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EXAMINING THE MEDIATING AND MODERATING ROLE OF PSYCHOLOGICAL CAPITAL IN THE JOB DEMANDS-RESOURCES MODEL

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COMPULSORY DECLARATION:

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works of other people has been attributed, cited and referenced.

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Abstract

Employee wellbeing has become a major concern for organisations globally, with an increased interest in the prevention of burnout and the maximisation of employee work engagement. Burnout and work engagement are of particular importance to organisations due to their respective negative and positive outcomes on employees. While burnout is linked to high turnover intentions and low performance, work engagement has a positive correlation with job satisfaction, life satisfaction and extra-role performance. Accordingly, the job demands-resources (JD-R) model was developed as a theoretical framework, highlighting those work characteristics that predict employee work engagement and burnout. A main criticism of the JD-R model is its lack of consideration for the impact of personal resources on employee wellbeing. Emanating from this concern, the current study used the conservation of resources (COR) theory to empirically test whether the personal resource of psychological capital or PsyCap (conceptualised as self-efficacy, hope, optimism and resilience) interacted within the health impairment and motivation processes of the JD-R model. More specifically, this study examined whether PsyCap moderated the relationship between job demands and burnout and mediated the relationship between job resources and work engagement.

A cross-sectional survey of 143 participants was conducted in a South African retail organisation. Of those who participated, 25.2% were male and 66.2% were female (the balance preferred not to answer). Consistent with previous research, the current study found that PsyCap moderated the relationship between workload and the cynicism dimension of burnout. This result implied that organisations should develop PsyCap in order to aid employees in coping with workload and preventing the development of cynicism. In addition, PsyCap fully mediated the relationship between autonomy and work engagement and partially mediated the relationships between advancement opportunities and supervisory support on the one hand and work engagement on the other. This result implied that the provision of job resources is an effective strategy aimed at developing work engagement and PsyCap and as a consequence, PsyCap enhances work engagement and aids employees in coping with stressful situations. This study's results provided evidence for the significant role that the personal resource of PsyCap plays in the JD-R model and provided a more comprehensive understanding of those factors that predict employee wellbeing. Gleaning a greater understanding of the significance of PsyCap may motivate researchers to determine the validity of the Psychological Capital Questionnaire (PCQ) in the local context. The study

incorporates certain limitations for which recommendations for future research are discussed.

Chapter 1- Introduction

The job demands-resources model (JD-R) has been used by organisational psychology researchers as a theoretical framework for empirical studies that investigate employee wellbeing (Crawford, Lepine, & Rich, 2010; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Rothmann & Essenko, 2007; Rothmann & Joubert, 2007). In addition, human resource (HR) practitioners have used the JD-R model to enhance employee wellbeing across various occupations (Demerouti et al., 2001; Hakanen, Bakker & Demerouti, 2005; Hakanen, Bakker, & Schaufeli, 2006). Underlying the JD-R model are two processes identified as 1) motivation and 2) health impairment. These processes focus on work characteristics and their relationship to motivation and ill health. In the motivation process, an abundance of job resources leads to work engagement and in the health impairment process, high job demands lead to strain (Bakker & Demerouti, 2007; Demerouti et al., 2001). There are a number of studies that support the health impairment and motivation processes (Bakker & Demerouti, 2007; Hakanen et al., 2006; Schaufeli & Bakker, 2004). However, there has been much concern over the restrictive nature of these processes in that they focus solely on the impact of work characteristics on wellbeing (Karatepe & Olugbade, 2009; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007, 2009a, 2009b). Derived from this concern, the JD-R model has been criticised for disregarding the role of personal resources in predicting wellbeing (Feltz, Short, & Sullivan, 2008; Xanthopoulou et al., 2007). This shortcoming presents an opportunity to investigate the role of personal resources within the JD-R processes in order to strengthen and establish a more comprehensive prediction of motivation and ill health. The few research studies that have attempted to address the JD-R model's weakness most commonly apply the personal resources of organisation-based self-esteem (OBSE), self-efficacy and optimism to the JD-R model (Xanthopoulou et al., 2007, 2009a) and vary with regard to their results (Herbert, 2011; Luthans, Norman, Avolio, & Avey, 2008; Xanthopoulou et al., 2007, 2009a). Based on the above problem, the current study aims to examine the role of, an under-researched personal resource, psychological capital (PsyCap) in the JD-R model's motivation and health impairment processes.

The concept of PsyCap is a multi-dimensional construct which refers to having confidence in one's ability to fulfil job-related tasks (self-efficacy), having a positive attitude toward future success (optimism), having the ability to set realistic goals, finding alternative pathways (hope) and persevering (resilience) when faced with obstacles (Luthans, Youssef,

& Avolio, 2007). PsyCap dimensions are state-like suggesting that if they are found to have an interaction within the JD-R processes, they can be managed and developed in an organisation-specific fashion toward creating more motivated and healthier employees. Previous studies have supported the notion that PsyCap interacts within the two processes of the JD-R model, resulting in the two work-related outcomes of work engagement and burnout (Cheung, Tang, & Tang, 2011; Luthans et al., 2008). Work engagement refers to the degree to which employees feel energetic, dedicated and engrossed in their work (Schaufeli, Salanova, Bakker, Alez-rom, 2002). Burnout refers to the degree to which employees feels exhausted and disconnected from their work (Maslach, Schaufeli & Leiter, 2001). Studies have also reported that those who are high in PsyCap are more likely to be satisfied with, committed to and engaged in their job and those who are low in PsyCap are more likely to feel emotionally exhausted, have the intention to quit and to be cynical (Avey, Luthans, & Jensen, 2009; Avey, Luthans & Yousef, 2009; Avey, Reichard, Luthans & Mhatre, 2011; Luthans, Avolio, Avey, & Norman, 2007). The objective of the current study is to expand the motivation and health impairment processes by integrating the personal resources identified in the PsyCap construct. The proceeding section presents a review of literature.

Chapter 2- Literature Review

The JD-R Model

The JD-R model (Bakker & Demerouti, 2007) proposes that although each occupation has its own risk factors associated with wellbeing, the psychosocial work environment can be divided into two general categories of job demands, and job resources. Job demands are those physical, social and organisational aspects that require sustained effort and result in negative physiological and psychological outcomes. Job resources are those physical, social and organisational aspects that aid in achieving work goals, preventing detrimental physiological and psychological outcomes and stimulating personal learning, growth and development (Bakker & Demerouti, 2007).

Job demands and resources act as antecedents for the JD-R model's two underlying processes- the health impairment process and the motivation process. The health impairment process suggests that when job demands are at an acceptable level, employees' energy reserves will allow them to cope with their workload and its accompanying fatigue. However, when employees apply sustained effort under chronic job demands, this can result in a depletion of energy reserves and an increase in strain such as burnout (Demerouti et al., 2001). The motivation process suggests that when job resources are available, they extrinsically and intrinsically motivate employees. They extrinsically motivate by helping employees cope with job demands for goal achievement and intrinsically motivate by satisfying certain psychological needs such as the need for autonomy, belongingness (social support) and competence (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004). This increase in motivation leads to positive outcomes such as higher work engagement (Hakanen et al., 2006).

A number of studies have provided support for the link between job demands and resources on the one hand and employee wellbeing and organisational outcomes on the other (JD-R model's dual processes) (Bakker, Demerouti, & Verbeke, 2004; Hakanen et al., 2005, 2006; Schaufeli & Bakker, 2004). Support for the health impairment and motivation processes was evident in a study which utilised a sample of Dutch employees from four different service organisations in the Netherlands (Schaufeli & Bakker, 2004). In terms of the health impairment process, this study found that job demands (workload and emotional

demands) were the most important predictors of the exhaustion dimension of burnout, which in turn predicted higher psychosomatic health problems (Schaufeli & Bakker, 2004). Similarly, in the motivational process, job resources (coaching, feedback and social support) were the most important predictors of engagement, which in turn predicted lower turnover intentions (Schaufeli & Bakker, 2004). In a sample from diverse occupations, Bakker et al. (2004) found similar results. In support of the health impairment process, results revealed that work pressure, work family interface and emotional demands (job demands) were positively associated with burnout and in turn burnout was negatively related to in-role performance. In support of the motivation process, results revealed that autonomy, development possibilities and social support (job resources) were negatively related to (dis)engagement and in turn disengagement was negatively related to extra-role performance (Bakker et al., 2004). Comparable results were found among a sample of Finnish teachers (Hakanen et al., 2006). Results revealed that when teachers were dealing with high pupil misbehaviour, work overload and a harsh physical work environment, it was likely that they were also experiencing burnout, exhaustion and cynicism, and indirectly, ill health. In addition, results showed that job resources (job control, information, supervisory support, innovative and social climate) were unique predictors of the core dimensions of work engagement, vigour and dedication, and indirectly, organisational commitment (Hakanen et al., 2006). Furthermore, the motivation process was confirmed among a sample of Finnish dentists (Hakanen et al., 2005). Results from this study illustrated a strong positive correlation between job resources and work engagement. (Hakanen et al., 2005).

A number of studies have investigated the JD-R model in the South African context (Mostert, 2011; Rothmann & Essenko, 2007; Rothmann & Joubert, 2007; Rothmann, Mostert, & Strydom, 2006). In a study of support staff from a South African higher education institution, Rothmann & Essenko (2007) provided support for the health impairment process. Findings suggested that burnout fully mediated the relationship between job demands (role overload) on the one hand and psychological and physiological ill health on the other hand (Rothmann & Joubert, 2007). In a study of South African miners, Rothmann & Joubert (2007) found that exhaustion was predicted by high workload and job insecurity and a lack of resources, while cynicism was predicted by a lack of resources such as career advancement opportunities and organisational support. In the South African construction industry, Mostert (2011) found similar results for the health impairment process. Results revealed that the exhaustion dimension of burnout was positively predicted by job demands, while a lack of

job resources predicted the three dimensions of burnout (exhaustion, cynicism and professional inefficacy) (Mostert, 2011). Table 1 below summarises the key findings of global research on the JD-R model's processes.

Table 1
Global Research on the JD-R Model's Processes

Author & Year	Sample & Response Rate in Parentheses	Country	Purpose	Method	Key Findings
Demerouti et al. (2001)	Three samples: 145 human service workers (55%), 134 industrial workers (54%), 95 transport workers (62%)	Germany	To validate the JD-R model across a number occupational settings.	Observer ratings and self-report	Identified two general categories that predict burnout of job demands and job resources where exhaustion was predicted by job demands and disengagement was predicted by job resources.
Schaufeli & Bakker (2004)	Four samples of employees: 381 insurance company (61%), 202 Occupational Health and Safety Service (63%), 507 pension fund company (34%), 608 home care institution (47%).	Netherlands	Developing a more comprehensive model to predict burnout and engagement by including job demands and resources as well as the consequence of these processes.	Self-report	The model's hypotheses were confirmed: 1) Burnout mediated the relationship between high job demands and experienced ill health. 2) Engagement mediated the relationship between high job resources and low turnover intention.
Hakanen et al. (2005)	3255 Dentists in the public service sector (71%)	Finland	To test whether job resources buffer the negative relationship between job demands and work engagement.		A number of interaction effects between various job demands and resources were found to be significant predictors of work engagement. Job resources help dentists cope with high job demands.
Xanthopoulou et al. (2007)	714 employees of electrical engineering company (50%)	Netherlands	To expand the JD-R model to include personal resources.	Self-report	Personal resources mediated the relationship between job resources and work engagement. Personal resources were antecedents of job resources as job resources mediated its relationship with work engagement.
Rothmann & Joubert (2007)	202 management level employees across different operational units in a platinum mine (65%)	South Africa	To determine the relationship between job demands, job resources, burnout and work engagement.	Self-report	Burnout was predicted by high demands and lack of resources. Job resources predicted work engagement.
Rothmann & Essenko (2007)	334 support staff in a higher education institution (57%)	South Africa	To examine the relationship between job demands, resources, optimism, burnout, and ill health.	Self-report	High job demands and lack of resources predicted burnout. Burnout mediated the relationship between job demands and resources on the one hand and ill health on the other.
Mostert (2011)	330 earthmoving employees (57%)	South Africa	To examine the relationship between job demands, job resources, work-family conflict and burnout	Self-report	High demands and low resources were the most detrimental for experiencing burnout. Work-home interface fully mediated the relationship between job resources and burnout.

An examination of the literature highlights three key notions. Firstly, the JD-R model has received extensive support across various occupations and populations. Secondly, South African research on the JD-R model indicates its relevance in the local context. Thirdly, it is evident from past research that the JD-R model has focused predominantly on job characteristics as antecedents of work engagement and burnout, while ignoring the important role of personal resources (Bakker & Demerouti, 2007; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). In support of this notion, a number of studies have suggested the much-needed integration of personal resources into the JD-R model as a factor that influences the motivation and health impairment processes (Karatepe & Olugbade, 2009; Xanthopoulou et al., 2007, 2009a, 2009b). Therefore, the current research will focus on integrating the construct of psychological capital, or PsyCap into the JD-R processes (Luthans et al., 2007).

Psychological Capital

The construct of PsyCap originates from the positive organisational behaviour (POB) school of thought (Luthans, 2002). POB's main focus is on the maximisation of individual strengths rather than weaknesses, as well as on improving individual performance through positive intervention (Luthans, 2002). POB is defined as " the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed and effectively managed for performance improvement in today's workplace" (Luthans, 2002, p. 59). This definition suggests that in order for a construct to be considered a POB, it needs to fulfil a number of inclusion criteria. These criteria include, 1) being a psychological capacity, 2) having a foundation in sound theory and research, 3) having reliable and valid measures and 4) being a state-like construct that can be developed and managed for performance improvement. Luthans et al. (2007) investigated a number of behavioural constructs as potential POBs but concluded that the four dimensions of PsyCap; self-efficacy, hope, optimism, and resilience, best meet all POB criteria.

Psychological Capital or PsyCap is defined as "an individual's positive psychological state of development 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 (resilience) to attain

success" (Luthans et al., 2007, p. 3). Each of the four PsyCap dimensions will be discussed in more detail in the proceeding section.

Self-efficacy. Self-efficacy fulfils all the POB inclusion criteria. Firstly, self-efficacy finds its origin in Bandura's (1977) widely used and accepted social cognitive theory. Bandura (1977) first developed the theory of self-efficacy based on the premise that individuals are proactive agents as opposed to passive reactors to their environment. Early conceptualisations defined perceived self-efficacy as being "concerned with judgement of how well one can execute courses of action required to deal with prospective situations" (Bandura, 1982, p. 122). The definition most commonly used across POB literature has evolved from Bandura's (1982) original definition and refers to self-efficacy as having the belief or confidence to muster the cognitive resources, motivation and action plans to successfully complete a task in a specific domain (Stajkovic & Luthans, 1998). This definition of self-efficacy implies that the likelihood of fulfilling a specific task does not only depend on the objective skills individuals possess, but also the confidence that the individual has to use these skills in task-related actions (Stajkovic & Luthans, 1998). Additionally, critical to Stajkovic and Luthan's (1998) definition is that self-efficacy is domain specific, meaning that an employee who is self-efficacious in his or her present job (current domain) may not be self-efficacious in a new job (another domain).

Secondly, self-efficacy also fulfils the POB criterion of reliable and valid measures, as it can be successfully assessed using a number of instruments. These instruments include the 10-item Generalised Self-Efficacy Scale (Schwarzer, Babler, & Kwiatek, 1997), the six-item subscale of the Maslach Burnout Inventory- General Survey (MBI-GS) (Schaufeli & Leiter, 1996) and the Entrepreneurial Self-Efficacy Scale developed by Wilson, Kickul, & Marlino (2007).

Thirdly, self-efficacy meets the POB development criterion. Bandura (1999) reported four sources of information that can accentuate an individual's self-efficacy. The most influential source of self-efficacy was enactive mastery, which explains that one will feel more confident in fulfilling a task when past experience has more often been successful than unsuccessful (Bandura, 1999). Vicarious modelling can also enhance self-efficacy by observing another individual similar to oneself successfully completing a task (Bandura, 1999). Another source of self-efficacy is verbal persuasion which includes being reassured

by, or receiving positive feedback from a respected role model about one's success in the task (Bandura, 1999). A final source of self-efficacy is one's own physical and emotional reaction to a specific task. For instance, when one is faced with a challenging task, a moderate sense of arousal will enhance one's belief that one can cope with the task (Bandura, 1997). These four sources of self-efficacy have been used as a foundation to shape interventions aimed at developing the self-efficacy dimension of PsyCap (Luthans, Avey, Avolio, Norman, & Combs, 2006).

Finally, a recent meta-analysis on the relationship between self-efficacy and work related performance found 82 articles establishing a distinct relationship between the two constructs (Judge, Jackson, Shaw, Scott, & Rich, 2007). Recent studies have reported strong positive correlations between self-efficacy and performance ranging from $r = .46$ to $r = .62$ (Jawahar, Meurs, Ferris, & Hochwarter, 2008; Schmidt & DeShon, 2009, 2010).

Optimism. Optimism in the PsyCap construct meets all POB inclusion criteria. Firstly, POB optimism is derived from two theoretical frameworks: 1) positive expectancies (Scheier & Carver, 1985) and 2) attributions (Abramson, Seligman, & Teasdale, 1978; Seligman, 1990). Positive expectancy optimism explains that, in general, optimistic individuals expect positive outcomes to manifest in any situation, while pessimists expect negative outcomes (Scheier & Carver, 1985). Explanatory style optimism (Seligman, 1991) takes expectancy optimism a step further by suggesting that individuals high in optimism attribute positive events and success to internal, stable and global processes, while attributing failure to external, specific and unstable processes (as cited in Snyder & Lopez, 2002). Most important to PsyCap's optimism is that it is not based on a random process of attribution with no credible assessment (Nelson & Cooper, 2007). PsyCap's optimism is realistic in the sense that it includes careful assessment of the causes and consequences of both positive and negative events before attributing success internally and detaching from failure (Nelson & Cooper, 2007).

Secondly, POB optimism has been measured using reliable and valid measures which include the Attribution Style Questionnaire (ASQ) (Seligman, Abramson, Semmel, & von Baeyer, 1979), the Expanded Attributional Style Questionnaire (EASQ) (Peterson & Villanova, 1988) and a short form of the EASQ (Whitley, 1991).

Thirdly, POB optimism is considered state-like and can be learned and developed through Schneider's (2001) three-step process. The first step involves increasing employees' leniency toward past failure by focusing on acceptance and finding affirmative meaning in every situation. The second step includes enhancing employees' appreciation for the present and gratitude for the positives in their lives. The last step involves increasing an employees' ability to learn from past experience and to recognise opportunity for the future (Schneider, 2001).

Finally, optimism fulfils the POB criterion of performance as literature recognises the performance impact of optimism in the work context (Green, Medlin, & Whitten, 2004; Luthans, Avolio, Walumbwa, & Li, 2005; Tuten & Neidermeyer, 2004).

Hope. Hope as a psychological construct meets all the relevant POB criteria. Firstly, PsyCap's hope is based on the widely used and extensively developed 'hope theory' (Snyder, 1991). Hope is defined by Snyder (1991) as " a cognitive set that is based on a reciprocally defined sense of successful a) agency (goal directed determination) and b) pathways (planning of ways to meet goals)" (p.571). These dimensions suggest that those who are hopeful have the capacity to set and pursue realistic goals (agency and goals) and to create multiple pathways to pursue these goals despite a variety of obstacles (pathways and goals) (Snyder, 1991). The agency dimension creates the determination or "willpower" to achieve goals while the pathways dimension creates the "waypower" to achieve these goals in the face of adversity (Snyder, Lopez, Shorey, Rand, & Feldman, 2003; Youssef & Luthans, 2007).

Secondly, hope also fulfils the POB criterion of reliable and valid measure as this construct has been assessed using a number of scales such as the Hope Scale (Snyder, 1991) and the Adult State Hope Scale (Snyder et al., 1996). Thirdly, there is considerable evidence to suggest that hope can be developed by setting realistic goals that are still challenging to the employee, developing contingency plans and resetting goals when necessary in order to avoid unrealistic hope (Luthans et al., 2006). Finally, hope is related to workplace performance in a variety of settings such as the manufacturing, services and non- governmental sectors (Luthans, Avolio, Avey, & Norman, 2007; Peterson, Gerhardt, & Rode, 2006; Youssef & Luthans, 2007).

Resilience. Resilience is another construct that fits the criteria laid out for POB. Firstly, the concept of resilience finds its roots in child psychology (Masten, 2001) but has recently been investigated as an important aspect in the work environment (Avey, Luthans, & Youssef, 2009; Luthans et al., 2007; Youssef & Luthans, 2007). Resilience is defined as having the capacity to persevere toward goals even when faced with obstacles (Luthans et al., 2007). Resilient individuals display an acceptance of their reality, can easily adapt to change and have a stable belief that all life events, including hardships, have meaning and purpose (Avey et al., 2006). This definition suggests that resilient individuals not only recover quickly in the face of obstacles, but are also motivated and learn from these challenges (Youssef & Luthans, 2007).

Secondly, valid and reliable measures have been established to assess resilience, such as the Resiliency Scale (Wagnild & Young, 1993) and the Ego-Resiliency Scale (Block & Kremen, 1996). Thirdly, resilience can be developed by aiding employees to proactively avoid and prevent risk (meeting deadlines) and by enhancing their job resources (greater involvement in training opportunities). In addition, interventions aimed at altering employees' reactions to circumstances can enhance resilience (Luthans, Vogelgesang & Lester, 2006). For example, encouraging the employee to believe that they have control over their environment as opposed to being controlled by the environment will result in an employee's perseverance towards attaining that goal. Finally, resilience fulfils the POB performance criterion because literature indicates a strong positive relationship between resilient employees and work-related performance (Luthans et al., 2007; Youssef & Luthans, 2007).

Although empirical research has illustrated the disparate qualities of hope, optimism, self-efficacy and resilience, these constructs also share numerous commonalities, which connect them to form the dimensions of PsyCap (Luthans et al., 2007). This suggests that the four dimensions of PsyCap have characteristics that relate to a high-order core factor (Luthans et al., 2007, p. 548). For example, literature suggests that the four dimensions of PsyCap are distinct from one another because optimism and resilience are more general in nature, and hope and self-efficacy are more focused on a specific context. However, all four PsyCap dimensions share a common factor of a positive expectation for the future and the motivation and perseverance to meet goals and objectives (Avey et al., 2009). Empirical evidence also demonstrates the higher order factor of PsyCap by supporting its construct

validity (Luthans et al., 2007). In addition, a competing models analysis showed that compared to a variety of other models, the core construct of PsyCap (the higher order factor) represented the best fit to the data (Luthans et al., 2007). This suggests that the four dimensions of self-efficacy, resilience, hope and optimism are best represented together as the core construct of PsyCap. The following section will present the current study's rationale for selecting PsyCap as a personal resource.

Rationale for using PsyCap as a Personal Resource

The current study focuses on PsyCap as a personal resource for reasons discussed below. Firstly, it can be theoretically and empirically inferred that focusing on PsyCap as a core construct is more beneficial than focusing on each of its dimensions individually (Luthans et al., 2007). This is illustrated in how the four dimensions of PsyCap are conceptually described in relation to one another. For example, Snyder (2000) proposes that employees who have hope are more likely to be resilient in the face of adversity due to their ability to plan alternative pathways to their goals. In addition, Bandura (1997) hypothesised that employees who are self-efficacious, will have the confidence to be hopeful and plan alternate pathways to goals when faced with obstacles. In other words, the core construct of PsyCap has more predictive power than its individual dimensions of hope, resilience, optimism and self-efficacy (Luthans et al., 2007). This notion is supported by empirical evidence which showed that PsyCap was more consistent in predicting outcomes such as performance, satisfaction and commitment than any of its individual dimensions alone (Larson & Luthans, 2006; Luthans et al., 2007). As the few studies attempting to integrate the individual dimensions of PsyCap into the JD-R model are inconsistent in their findings (Herbert, 2011; Xanthopoulou et al., 2007, 2009a), it is anticipated that integrating PsyCap will obtain an improved result due to its greater predictive power.

Secondly, PsyCap was chosen for the current study due to its positive impact on organisational outcomes. Empirical research has shown that PsyCap is positively related to positive emotions, engagement (Avey, Wernsing, & Luthans, 2008), performance, satisfaction, commitment (Larson & Luthans, 2006; Luthans et al., 2007) and organisational citizenship behaviours (OCB) (Avey et al., 2009). In addition, PsyCap is negatively related to cynicism, deviant behaviours and intentions to quit (Avey et al., 2009). In addition, Larson &

Luthans (2006) showed that PsyCap explained unique variance over and above human and social capital on satisfaction and commitment.

Thirdly, empirical evidence shows that PsyCap is open to development, and hence, unlike stable personality traits, can be enhanced through intervention. Using test retest reliability measures, Luthans et al. (2007) empirically showed that PsyCap (r = .52) is more volatile over time compared to personality character traits (r = .76) such as extroversion, but is still stable relative to emotions (r = .46). When placed on the state-trait continuum, Luthans et al. (2007) classified PsyCap as state-like, suggesting that it is open to change and development, but is still relatively stable over time. The malleability of PsyCap was found to be more valuable than the stability of traits due to its predictive power over outcomes. Empirical results revealed that PsyCap explained unique variance in positive employee outcomes (commitment and satisfaction) beyond widely reported personality traits (Luthans et al., 2007; Avey et al., 2009). Consequently, PsyCap's integration in the JD-R processes will be valuable to the current study because PsyCap's malleability will allow for its development in employees and ultimately for greater employee wellbeing.

Lastly, the summary of prior research on PsyCap presented in Table 2 illustrates that there are only three known reported research studies on PsyCap within the South African context (Du Plessis & Barkhuizen, 2012; Herbert, 2011; Pillay, 2012) compared to the abundance of research in the United States of America (USA) (Larson & Luthans, 2006; Luthans et al., 2007; Luthans et al., 2008). The objective of this study is to further investigate the applicability of PsyCap within the South African context. The following section will discuss the hypothesised role of PsyCap within the motivation and health impairment processes of the JD-R model.

Table 2
Global research on PsyCap

Author & Year	Sample & Response Rate in Parentheses	Country	Purpose	Method	Key Findings
Larson & Luthans (2006)	74 production workers (100 %)	United States of America (USA)	Exploratory study to examine the relationship between PsyCap on the one hand and organisational commitment and job satisfaction on the other.	Descriptive and self-report measures	PsyCap was positively related to both organisational commitment and job satisfaction.
Luthans et al. (2008)	Two samples: 163 insurance employees (82%), 170 engineers and technicians (59%)	USA	To uncover the importance of both supportive organisational climate and PsyCap on performance management.	Self-report and manger performance ratings.	PsyCap mediated the relationship between supportive organisational climate and performance.
Avey et al. (2010)	336 employees across a variety of occupations and organisations	USA	To test PsyCap relationships within an overarching theoretical framework which includes contextual factors, other individual differences and a broad range of positive and negative outcomes.	Self-report	PsyCap was positively related to desirable outcomes (organisational citizenship behaviours or OCBs) and negatively related to undesirable outcomes (intentions to quit, cynicism and counterproductive work behaviours). PsyCap was shown to add variance to work-related outcomes over and about personality traits, self-evaluation traits and contextual factors.
Cheung, Tang & Tang (2011)	264 Chinese school teachers (92%)	China	To examine the relationships of emotional labour within a school setting. Primarily to uncover whether PsyCap moderates the relationship between emotional labour and burnout and job satisfaction.	Self-report	PsyCap was negatively related to emotional labour and burnout and positively related to job satisfaction. PsyCap moderated the relationship between emotional labour on the one hand and job satisfaction and depersonalization on the other. The moderating effect of PsyCap was stronger on cognitive related outcomes than emotional outcomes.
Avey, Reichard, Luthans & Mhatre (2011)	51 independent samples (N= 12 567)	USA, China, India and Australia	To investigate the impact of PsyCap on desirable and undesirable work-related outcomes. In addition, to investigate the moderating effect of contextual factors on the relationship between PsyCap and outcomes.	Meta-analysis	PsyCap was positively related to desirable attitudes, behaviours and various measures of performance and negatively related to undesirable attitudes and behaviours. PsyCap had a stronger relationship with outcomes in the USA context as well as the service industry.
Herbert (2011)	209 employees in various occupations across the construction industry (66.35%)	South Africa	To investigate the relationship between occupational stress (OS), work engagement, burnout and PsyCap as well as the moderating role of PsyCap in the OS burnout relationship.	Self-report	OS was negatively related to all three dimensions of burnout. PsyCap was negatively related to OS and burnout. OS and burnout were negatively related to work engagement. PsyCap moderated the relationship between OS and personal and work related burnout.
Pillay (2012)	185 managers and non-managers in a financial institution (74%)	South Africa	To investigate the relationships between PsyCap, happiness and the organisational citizenship behaviours (OCB) of employees.	Self-report	Happiness as measured by orientations to happiness was positively related to both total PsyCap and total OCBs. Happiness as measured by satisfaction with life was positively related to total PsyCap but not to total OCBs. PsyCap and total OCBs were positively related.
Du Plessis & Barkhuizen (2012)	131 members of the SA board of people practice (SABPP) (15%)	South Africa	To determine whether South African human resource practitioners practice the positive organisational behaviours evident in the PsyCap construct	Self-report	The PCQ presented a different structure in the South African context, revealing only three as opposed to four dimensions of hopeful-confidence, optimism and resilience. South African HR practitioners encompass a high level of PsyCap.

The Role of PsyCap in the JD-R Model

Xanthopoulou et al. (2007) was the first to propose the expansion of the JD-R model to include personal resources. Based on the COR theory (Hobfoll, 1989), this study examined how the personal resources of OBSE, optimism and self-efficacy interacted with job demands and resources in predicting work engagement and burnout (Xanthopoulou et al., 2007). The current study will build on Xanthopoulou et al.'s (2007) research by integrating the under-researched personal resource of PsyCap. Although there is some research on PsyCap's role in the JD-R model's processes, these studies generally focus on only one process and do not place solitary emphasis on enhancing JD-R theory (Cheung et al., 2011; Herbert, 2011; Luthans et al., 2008). Hence the current study is unique in the sense that (as shown in Table 1 and Table 2 which present a summary of JD-R and PsyCap research respectively), it is the first known study to focus on the role that PsyCap plays as a personal resource within the JD-R model's processes, and more importantly is the first known study in the South African context.

The COR theory defines resources as those "objects, personal characteristics, conditions or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions or energies" (Hobfoll, 2002, p. 516). Derived from this definition are the two principles that will be used in the current study to explain how PsyCap interacts within the JD-R model. The first principle states that individuals must invest their resources in order to prevent and cope with negative outcomes such as threat or loss of resources (Hobfoll, 1989). The first COR principle is supported by a fundamental JD-R assumption which states that job resources buffers the negative impact of job demands on employee wellbeing (Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003). The second principle is embedded in the COR theory on resource caravans (Hobfoll, 2002). This principle states that resources do not exist in isolation and therefore when individuals possess a large pool of resources, they have a greater tendency to accumulate more resources. In other words, the possession of resources produce other resources which accumulate to form resource caravans and result in greater employee wellbeing (Hobfoll, 2002). Inferred from the aforementioned principles, PsyCap can be integrated into the JD-R processes in two ways. Firstly, it is expected that PsyCap will act as a moderator in the health impairment process. Secondly, it is expected that PsyCap will act as a mediator in the

motivation process. The proceeding sections will discuss PsyCap's role in both the health impairment and motivation processes.

PsyCap as a moderator within the health impairment process. A COR principal provides support for the moderating role of personal resources in the relationship between undesirable or stressful work characteristics and negative outcomes (Hobfoll, 1989). This principal suggests that in order to prevent negative outcomes such as burnout, employees need to invest their resources. Cheung et al. (2011) conducted a study, which used PsyCap as a moderator between a stressor-strain (emotional labour-burnout) relationship. Cheung et al.'s (2011) study showed that under high emotional stress, employees high in PsyCap reported lower levels of cynicism (depersonalisation) and higher levels of job satisfaction than their counterparts who were low in PsyCap.

Although research on PsyCap as a moderator is scarce, there are studies that have investigated other moderating or buffering personal resources. A study conducted by Siu, Lu, and Spector (2007) found that in the presence of stressors, individuals high in general self-efficacy were less likely to present symptoms of low mental health. Similarly, Grau, Salnova, and Peiro (2001) found that professional self-efficacy moderated the stress-strain relationship, but more specifically, when role conflict was high, individuals with low professional self-efficacy displayed greater levels of cynicism compared to those individuals with high professional self-efficacy. Furthermore, Riollo and Savicki (2003) found optimism to be a moderator between chronic stress on the one hand and exhaustion and depersonalisation on the other. Contradicting the aforementioned studies, Xanthopoulou et al. (2007) found that self-efficacy, optimism and OBSE did not moderate the relationship between job demands and exhaustion. Similarly, Rothmann and Essenko (2007) found that optimism did not moderate the relationship between job demands and exhaustion among a sample of South African teachers.

Two reasons were suggested for inconsistent results among past moderation studies. Firstly, Xanthopoulou et al. (2007) attributed the lack of support for their moderation hypothesis to the nature of the personal resources used in their study. They suggested that using more practical behavioural personal resources such as time management, as opposed to affective-cognitive resources such as self-esteem, are more effective in managing job demands and preventing exhaustion. Similarly, Cheung et al. (2011) suggested that the

inconsistency among previous moderation findings can be attributed to the continuous failure of moderation studies to consider the nature of stressors, resources, and strains. According to Cheung et al. (2011), moderation effects are more likely to be observed when there is congruence between the nature of the resource and the strain, for example a cognitive resource and cognitive strain. Based on the aforementioned notion, Cheung et al. (2011) argued that PsyCap is a cognitive resource, which has a stronger moderation effect on the stressor-cynicism (cognitive strain) relationship than the stressor-exhaustion (emotional strain) relationship. The current study aims to improve on past moderation results and provide support for Cheung et al.'s (2011) hypothesis by testing PsyCap's moderation effect on the two burnout outcomes of exhaustion and cynicism. As cynicism is cognitive in nature and exhaustion is emotional, it is anticipated that a moderation effect is more likely to be observed in the job demands-cynicism relationship and than in the job demands-exhaustion relationship.

PsyCap as a mediator within the motivation process. This COR principle on resource caravans implies that when individuals possess job resources, they are more likely to accumulate personal resources which ultimately leads to increased work engagement. This COR principle supports the mediation of personal resources between job resources and work engagement (Luthans et al., 2008; Xanthopoulou et al., 2007, 2009a). Luthans et al. (2008) conducted a study that investigated PsyCap as a mediator between a job resource (supportive organisational climate) and a positive outcome (work performance). According to Luthans et al. (2008), the "perceptions of a supportive climate may create the positive conditions necessary for PsyCap to flourish" (p.226) which ultimately leads to greater job performance. For example, those employees who experience setbacks because of mistakes made, may find it easier to be resilient and overcome obstacles in a supportive organisational climate because they will not be punished for their mistakes, but rather encouraged to still focus on and accomplish the task at hand (Luthans et al., 2008). Consequently, Luthans et al (2008) found PsyCap to be a full mediator in the relationship between a supportive organizational climate and job performance.

Although research on PsyCap as a mediator is scarce, studies have been conducted on the mediating role of the individual dimensions of PsyCap, as well as various other personal resources. The well-known job characteristics model (JCM) (Hackman & Oldham, 1980) theorises that job characteristics such as feedback, autonomy, task variety, identity, and

significance stimulate a variety of psychological states such as the meaningfulness of work, which in turn influence an employee's intrinsic motivation. In other words, the relationship between job resources and motivation is mediated by psychological states (Hackman & Oldham, 1980). An empirical study conducted by Xanthopoulou et al. (2007) found that the two dimensions of PsyCap, self-efficacy and optimism, as well as an additional personal resource, namely OBSE, partially mediated the relationship between job resources (autonomy, social support and opportunity for advancement) and work engagement. Xanthopoulou et al. (2009b) expanded their study to investigate how employees' day to day fluctuations (day-level) in personal resources impact on the relationship between their daily level of job resources and daily level of work engagement. This study revealed that day-level self-esteem, self-efficacy and optimism (personal resources) fully mediated the relationship between autonomy (job resources) and work engagement. In a recent study, l etjes (2012) found that the personal resources of proactive behaviour, assertiveness and worker flexibility, partially mediated the relationship between job resources and work engagement. The current study expects that PsyCap will mediate the motivation process, however, it will be a partial mediation for two reasons. Firstly, extensive research on the direct effects of job resources on work engagement cannot be ignored (Bakker et al., 2007; Crawford et al., 2010; Rothmann & Joubert, 2007; Schaufeli & Bakker, 2004). Secondly, there are other personal resources, not included in the current study, that have been shown to mediate the motivation process (ackman Oldham, 1980 l etjes, 2012 a nthopoulou et al., 2007).

Conceptualising Work Related Outcomes

Burnout. Burnout literature originated in the field of health professionals and has subsequently expanded across a wide range of occupational contexts (Crawford et al., 2010; Hakanen et al., 2006; Hakanen & Schaufeli, 2012; Schaufeli et al., 2002). There is an underlying consensus that the definition of burnout incorporates the following three dimensions- exhaustion, cynicism and professional inefficacy (Maslach et al., 2001). Exhaustion refers to feeling overextended and lacking the capacity to work due the depletion of emotional resources. Cynicism refers to the mental withdrawal from various aspects of the job in an attempt to cope with job demands. Professional inefficacy refers to a feeling of incompetence and lack of accomplishment at work (Maslach et al., 2001). Exhaustion illustrates the stress dimension of burnout, while cynicism, a form of depersonalisation, captures an employee's relationship with his/her job. The third burnout dimension,

professional inefficacy, has often been viewed as the more complicated and weaker dimension of burnout due to the fact that it has a weak relationship with, and develops fairly independently from the other two dimensions (Lee & Ashforth, 1996). Studies have also classified efficacy in terms of a personal resource rather than a dimension of burnout (Avey et al., 2006; Luthans et al., 2007; Luthans & Youssef, 2004; Xanthopoulou et al., 2009a). The current study will measure burnout using the Maslach Burnout Inventory-General Survey (MBI-GS) and will only measure exhaustion and cynicism as the core dimensions of burnout (Schaufeli, Salanova, González-Romá, and Bakker, 2002; Schaufeli and Bakker, 2004).

The prominence of burnout research results from its negative impact on various employee outcomes. Literature links burnout to negative outcomes such as turnover intentions, absenteeism, psychological and physical ill health (Hakanen et al., 2006; Hakanen & Schaufeli, 2012a; Rothmann & Essenko, 2007; Schaufeli & Bakker, 2004). Furthermore, high levels of burnout are related to lower positive outcomes such in-role and extra-role performance (Bakker, Demerouti, & Verbeke, 2004; Maslach & Leiter, 2004; Maslach et al., 2001), productivity, efficiency and commitment (Hakanen et al., 2006).

The negative impact of burnout has encouraged researchers to focus on its key drivers. Initially, it was assumed that burnout was a function of deficiencies evident in the character and behaviour of individuals (Maslach & Leiter, 1997). However, Maslach & Leiter (2008) argue that it is rather the social environment in which employees work that manifests burnout. Reported antecedents of burnout include; the person-environment mismatch, work overload, emotional demands, time pressure, role conflict, role ambiguity and the lack of reward, social support, fairness and feedback, (Maslach & Leiter, 2008; Maslach et al., 2001; Rothmann & Joubert, 2007; Schaufeli & Bakker, 2004).

It has been argued that the dimensions of burnout and work engagement lie on opposite ends of a continuum and hence work engagement will not provide additional information to that which is already known about burnout (Gonza´lez-Roma´, Schaufeli, Bakker, Lloret, 2006). In order to combat this criticism, Avey et al. (2009) reported that researchers need to take a more balanced perspective by including both the positive and the negative. As a result, the current research will include both work engagement and burnout as work related outcomes.

Work engagement. The focus of organisational psychology literature has been on the negative attributes of employees and the need to fix human weakness and dysfunction (Fineman, 2006). It was first encouraged by Seligman (1999) to move away from psychology's four D approach (damage, disease, disorder and dysfunction) toward a newer concept of positive organisational psychology (POP). This shift has stimulated an increase in research that focuses on human wellness as well as the individual and organisational factors that contribute to it. As a result of the emphasis on positivity, there has been an accelerated interest in the concept of work engagement, its antecedents and its outcomes (Albrecht, 2010).

Kahn (1990) provided the first definition of "personal engagement", proposing that those who were engaged invested themselves in task performance on three levels: cognitive, emotional and physical. Similarly, Macey & Schneider's (2008) definition of work engagement define this concept on three levels: 1) as a trait or a general and stable positive outlook on work, 2) as a state or a feeling of energy, connection, concentration and enjoyment of one's work and 3) as a behaviour or performing above job requirements. However, work engagement is most commonly defined as a psychological state (Maslach and Leiter 1997; Schaufeli et al., 2002). Work engagement is conceptualised by Maslach and Leiter (1997) as a psychological state directly opposite to burnout where exhaustion, cynicism, and inefficacy are directly mirrored by energy, involvement, and efficacy. Accordingly, Maslach and Leiter (1997) operationalize engagement using the opposite pattern of scores on the MBI-GS, a common tool used to measure burnout (Leiter & Maslach, 2004). For example a low score on the exhaustion dimension suggests that the individual is high in energy. In contrast, Schaufeli et al. (2002) conceptualise and operationalize work engagement as an independent construct from burnout defining it as "a positive, fulfilling, work-related state of mind characterized by vigour, dedication, and absorption" (Schaufeli et al., 2002; p. 74). There are a number of differences between Maslach and Leiter (1997) and Schaufeli et al's (2002) definitions of work engagement. While Maslach and Leiter (1997) refer to engagement as a temporary state which is specific to a particular event, object, person or behaviour, Schaufeli et al's (2002) engagement is a more long-lasting and general cognitive-affective state. In addition, although involvement (Maslach & Leiter, 1997) and dedication (Schaufeli et al., 2002) both include an identification to one's job, dedication refers to a stronger identification and contains an affective dimension that is not present in involvement (Schaufeli et al., 2002). Moreover, the third dimensions of chaufeli et al.'s

(2002) engagement, absorption, does not mirror the third dimension of the MBI-G 's burnout inefficacy (Schaufeli et al., 2002).

The current study will define and operationalize work engagement independently from burnout in terms of Schaufeli et al.'s (2002) two work engagement dimensions of vigour and dedication and the Utrecht Work Engagement Scale (UWES) (Schaufeli, Bakker, & Salanova, 2006). Vigour refers to having high energy levels and the willingness to invest effort when fulfilling job tasks. Dedication refers to having a strong identification with, and a sense of pride and enthusiasm in one's work (Schaufeli et al., 2002, 2006). The current study's definition of work engagement (Schaufeli et al., 2002) was chosen due to its independence from the MBI-G 's definition of burnout and its wide acceptance in literature (Bakker, 2005; González-Romá, Schaufeli, Bakker, & Lloret, 2006; Rothmann & Joubert, 2007; Schaufeli, 2006; Xanthopoulou et al., 2007, 2009a, 2009b).

Work engagement has been reported to have a positive impact on organisational outcomes such that it enhances life satisfaction (Hakenen & Schaufeli, 2012), service climate, employee performance, customer loyalty (Salanova, Agut & Peiro, 2005), and employee commitment (Hallberg & Schaufeli, 2006) and reduces depressive symptoms (Hakenen & Schaufeli, 2012) and turnover intentions (Schaufel & Bakker, 2004). In addition, work engagement has been empirically found to lead to engagement behaviours such as performing tasks over and above expected requirements, taking initiative, being innovative and contributing to the organisation through the active pursuit of opportunity with a main focus on achieving organisational objectives (Christian, Garza, & Slaughter, 2011; Crawford et al., 2010; Macey & Schneider, 2008; Ram & Prabhakar, 2011).

Previous studies on the positive impact of work engagement have focused on the factors that contribute to its development (Christian et al., 2011; Hakanen et al., 2005; Hakanen, Bakker, & Schaufeli, 2006; Mostert, Rothmann, & Rothmann, 2012; Simpson, 2009; Xanthopoulou et al., 2009a, 2009b). It has been suggested that employees' work characteristics determine their level of work engagement (Bakker & Demerouti, 2007). More specifically, those employees who experience high job resources and low job demands are generally more engaged in their work (Bakker et al., 2007; Crawford et al., 2010; Schaufeli & Bakker, 2004). Job resources include feedback, autonomy, social support, organisational climate, opportunities for development, recovery, rewards, job variety, procedural and distributive justice, work role fit,

information and task significance (Albrecht, 2010; Christian et al., 2011; Crawford et al., 2010; Hakanen et al., 2006; Ram & Prabhakar, 2011). Job demands include administrative hassles, emotional conflict, organizational politics, resource inadequacies, role conflict, role overload, physical demands, working conditions, work-family conflict and job insecurity (Christian et al., 2011; Crawford et al., 2010; Mauno, Kinnunen, & Ruokolainen, 2007; Mostert et al., 2012; Rothmann & Joubert, 2007). In addition to work characteristics, literature reveals that certain personality characteristics and strong leadership abilities lead to more engaged employees (Christian et al., 2011; Macey & Schneider, 2008). Personality characteristics include proactive personality type and conscientiousness, (Macey & Schneider, 2008), and leadership variables include transformational leadership and leader-member exchange (Christian et al., 2011; Macey & Schneider, 2008). Based on literature, the proceeding section will propose the current study's theoretical models and hypotheses.

Theoretical Research Models

Based on the hypothesised expansions of the JD-R model's health impairment and motivation processes to include PsyCap, the theoretical models to be tested are presented in Figure 1 and Figure 2 respectively. After a discussion with the company's R manager, it was deemed beneficial to include those job demands and resources that were crucial to the specific retail context. Therefore, in Figure 1, job demands include workload, role ambiguity and role conflict and in Figure 2, job resources include autonomy, advancement opportunities and supervisory support. In terms of job demands, workload refers to the level of physical, emotional or cognitive demands an employee possesses (Rothmann & Joubert, 2007). Role ambiguity is defined as the extent to which an employee is confronted with vague and unclear goals and objectives (Rizzo, House, & Lirtzman, 1970). Role conflict is defined as the extent to which an employee possesses role expectations which are incongruent (Rizzo et al., 1970). In terms of job resources, autonomy refers to the level of freedom an employee possesses in determining how to carry out their job (Robbins, Judge, Odendaal, & Roodt, 2009). Advancement opportunities refer to the opportunities an employee receives in terms of growth and development, promotion and financial progression (Robbins et al., 2009). Supervisory support is defined as the level of support, appreciation and encouragement an employee receives from his or her manager (Robbins et al., 2009). The current study's theoretical models (Figure 1 and Figure 2) and hypotheses are presented below (hypothesis 1-10).

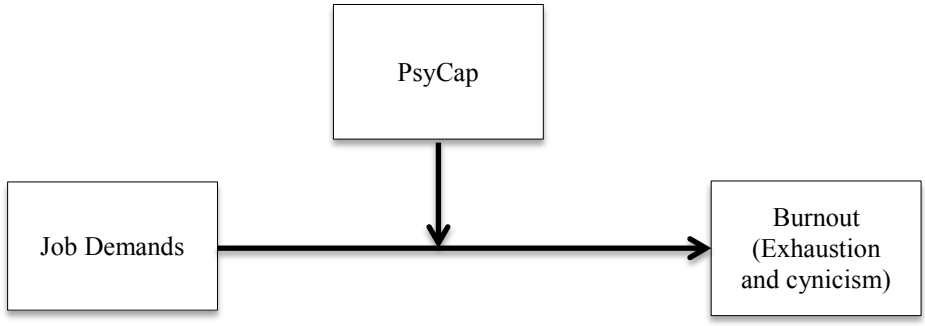

Figure 1. The hypothesised expansion of the JD-R model's health impairment process to include PsyCap labeled Model 1.

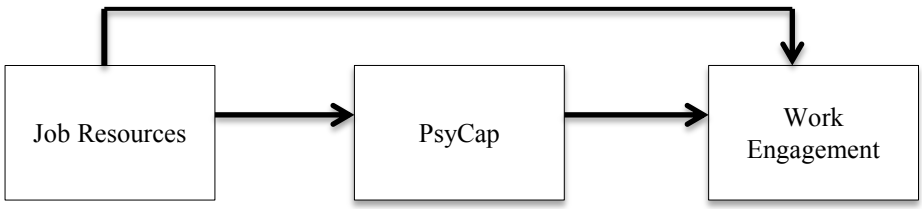

Figure 2. The hypothesised expansion of the JD-R model's motivation process to include PsyCap labeled Model 2.

Based on the proposed models the following hypotheses will be tested:

H_1: Workload is positively related to a) exhaustion and b) cynicism.

H_2: Role ambiguity is positively related to a) exhaustion and b) cynicism.

H_3: Role Conflict is positively related to a) exhaustion and b) cynicism.

H_4: PsyCap moderates the relationships between a) workload, b) role ambiguity and c) role conflict on the one hand and exhaustion on the other.

H_5: PsyCap moderates the relationships between a) workload, b) role ambiguity and c) role conflict on the one hand and cynicism on the other.

H_6: Autonomy is positively related a) PsyCap and b) work engagement.

H_7: Advancement opportunities are positively related a) PsyCap and b) work engagement.

H_8: Supervisory support is positively related a) PsyCap and b) work engagement.

$H_{9:}$ PsyCap is positively related to work engagment.

H_{10a}: PsyCap mediates the relationship between autonomy and work engagement.

H_{10b}: PsyCap mediates the relationship between advancement opportunities and work engagement.

H_{10c}: PsyCap mediates the relationship between supervisory support and work engagement.

The following chapter will focus on the research methodology exercised in the current study in terms of research design, measures, sample, procedure, and data analysis.

Chapter 2- Method

Research Design

A cross-sectional descriptive research design was used for the purpose of the study. This design was chosen as it allowed for examining the relationships between variables. Data was collected using self-report questionnaires to measure the variables and test the hypotheses.

Measures

After a review of literature pertaining to the relevant constructs, a 64-item questionnaire was composed from pre-existing measures which were chosen based a high Cronbach's Alpha (α) of above α = 0.70 (Pallant, 2005). In addition, the workload, role ambiguity, role conflict, supervisory support and advancement opportunities scales were shortened for the purpose of the current study and items were chosen based on an examination of EFA derived factor loadings for each construct's original scale (Rizzo et al., 1970; Rothmann & Joubert, 2007). Items were considered if they displayed a factor loading above .3 and were subsequently chosen based on face validity. Scales were shortened because using complete scales would have deemed the resulting questionnaire too long and complex for use in data collection. Responses for all scales were provided on a five-point Likert scale (*1= strongly disagree, 5= strongly agree*). All scales were adapted to suit the South African organisational context. Detailed descriptions of each of the subscales are presented below. An illustration of the distributed questionnaire is shown in Appendix A, Table A1. Participants were also asked to provide demographic information.

Job demands. *Workload* was measured using four items from the Job Demands-Resources Scale (JDRS) (Rothmann & Joubert, 2007). The internal consistency for the workload scale was found to be high (α = 0.80) and the scale items chosen to be included in the current study presented acceptable factor loadings ranging from r = 55 to r = .69 (Rothmann & Joubert, 2007). A high score (*1 = low, 5= high*) on this scale indicates a high level of workload. A sample item stated, "I have to give my attention to a number of tasks at the same time".

Role ambiguity and *role conflict* were measured using ten items (five items each) chosen from an original 18-item scale (Rizzo et al., 1970). The role ambiguity and role conflict scales were selected due to the fact that both scales displayed high Cronbach Alphas of $\alpha = .82$ and $\alpha = .78$ respectively (Rizzo et al., 1970). In addition, the ten items chosen to be included in the current study's scales displayed acceptable factor loading above .3 ($.35 < r < .61$) (Rizzo et al., 1970). A sample item for the role ambiguity scale stated, "I feel certain about my level of authority". A sample item for the role conflict scale stated, "I have to do tasks that I feel should be done differently".

Job resources. *Autonomy* was assessed using three-items from the Job Characteristics Questionnaire (JCQ) (Karesek, 1985) that measures decision-making authority (as cited in Cheng, Luh, & Guo, 2003). In a South African sample, the internal consistency for job resources within the JCQ scale was found to be high ($\alpha = .80$). A sample item stated, "I have significant autonomy in determining how I do my job".

Supervisory support and *advancement opportunities* were measured using four items and three items from the JDRS respectively (Rothmann & Joubert, 2007). In Rothmann and Joubert's (2007) study, the supervisory support and advancement opportunities scales were found to have high Cronbach Alphas of $\alpha = .94$ and $\alpha = .79$ respectively. Additionally, all scale items included in the current study displayed acceptable factor loadings above .3 ($.42 < r < .79$) (Rothmann & Joubert, 2007). High scores on these scales represent high levels of supervisory support and advancement opportunities. A sample item for advancement opportunities stated, "My job offers me the possibility to progress financially". A sample item for supervisory support stated, "My manager informs me about how well I am doing in my work".

PsyCap. *PsyCap* was assessed using 23 items from the 24 item PsyCap questionnaire (PCQ) (Luthans et al., 2007). One item, "I approach this job as if every cloud has a silver lining", was deleted in consideration of face validity for the relevant sample. The PCQ consists of 4 subscales measuring self-efficacy, hope, resilience and optimism. The internal consistency of the PCQ was found to be high ($\alpha = .91$) (Luthans, Norman, Avolio, & Avey, 2008). An example item for self-efficacy stated, "I feel confident analysing a long-term problem to find a solution". A sample item for hope stated, "If I should find myself in a jam

at work, I could think of many ways to get out of it". A sample item for resilience stated, "I usually manage difficulties one way or another at work". A sample item for optimism stated, "when things are uncertain for me at work, I usually expect the best".

Work engagement. The Utrecht Work Engagement Scale-Short Form (UWES-SF) developed by Schaufeli, Bakker, and Salanova (2006) was used to assess *work engagement*. This scale consisted of two subscales namely vigour and dedication, which each contained three items. The Cronbach Alpha for the vigour and dedication scales were found to be higher than α = .70 for a South African sample (Schaufeli et al., 2006). Higher scores on these scales indicate higher levels of vigour and dedication. A sample item for the vigour scale stated, "At my work, I feel bursting with energy". A sample item for the dedication scale stated, "My job inspires me".

Burnout. Burnout was measured using the MBI-GS (Schaufeli & Leiter, 1996). This study measured two of the three MBI-GS subscales of *exhaustion* (five items) and *cynicism* (five items). In a South African sample, the internal consistency as measured by Cronbach Alpha was found to be high for both exhaustion (α = .88) and cynicism (α = .78) (Storm & Rothmann, 2003). Higher scores on these scales indicate higher levels of exhaustion and cynicism. A sample exhaustion item stated "I feel used up at the end of the workday". A sample cynicism item stated "I have become less enthusiastic about my work."

Demographic variables. Demographic variables were included in the study in order to determine the characteristics of the current sample in terms of age, gender, race, language and tenure.

Sample

Convenience sampling methodology was used to select the sample from management staff at a retail organisation (Burns & Burns, 2008). This organisation was used due to the ease of accessibility. The researcher received 143 responses from the 438 questionnaires that were distributed (33% response rate). Participant demographics are represented in Table 3. There were no participants younger than 20 years old or older than 69 years. In addition, there were no participants with tenure between 18 to 20 years.

Table 3

Demographic Characteristics of Participants

Variable	Level	Number of subjects	% of subjects
Age (years)	20-29	39	27.3
	30-39	32	22.4
	40-49	10	7.0
	50-59	2	1.4
	60-69	2	1.4
	PNTA	58	40.6
Race	White	96	67.1
	Black	15	10.5
	Coloured	15	10.1
	Asian	1	0.7
	Indian	7	4.9
	PNTA	9	6.3
Gender	Male	36	25.2
	Female	99	66.2
	PNTA	8	5.6
Tenure (years)	<1	24	16.8
	1-3	51	34.7
	4-6	30	21.0
	7-9	24	16.8
	10-14	8	5.6
	15-17	3	2.1
	>20	3	2.1
Gender	Male	36	25.2
	Female	99	66.2
	PNTA	8	5.6

Note. n = 143. PNTA= Prefer not to answer

Procedure

Before the study commenced, permission was obtained from the organisation's Chief Executive Officer (CEO) to survey employees. After the survey tool was compiled the researcher sought ethical clearance from the Commerce Faculty's Ethics Research Committee at the University of Cape Town. The self-report questionnaire (see Appendix A, Table A1) was compiled online using the Qualtrics software which enabling the researcher to distribute the questionnaire via email. The relevant email addresses were collected from the HR manager and were entered into the software for distribution. Emails were sent to all relevant participants and consisted of a questionnaire notification, a link that directed participants to their respective questionnaire and a cover letter. The cover letter attached (see Appendix B) informed participants about the nature and objectives of the study, the instructions for completing the questionnaire, confidentiality and anonymity and voluntary

participation. The CEO and HR manager were both asked to endorse the completion of the questionnaire in order to ensure a high response rate. After two weeks of the survey being online the response rate was poor, a second notification reminding employees to complete the questionnaire was sent via email. Two weeks after the reminder email, the questionnaire was closed and a thank you email was sent to all those who participated in the study. The collected data was then exported into an excel spreadsheet in order to export data into IBM SPSS version 20 research software where the data was analysed.

Data Analysis

Descriptive statistics as well as correlation analyses were conducted in order to describe the variables and determine their relationship. Correlation analyses were conducted to test hypotheses 1a-b, 2a-b, 3a-b, 6a-b, 7a-b, 8a-b and 9. Moderation regression analyses (Howell, 2012) were conducted to test hypotheses 4a-c and 5a-c in Model 1. Mediation analyses (Baron & Kenny, 1986) were conducted to test hypotheses 10a-c in Model 2.

Chapter 3- Results

Results are presented in four sub-sections according to measurement analyses and model testing. The first section will discuss the validity and reliability of the job demands, job resources, PsyCap, work engagement and burnout scales. The second section presents the descriptive data for each scale. The third section displays Model 1 correlation and moderation results and the fourth section illustrates Model 2 correlation and meditation findings.

Measurement Validity and Reliability

The proceeding section will discuss the validity and reliability of the scales used to measure the constructs in the current study. In EFA analyses, the current study adopted an acceptable factor-loading cut off scores of .3 for the PsyCap and burnout scales and a cut off of .4 for job demands, job resources and the work engagement scales. A higher cut off score was chosen for specific scales because the closer factor loadings are to 1, the more important they are in explaining the variation in that factor (Burns & Burns, 2008). A lower cut off score was retained in certain EFAs because higher cut offs would have diminished the number of questionnaire items in these scales to an unusable level of below three (Burns & Burns, 2008). In addition, internal consistency was measured using Cronbach's Alpha (α) and was deemed acceptable at a level of α = .60 (George & Mallery, 2003).

Job demands and job resources. An EFA using principal components analysis (PCA) was conducted on the job demands and job resources scales in order to assess the degree of independence between observed variables (Burns & Burns, 2008). In addition, varimax rotation was performed in order to interpret and refine the factor structure. Varimax rotation was chosen due to the assumption that the subscales are uncorrelated (Pallant, 2005). Before PCA was conducted, reverse scoring was completed on all role ambiguity items. It was deemed appropriate to conduct PCA as the Kaiser-Meyer-Olkin (1974) (KMO) measure of sampling adequacy was .81 above the recommended value of .6 (Kaiser, 1974) and the Bartlett's test for sphericity (BTS) (Bartlett, 1954) was significant (χ^2_{276} = 1325.50, p < .001). Using Kaiser's criterion, only factors presenting eigenvalues greater than 1 were retained for further analysis (Kaiser, 1974). As shown in Appendix C, Table C1, the PCA with varimax rotation revealed six factors with eigenvalues ranging from 1.05 to 5.73, for

which these factors explained 62.60% of the total variance. Items two and three from the original workload scale were removed from the analysis as they presented cross loadings on factors three and four (see Appendix C, Table C1) (Burns & Burns, 2008). As shown in Table 4, the aforementioned items were removed from the scale and an additional PCA was performed, revealing six clean factors, which explained 63.74% of the total variance.

Table 4
EFA for the Job Demands and Job Resources Scale.

Item	Statement	RA	SS	RC	AO	A	JP
RA3	I know what my responsibilities are.	**.87**					
RA4	I know exactly what is expected of me.	**.83**					
RA2	In my job I have clear and planned goals and objectives	**.68**					
RA5	Explanation is clear of what tasks I need to complete.	**.59**					
RA1	I feel certain about my level of authority.	**.49**					
SS3	I get on well with my manager.		**.82**				
SS2	My manager informs me about how well I am doing in my work.		**.79**				
SS1	I feel that my manager appreciated my work.		**.73**				
SS4	I can discuss work problems with my manager.		**.52**				
RC4	I receive incompatible requests from two or more people.			**.79**			
RC2	I receive an assignment without the manpower to complete it.			**.77**			
RC1	I have to do tasks that I feel should be done differently.			**.68**			
RC5	I do tasks that are apt to be accepted by one person and not to be accepted by others.			**.55**			
AO1	My job offers me the possibility to progress financially.				**.78**		
AO2	I have opportunities to be promoted.				**.73**		
AO3	My company gives me opportunities to attend training				**.67**		
A1	I can decide on my own how to go about doing my work.					**.77**	
A3	I have considerable opportunity for independence and freedom in how I do my job.					**.74**	
A2	I have significant autonomy in determining how I do my job.					**.66**	
JP4	There are many complexities in my work.						**.77**
RC3	I work in collaboration with or within two or more groups that operate quite differently.						**.67**
JP1	I need to give my attention to a number of tasks at the same time.						**.65**
Eigenvalues		5.67	2.93	1.75	1.47	1.17	1.03
Individual total variance (percent)		25.77%	13.33%	7.97%	6.69%	5.32%	4.66%
Cumulative total variance (percent)		25.77%	39.10%	47.07%	53.76%	59.07%	63.74%

Note. Principal axis factoring. Item-to-factor loadings below .4 were suppressed. Each item's significant loadings are presented in boldface. RA = role ambiguity, N = 5; JP= workload, N = 3; RC = role conflict, N=4; A= autonomy, N=3; AO= advancement opportunities, N = 3; SS = supervisory support, N = 4.

The factor loadings for all six factors were deemed significant at a value greater than .4 (Burns & Burns, 2008). As illustrated in Table 4, item three on the role conflict scale loaded significantly on the workload factor (factor six). This item stated, "I work in collaboration with or within two or more groups that operate quite differently". Factor six was labelled workload and the resulting workload scale consisted of items one and four from the original workload scale and item three from the original role conflict scale. It was deemed appropriate to form this scale because all three items reported the need for an employee to divide his or her attention either within the task, among tasks or across groups.

The EFA analysis supported the construct validity for job demands and job resources scales where job demands were represented by factor one, three and six and job resources were represented by factor two, four and five. More specifically, role ambiguity loaded on factor one, supervisory support on factor two, role conflict on factor three, advancement opportunities on factor four, autonomy on factor five and workload on factor six.

The reliabilities for the job demand and job resource scales were evaluated in order to assess whether the scales were consistent in their measurements (Burns & Burns, 2008). All scale reliabilities were at an acceptable level where the internal consistency for the role ambiguity scale was α = .79, the workload scale was α = .62, the role conflict scale was α = .74, the autonomy scale was α = .72, the advancement opportunities scale was α = .71 and the supervisory support scale was α = .84. All scales had corrected item-total correlation above the significant value of .4 (see Appendix C, Table C2-C7) (George & Mallery, 2003). Hence all scales were reliable.

Psychological capital. In order examine the psychometric properties of the PCQ scale; structural equation modelling (SEM) in the student version of Lisrel 9.0 was used to conduct a confirmatory factor analysis (CFA) (Kline, 2010). It was deemed appropriate to first conduct a CFA rather than an EFA as the PCQ's four factor structure is supported by sound theoretical rationale (Avey et al., 2011; Luthans et al., 2007; Luthans et al., 2007). Before a CFA was conducted, reverse scoring was completed on the resilience item one and the optimism items one and three. In addition, the variable type and normality of the items were examined (Kline, 2010). Although the items on the PCQ were measured on an ordinal scale, Muthen and Kaplan (1985) suggest that no severe distortions will occur when ordered

data is specified as continuous, hence the current study specifies the PCQ items as continuous. The multivariate normality of the scale was tested, revealing that the scale had a non-normal distribution with a significant multivariate skewness and kurtosis score of χ^2 = 102.77 p < .001. As a result, a Robust Maximum Likelihood (RML) technique was deemed appropriate for the CFA because data was continuous and non-normality distributed (Kline, 2010). In order to conduct the CFA analysis on the student version of Lisrel (which is restricted to 15 observed variables) the PCQ items for each of the PsyCap subscales were collapsed into a composite score for their respective PsyCap dimension, resulting in four composite scores. The four composite scores were then assumed to load on the one latent factor of PsyCap.

The goodness of fit for the measurement model was assessed using four fit statistics with various cut off scores. These fit statistics included the chi-square statistic (χ^2) where a good fit was represented by significance (p < .05), the root mean square of error approximation (RMSEA) with a cut off score of .08 or less, and the comparative fit index (CFI) and normed fit index (NFI) with cut off scores above .95 (Hooper, Coughlan, & Mullen, 2008). In the current study, model fit was supported only if all four fit statistics were significant. Although the chi-square score was significant (χ^2_2 =12.41, p < .01) and the CFI and NFI values were at the cut off point of .95, the RMSEA revealed a poor fit with a score of .19 above its cut off (see Appendix D, Table D1). A hypothesized reason for this poor fit is based on the assumption that the PCQ has limited theoretical support in the South African context where most research is based in the USA (Luthans et al., 2007; du Plessis & Barkhuizen, 2011). This suggests that the factor structure of the PCQ may be distorted by the difference in its interpretation of South African and American respondents (du Plessis & Barkhuizen, 2011). Consequently, a more exploratory approach was adopted in order gain a greater understanding of the factor structure of the PCQ in South Africa (SA).

EFA using principal axis factoring (PAF) was conducted to assess the degree of independence between the four PCQ dimensions (Burns & Burns, 2008). In order to interpret and refine the factor structure, direct oblimin rotation (DOR) was performed. DOR was chosen due to the assumption that the PCQ subscales are correlated (Pallant, 2005). It was deemed appropriate to conduct PAF as the KMO (1974) measure of sampling adequacy was .84 above the recommended value of .6 and the BTS (Bartlett, 1954) was significant (χ^2_{253} =

1124.20, $p < .001$). It is an accepted practice that factors presenting eigenvalues greater than 1 are retained for further analysis (Kaiser, 1974).

EFA results revealed six factors with eigenvalues exceeding 1, explaining 61.53% of the total variance. After an examination of the factor loadings, item one and three for the hope scale, items one and three for the resilience scale and items one and three for the optimism scale were omitted from the analysis as these items either presented cross-loadings or did not load significantly on either factor (Burns & Burns, 2008). As shown in Appendix D, Table D2, the omission of the items mentioned above, resulted in a four-factor model where a number of hope items loaded negatively on factor four. Consequently, a four factor structure did not make sense for the current study's PCQ and an additional factor analysis was conducted where three factors were extracted (du Plessis & Barkhuizen, 2012).

Results from the three-factor EFA are shown in Table 5, revealing three clean factors that explain a total variance of 55.93% and present eigenvalues of 5.57, 2.07 and 1.31 respectively. Factor loadings on the three factors were deemed significant at .3 (Burns & Burns, 2008). Hope and optimism items loaded on the same factor (factor two) as the current study's data did not differentiate between these constructs. Factor two was relabelled hopeful-optimism and hopeful-optimism was defined as an energetic pursuit of one's goals and the expectance of positive outcomes when developing alternate pathways around obstacles (Luthans et al., 2007). Literature suggests that the construct validity of a measure is confirmed when the factors obtained in an EFA are useful and meaningful (du Plessis & Barkhuizen, 2011). Therefore, it can be concluded that EFA results support the construct validity of the self-efficacy scale (factor 1), the hopeful-optimism scale (factor 2) and the resilience scale (factor 3) as these factors are meaningful. Similarly to du Plessis and Barkhuizen (2011), the current study will rename the new PsyCap scale PCQ-SA.

Table 5

Three-Factor EFA for the PCQ Scale.

Item No.	Statement	SE	H-O	RE
SE2	I feel confident representing my work area in meetings with management.	**.79**		
SE4	I feel confident helping to set targets/goals in my work area.	**.78**		
SE3	I feel confident contributing to discussions about the company's strategy.	**.78**		
SE1	I feel confident analysing a long-term problem to find a solution.	**.75**		
SE5	I feel confident contacting people outside the company (e.g. suppliers, customers) to discuss	**.66**		
SE6	I feel confident presenting information to a group of colleagues.	**.52**		
H5	I can think of many ways to reach my current work goals.		**.68**	
H4	Right now I see myself as being pretty successful at work.		**.64**	
O5	I'm optimistic about what will happen to me in the future as it pertains to work.		**.62**	
H2	At the present time, I am energetically pursuing my work goals		**.59**	
O4	I always look on the bright side of things regarding my job.		**.55**	
O2	When things are uncertain for me at work, I usually expect the best. .		**.50**	
H6	At this time, I am meeting the work goals that I have set for myself.		**.50**	
R5	I can get through difficult times at work because I've experienced difficulty before.			**.70**
R4	I usually take stressful things at work in stride.			**.45**
R6	I feel I can handle many tasks at a time at this job.			**.39**
Eigenvalues		5.57	2.07	1.31
Individual total variance (percent)		34.79%	12.94%	8.20%%
Cumulative total variance (percent)		34.79%	47.23%	55,93%

Note. Principal axis factoring. Item-to-factor loadings below .3 were suppressed. Each item's significant loadings are presented in boldface. SE = self-efficacy, N = 6; H-O = hopeful-optimism, N = 7; RE = resilience, N = 3.

The three subscales of the PCQ measure were averaged to create a total score for PsyCap and the appropriateness of collapsing the three subscales into a composite score was supported by Luthans et al. (2007). The internal consistency as measured by Cronbach's Alpha was assessed for the total PsyCap scale and not its components because only the total PsyCap scale was used in further analyses. The reliability of the total PsyCap scale was high (α = .87) but the corrected item-total correlations for resilience item four and optimism item two were .29, below the significance level of .3. The removal of these items did not significantly change the reliability of the scale and therefore these items were retained for further analysis. The remaining corrected item total correlations ranged from r = .31 to r = .69 (See Appendix D, Table D3). Thus the total PsyCap scale was deemed reliable.

Work engagement. A PCA was conducted on the UWES-SF in order to assess its construct validity in the current context. A PCA was deemed appropriate as the KMO was .84

above the recommended value of .6 and the BTS was significant ($\chi^2_{15} = 474.68$, $p < .001$). Results revealed that all six work engagement items loaded significantly on one factor where factor loadings were significant at .4 (eigenvalue: 3.86; explained variance: 64.34%; factor loadings: .63 < r < .84). The unidimensional UWES-SF differs from the original two-dimensional UWES-SF in Schaufeli et al.'s (2006) study. This scale is thus unidimensional and the factor is assumed to indicate overall work engagement.

The internal consistency as measured by Cronbach's Alpha was assessed for the total work engagement scale and was found to be high (α = .89). In addition, all corrected item-correlations were at an acceptable level of .4 ranging from r = .59 to r = .79 (see Appendix E, Table E1). Thus the total WE scale was deemed reliable.

Burnout. Principal axis factoring (PAF) with direct oblimin rotation (DOR) was used to measure the construct validity of the burnout scale. PAF was deemed appropriate as the KMO was above the recommended value of .6 (KMO = .83) and the BTS was significant ($\chi^2_{45} = 775.90$, $p < .001$). As shown in Table 6, results revealed two factors with eigenvalues above 1 (eigenvalues of 4.90 and 1.31 respectively), explaining 62.13% of the total variance.

Table 6
EFA for the Burnout Scale

Item No.	Statement	E	C
E2	I feel used up at the end of the workday	**.89**	
E5	I feel burnt out from my work.	**.86**	
E1	I feel emotionally drained from my work.	**.80**	
E3	I feel fatigued when I get up in the morning and have to face another day on the job.	**.67**	
E4	Working all day is really a strain for me.	**.63**	
C3	I just want to do my work and not to be bothered.	**.39**	
C2	I have become less enthusiastic about my work.		**.91**
C1	I have become less interested in my work since I started this job.		**.72**
C4	I doubt the significance of my work.		**.49**
C5	I have become more cynical about whether my work contributes anything.		**.38**
Eigenvalues		4.90	1.31
Individual total variance (percent)		49.05%	13.09%
Cumulative total variance (percent)		49.05%	62.13%

Note. Principal axis factoring. Item-to-factor loadings below .3 were suppressed. Each item's significant loadings are presented in boldface. E = exhaustion, N = 5; C = cynicism, N = 3.

Table 6 represents the factor loadings for the two factors where loadings were accepted as significant above a value of .3. Item three on the cynicism scale loaded significantly on the same factor as all the original exhaustion items. Cynicism item three

stated, “I just want to do my work and not to be bothered”. At face validity, it was deemed suitable to add this item to the exhaustion scale. These findings support the construct validity of the burnout scale, where exhaustion loaded on factor one and cynicism on factor 2.

The two subscales of burnout, exhaustion and cynicism, were used in further analyses in order to test Cheung et al.'s (2011) suggestion of matching the nature of the moderator with the nature of the strain. The reliabilities of the exhaustion and cynicism scales were high at α = .86 and α = .76 respectively and all corrected item total correlations were above .3 (see Appendix E, Tables E2 and E3). Therefore, these scales were deemed reliable.

Descriptive Data

Table 7 reports the descriptive statistics for all measures used in the study. According to Tabachnick and Fidell (2001), skewness and kurtosis values below one can be assumed to have a reasonably normal distribution. As evident in Table 4, the skewness and kurtosis ratios for all scales (except for the PsyCap scale) were lower than one and hence it can be inferred that these scales have a normal distribution. The PsyCap scale however had a kurtosis ratio greater than one and hence a Kolmogorov-Smirnov (K-S) test of normality was conducted to verify this result. PsyCap displayed a significant KS tests for normality (D_{143} = .11, p < .001) indicating that the PsyCap scale was non-normally distributed (Burns & Burns, 2008).

In Table 7 the mean score for all scales are reported as a measure of central tendency however the median score was reported for the PsyCap scale due to its non-normal distribution (Burns & Burns, 2008). Mean and median scores indicate that reported levels of workload, autonomy, supervisory support, work engagement and PsyCap lie above the scales midpoint of 3, suggesting that participants are experiencing above average levels of the aforementioned variables. In addition, mean scores indicate that reported levels of role ambiguity, role conflict, advancement opportunities, exhaustion and cynicism are below the scales’ midpoints of 3, suggesting that participants are experiencing below average levels of the aforementioned variables.

Table 7
Summary of Descriptive Data

Scale	Mean	Median	SD	Min	Max	Skewness	Kurtosis
Workload	3.92	-	.69	2.00	5.00	-.74	.24
Role ambiguity	2.31	-	.68	1.00	4.80	.65	.79
Role Conflict	2.98	-	.74	1.00	5.00	.11	-.12
Autonomy	3.67	-	.65	2.00	5.00	-.58	.20
Advancement opportunities	2.68	-	.90	1.00	5.00	-.07	-.68
Supervisory support	3.62	-	.83	1.00	5.00	-.61	.17
Exhaustion	2.63	-	.75	1.00	4.83	.39	.22
Cynicism	2.47	-	.78	1.00	4.50	.20	-.23
Work engagement	3.50	-	.73	1.00	5.00	-.74	.87
Psychological capital	-	3.81	.50	2.00	4.88	-.92	1.73

Note. n = 143

An Expansion of the Health Impairment Process: Model 1

Correlation analyses. The Pearson product moment correlations for workload, role ambiguity, role conflict, exhaustion, cynicism and burnout scales are presented in Table 8. This table illustrates that as hypothesised workload was positively related to exhaustion (hypothesis 1a), role ambiguity was positively related to exhaustion and cynicism (Hypotheses 2a and 2b) and role conflict was positively related to exhaustion and cynicism (hypotheses 3a and 3b). In contrast, hypotheses 1b was not supported, as workload was not significantly related to cynicism.

Table 8
Pearson Correlation Matrix for Model 1 Scale Scores

Measure	1	2	3	4	5	6
1.Workload	(.62)					
2.Role ambiguity	-.01	(.79)				
3.Role Conflict	.41**	.22**	(.74)			
4.Exhaustion	.17**	.28**	.37**	(.86)		
5.Cynisim	-.09	.44**	.31**	.56**	(.76)	

Note. n = 143. Cronbach alpha for each scale is shown in parenthesis.
**p < .01. *p < .05

Moderation analyses. According to Howell (2005), a hierarchical regression analysis should be conducted in order to test whether PsyCap moderates the relationship between job demands and burnout. The first step in this analysis was to centre (variable score – variable mean) the independent (IV) and the moderator variables in order to avoid problems such as multicollinearity and evaluating one main effect at the extreme value of the other main effect (Howell, 2012). The second step involves creating an interaction term between the IV and the moderator (IV x moderator). The third step includes a hierarchical regression analysis, whereby the predictor variables (IV and moderator) are regressed on the dependant variable

(DV) in model one and the interaction term is added to the regression equation in model 2. When analysing model two, one would conclude that a moderation effect has occurred when the interaction term makes a unique contribution to the variance in the DV over and above the individual predictor variables. The moderation hypotheses in the current study were assessed using the aforementioned procedure. The current study's moderation findings are presented in Table 9 and Table 10. Results revealed that the interaction between workload and PsyCap made a unique contribution to the variance in cynicism, providing support for hypothesis 5a (see Table 10). In contrast, the interactions between all job demands and PsyCap did not make unique contribution to the variance in exhaustion (see Table 9) and hence hypotheses 4a, 4b, 4c were not supported. Similarly, the interactions between PsyCap on the one hand and role ambiguity and role conflict on the other did not make a unique contribution to the variance in cynicism and hence hypotheses 5b and 5c were not supported (see Table 10).

Table 9

Testing Moderator Effects Using Hierarchical Regression on Exhaustion

	Variable[a]	ΔR^2	B	Std Error	β
Model 1		.30***			
	Workload		.42***	.08***	.39***
	PsyCap		-.85***	.11***	-.57***
Model 2		.00			
	Workload x PsyCap		-.06	.13	-.04
Model 1		.19***			
	Role ambiguity		.16	.09	.14
	PsyCap		-.55***	.12***	-.37***
Model 2		.00			
	Role ambiguity x PsyCap		.13	.16	.06
Model 1		.34***			
	Role conflict		.41***	.07***	.40***
	PsyCap		-.67***	.10***	-.45***
Model 2		.01			
	Role conflict x PsyCap		.17	.12	.10

[a] All variables in the regression analysis are centred.

***p < .001. **p < .01. *p < .05.

Table 10
Testing Moderator Effects Using Hierarchical Regression on Cynicism

	Variable[a]	Δa^2	B	Std Error	β
Model 1		.37***			
	Workload		.18***	.08***	.16***
	PsyCap		-.99***	.11***	-.65***
Model 2		.02*			
	Workload x PsyCap		-.28*	.12*	-.17*
Model 1		.40***			
	Role ambiguity		.29**	.08**	.25**
	PsyCap		-.76***	.11***	-.49***
Model 2		.01			
	Role ambiguity x PsyCap overload		.17	.14	.08
Model 1		.47***			
	Role conflict		.37***	.07***	.35***
	PsyCap		-.94***	.10***	-.61***
Model 2		.00			
	Role conflict x PsyCap		.08	.11	.04

[a] All variables in the regression analysis are centred.
***p < .001. **p < .01. *p < .05.

An Expansion of the Motivation Process: Model 2

The Pearson product moment correlations for scores on the autonomy, advancement opportunities, supervisory support, PsyCap and work engagement scales are presented in Table 11. This table shows that autonomy had a strong and moderate positive correlation with PsyCap and work engagement respectively, supporting hypotheses 6a and 6b. Similarly advancement opportunities had a moderate positive relationship with PsyCap and work engagement, supporting hypotheses 7a and 7b. Results also revealed that supervisory support had a moderate and strong positive relationship with PsyCap and work engagement respectively, providing support for hypotheses 8a and 8b. In addition, PsyCap had a strong positive correlation with work engagement (Hypothesis 9).

Table 11
Pearson Correlation Matrix for Model 2 Scale Scores

Measure	1	2	3	4	5
1.Autonomy	(.72)				
2.Advancement Opportunities	.28**	(.71)			
3.Supervisory support	.50***	.50***	(.84)		
4.Psychological Capital	.54***	.37***	.48***	(.87)	
5.Work Engagement	.44***	.38***	.51***	.72***	(.89)

Note. n = 143. Cronbach alpha for each scale is shown in parenthesis.
**p < .01. *p < .05

Mediation Analyses. In order to test the mediation hypotheses in the current study, a four-step series of regression analyses were performed (Baron & Kenny, 1986). In order for

mediation to be established, a number of criteria must hold. In the first regression analysis, the IV must be significantly associated with the DV. In the second regression, the IV must be significantly associated with the mediator. In the third regression, the mediator must be significantly associated with the DV. In the fourth regression, both the IV and the mediator are regressed on the DV and a mediation effect is observed when a smaller or insignificant association is detected between the IV and DV. In other words, the relationship between the IV and the DV must be less in the fourth regression than in the first regression (Baron & Kenny, 1986). In the current study, job resources served as the IV, work engagement represented the DV and PsyCap the mediator. Results are presented in Figure 3, which illustrates that as hypothesised PsyCap partially mediated the relationship between advancement opportunities and work engagement (supporting hypothesis 10b) and PsyCap partially mediated the relationship between supervisory support and work engagement (supporting hypothesis 10c). Results displayed only partial support for hypothesis 10a revealing that PsyCap fully mediated the relationship between autonomy and work engagement as opposed to the hypothesis that proposes PsyCap as a partial mediator.

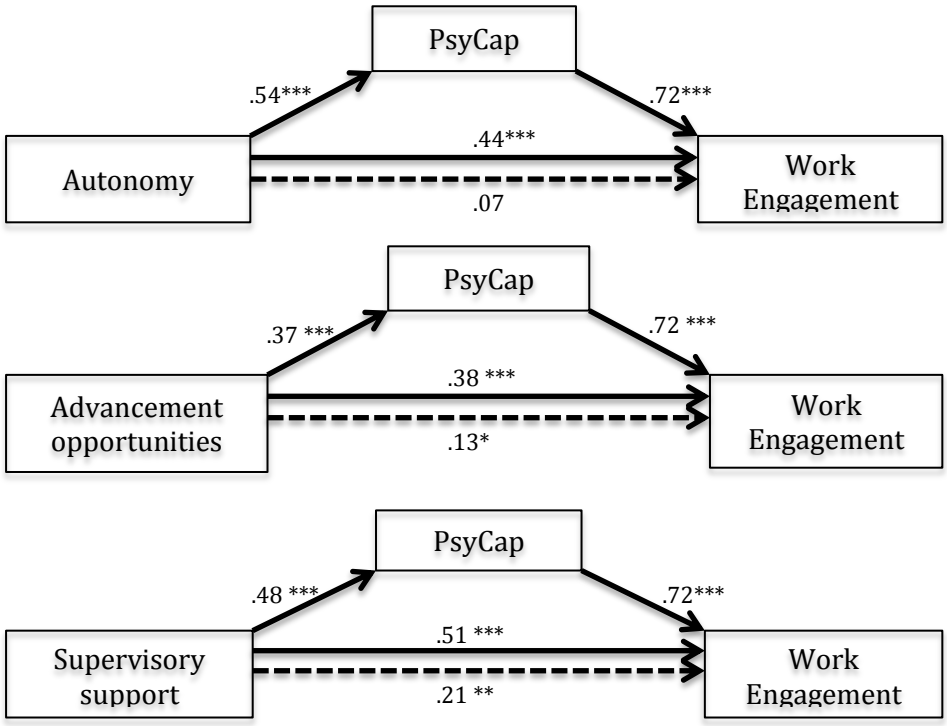

Figure 3. Mediation regression analyses of PsyCap and job resources on work engagement. Solid lines between variables denote direct paths. The dotted lines denote the correlation between job resources and work engagement when PsyCap is included as a mediator. Values denote the standardised beta weights (β). ***< .001. **p < .01. *p < .05.

The results chapter presented findings for the current study's hypotheses through statistical analysis of the data. These findings lent support for correlation hypotheses and partial support for meditation and moderation hypotheses. In the proceeding discussion section, these findings and their significance will be discussed in greater detail.

Chapter 4- Discussion

The objective of the current study was to gain a greater understanding of the role that personal resources play in the JD-R model's motivation and health impairment processes. More specifically, using the COR theory, the current study examined whether PsyCap mediated the relationship between job resources and work engagement and moderated the relationship between job demands and burnout. The following chapter discusses findings from the PsyCap CFA and EFA as well as results from Model 1 and Model 2 analyses. Thereafter, the current study's theoretical and practical contributions as well as its limitations and recommendations for future research are considered. Key findings from the current study revealed that,

- PsyCap consisted of a three dimensions opposing its four dimensionality originally hypothesised by Luthans et al. (2007).
- PsyCap fully mediated the relationship between autonomy and work engagement.
- PsyCap partially mediated the relationships between advancement opportunities and supervisory support on the one hand and work engagement on the other.
- PsyCap moderated the relationship between workload and cynicism.
- PsyCap did not moderate the relationship between role conflict and role ambiguity on the one hand and exhaustion and cynicism on the other.
- PsyCap did not moderate the relationship between workload on the one hand and exhaustion on the other.

These findings and their implications will be discussed in detail in the section to follow.

PsyCap in the South African Context

A CFA analysis was conducted in order to examine whether the factor structure of the PCQ, used to measure PsyCap, was consistent with its four dimensional structure represented in literature (Luthans et al., 2007). CFA fit indices indicated that the PsyCap measurement model (consisting of hope, resilience, self-efficacy and optimism as observed variables) did not adequately fit the data. This result suggests that the original structure of the PCQ is not valid in the local context due to the lack of theoretical support for the four dimensions of

PsyCap in South African literature. As a result, the researcher decided to use an EFA to further analyse the PCQ factor composition in the local context.

The current study's EFA findings did not replicate the original PCQ four-factor structure as presented in Luthans et al.'s (2007) study. Alternatively, a three-factor measurement model emerged from the data. Two factors consistent with Luthans et al. (2007) were referred to as self-efficacy and resilience and the third factor was referred to as hopeful-optimism, a combination of the constructs of hope and optimism. The third dimension was formed due to the failure of the current study's data to differentiate between hope and optimism. The current finding is consistent with two South African studies (du Plessis & Barkhuizen, 2012; Pillay, 2012), which were also unable to replicate Luthans et al.'s (2007) original findings. The three dimensional model of PsyCap is consistent with the results of du Plessis and Barkhuizen's (2011) study that found three factors among a sample of South African HR managers. Similarly, Pillay (2012) found a two-factor structure for South African managers and non-managers in a financial institution. In contrast, a study conducted by e rbert's (2011) claimed support for the four dimensions of PsyCap in the South African context. However, the emergence of the four dimensions of PsyCap in e rbert's (2011) study may be attributed to an item analysis that was conducted prior to the CFA. It can be inferred from these results that there is a difference between South African and American employees in their conceptualisation of the PCQ items. As there is no known study that solely focuses on validating the PCQ in SA, the factor structure of this construct remains uncertain in the local context. This result warrants further research on the measurement model of the South African PCQ.

PsyCap as a Moderator within the Health Impairment Process

The current study's results found support for the notion that those who possess PsyCap, will be less likely to experience cynicism, in times of high workload (Hobfoll, 1989, 2002). In other words, it was found that PsyCap moderated the relationship between workload and cynicism. This result is consistent with Herbert (2011) who found that those high in PsyCap experience a lower level of work-related burnout from occupational stress than those low in PsyCap. In addition, this result lent support for Cheung et al.'s (2011) research which found that PsyCap moderated the emotional labour-cynicism relationship. Cheung et al. (2011) attributes this significant result to the congruence between the nature of

PsyCap (a cognitive resource) and the nature of cynicism (a cognitive strain). The supported moderation finding (hypothesis 5a) suggests that those employees who are high in PsyCap are less likely to experience a detachment from their work under immense workload. This finding indicates that developing PsyCap is an effective strategy for helping employees to cope with workload and preventing its resulting cynicism.

In contrast, the current study found that PsyCap did not moderate any job demands-exhaustion relationships or the relationships between role ambiguity and role conflict on the one hand, and cynicism on the other. These results are inconsistent with Herbert's (2011) findings but are consistent with a study conducted among a sample of Dutch electrical engineers (Xanthopoulou et al., 2007). This result is also consistent with Cheung et al. (2011) study, which found that PsyCap did not moderate the relationship between emotional labour and exhaustion. Cheung et al.'s (2011) suggests that the rejection of PsyCap as a moderator in job demands-exhaustion relationships (hypotheses 4a, 4ab and 4c) can be partly attributed to the mismatch between the nature of PsyCap (a cognitive resource) and exhaustion (an emotional strain). Moderation results propose that when the nature of the moderator is matched with the nature of the strain, it is more likely that a moderation effect will be observed (Cheung et al., 2011). Consequently, when choosing moderators for future studies, researchers should consider matching the nature of the moderator to its respective outcome.

The aforementioned attribution did not accounted for the lack of support for PsyCap as a moderator in other job demands-cynicism relationships (hypotheses 5b and 5c). Therefore, the rejection of current moderation hypotheses can be attributed to the use of the MBI-GS as a measurement of burnout. Although the MBI-GS is one of the most widely used measures of burnout, Kristensen, Borritz, Villadsen, and Christensen (2005) outline a number of issues with this scale. A key concern argues that since the establishment of the original Maslach Burnout Inventory (MBI), an updated definition of burnout has not been reformulated for the new MBI-GS. The original MBI solely focused on the human service sector while the MBI-GS is aimed at variety of occupations. Consequently, there may be an issue with the MBI-G 's theoretical backing and as a consequence an inconsistency between its intended purpose (measuring general occupations) and eventual outcome (measuring human service occupations) (Kristensen et al., 2005). This incongruence may compromise the dependability of the MBI-GS and may have distorted the current study's results. Kristensen et al. (2005) suggests using the Copanhagen burnout inventory (CBI) as an

alternative burnout measure due its solid theoretical foundation. A final reason for unsupported moderation findings lies in the uncertainty surrounding the PsyCap meaurement model in the South African context. Further research on the validation of the PCQ in SA is warranted due to the important role personal resources play in reducing job stress.

Other Model 1 correlation findings revealed a positive association between job demands and the burnout dimensions of exhaustion and cynicism. This result is consistent with previous studies that test the validity of the JD-R model (Bakker, Demerouti, & Verbeke, 2004; Crawford et al., 2010; Xanthopoulou et al., 2007, 2009). This finding indicates that when job demands are high (more specifically when workload, role conflict and role ambiguity are elevated) employees will feel emotionally depleted, lack the ability to work and in order to cope with such strain, will feel the need to emotionally withdraw or detach from specific aspects of their job. Previous studies of stress research reported the consequences of exhausted and detached employees; these include high levels of turnover intentions, absenteeism and psychological and physical ill health (Hakanen et al., 2006; Hakanen & Schaufeli, 2012; Rothmann & Essenko, 2007; Schaufeli & Bakker, 2004). In addition, burnout is linked to low levels of commitment, job and life satisfaction and in-role and extra-role performance (Bakker et al., 2004; Hakanen et al., 2006; Maslach & Leiter, 2004; Maslach et al., 2001). These results emphasise the need for organisations to minimise excessive workload and the conflict and ambiguities present in employee roles in order to prevent employee burnout and ultimately its high associated costs (Casserly & Megginson, 2009). It is essential for organisations to discover and implement training programmes that are aimed at this objective. An intervention such as that presented in this study's moderation findings shows that the development of employee PsyCap could aid employees in coping with workload and ultimately cynicism.

PsyCap as a Mediator within the Motivation Process

Initial mediation analyses showed that PsyCap was positively related to work engagement which is consistent with Sweetman and Luthans' (2010) study that explained how each PsyCap dimension leads to more energetic and dedicated employees. In addition, correlation findings revealed that PsyCap was positively related to job resources. This result is in line with Luthans et al. (2008) study which explained that a supportive organisational climate may aid in building employee PsyCap. Lastly, it was found that autonomy,

advancement opportunities and supervisory support were positively related to work engagement. This result is consistent with similar American-based studies (Avey et al., 2008; Hakanen et al., 2006; Schaufeli & Bakker, 2004) and South African-based studies (Rothmann & Joubert, 2007).

Beyond providing evidence for correlation results, core meditation hypotheses were partially supported by current findings. Results revealed that autonomy and work engagement were fully mediated and not partially mediated by PsyCap, which presents partial support for this hypothesis (hypothesis 10a). This result is in line with a study conducted by Luthans et al.'s (2008) study, which found that PsyCap fully mediated the relationship between a job resource (supportive organisational climate) and a positive outcome (employee performance). These mediation findings suggest that employee autonomy is only linked to work engagement through its relationship with PsyCap. In other words, employees who are given the freedom to determine how to go about doing their work are likely to be high in PsyCap, which in turn results in more energetic and dedicated employees.

In contrast, other core meditation findings gained full support in the current study. PsyCap was found to partially mediate the relationships between supervisory support and advancement opportunities on the one hand and work engagement on the other (hypotheses 10b and 10c). This mediation result is consistent with Xanthopoulou et al.'s (2007) study, which discovered that the personal resources of OBSE, self-efficacy and optimism acted as a partial mediating link between job resources and work engagement. The current study replicates findings from Slöetjes' (2012) research, which discovered the personal resources of proactive behaviour, assertiveness and worker flexibility to be partial mediating links between job resources and work engagement. These mediation results indicate that employees who have high supervisory support and receive the opportunity to learn and grow in their job, will not only experience a higher level of work engagement, but will also possess a greater level of PsyCap and the development of PsyCap will in turn lead to an even greater level of employee work engagement. For example, an employee who seeks guidance and receives assistance from his or her manager when completing a task, will not only feel more engaged in their work but will also gain assurance in his or her ability to fulfil such tasks and hence will be even more engaged.

As highly engaged employees accrue numerous benefits to the organisation such as higher commitment (Hallberg & Schaufeli, 2006), employee performance, service climate,

customer loyalty (Salanova, Agut, & Peiró, 2005), life satisfaction (Hakanen & Schaufeli, 2012) and lower employee turnover intentions (Schaufeli & Bakker, 2004), organisations should attempt to maximise this outcome. The current study's mediation findings suggest that the provision of job resources and the development of PsyCap are potential strategies, which aim at such maximisation. Additionally, results indicate that employee PsyCap can be developed through the provision of job resources. In other words, organisations can build self-efficacy, resilience, hope and optimism in their employees by providing them with freedom in their work, managerial support and opportunities to grow their skills and advance both financially and hierarchically in the organisation. It can be inferred from the current study's mediation and moderation findings that both job resources and PsyCap perform a dual role for enhancing employee wellbeing. While the provision of job resources increases both work engagement and PsyCap, PsyCap further enhances work engagement in addition to buffering the manifestation of cynicism in times of high workload. The following section presents the contribution of the current study to theory and discourse on PsyCap and employee wellbeing.

Theoretical Contributions

The present study makes a unique contribution to JD-R literature by affirming the significance of a major drawback of this model; its lack of consideration for those personal characteristics that impact employee wellbeing (Deese, 2009 l etjes, 2012 a nthopoulou et al., 2007, 2009a). The current study confirmed the necessity of including personal resources in the JD-R model by partially supporting the moderating role of PsyCap in the health impairment process and its mediating role in the motivation process. The recent inclusion of personal resources in the JD-R processes emphasises the significant implication of the individual within the work environment and proposes a more comprehensive model for predicting burnout and work engagement. In addition, the current study provides further knowledge to JD-R literature as the only known research to investigate and provide support for the role of PsyCap in the JD-R processes.

The current study's results showed that job demands were strongly associated with burnout and job resources with work engagement. These findings provide further support for the validity of the JD-R model's health impairment and motivation processes at large but more specifically in the South African context.

The current study also provides empirical support for the COR theory. Meditation results suggest that the provision of job resources leads to increased employee personal resources (PsyCap), which in turn leads to higher work engagement. This result supports the COR theory on resource caravans. Furthermore, it was found that PsyCap aids employees in coping with workload and its resulting cynicism. This finding provides evidence for a second COR assumption, which states that the investment of resources buffers the negative effects of stressful situations.

It is also significant to note that in the current study, PsyCap (a cognitive resource) only moderated the outcome of cynicism (a cognitive outcome) and not exhaustion (an emotional outcome). This result affirms Cheung et al.'s (2011) suggestion that moderation is more likely observed when the nature of moderators are matched to the nature of strains.

The current study is one of four known studies to investigate the construct of PsyCap as measured by the PCQ in the South African context. Current findings contribute to limited knowledge on the structure of the PCQ in the local context by finding a similar result to two South African studies (du Plessis & Barkhuizen, 2012; Pillay, 2012). These results indicate that PsyCap elicits a different interpretation by South African employees in comparison to the cited American studies. Although the current study does not support the four dimensionality of PsyCap, it further validates Luthans et al.'s (2007) two dimensions of self-efficacy and resilience in the South African context. It is recommended that future studies should focus on a thorough analysis of the psychometric properties of the PCQ using South African samples to determine the validity of the construct in the local context. The following section will discuss the further practical implications of the current findings.

Practical Implications

Findings from the current study provide an empirical framework for understanding the factors that influence employee work engagement and cynicism, ranging from the work environment to the newly established determinant of personal resources. The knowledge generated is based on a South African sample and therefore provides a relevant basis for developing work engagement and preventing cynicism in South African employees. Mediation and moderation findings suggest that the provision of job resources enhance work

engagement and PsyCap and PsyCap further increases work engagement and inhibits the association between workload and cynicism. As both job resources and PsyCap serve a dual purpose for employee wellbeing, results emphasise the importance for organisations to provide employees with resourceful work environments and to consider developing PsyCap as a psychological resource. Furthermore, the provision of job resources presents an alternate intervention for developing PsyCap. While more common PsyCap interventions occur outside of the workplace and require employees to take time off work (Luthans et al., 2006), the job resources intervention is an environmental-level programme that can be implemented during working hours, involving an alteration in the work environment. As a result, the current study's findings can be used to develop and test interventions aimed at enhancing employee wellbeing and PsyCap. It is recommended that future studies adopt an experimental design to test whether the provision of resources is a suitable PsyCap and employee wellbeing intervention in the local context.

Current meditation findings illustrate that the work environment has a significant influence on employee personal characteristics (Deese, 2009). Personal characteristics such as PsyCap are not only linked to employee outcomes such as job satisfaction but are also linked to organisational outcomes such as high employee performance (Larson & Luthans, 2006). This indicates that organisations should recognise the importance of considering employees in the decision making, not only to the benefit of employees but also to the benefit of the organisation. In order to ensure that employees are considered in decisions, it is recommended that organisations practice strategic human resource management (SHRM). SHRM involves aligning HR strategies with business strategies in order to ensure that the organisation has skilled, motivated and committed employees (Regis, 2008).

Limitations and Recommendations for Future Research

The following section will discuss the limitations pertaining to the current study. First, the design of the study lends itself to a number of limitations. The descriptive cross-sectional research design used in the current study limits its ability to provide causal inferences (Burns & Burns, 2008). For example, it cannot be inferred with complete surety that job resources caused PsyCap, perhaps those who believe in their ability to do job tasks, are more likely to positively perceive job resources. In addition, the current study used self-report questionnaires, which may have resulted in common method bias. Future studies

should aim to test the reciprocal relationship between job resources and PsyCap as well as combat common method bias by adopting a longitudinal study design (Buchanan & Bryman, 2009; Xanthopoulou et al., 2009a).

Second, the current study did not find support for the hypothesised moderating role of PsyCap in the job demands-exhaustion relationships and some job demands-cynicism relationships. This insignificant result was attributed to flaws present in MBI-GS used to measure burnout in the current study. MBI-GS weaknesses were found in its definition and theoretical backing. Future research on occupations outside of the human service sector should consider using the CBI due to its solid theoretical foundation (Kristensen et al., 2005).

Third, the current study's sample limits the generalizability of its results to a single organisation in the retail industry. Future studies should consider a random sampling method and draw their sample from a number of organisations from various industries. This method should allow for meaningful findings, which can be generalised to a larger group of employees (Burns & Burns, 2008).

Fourth, an EFA strategy was used to analyse the validity of most constructs in the current study. In hindsight however, validity could have been more appropriately measured by applying a CFA across all constructs. A CFA may have been more suited due to the fact that all scales used in the study were derived from existing scales with structures supported by theoretical and empirical grounds.

Fifth, the current study is limited in the sense that it analyses the two processes of the JD-R model independently from one another and in doing so it fails to consider empirical literature that illustrates the interaction between them. For example, previous studies show that job resources interact within the health impairment process by not only inhibiting the relationship between job demands and burnout but also enhancing burnout (Rothmann & Joubert, 2007; Rothmann & Essenko, 2007; Mostert, 2011). Future research should include the interaction between the health impairment and motivation processes.

Sixth, the current study used the causal steps approach by Baron and Kenny's (1986) to analyse mediational effects. Although this method is an accepted practice, it has been critisised by a number of methodological experts who suggest more modern analytical

techniques for measuring indirect effects. For example, Hayes (2009) explains that Baron and Kenny's (1986) method is lower in power compared to other statistical methods and hence will be less likely to detect mediational effects. As a result, Hayes (2009) suggests a bootstrapping approach which is high in power and can sufficiently control for error. Future research should use bootstrapping as opposed to the causal steps approach when measuring mediation.

Lastly, South African studies, which include the PCQ as a measurement tool, have found inconsistent results with regard to the structure of PsyCap. Hence future research should focus on conducting thorough psychometric analysis on the PCQ measurement model in the South African context.

Conclusion

A number of studies have attempted to expand the JD-R model to include personal resources, however this study is unique in that it is the only known research that uses the personal resource of PsyCap. The main contribution of the current study adds to JD-R literature by finding support for the mediating role of PsyCap in the motivation process and its moderating role in the workload-cynicism relationship. This result provides a more comprehensive understanding of the determinants of employee engagement and cynicism, which include not only job but also personal resources. This contribution further suggests that the provision of job resources is a possible environmental-level intervention for enhancing PsyCap and employee wellbeing. Moreover, the current study established other contributions to theory where results lent support to the original motivation and health impairment processes of the JD-R model as well as the COR assumptions. A final contribution of the current study proposes an alternative structure for the PCQ in the South African context from that originally hypothesised by Luthans et al. (2007). Unique results evident in the current study provide support for the necessity of future research on this topic. Future studies should consider the current study’s limitations and use it as a foundation for prospective research.

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Appendices

Appendix A

Below are statements that describe how you may think about yourself right now. Use the following scale to indicate your level of agreement or disagreement with each statement. (1 = strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = somewhat agree, 5 = agree, 6 = strongly agree).

Table A1

Item No.	Statement	Strongly disagree	disagree	neutral	agree	Strongly agree
Workload (Rothaman & Joubert, 2007)						
1	I have to give my attention to a number of tasks at the same time.	1	2	3	4	5
2	My work is pressurized in terms of time.	1	2	3	4	5
3	I have too many tasks to complete.	1	2	3	4	5
4	There are many complexities in my work.	1	2	3	4	5
Role ambiguity (Rizzo et al., 1970)						
5	I feel certain about my level of authority.	1	2	3	4	5
6	In my job, I have clear and planned goals and objectives.	1	2	3	4	5
7	I know exactly what is expected of me.	1	2	3	4	5
8	Explanation is clear of what tasks I need to complete.	1	2	3	4	5
9	I know what my responsibilities are.	1	2	3	4	5
Role Conflict (Rizzo et al., 1970)						
10	I work in collaboration with or within two or more groups who operate differently.	1	2	3	4	5
11	I have to do tasks that I feel should be done differently.	1	2	3	4	5
12	I receive incompatible requests from two or more people.	1	2	3	4	5
13	I do things that are apt to be accepted by one person and not accepted by others.	1	2	3	4	5
14	I receive an assignment without the manpower to complete it.	1	2	3	4	5
Supervisory support (Rothaman & Joubert, 2007)						
15	I feel that my manager appreciates my work.	1	2	3	4	5
16	I can discuss work problems with my manager.	1	2	3	4	5
17	My manager informs me about how well I am doing my work.	1	2	3	4	5
18	I get on well with my manager.	1	2	3	4	5

Table A1 cont.

Item No.	Statement	Strongly disagree	disagree	neutral	agree	Strongly agree
Autonomy (Karesek, 1985)						
19	I have significant autonomy in determining how I do my job.	1	2	3	4	5
20	I can decide on my own how to go about doing my work.	1	2	3	4	5
21	I have considerable opportunity for independence and freedom in how I do my job.	1	2	3	4	5
Advancement opportunities (Rothaman & Joubert, 2007)						
22	My job offers me the possibility to progress financially.	1	2	3	4	5
23	I have opportunities to be promoted.	1	2	3	4	5
24	My company gives me opportunities to attend training courses.	1	2	3	4	5
Psychological capital (Luthans et al, 2007)						
25	I feel confident analysing a long-term problem to find a solution.	1	2	3	4	5
26	I feel confident representing my work area in meetings with management.	1	2	3	4	5
27	I feel confident contributing to discussions about the company's strategy.	1	2	3	4	5
28	I feel confident helping to set targets/goals in my work area.	1	2	3	4	5
30	I feel confident contacting people outside the company (e.g., suppliers, customers)	1	2	3	4	5
31	I feel confident presenting information to a group of colleagues.	1	2	3	4	5
32	If I should find myself in a jam at work, I could think of many ways to get out of it.	1	2	3	4	5
33	At the present time, I am energetically pursuing my work goals.	1	2	3	4	5
34	There are lots of ways around any problem.	1	2	3	4	5
35	Right now I see myself as being pretty successful at work.	1	2	3	4	5
36	I can think of many ways to reach my current work goals.	1	2	3	4	5
37	At this time, I am meeting the work goals that I have set for myself.	1	2	3	4	5
38	When I have a setback at work, I have trouble recovering from it, moving on. (R).	1	2	3	4	5
39	I usually manage difficulties one way or another at work.	1	2	3	4	5
40	I can be "on my own," so to speak, at work if I have to.	1	2	3	4	5

Table A1 cont.

Item No.	Statement	Strongly disagree	disagree	neutral	agree	Strongly agree
Psychological capital (Luthans et al, 2007)						
41	I usually take stressful things at work in stride.	1	2	3	4	5
42	I can get through difficult times at work because I've experienced difficulty before.	1	2	3	4	5
43	I feel I can handle many things at a time at this job.	1	2	3	4	5
44	When things are uncertain for me at work, I usually expect the best.	1	2	3	4	5
45	If something can go wrong for me work-wise, it will. (R)	1	2	3	4	5
46	I always look on the bright side of things regarding my job.	1	2	3	4	5
47	I'm optimistic about what will happen to me in the future as it pertains to work.	1	2	3	4	5
48	In this job, things never work out the way I want them to. (R)	1	2	3	4	5
Work engagement (Schaufeli & Bakker, 2003)						
49	At my work, I feel bursting with energy.	1	2	3	4	5
50	At my job, I feel strong and vigorous.	1	2	3	4	5
51	When I get up in the morning, I feel like going to work.	1	2	3	4	5
52	I am enthusiastic about my job.	1	2	3	4	5
53	My job inspires me.	1	2	3	4	5
54	I am proud of the work that I do.	1	2	3	4	5
Burnout (Schaufeli & Leiter, 1996).						
55	I feel emotionally drained from my work.	1	2	3	4	5
56	I feel used up at the end of the workday.	1	2	3	4	5
57	I feel fatigued when I get up in the morning and have to face another day on the job.	1	2	3	4	5
58	Working all day is really a strain for me.	1	2	3	4	5
59	I feel burned out from my work.	1	2	3	4	5
60	I have become less interested in my work since I started this job.	1	2	3	4	5
61	I have become less enthusiastic about my work.	1	2	3	4	5
62	I just want to do my job and not to be bothered.	1	2	3	4	5
63	I doubt the significance of my work.	1	2	3	4	5
64	I have become more cynical about whether my work contributes anything.	1	2	3	4	5

Appendix B

Dear Respondent

ORGANISATIONAL PSYCHOLOGY MASTERS PROGRAMME 2012 RESEARCH PROJECT .

We are inviting you to participate in the Organisational Psychology masters research project. The research topic focuses on factors that contribute to enhancing employee engagement and inhibiting employee burnout.

Along with this letter is a short questionnaire consisting of 64 questions that ask a variety of questions about the research questions. We are asking you to look over the questionnaire and, if you choose to do so, complete it and it and return it to us. It should take you about 8 minutes to complete.

Through your participation we hope to understand how the work environment as well as employee confidence, resilience, hope and optimism contribute to their wellbeing in the workplace.

We do not know of any risks to you if you decide to participate in this survey. We guarantee that your responses will be kept confidential. Your responses will also not be identified with you personally as you are not required to identify yourself on the questionnaire. None of the researchers are being financially rewarded for conducting this research. You are free to withdraw from the study at any time. Demographic details are requested at the end of the questionnaire; these will be kept confidential, but are important for the success of this research project. Previous research has demonstrated that demographic variables are essential to consider when analysing results.

Your participation is completely voluntary; there is no penalty if you do not participate. By completing and submitting this questionnaire, you are acknowledging that your participation in this study has been of your own free will.

If you have any questions or concerns about completing the questionnaire or about being in this study, you may contact Chao Mulenga at Chao.mulenga@uct.ac.za; telephone 021 650 4243 or 650 3940. The Commerce Ethics Committee at the University of Cape Town has approved this study and the questionnaire.

Appendix C

Table C1
Initial EFA for the Job Demands and Job resources Scale.

Item No.	Statement	RA	SS	RC	AO	A	JP
RA3	I know what my responsibilities are.	**.85**					
RA4	I know exactly what is expected of me.	**.83**					
RA2	In my job I have clear and planned goals and objectives.	**.63**					
RA5	Explanation is clear of what tasks I need to complete.	**.63**					
RA1	I feel certain about my level of authority.	**.45**					
SS3	I get on well with my manager.		**.81**				
SS2	My manager informs me about how well I am doing in my work.		**.78**				
SS1	I feel that my manager appreciated my work.		**.72**				
SS4	I can discuss work problems with my manager.		**.49**				
RC4	I receive incompatible requests from two or more people.			**.77**			
RC2	I receive an assignment without the manpower to complete it.			**.77**			
RC1	I have to do tasks that I feel should be done differently.			**.66**			
WL3	I have too many tasks to complete.			**.51**	**.48**		
RC5	I do tasks that are apt to be accepted by one person and not to be accepted by others.			**.55**			
WL4	There are many complexities in my work.				**.77**		
RC3	I work in collaboration with or within two or more groups that operate quite differently.				**.66**		
WL1	I need to give my attention to a number of tasks at the same time.				**.63**		
WL2	My workload is pressurised in terms of time.			**.47**	**.59**		
AO1	My job offers me the possibility to progress financially.					**.78**	
AO2	I have opportunities to be promoted.					**.73**	
AO3	My company gives me opportunities to attend training courses.					**.67**	
A1	I can decide on my own how to go about doing my work.						**.77**
A3	I have considerable opportunity for independence and freedom in how I do my job.						**.74**
A2	I have significant autonomy in determining how I do my job.						**.66**
Eigenvalues		5.73	3.65	1.85	1.48	1.26	1.05
Individual total variance (percent)		23.87%	15.22%	7.70%	6.18%	5.26%	4.38%
Cumulative total variance (percent)		23.87%	39.10%	46.79%	52.96%	58.22%	62.60%

Note. Principal axis factoring. Item-to-factor loadings below .4 were suppressed. Each item's significant loadings are presented in boldface. RA = role ambiguity, N = 5; WL= workload, N = 4; RC = role conflict, N=5; A= autonomy, N=3; AO= advancement opportunities, N = 3; SS = supervisory support, N = 4.

Table C2

Role Ambiguity Scale Item-Total Correlations

Item No.	Statement	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
RA3	I know what my responsibilities are.	**.70**	.71
RA4	I know exactly what is expected of me.	**.56**	.72
RA2	In my job I have clear and planned goals and objectives.	**.60**	.74
RA5	Explanation is clear of what tasks I need to complete.	**.50**	.77
RA1	I feel certain about my level of authority.	**.43**	.80

Note. All items above .3 are boldface. RA = role ambiguity, N = 5.

Table C3

Role Conflict Scale Item-Total Correlations

Item No.	Statement	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
RC4	I receive incompatible requests from two or more people.	**.62**	.63
RC2	I receive an assignment without the manpower to complete it.	**.53**	.68
RC1	I have to do tasks that I feel should be done differently.	**.49**	.70
RC5	I do tasks that are apt to be accepted by one person and not to be accepted by others.	**.49**	.70

Note. All items above .3 are boldface. RC = role conflict, N = 4.

Table C4

Supervisory Support Scale Item-Total Correlations

Item No.	Statement	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SS3	I get on well with my manager.	**.67**	.80
SS2	My manager informs me about how well I am doing in my work.	**.74**	.76
SS1	I feel that my manager appreciated my work.	**.74**	.76
SS4	I can discuss work problems with my manager.	**.55**	.84

Note. All items above .3 are boldface. SS = supervisory support, N = 4.

Table C5

Advancement Opportunities Scale Item-Total Correlations

Item No.	Statement	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AO1	My job offers me the possibility to progress financially.	**.55**	.59
AO2	I have opportunities to be promoted.	**.59**	.53
AO3	My company gives me opportunities to attend training courses.	**.44**	.72

Note. All items above .3 are boldface. AO = advancement opportunities, N = 3.

Table C6

Autonomy Scale Item-Total Correlations

Item No.	Statement	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
A1	I can decide on my own how to go about doing my work.	**.50**	.67
A3	I have considerable opportunity for independence and freedom in how I do my job.	**.56**	.60
A2	I have significant autonomy in determining how I do my job.	**.55**	.61

Note. All items above .3 are boldface. A = autonomy, N = 3.

Table C7

Workload Scale Item-Total Correlations

Item No.	Statement	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
WL4	There are many complexities in my work.	**.46**	.47
RC3	I work in collaboration with or within two or more groups that operate quite differently.	**.47**	.46
WL1	I need to give my attention to a number of tasks at the same	**.40**	.58

Note. All items above .3 are boldface. JP = workload, N = 1; RC = role conflict, N = 2.

Appendix D

Table D1

PCQ-24 CFA Fit Indices

Model	χ^2	DF	NFI	CFI	RMSEA
PCQ-24	12.41**	2	.94	.95	.19

Note. χ^2 = Chi-squared; DF = degrees of freedom; NFI = Normed fit index; CFI = Comparative fit index; RMSEA = root mean square of error approximation.
**p < .01. *p < .05.

Table D2

Four-Factor EFA for the PCQ Scale.

Item No.	Statement	Factor 1	Factor 2	Factor 3	Factor 4
SE2	I feel confident representing my work area in meetings with management.	**.79**			
SE4	I feel confident helping to set targets/goals in my work area.	**.78**			
SE1	I feel confident analysing a long-term problem to find a solution.	**.78**			
SE3	I feel confident contributing to discussions about the company's strategy.	**.76**			
SE5	I feel confident contacting people outside the company (e.g. suppliers, customers) to discuss problems.	**.66**			
SE6	I feel confident presenting information to a group of colleagues.	**.52**			
O5	I'm optimistic about what will happen to me in the future as it pertains to work.		**.92**		
O2	When things are uncertain for me at work, I usually expect the best.		**.45**		
O4	I always look on the bright side of things regarding my job.		**.43**		
R5	I can get through difficult times at work because I have experienced them before.			**.71**	
R4	I usually take stressful things at work in stride.			**.45**	
R2	I usually manage difficulties one way or another at work.			**.38**	
H5	I can think of many ways to reach my current work goals.				**-.81**
H4	Right now I see myself as being pretty successful at work.				**-.58**
H6	At this time, I am meeting the work goals I have set for myself.				**-.51**
H2	At the present time, I am energetically pursuing my work goals.				**-.42**
Eigenvalues		5.57	2.07	1.31	1.02
Individual total variance (percent)		34.79%	12.94%	8.20%	6.37%
Cumulative total variance (percent)		34.79%	47.73%	55.93%	62.30%

Note. Principal axis factoring. Item-to-factor loadings below .3 were suppressed. Each item's significant loadings are presented in boldface. SE = self-efficacy, N = 6; O = optimism, N = 3; R = resilience, N = 3; H = hope, N = 4.

Table D3

PCQ Item-Total Correlations

Item No.	Statement	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SE2	I feel confident representing my work area in meetings with management.	**.61**	.86
SE4	I feel confident helping to set targets/goals in my work area.	**.69**	.85
SE3	I feel confident contributing to discussions about the company's strategy.	**.59**	.86
SE1	I feel confident analysing a long-term problem to find a solution.	**.60**	.86
SE5	I feel confident contacting people outside the company (e.g. suppliers, customers) to discuss problems.	**.61**	.85
SE6	I feel confident presenting information to a group of colleagues.	**.57**	.86
H5	I can think of many ways to reach my current work goals.	**.47**	.86
H4	Right now I see myself as being pretty successful at work.	**.68**	.85
O5	I'm optimistic about what will happen to me in the future as it pertains to work.	**.48**	.86
H2	At the present time, I am energetically pursuing my work goals.	**.50**	.86
O4	I always look on the bright side of things regarding my job.	**.48**	.86
O2	When things are uncertain for me at work, I usually expect the best.	**.29**	.87
H6	At this time, I am meeting the work goals that I have set for myself.	**.43**	.86
R5	I can get through difficult times at work because I've experienced difficulty before.	**.39**	.87
R4	I usually take stressful things at work in stride.	**.29**	.87
R2	I usually can handle difficulties at work one way or another at work.	**.31**	.87

Note. All items above .3 are boldface. SE = self-efficacy, N = 6; O = optimism, N = 3; R = resilience, N = 3; H = hope, N = 4.

Appendix E

Table E1

Work Engagement Scale Item-Total Correlations

Item No.	Statement	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
V1	At my work, I feel bursting with energy.	**.59**	.87
V2	At my job, I feel strong and vigorous.	**.79**	.86
V3	When I get up in the morning, I feel like going to work.	**.75**	.86
D1	My job inspires me.	**.76**	.86
D3	Am enthusiastic about my job.	**.76**	.86
D2	I am proud of the work that I do.	**.59**	.89

Note. All items above .3 are boldface. V = vigour, N = 3; D = dedication, N = 3.

Table E2

Exhaustion Scale Item-Total Correlations

Item No.	Statement	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
E2	I feel used up at the end of the workday.	**.73**	.83
E5	I feel burnt out from my work.	**.81**	.82
E1	I feel emotionally drained from my work.	**.73**	.83
E3	I feel fatigued when I get up in the morning and have to face another day on the job.	**.73**	.83
E4	Working all day is really a strain for me.	**.60**	.85
C3	I just want to do my work and not to be bothered.	**.41**	.89

Note. All items above .3 are boldface. . E = exhaustion, N = 5; C = cynicism, N = 1.

Table E34

Cynicism Scale Item-Total Correlations

Item No.	Statement	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
C2	I have become less enthusiastic about my work.	**.72**	.61
C1	I have become less interested in my work since I started this job.	**.65**	.66
C4	I doubt the significance of my work.	**.58**	.70
C5	I have become more cynical about whether my work contributes anything.	**.33**	.82

Note. All items above .3 are boldface. . C = cynicism, N = 4.