the same subgroup.No correlation was found between individuals within subgroups and as such the assumption of independence was not violated.

There also needs to be homogeneity of variances and the dependent variable has to be on the interval scale and normally distributed. All the scales used in this study were on the interval scale of measure. However, both the independent (PsyCap) and moderator (supervisor support) variables were dichotomised in this study. According to Baron and Kenny (1986, p.1175) a 2x2 ANOVA is characterised by the effect which a dichotomous independent variable has on a dependent variable as a result of the effects of "another dichotomy." Because the sample size was small two groups were most appropriate and hence it was sensible to conduct a median split.

It is important to examine the normality of the scales, and in particular the dependent scales of measure namely satisfaction and organisational commitment. Both dependent variables in the study were normally distributed and skewness and kurtosis coefficients fell comfortably within the range of -1 and +1. Levene's test also indicated homogeneity of variances.

Ethical Considerations

The researcher obtained ethical clearance from the Human Research Ethics Committee of the University of the Witwatersrand in order to ensure that the study met strict ethical standards (refer to Appendix I).

There are various ethical issues which have been taken into account throughout the research process. One particularly important consideration that was accounted for is the issue of confidentiality and anonymity. Confidentiality is when a researcher is able to identify the participants' response "but promises not to do so publicly" (Babbie and Mouton, 2001, p.523). Anonymity then is when the researcher does not have the ability to identify a response with a particular participant (Babbie and Mouton, 2001). In this study confidentiality was achieved by virtue of anonymity. No identifying information was asked for from the participants. Some organisations were required to indicate which department they belong to in the organisation, but this information was only viewed by the researcher and the researcher's supervisor.

Participants were not harmed physically or psychologically in any way during the data collection process. The questions in all four questionnaires are closed ended therefore there were no probing questions which could psychologically harm the participant (Babbie and Mouton, 2001). Participants were simply sent an e-mail which invited them to volunteer to take part in the research. In addition, participants were given the choice to complete the questionnaires. Once the questionnaires were submitted via the online link, responses and respondents remained anonymous and did not have the option to withdraw.

No participant was forced to take part in this research and no penalty was awarded for non-participation. The companies, individuals and departments under investigation in this research opted to take part in the research. Employees were sent an e-mail with a participation sheet which invited them to participate in the research. A link was also sent along with the participant information sheet. The link contained all the relevant questionnaires as a pack.Those who completed the questionnaire volunteered and simultaneously provide their consent to participate. Therefore voluntary participation as well as informed consent was achieved. The organisations received the results in the form of a summary at the group level. In order to protect anonymity and confidentiality, no individual or departmental results were given out to the participating organisations upon completion of study.

Chapter 4: Results

The following chapter presents the findings obtained in the study using a number of statistical tests. Frequencies and descriptive statistics were performed as well as reliability analyses in order to determine the relaibility coefficients of the instruments used in this study. Demographic information obtained was merely used to describe the sample that was obtained and used in this study. The main analyses intended to be used was a Hierarchical Linear Model (HLM) analysis. However due to methodological issues and constraints, the HLM analysis was not carried out fully and was thus sumplemented with a Pearsons product moment correlation and a two-way ANOVA in order to answer the research questions.

Sample

The sample obtained was large and diverse. The sample consisted of 50 employees, from various organisations and departments in the Gauteng and Kwazulu-Natal region. Out of 50 responses, 45 were usable for the study. Fourty five represents those individuals who completed at least one of the scales as there were only 40 respondents who completed all 4 scales. Four responses were labelled as missing as the respondents did not complete the questionnaire (after the demographics section) and one was an outlier which was removed. The descriptive statistics and frequencies for the final sample (n=45) have illustrated that the sample was comprised of 66.7% female employees (Male=33.3%). As a result, the majority of employees were female (n=30). There is evidence, however that females are more likely to volunteer than men and this could potentially account for their overrepresentation (Rosenthal & Rosnow, 2008).

Participants ranged from 21 to 63 years of age, with the mean age being 35.40 years (S=11.40). In terms of race, the sample was primarily made up of White employees (40%). Most of the participants reported being with their employing organisation for 6 months to a year (30%). In terms of education, more than half of all participants had at least a degree in their related field of study (62%). From the 62% that had degrees, 4% had a postgraduate degree (n=2), 2% had an Honours degree (n=1), 2% had a Masters degree (n=1), 2% had a PhD (n=1) and 2% had a postgraduate diploma (n=1). Of the 6% that had only a matric, 2% was currently studying (n=1). The table below provides a detailed description of the sample demographics:

Table 1

Sample Demographics

		Frequency	Percentage
Gender	Male	17	34%
	Female	33	66%
Race	Black	18	36%
	White	20	40%
	Asian	10	20%
	Coloured	2	4%
	Other	0	0%
Age	20-35 years of age	28	58%
	36-59 years of age	19	40%
	60 + years of age	1	2%
Tenure	6 months to a year	15	30%
	1-2 years	12	24%
	2-3 years	6	12%
	3-4 years	5	10%
	4-5 years	2	4%
	5 years +	10	20%
Level of Education	Matric	3	6%
	Certificate	7	14%
	Diploma	9	18%
	Degree	31	62%

Tables 8.1 to 8.4 in Appendix J provides a breakdown of the demogaphics per department. The tables further indicate that there were similar patterns across all departments in terms of gender (most of whom were female), race (white) and education (degree). Tenure, however, varied across departments. Examining demographics was not an aim of this particular study, however it was nevertheless important to recognise and mention the patterns observed.

Reliability of Instruments

Previous reliability coefficients obtained on the instruments used were discussed in the methodology chapter. It has been argued that reliability coefficients of between .7 and .8 are regarded as acceptable while those coefficients above .8 are considered strong and high

(Breakwell et al., 2006). Reliability coefficients below .6 are considered to be low and weak (Breakwell et al., 2006).

Using Cronbach's Alpha, reliability coefficients were also determined for the instruments used in this study. As previously mentioned, an internal consistency reliability coefficient of .7 is considered to be acceptable and .8 is considered to be high and good. Reliabilities were obtained for the various scales that were used in the study namely psychological capital (α=.89) and the various component scales of hope (α=.92), confidence (α=.90), optimism (α=.74) and resiliency (α=.74); supervisor support (α=.94), job satisfaction (α=.90) and organisational commitment (α=.65). It is evident from the above table that all the reliabilities obtained, with the exception of the commitment scale, were acceptable (above .7) and there is evidence of good internal consistency reliability amongst all instruments used in the study. The alphas obtained were also comparable to the alphas obtained in previous studies as discussed in the methodology chapter. Table 2 summarises the reliabilities obtained on each scale including both the raw and standardized alpha coefficients:

Table 2

Reliabilities of Questionnaires

Scale	Cronbach Alpha	Standardized Cronbach Alpha Coefficient	Number of Items
Psychological Capital Questionnaire	.88	.89	24
▪ Hope Component	.91	.92	6
▪ Confidence Component	.90	.90	6
▪ Optimism Component	.72	.74	6
▪ Resiliency Component	.72	.74	6
Perceived Supervisor Support Scale	.94	.94	8
Job Satisfaction Scale	.90	.90	15
Organisational Commitment Questionnaire	.63	.65	15

Descriptive Statistics for Variables

Descriptive statitistics for the variables under investigation in the study were also obtained. The mean PsyCap score (*N*=45) across all participants was 4.88 (*S*=.55) with a possible range of 1 through 6. The supervisor support scale (*N*=43) yielded a mean score of 6.06 (*S*=.97) with a possible range of 1 to 7. A mean score of 4.74 (*S*= .65) was obtained on the commitment scale (*N*=41) with a possible range of 1 through 7. Lastly, a mean score of 5.40

(*S*=.79) and a possible range of 1 through 7 as obtained on the job satisfaction scale (*N*=41). It is evident that the majority of participants reported relatively high scores on all the scale. These scores illustrate that in general, participants reported relatively high levels of psychological capital, supervisor support, organisational commitment and job satisfaction.

Assumptions: Normality

The variables were also tested for normality through the examination of skewness and kurtosis coefficients. For normality to be achieved, the skewness and kurtosis values need to fall within the range +1 and -1. Skewness and kurtosis coefficients revealed that both the dependent variables of satisfaction and organisational commitment fell comfortably within the range of +1 and -1. Job satisfaction was reasonably normal yielding a skewness coefficient of .112 and kurtosis coefficient of -.92. Most participants were therefore fairly satisfied with their jobs. Organisational commitment was also reasonably normal with a skewness coefficient of -.35 and a kurtosis of -.26. Similar to job satisfaction, most particpants were on average commited to their organisation. Figures 2.1 and 2.2 below illustrate the normality of both dependent variables:

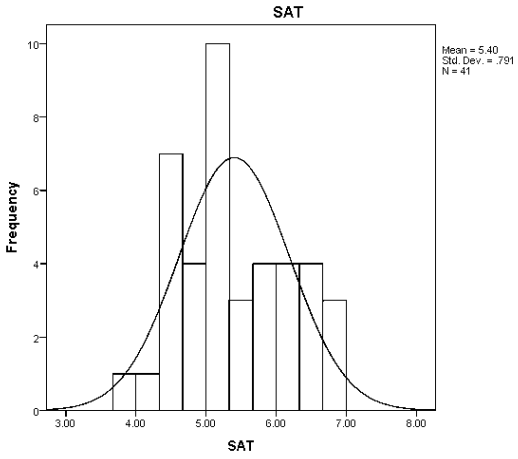


Figure 2.1: Job satisfaction distribution

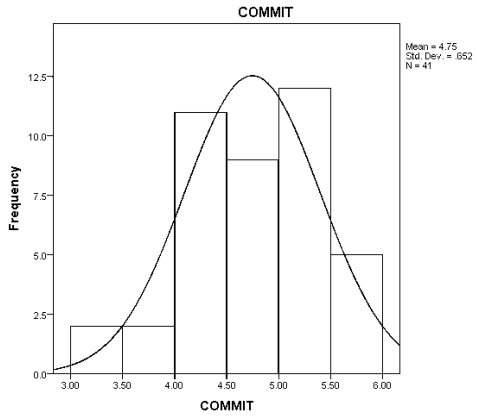


Figure 2.2: Organisational commitment distribution.

The two independent varaibles, PsyCap and supervisor support, however, were non-normal. The PsyCap variable was skewed to the left. A histogram revealed that this was primarily due to the presence of an outlier as indicated Figure 3.1 below. Before the outlier was removed, descriptive statistics revealed that the variable had a skewness coefficient of -1.82 and a kurtosis of 6.61. The outlier was therefore removed and a histogram and descriptive statistics were generated after this step was taken. The skewness after the outlier was removed was -.34 and the kurtosis was -.675 as indicated in Figure 3.2.

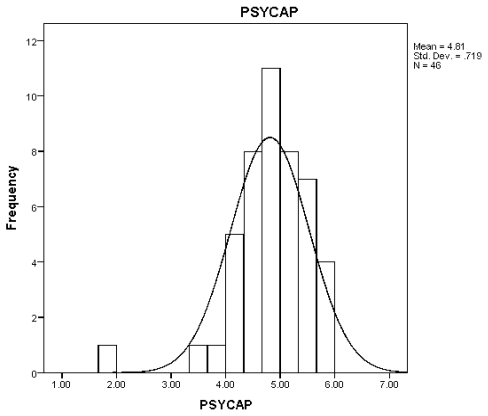


Figure 3.1: PsyCap distribution with the outlier.

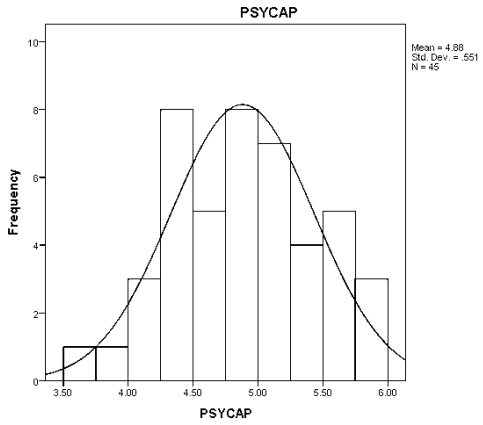


Figure 3.2: PsyCap distribution with the outlier removed.

The last variable, supervisor support, was heavily negatively skewed. The descriptive statistics illustrated that the skewness coefficient for supervisor support was -1.15 and the kurtosis was .59. The distribution indicates that most of the participants reported having extremely supportive supervisors. In order to correct for the lack of normality two transformations were considered namely a log transformation after the direction of the scale was reversed (as log transformations only improve right sewed distributions) and an arcsin square root transformation after the scores were converted to proportions. The arcsin square root transformation produced a more appropriate distribution and as a result, all further analyses were produced using the transformed distribution. This is indicated by Figure 4 below:

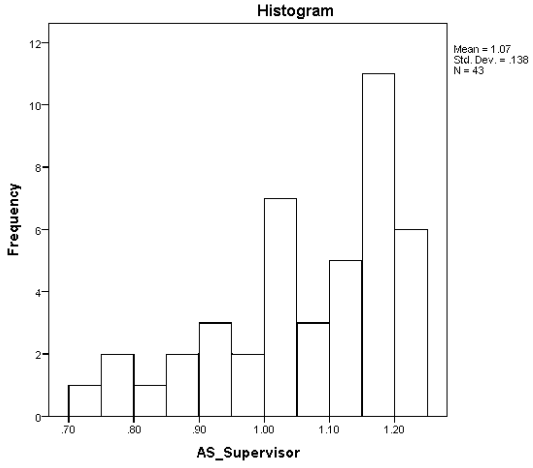


Figure 4: Arcsin square root transformation for supervisor support.

As previously mentioned one of the important assumptions regarding parametric correlations is to ensure that there is a linear relationship amongst the variables under investigation. A scatterplot was generated in order to examine the degree of linearity between PsyCap and the

dependent variables and supervisor support and the dependent variables. The scatterplots generated for the PsyCap/organisational commitment and PsyCap/job satisfaction relationships illustrated a positive linear relationship between the variables as indicated by Figures 5.1 and 5.2 below:

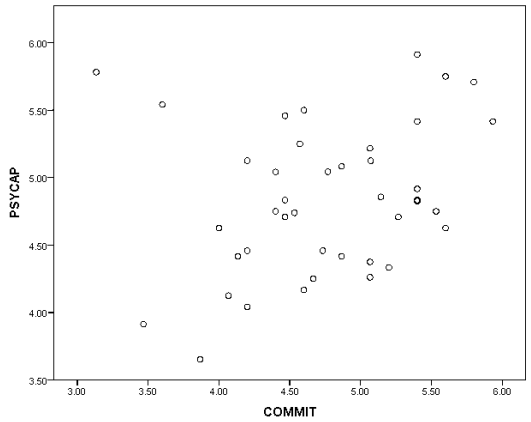


Figure 5.1: Relationship between PsyCap and organisational commitment.

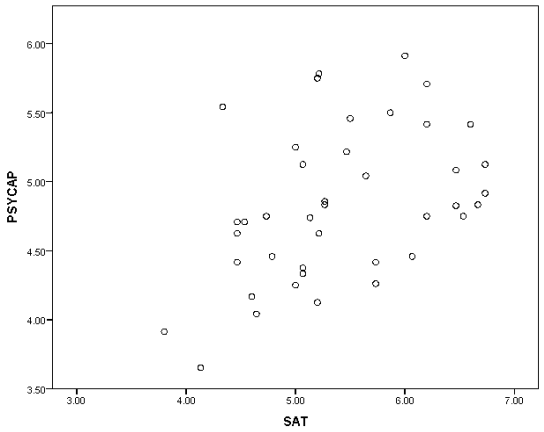


Figure 5.2: Relationship between PsyCap and job satisfaction.

However scatterplots generated for the relationship between supervisor support and the dependent variables revealed that the relationship between supervisor support and commitment is weak and the relationship with satisfaction is slightly curved (refer to Figures 7.1 and 7.2 in Appendix K). However, the assumption of linearity was not severely violated.

Hierarchical Linear Model

A Hierarchical Linear Model was run in order to establish the relationship between the variables under investigation at various hierarchical levels. "These levels are numbered in ascending order, beginning with the most elementary level" (Roberts, 2004, p.31). The levels defined in this particular study were the individual levels (level 1) and the departmental levels

(level 2). Level 1 variables constituted of individual levels of PsyCap while level 2 variables were defined in terms of perceived supervisor support. Perceived supervisor support was measured at the departmental level. The following section reports and examines the result obtained through the HLM analysis.

Base model.

The first model that was generated from the analysis was the base model. A base model was generated separately for both the dependent variables of job satisfaction and organisational commitment. The base model examines how much of the variance in the dependent variables is a function of which class or in this case the department, the individual belongs to. This particular model "investigates the amount of between-group variance" in job satisfaction (organisational commitment) "by partitioning the total variance" in job satisfaction (organisational commitment) "into its within-group and between-group components" (Hoffman, Griffin & Gavin, 2000, p.479). It is important to note that despite the teminology appearing the same, this decomponsition is not directly equivalent to the similar decomposition of a simple ANOVA, as the ANOVA between group variance includes variance which is attributable to within group variance. In this model, the departments act as the independent variable.

As previously mentioned, the ICC for the dependent variables were calculated in order to determine how much of variance in job satisfaction (organisational commitment) can be explained by which department the individual belongs to. Calculations were conducted and revealed that the ICC for the base model with the dependent variable being satisfaction was 0% and the ICC for the base model with organisational commitment as the dependent variable was 0%. This indicates that none of the variance in job satisfaction was a function of which department the individual belongs to. Similarly, 0% of the variance in organisational commitment is a function of which department the individual belongs to. Both these values indicate that all the variance in organisational commitment and job satisfaction occurred at the level of the individual and no variance was explained at the level of the department. Alternatively this indicates that there is no lack of independence due to departments and as such the additional complexity of the HLM is unnecessary.

This is further clarified by examining ANOVA summary tables and in particular by comparing the mean square values between and within groups. If the mean square value for

between groups is less than or equal to the mean square error (within groups) this implies that all of the between group variance can be accounted for by within group variance. Thus the means squares for between groups should be significantly larger than the mean squares for within groups if diffferences between the classes are to be found and as such for there to be a substantial ICC. Table 3 presents the summary of calculations:

Table 3

One-way ANOVA Summary Table

		Sum of Squares	df	Mean Square	F	Sig.
PSYCAP	Between Groups	3.518	13	.271	.438	.942
	Within Groups	19.768	32	.618		
	Total	23.286	45			
SUPERVISOR	Between Groups	13.339	13	1.026	.841	.617
	Within Groups	36.611	30	1.220		
	Total	49.950	43			
COMMIT	Between Groups	5.245	13	.403	.912	.552
	Within Groups	12.385	28	.442		
	Total	17.630	41			
SAT	Between Groups	8.534	13	.656	1.037	.447
	Within Groups	17.724	28	.633		
	Total	26.259	41			

The ANOVA summary table illustrates that the mean square values for between groups are either smaller than or the same as the mean square values for within groups. This pattern explains the apparently anomolous results which showed 0 between group variance in the HLM.

The primary intention of the HLM analyis was to look at the addition of level two predictors to the HLM and model the organisations potential to impact via the departmental level supervisor support. However, the ICC's revealed that there was insufficient level two variance to explain. It was therefore insensible to continue with the HLM analysis and as a result the HLM analysis was replaced by simple linear models, in particular correlation and ANOVA. As noted above the 0 ICC indicates that the independence assumptions are now met and there is no need to adjust for the lack of independence using the HLM approach.

However supervisor support must now be conceptualised as an individual variable and as such reflects each respondents perception of the supervisor support they receive.

Correlations

As previously stated, simple correlations were performed in order to answer the first two reearch questions namely:

- What is the relationship between PsyCap and the dependent variables of job satisfaction and organisational commitment?
- What is the relationship between supervisor support and the dependent variables of job satisfaction and organisational commitment?

The following guidelines, as stipulated by Cohen, need to be adhered to when evaluating the strength and direction of correlations: correlations of 0 to .3 are considered to be weak, correlations of .3-.5 are considered to be moderate and correlations greater than .7 are considered to be very strong (Howell, 2008). Table 4 below illustrates the correlations between the variables that were under investigation and their degree of significance. Only the variable combinations that were pertinant to examining the first two research questions stated above were reported.

Table 4

Pearson Correlation Coefficients

	PsyCap	Commit	Sat
PsyCap	1	.275	.436**
Commit		1	.634**
Sat			1

**p < 0.01

1a. What is the relationship between PsyCap and organisational commitment?

With respect to the relationship bewteen PsyCap (*N*=45) and organisational commitment (*N*=41), a test of significance at the 0.01 level revealed that PsyCap was not significantly related to organisational commitment (*p*=.08). The observed relationship (*r*=0.27) was weak.

1b. What is the relationship between PsyCap and job satisfaction?

By contrast PsyCap (*N*=46) and job satisfaction (*N*=41), were found to be significantly related to each other at the .01 level of significance (*p*=.004) and yielded a correlation coefficient of .43 which is moderate.This suggests that high levels of PsyCap are associated with high levels of job satisfaction. In other words, individuals who had high levels of PsyCap were more satisfied with their jobs than individuals with low levels of PsyCap.

Fishers Z-test for Dependent Correlations

Interestingly the correlations illustrate that PsyCap was related to satisfaction but not to organisational commitment. In order to further investigate this result, Fisher's Z-test for Dependent Correlations was conducted in order to examine whether or not there was some difference between both correlations, namely the correlation between PsyCap and job satisfaction and the correlation between PsyCap and organisational commitment. The formula used was taken from Rosenthal and Rosnow (2008, p.685) as follows:

R_{AC}=Correlation between PsyCap and job satisfaction

R_{BC}=Correlation between PsyCap and organisational commitment

R_{AC}=Correlation between job satisfaction and organisational commitment

$$Z_{r1}=\ln \frac{1-rac}{1+rac}$$

$$Z_{r2}=\ln \frac{1-rbc}{1+rbc}$$

$$Z= (Z_{r1}- Z_{r2})\sqrt{\frac{N-3}{2(1-rab)n}}$$

Where: rac=correlation between PsyCap and satisfaction

rbc=correlation between PsyCap and commitment

rab=correlation between satisfaction and commitment (Rosenthal & Rosnow, 2007)

After calculations were conducted using the above formula, a Z-score of 2.49 (p=.012) was obtained. From this it can be concluded that the correlation between PsyCap and satisfaction and PsyCap and organisational commitment is statistically significantly and both correlations are different from each other. This suggests that PsyCap is a stronger predictor of job satisfaction that it is of organisational commitment.

2a. What is the relationship between supervisor support and job satisfaction?

As previously stated, the supervisor support variable was negatively skewed and as such an arcsine square root transformation was performed on the mean of supervisor support to bring it closer to normality.

As indicated by table 6, the relationship between supervisor support (N=43) and job satisfaction (N=41) is significant at the .01 level of signifcance (p=.000). The analysis also yielded a correlation coefficient of .69 which is strong . This means that high levels of supervisor support are associated with high levels of job satisfaction. In other words, individuals who perceived their supervisor as being very supportive were more likely to be satisfied with their jobs.

2b. What is the relationship between supervisor support and organisational commitment?

Similarly, the relationship between supervisor support (N=43) and organisational commitment (N=41) was also found to be significant at the .01 level of significant (p=.038). The correlation coefficient obtained for this relationship was .32 which is weak to moderate according to the guidelines stipulated by Cohen. This means that high levels of supervisor support are associated with high levels of organisational commitment. Therefore individual's who perceived their superviors as being supportive were more committed to their jobs. Table 5 presents the correlations based on the transformed distribution

Table 5

Pearson Correlation Coefficients

	AS_Supervisor	Commit	Sat
AS_Supervisor	1	.326**	.690**
Commit		1	.634**
Sat			1

**p<0.01

Two-way ANOVA

A two-way ANOVA was used to answer the final research question namely,

- Does supervisor support moderate the relationship between PsyCap and the dependent variables of job satisfaction and organisational commitment?

In order to examine the effect which supervisor support had on the relationship between PsyCap and the dependent variables of job satisfaction and organisational commitment the interaction between PsyCap and supervisor support was examined. As a result a two-way ANOVA was conducted in order to examine the interaction effects of PsyCap and supervisor support on the dependent variables.

A indicated in the previous chapter, a median split was conducted on the the independent variables in this study, namely supervisor support and PsyCap. In other words, both variables were split into high and low groups by dividing the data into half. All scores below the 50^{th} percentile were considered to be low while scores above the 50^{th} percentile were considered to be high. The median split approach was prefered to moderated multiple regression due to its simplicty, given the small sample size. The significant interaction effects were examined using post hoc analyses in order to further assess the nature of the relationships.

1. *Does supervisor support moderate the relationship between PsyCap and job satisfaction?*

The first research question aimed to examine whether or not supervisor support moderates the relationship bewteen PsyCap and job satisfaction. Table 6 shows that there was a significant interaction between supervisor support and PsyCap on the dependent variable of job satisfaction ($F1,37) = 4.18$; $p<.05$. Figure 6, the interaction plot, illustrates that there is an

interaction between supervisor support and PsyCap. Specifically Figure 6 illustrates that supervisor support makes more of a difference to an individual's job satisfaction when the individual has low levels of PsyCap. Furthermore supervisor support does not make a difference to an individuals level of job satisfaction when the individual has high levels of PsyCap.

Table 6

Interaction effects of PsyCap and Supervisor Support on Job Satisfaction

Source	df	Mean Square	F	Sig.
Supervisor Support	1	9.404	35.618	0
PsyCap	1	0.398	1.508	0.227
Sup. Supp. x PsyCap	1	1.103	4.18	0.048
Error	37	0.264		

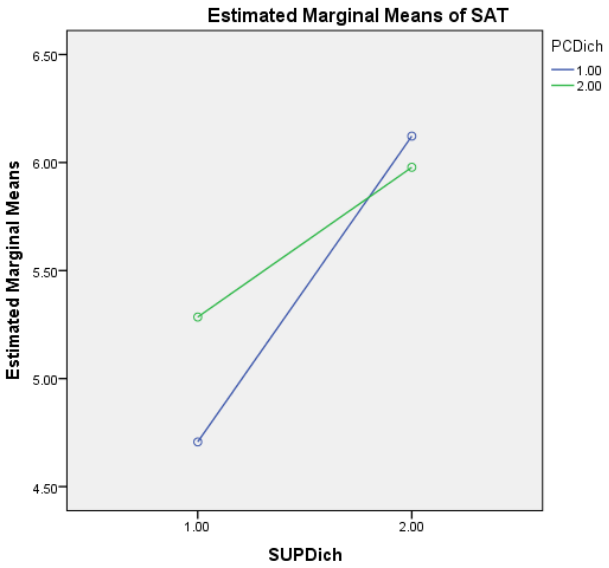


Figure 6: Interaction plot for the relationship between PsyCap and supervisor support on job satisfaction.

2. *Does supervisor support moderate the relationship between PsyCap and organisational commitment?*

The second moderation question aimed to examine whether or not supervisor support moderates the relationship between PsyCap and organisational commitment. The two-way

ANOVA revealed that there was no significant interaction effect (F (1, 37) =.194; p>.05) as indicated in Table 8.

Table 7

Interaction effects of PsyCap and Supervisor Support on Organisational Commitment

Source	df	Mean Square	F	Sig.
Supervisor Support	1	1.461	3.618	0.065
PsyCap	1	0.027	0.066	0.798
Sup. Supp. x PsyCap	1	0.078	0.194	0.662
Error	37	0.404		

Chapter 5: Discussion

The aim of this study was to examine the moderating role of a supportive organisational climate, as defined by supervisor support on the relationship between psychological capital (PsyCap) and the dependent variables of job satisfaction and organisational commitment. This was achieved by first examining whether individual levels of PsyCap are significantly related to job satisfaction and organisational commitment. Secondly, the relationship between supervisor support and the dependent variables of job satisfaction and organisational commitment was examined. Lastly the moderating relationship stated above was analysed. These aims were addressed using a number of statistical analyses including the proposed HLM analysis, which was not carried out fully due to methodological constraints, Pearson's product moment correlation analyses and a two-way ANOVA.

This chapter will serve as a dicussion of the results obtained in this study. This chapter will interpret the results in relation to past literature and research that was conducted around the variables that were under investigation in this study. Furthermore, methodological issues that could have potentially contributed to the results obtained, will also be discussed.

HLM and One-Way ANOVA

Before delving into the research questions posed in this study, it is important to acknowledge and present reasons for why the proposed HLM analysis did not work. The ICC's for the base model revealed that 0% of the variance in both job satisfaction and organisational commitment was due to which department the individual belonged to. This suggests that the variance in job satisfaction and organisational commitment occurred at the level of the individual and not the level of the department. A one-way ANOVA further reinforced these results and revealed that the between group variance in perceptions of job satisfaction and organisational commitment was accounted for by the within group variance.

The HLM and one-way ANOVA provided results that were contrary to what the researcher initially hypothesized; that is that individuals within departments are more alike than individuals between departments. In other words individuals compared their feelings and levels of job satisfaction in particular relative to individuals within their specific department rather than individuals across departments. This is potentially because individuals within departments have easy access to each other within their department. They are thus able to

observe what others in similar positions are obtaining in terms of tangible and intangible job outputs and weigh how satisfied and committed they are in relation to others as a result.

Research on job satisfaction has shown that individuals often evaluate their levels of job satisfaction based on a reference group. Okafor and Odulaja (2006) argue that workers form part of a social situation (a work group, team or department) within which they are constantly interacting with others. Within these social situations individual's are allowed to make comparisons with others or what they call 'reference group members' (Okafor & Odulaja, 2006). These reference groups are the basis upon which the individual makes comparisons about their job satisfaction or dissatisfaction. Equity theory, as explained in the literature review, explains the idea of reference groups thoroughly by stating that employees compare their inputs and outputs relative to what their co-workers expend in their jobs and obtain as a result of their efforts. Equity theory is thus an ideal theory which can be used to explain the results obtained in the HLM analysis and the one-way ANOVA; that individuals weigh their levels of job satisfaction relative to what they are obtaining in terms of the outputs in comparison to others in similar positions.

Research Question 1

What is the relationship bewteen PsyCap and organisational commitment?

The first research question aimed to examine the relationship between PsyCap and the dependent variables of job satisfaction and organisational commitment. A Pearsons product moment correlation revealed that there was no significant relationship between PsyCap and organisational commitment at the 0.01 level of significance ($p=0.08$). This result is not consistent with the results obtained by Luthans and colleagues in two studies that examined this relationship. Larson and Luthans (2006) found a weak, positive and significant relationship between PsyCap. Similarly, Luthans, Norman, Avolio and Avey (2008), found weak and moderate, positive and significant relationships between commitment and PsyCap in two different studies. Although in terms of statistical significance this result is not consistent with previous research, the effect size obtained for the relationship between PsyCap and organsiational commitment ($r=.31$) is of the same order of magnitude as that found by Larson and Luthans (2006) and Luthans et al. (2008) ($r=.31$ for study 1 and $r=.48$ for study 3). As such it is difficult to draw strong conclusions as the power of the test is not sufficient to detect the small effect sizes found by Luthans and others.

As mentioned the result obtained with regard to the relationship between PsyCap and organisational commitment in this study could potentially be attributed to the small sample size and in particular the power of the statistical test. The power of a test refers to "the probability of correctly rejecting the null hypothesis when it is should be rejected" (Hair, Black, Babin & Anderson, 2010, p.10). The power of a test can be affected by two types of error namely a Type I and a Type II error. A Type 1 error is the probability of rejecting the null hypothesis when it is true (Howell, 20008). This means that the researcher will conclude that there is significance when in fact it does not exist (Hair et al., 2010). A Type II error is the probability of not rejecting the null hypothesis when it is in fact false (Howell, 2008). This means that the researcher will conclude that there is no significant result when they are in fact present (Hair et al., 2010).

The power of a test therefore refers to the probability of detecting significance when it is present. According to Hair et al., (2010), one of the most important factors affecting the power of a satistical test is sample size. A larger sample size always increases the power of a statistical test. However it is important to note that as the sample becomes bigger, the possibility of finding smaller and samller effects that are statistically significant, will increase (Hair et al., 2010). At extremely large sample sizes, "almost any effect" can be found to be significant (Hair, et al., 2010, p.11). It is therefore on the onus of the researcher to determine how high they want the power to be. The sample used for this particular study varied per variable. There were 45 participants that answered the PsyCap questionnaire, 43 that answered the supervisor support questionnaire and 41 that answered both the job satisfaction and organisational commitment questionnaires. Regardless of the variation in sample sizes, the sample was nevertheless small. A larger sample size in this study would have yielded more significant and stronger results with respect to the relationship between PsyCap and organisational commitment.

The small sample size would have reduced the power of the test thereby explaining the insignificant result. The small sample size could also explain the very weak correlation obtained between PsyCap and organisational commitment. The correlation coefficient illustrates that there is some relationship between the two variables, but the sample may not have been large enough to find a stronger correlation and a more significant result between PsyCap and organisational commitment as found by Luthans and colleagues.

Another plausible and more likely explanation for the non-significant result could be that commitment has very little to do with an individual's levels of motivation or levels of PsyCap. In other words there are factors and antecedents at the organisational level which may play a bigger role in determining whether or not an individual is committed to their organisation or not. This argument can be further reinforced by Fisher et al. (2003), Johnson and Chang (2007) and Chughtai and Zafar (2006) who state that there are various organisational factors which predict and affect an individuals level of commitment to their organisation. This could include for example, supervisor support and leadership, reward and performance systems, justice perceptions and job characteristics.

Johnson and Chang (2007), however, further argue that there has been sufficient research to conclude that situational or organisational level variables play a bigger role in how committed an individual is to the organisation more so than individual level variables. Personal variables have been shown to be weak and inconsistent predictors of organisational commitment (Chughtai & Zafar, 2007; Mathieu & Zajac, 1990). The weak and inconsistent relationship between personal variables and organisational commitment could possibly explain why PsyCap was thus not related to commitment in anyway.

What is the relationship between PsyCap and job satisfaction?

Unlike with organisational commitment, the correlation between PsyCap and job satisfaction was significant at the 0.01($p=0.004$) level of significance and showed a moderate effect ($r=0.43$). This is consistent with research conducted by Luthans et al. (2008) who found moderate and strong results in their studies ($r=.39$ in study 1 and $r=.72$). The large correlation found by Luthans et al. (2008) conflicts with the small result found in this study particulalry because of the small sample size that was obtained. However, the correlation obtained in this study suggests that high levels of PsyCap are associated with high levels of job satisfaction. As previously stated, individuals who had high levels of PsyCap were more satisfied with their jobs than individuals with low levels of PsyCap. It would be expected that individuals who are satisfied with their jobs would also more likely be committed to their employing organisation. However, this was not the case in this study which illustrated through Fishers Z test that PsyCap is a stronger predictor of job satisfaction than organisational commitment. This will be discussed subsequently.

According to Avey et al. (2011), individuals high in PsyCap often report being more satisfied with their jobs. The result obtain in this particular study between PsyCap and job satisfaction

relates to Robbin et al's. (2009) proposition that individual's with positive core self-evaluations are more likely to be satisfied with their jobs because they believe in their self-worth and competence and are more confident as a result. Although research has shown that as with commitment, personal variables are inconsistent predictors of job satisfaction, this study found support for the argument that personal variables, in this case PsyCap, play an important role in determining an individuals level of job satisfaction.

In relation to the result obtained in this study then, it is possible that individual's with high levels of PsyCap are more likely to be satisfied with their jobs because they do not solely base their satisfaction on extrinsic factors such as pay and salary but also how much of personal growth and development they achieve in their job. They thus experience intrinisc motivation because he or she "is motivated to perform well because of some subjective rewards or feelings that he expects to receive or experience as a result of performing well" (Warr, Cook & Wall, 1979, p.1131).

Fishers Z Test for Dependent Correlations

In order to further investigate why PsyCap was related to job satisfaction and not to organisational commitment, a Fishers Z-test for Dependent Correlations was conducted. The Z score obtained was significant suggesting that PsyCap is a stronger predictor of job satisfaction than it is of organisational commitment.

A plausible explanation for this result could once again be related to issues concerning internal organisational characteristics. The significant result obtained further reinforces the argument that has been made with respect to the first research questions; that there are broader organisational level variables that are stronger predictors of organisational commitment than personal variables which explains why PsyCap as an individual level variable was not related to organisational commitment.

Research Question 2

What is the relationship bewteen supervisor support and job satifaction?

The second research question aimed to examine the relationship between supervisor support and the dependent variables of job satisfaction and organisational commitment. Pearson's product moment correlations revealed that supervisor support was significantly, strongly and poitively related to job satisfaction (r=0.69). Therefore, individuals who perceived their

supervisor as being very supportive were more likely to be satisfied with their jobs. Despite the small sample size, it was interesting to find a strong relationship between the variables of supervisor support and job satisfaction.

This is very consistent with past research which found that organisational variables such as a supportive organisational climate play a much bigger role in an employees satisfaction with their work than other variables such as demographics and potentially motivational variables like PsyCap. A supportive work environment provides employees with "an appropriate atmosphere to conduct high quality services, to derive gratification, from their job and to be committed to their profession" (Acker, 2004, p.72). Supervisors form part of this supportive work environment by providing socio-emotional support and by showing care and concern for their subordinates. As a result, "supervisors that are perceived as generally supportive of the workforce help increase job satisfaction among employees" (Babin & Boles, 1996, p.60).

This proposition can be further explained using Hertzberg's two factor theory. As mentioned in the literature review, Hertzberg' two-factor theory states that when hygiene factors are absent and motivator factors and present, dissatisfaction may ensue. This position thus illustrates that it is on the onus of the supervisors to ensure that a good work environment is being maintained by providing all employees with sufficient recognition, delegating challenging work and responsibility, and giving them the opportunity for growth and development (Stringer, 2006).

As previously stated when when motivator factors are present and hygiene factors are absent dissatisfaction may persist (Stringer, 2006). Consistent with Hertzberg' theory is the notion that supervisors are responsible for ensuring that both motivator and hygiene factors are present in the employees work environment. By removing barriers to job satisfaction, supervisors ensure that employees achieve their job satisfaction fully. Stringer (2006, p.137) further reiterates this view by stating that supervisors who "recognize employees for their efforts; effectively delegate responsibility to their employees; and provide opportunities for advancement to their employees" will increase the probability that their employees intrinsic and extrinsic needs will be met. This will result in increased job satisfaction on the part of the individual.

Social Exchange theory can also be used to explain the strong relationship that was obtained between supervisor support and job satisfaction. The mean score obtained on the supervisor

support scale was 6.06 which suggests that most participants perceived their supervisors in a favourable light. According to Social Exchange theory, supervisors were thus seen to provide their employees with sufficient care, fair treatment and high levels of support. This in turn resulted in employees reciprocating positive behaviours and work attitudes. In this case, most participants perceived their supervisors as being caring and concerned, valuing their contributions to the organisation and treated them fairly which resulted in them being more satisfied with their jobs.

What is the relationship between supervisor support and organisational commitment?

With repect to organisational commitment, supervisor support was found to be significantly ($p=0.003$), positively and weak to moderately ($r=0.32$) related to commitment. Therefore, individual's who perceived their superviors as being supportive were more committed to their organisations than those who did not perceive their supervisors as being supportive. Because commitment applies to organisations rather than individuals or jobs one would expect that employees would considered their supervisors to be agents of their commitment to their employing organisation.

The result obtained in this study can possibly be explained by the notion that supervisors act as agents on behalf of the organsiation. As argued by Rhoades and Eisenberger (2002), supervisors are seen as representatives of the organisation and any favourable or unfavourable behaviour on the part of the supervisor is reflective of the organisation itself. In this regard, empirical evidence has provided support that Perceived Supervisor Support (PSS) was found to be one of the strongest predictors of Perceived Organisational Support (POS) (Eisenberger et al., 2002). This means that employees identify their supervisors with the organisation (Eisenberger et al., 2002). Greater supervisor support can result in higher commitment to the organisation as a result of the associations which the employee makes between the supervisor and the organisation (Maertz et al., 2007).

However, it is also important to note that the relationship obtained between supervisor support and organisational commitment in this support is a weak to moderate one. It is possible that participants in this particular study did not view their superviors as agents of the organisation but rather as independent actors who provided them with support, care, recognition and concern with respect to their job only. In other words, supervisors formed

"individual relationships and related attachments with their employees that are distinct from employee attitudes toward the organization as a whole" (Maertz et al., 2007, p.1062).
In this regard, employees' form different relationships with each entity (supervisor or organisation) and their actions are thus geared towards the entity which provides them with the most benefits or support (Maertz et al., 2007). In this case, the existence of a correlation suggests some association with the organisation but the weak nature of the relationships suggests that more association is made with the supervisor directly. This would mean that there are broader organisational level factors that surpass supervisor support as antecedents to their long-term commitment to their employing organisation. Hence commitment could possibly be a function of supervisor support and other organisational behaviour. For example, support at the organisational level, through policies of work-life balance, flexi-time, child care services and assistance, or even communicating to employees that the organisation cares about them can act as stronger predictors of organisational commitment and specifically affective commitment.

Another plausible explanation for the weak to moderate relationship between supervisor support and organisational commitment could be events which were taking place in the organisation during the time at which the current research was being carried out. These factors were beyond the control of the organisation. For example, the researcher had knowledge that some of the participating organisations were in the process of closing down or downsizing. The weak to moderate relationship can therefore be attributed to the fact that there was a small likelihood that participants would be affectively committed to their employing organisation particularly when they were aware that their job security was being threatened. Also during an economic recession, similar to the one which most South African companies are finding themselves in the midst of, affective commitment would be less applicable and other forms of commitment such as continuance commitment would come into play. This would mean that employees are more concerned about their job security than their emotional attachment to their employing organisation.

Research Question 3

> *Does supervisor support moderate the relationship between PsyCap and job satisfaction?*

The last research question aimed to examine whether or not supervisor support moderates the relationship between PsyCap and the dependent variables of job satisfaction and

organisational commitment. The two-way ANOVA revealed that there was a significant interaction in the effects of PsyCap and supervisor support on job satisfaction. Specifically, supervisor support has a greater impact when PsyCap is low than when it is high.The result obtained was precisely what the researcher expected to find. Although research has found inconsistent relationships between the interaction of situational/organisational and personal variables on job satisfaction as examined by Cohrs et al. (2006), this study found support for some interaction between organisational variables (supervisor support) and personal variables (PsyCap) on job satisfaction. However, this needs to be further tested on larger sample sizes to refute or reinforce the result found in this study.

There are a number of plausible explanations for the results obtained in the interaction. The first result was that supervisor support made no difference to individuals who had high levels of PsyCap. This is possibly because individuals high in PsyCap are more self-motivated. They capitalise on the individual facets or constructs that make up PsyCap, namely hope, optimism, confidence and resilience, in order to carry out their work and cope with their job demands. They often manage to find and construct alternative pathways in order to solve problems and reach their goals, they are confident when it comes to carrying out their work and participating in organisational activities and discussions, they are optimistic about their jobs and how they approach problem and they often recover quickly from setbacks or improvements at work. They are therefore less likely to draw on the support of supervisors when they find themselves in a predicament at work and are more satisfied as a result.

Supervisor support, however, did make a difference for individuals with low levels of PsyCap. They therefore have to draw on the support of external entities such as the supervisor in order to cope with demands made on their job. Within the South African context, it is important to note that this may not solely be because individual's with low levels of PsyCap are less self-motivated than individuals with high levels of PsyCap. There could be more pressing issues and factors affecting their low levels of PsyCap. One of the most prominent issues is the notion of diversity within the South African context. South Africa is racially and culturally diverse and the way in which different sub-cultures understand motivation and the emphasis the place on certain aspects of motivation may differ (Urban, 2006, p.3). Furthermore culture influences the way in which a person processes and structures their cognitions and beliefs (Urban, 2006). This was not tested in the current study however future research needs to be devoted to how culture, specifically within the South African context,

plays a role in determining and influencing an individual's levels of PsyCap before concluding that low levels of PsyCap are solely because individuals' are less self-motivated.

The last question aimed to examine whether or not supervisor support moderated the relationship between PsyCap and organisational commitment. No interaction was found between these variables and this could potentially be due to the small sample size and how unbalanced the ANOVA design was.

Practical implications

The results obtained in this study have both theoretical implications and practical implications for managers and organisations. The results first and foremost have implications for both supervisor support and broader organisational level support. These implications are generally straightforward and easy to implement but are nevertheless important to consider. The study's findings show that organisational level variables are more important to work-related attitudes than individual level variables (i.e. PsyCap). In this case supervisor support was seen to be essential for both job satisfaction and organisational commitment. The role of a supervisor is to take an interest in the development and growth of their employees, care for the well-being of their employees and treating employees fairly, giving them more responsibility and autonomy. The role of the supervisor should therefore be made more dominant by management and supervisors should be given more training and rewards to "for being supportive" (Maertz et al., 2007, p.1072). This will increase supportive behaviours which will have positive implications for desireable work attitudes such as organisational commitment and job satisfaction.

In addition to supervisor support, there was some evidence that the support of the organisation as a whole was important for commitment. Managers need to theorefore identify whether "task-based or socio-emotional meeds are best targeted through support" (Maertz et al., 2007). Following from Maertz et al's (2007) suggestion these sources of support need to be tailored for each individual and individual needs. These policies and efforts should be made visible to ensure employees that the organisation does care about them and supports them.

Some of these efforts and policies would include noticeable resources in the work environment such as more food, greater budgets and wellness facilities, childcare and fincancial assistance, counselling resources for socio-emotional problems as well as

opportunities for career growth and development through training initiatives. Maertz et al. (2007) goes to the extent of saying that management should even communicate verbally or in writing to employees that the organisation wants to assist them in anyway possible. This may foster organisational support and thus have positive implications for organisational commitment in particular. Management could also conduct climate surveys to identify employee needs and what employees define as supportive organisational climates.

The strong association between organisational variables and work-related outcomes, however, was not to say that PsyCap was not an important factor in determining an employees job satisfaction and commitment. The results found between PsyCap and work-related attitudes in this particular study, were very preliminary particularly because PsyCap has not been studied extensively in the South African context and is a new and emerging concept in the country. Also because of the small sample size, not much can confidently be said about the relevance and applicability of PsyCap in South African organisations. The results obtained were not very strong and with respect to organisational commitment, not significant at all. This further reinforces the importance which organisational variables play in determining work-related attitudes rather than personal or individual level variables.

The result obtained in this study with respect to PsyCap and the dependent variables of job satisfaction and organisational commitment, however, can nevertheless can have implications for organisations operating in the South African context. For those individuals who reported having high levels of PsyCap management needs to consider making constant efforts to provide more opportunities for growth and development. This will prevent individuals with high levels of PsyCap from becoming bored and dissatisfied with their jobs. For individuals low in PsyCap, organisations should consider identifying what factors are contributing to their low levels of PsyCap (i.e. personal problems, cultural differences, demographics, lack of skills or abilities) rather than assuming that these individuals are less self-motivated. This will make the training and development initiatives which management implements in the organsation far more holistic and inclusive of the needs of individuals which will have positive implications for their work place behaviours and attitudes. This is a research gap which future research should look into.

It is important to note, however, that these practical implications should be accepted with caution. The small sample size does guarantee that the results obtained in this study are conclusive. Therefore extensive research still needs to be done.

Limitations

Like all studies, this study had a number of limitations which needed to be acknowledged. First and foremost, this study was cross-sectional in nature which means that no causal conclusions could be drawn from the results obtained. Feelings about job satisfaction, commitment and perceived supervisor support could have merely reflected current perceptions at the time of completing the questionnaire. The aim of this study, however was not to establish causal links between the variables (i.e. high or low levels of psychological capital cause individuals to be more satisfied or committed to their organisation) but rather to establish whether there was in fact some relationship between the variables under investigation.

Another limitation was the use of self-report measures to collect data. It is taken for granted that participants will answer the questionnaire honestly and openly. However there was evidence of a presence of positivity bias or 'faking good.' The lack of variance obtained between departments, particularly in relation to supervisor support, could potentially and possibly be attributed to the fact that participants want to be perceived as good or answer the questions in a 'socially acceptable manner.' In addition it is likely that participants would want to portray their supervisor in a positive light despite continuous reinforcement of confidentiality. This type of self-report questionnaire is also susceptible to non-response bias where questionnaires are not returned. In this case all questionnaires were submitted via the online link but some of the questionnaires were not completed fully which resulted in a different number of observations for each variable. There is a concern that there is further sampling bias in that respodents who did not complete the whole questionnaire may be different in important aspects such as their levels of job satisfaction, from those who did.

Another very important limitation is the small sample size that was obtained. Although some of the results obtained were significant, the associations between them were weak to moderate and some even non-significant because the sample size could have affected the power of the test. As a result the results obtained were not strong enough to conclude how applicable PsyCap is in the South African context. Therefore, it was difficult to draw definite and strong conclusions about the results obtained in this study. Future research should seriously consider carrying out the HLM analysis as proposed in this study, on a much larger sample. The results obtained in the HLM analysis will have implications not only for departmental climate but for organisational climate as a whole.

This study was also one of the first to examine the relationship between PsyCap and work-related attitudes as moderated by supervisor support. Therefore it was difficult for the researcher to make theoretical and conceptual links between the variables and the type of sample that was used in this study because not much research was conducted around these variables in this context, by researchers. Therefore it was difficult to draw definite conclusions about the relationship amongst the variables in relation to previous research in this study in addition to the small sample size.

Directions for Future Research

The following recommendations are proposed for future research. Future research should consider delving into studying the applicability and relevance of PsyCap in South Africa on much larger samples. This will assist in refuting or reinforcing the results obtained in this study. As previously mentioned, future research should seriously consider redoing this study using the Hierarchical Linear Model. This will not only add to a growing body of research in PsyCap but examine its effects at different hierarchical levels in the organisation.

Future research should look at PsyCap in relation to culture and particularly how culture plays a role in the development of PsyCap or lack thereof. This will provided evidence for how definitions of motivation differ across cultures. Most of the studies around PsyCap have been conducted in the United States and the cross-cultural validation of the contruct is much needed.

As previously mentioned, future research should also look more closely at antecedents of PsyCap (i.e. what causes PsyCap). This will provide a more solid base for understanding why some individuals are have higher levels of PsyCap than others and will have implications for what the organisation can do to help both types of individuals (i.e. those high and low in PsyCap). Related to this is the need for research on other potential moderating variables such as organisational culture, the type of environment the individual works in and also potential demographic variables such as gender, age and education.

With respect to supportive organisational climates, furture research should consider looking at employees perceptions of supervisors as agents of the organisation or as indpendent actors specifically within the South African context. This will provide information as to whether supervisor or broader level organisational support makes a bigger difference to employees and their work-related attitudes.

PsyCap is much needed in a country that is emerging from a difficult past and where organisations are constantly trying to keep up and remain competitive in a turbulent and unpredicatble business environment. However, because supervisors seem to play a vital role in the organisational life of an employee, it would be imperative to assess supervisors' levels of PsyCap and how this may or may not have a trickle down effect on employees. This is particularly relevant when considering employees who have low levels of PsyCap and an area which future research should consider looking into.

Finally, there is very little research on the impact of PsyCap on work-related outcomes. The current study has found some significant relationships between PsyCap and some work-related outcome, very little is known about the relationship between PsyCap and other work-related outcomes such as absenteeism, stress and well-being and turnover intentions among others. Therefore future research should be devoted to exmining the relationship between PsyCap and these work-related outcomes beyond what has already been determined, on different samples, in different work contexts and environments and across cultures and nations.

Conclusion

In conclusion, the current study sought to examine the relationship between psychological capital and the dependent variables of job satisfaction and organisational commitment as moderated by a supportive organisational climate. Research on PsyCap and work-related outcomes and attitudes have been limited particularly within the South African context. Research on PsyCap has made strides internationally but is still in its infant stages.

Overall, significant results between PsyCap and satisfaction were obtained in this study as well as supervisor support and the work-related attitudes of job satisfaction and organisational commitment. These findings show that organisational level variables play a more important role in determining work-related attitudes rather than individual level variables.These results had important implications for management and organisations including providing suifficent support for their employees to garner their commitment and satisfaction and enhancing the role of the supervisor as an important figure in the organisational life of the employee. Further analyses revealed that PsyCap related more strongly with job satisfaction than it did with organisational commitment.

Supervisor support was also found to moderate the relationship between PsyCap and job satisfaction. Particularly supervisor support did not make a difference for individuals with high levels of PsyCap but made a difference for individuals with low levels of PsyCap. This had implications for career growth and development and PsyCap development initiatives.

Furthermore, PsyCap was not found to be significantly related to commitment. This provided further evidence that organisational level factors make more of a difference to work-related attitudes than individual level factors. Supervisor support did not moderate the relationship between PsyCap and organisational commitment. The small sample size was a major contributing factor to the non-significant results and the correlations that were obtained in this study. Therefore it was difficult to make strong conclusions with respect to the results found in this study. In general, more research needs to be conducted in relation to these variables as there is insufficient research at present, particulary within the South African context.

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