# The Effect of Psychological Capital and Self-Leadership on Work Engagement among Agricultural Extension Advisors

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# Dissertation

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# DECLARATION

I, Kirsty-Leigh Green, hereby declare that the work contained in this dissertation is the true work of my own submitted in fulfilment of the requirements in respect of Master of Commerce, Department of Industrial Psychology in the Faculty of Economic Management Sciences at the University of the Free State. I have acknowledged all the sources consulted.

Signed:

Date: 24 November 2021

#### ABSTRACT

Work engagement is considered highly important to organisations and within the field of industrial psychology as organisations hope to improve and increase employee's engagement and in so doing, enhance employees' performances. Focus has shifted in organisations to proactively recognise how the concepts of positive psychology, psychological capital, and selfleadership, can promote the improvement of work engagement in employees. The present research studied the effect of psychological capital and self-leadership on the work engagement levels of agricultural extension advisors within South Africa. The main objective of the study was to explore whether psychological capital and self-leadership had a significant effect on the work engagement of agricultural extension advisors. The second objective of the study was to assess whether there was a distinction between male and female agricultural extension advisors concerning their levels of work engagement. A quantitative research method was used in which data was gathered using three scales (UWES, PCQ-24 and combination of the ASLQ and RSLQ). Cronbach's alphas were used to measure the reliability of the scales and based on this all constructs were determined to be valid and reliable measures. A list of respondents was provided by the South African Society for Agricultural Extension and emails were sent out to the respondents containing the questionnaires. A total of 103 viable questionnaires were attained.

A Pearson product-moment correlation analysis and stepwise multiple regression analysis was used to address the main objective. Both psychological capital (r = .721, p = .000) and self-leadership (r = .585, p = .000) had significant positive correlation with work engagement that were both interpreted as large, substantial relationships. The stepwise multiple regression analysis results indicated that three important predictors of work engagement were hope, optimism and behaviour-focused strategies which explained 62.8% of the variance in work engagement. Hope was shown to have the highest contribution ( $R^2 = 0.52$ ) as hopeful employees have shown to be goal directed and have positive outlooks that lead to positive behaviours that enable work engagement of employees. The secondary objective was addressed using an independent sample t-test; however, the levels of work engagement between male and female agricultural extension advisors were found to be insignificant indicating that there were no differences.

Conclusions from the study indicated that personal and work resources from psychological capital and self-leadership influence the work engagement levels of employees. Therefore, self-leadership strategies should be used to lay the foundation for organisations to create positive

change and expand the positive psychological resources of employees to increase the work engagement levels. It was further recommended that psychological capital be used to enhance employees' experiences of hope and optimism by including them in employees training and development initiatives. Future studies should focus on more advanced research of these concepts within the agricultural sector to help agricultural extension advisors to develop and increase their levels of work engagement.

**Keywords**: Work engagement, psychological capital, self-leadership, agricultural extension advisors.

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#### **CHAPTER 1: INTRODUCTION, BACKGROUND AND PROBLEM STATEMENT**

## 1. GENERAL INTRODUCTION

The research proposed will focus on the effect of psychological capital and self-leadership on the work engagement of agricultural extension advisors in South Africa. The below will cover the following: background to the study, problem statement, research questions, objectives, and study hypothesis.

# 1.1. INTRODUCTION AND RESEARCH PROBLEM STATEMENT

Work engagement has gained budding interest in the field of human resource development in the hopes of improving employee's engagement and enhancing the significant impact of work engagement on organisations employee performances and learning (Eldor, 2016). Work engagement is defined by Scahufeli, Salanova, Gonzalez-Roma and Bakker (2002) as a "positive, fulfilling work related state of mind that is characterised by vigor, dedication and absorption" (p. 74). Hayes, Chumney, Wright, and Buckingham (2019) conducted a global study to identify the levels of engagement, it was found that only 16% of employees are fully engaged in work. Within professional services only 18% globally are fully engaged. Previous research has estimated a 21% increase in organisational profitability which could result in the improvement of work engagement levels within organisations (Zondo, 2020). The Gallup 2016 survey indicated that only 9% of employees within South African are actively engaged at work.

A large-scale study within 30 European countries that was conducted by Hakanen, Ropponen, Schaufeli and De Witte (2019), found that those within the human service industry including agriculture experienced higher work engagement than employees within other sectors. Work engagement can be positively impacted amongst this group as working with people and assisting them can be experienced as meaningful (Hakanen *et al.*, 2019). Extension is defined as the informational and educational process that is directed towards rural populations. Extension aims at providing advice and information to farmers and rural areas to help solve problems, increase efficiency and production and the standard of living of a farming family (Khalid & Sherzad, 2019). Agricultural extension is considered an important factor in the farming process as it provides the latest information about technology and farming methods to the farmers (Suksod, Dangsuwan, & Jermsittiparsert, 2019). People management and empowerment is important as people working within this field need to be able to manage and encourage a diverse amount of people and effectively provide leadership to them (Department

of Agriculture, 2005). Therefore, indicating the importance of leadership and more specifically, self-leadership. According to Kotze (2018), self-leadership and psychological capital both have an influence on the work engagement of employees. The study further suggested relevant personal resources within the workplace are self-leadership strategies, especially in the relationship with work engagement (Kotze, 2018). An essential competency for effective job performance is self-leadership (Mahembe, Engelbrecht & Wakelin, 2017). Furtner and Rauthmann (2010) state that self-leadership is how leaders lead and manage themselves. A variety of benefits have been documented on the benefits of self-leadership, these include improved performance, enhanced confidence, and goal achievement. Within a social context, team dynamics such as satisfaction, performance and effectiveness have been positively influenced by self-leadership (Gil, Rico, Alcover, & Barrasa, 2005).

It was proposed by Kotze (2018) that psychological capital positively influences work engagement levels, specifically vigor and dedication. Psychological capital (PsyCap) has been shown to have advantages on all levels, including employees, leaders, and the organisation. A fundamental aspect in the development of leadership is being able to explore the question of "who you are" which can result in increased self-awareness (George, Sims, McLean & Mayer, 2007). PsyCap can be defined by Luthans, Avolio, Avey and Norman (2007) as the individual's positive psychological state of development and is characterised by having self-efficacy, optimism, hope and resiliency.

Psychological capital and self-leadership have both been related to work engagement. According to Li, Castano and Li (2018), individuals work engagement is improved through the contribution of psychological capital as it has been considered a positive psychological resource that influences on one's areas of life including emotion and behaviour. Furthermore, it was found by Kizrak, Bicakci and Basim (2017) that different psychological factors such as hope, and optimism (dimensions of psychological capital) are influenced by self-leadership behaviours. Self-leadership has also been shown to influence employees work engagement. In a study conducted by Shaoping *et al.* (2015) a positive association was found between self-leadership and work engagement.

Due to leadership playing a major role within agricultural extension, it is necessary to explore and identify how self-leadership can influence an extensionists behaviour and how they lead themselves. There is also a gap in identifying whether self-leadership influences the work engagement of employees. Work engagement is said to be gendered. This may be due to woman having lesser opportunities to experience a sense of psychological meaningfulness, safety, and availability as compared to males who find it easier to be engaged (Banihani, Lewis, & Syed, 2013). Gender differences in work engagement can be observed from a social aspect, in other words, the difference between men and women are not just about the biological differences but differences such as resource distribution in society, hierarchical structures and task allocation in families (Ely & Padavi, 2007; Tshilonggamulenzhe & Takawira, 2015). Crompton, Lewis and Lyonette (2007) stated one's capacity to be fully available and engaged can be influenced by men and women's experiences in the workplace and at home.

This study thus aims to further the understanding of the effects of psychological capital and self-leadership on work engagement among agricultural extension advisors within South Africa. Emphasis will be placed on the contributions psychological capital and self-leadership can have in increasing work engagement. Furthermore, this study aims to benefit agricultural extension by expanding the research base on how to develop their self-leadership and by so doing effectively increase their work engagement.

## **1.2. RESEARCH QUESTIONS**

#### 1.2.1. Primary research question.

Does psychological capital and self-leadership have an effect on work engagement among agricultural extension advisors in South Africa?

## 1.2.2. Secondary research question.

Do differences exist between male and female agricultural extension advisors regarding the levels of work engagement?

# **1.3. RESEARCH OBJECTIVES**

#### 1.3.1. Primary research objective.

To determine by means of a non-experimental research design whether psychological capital and self-leadership have an effect on the levels of work engagement among agricultural extension advisors.

### 1.3.2. Secondary research objective.

To determine by means of a non-experimental research design whether differences exist between male and female agricultural extension advisors regarding the levels of work engagement.

## **1.4. RESEARCH HYPOTHESIS**

## 1.4.1. Hypothesis 1

*Null hypothesis* ( $H_o$ ). The variances in the levels of work engagement cannot be explained by psychological capital and self-leadership among agricultural extension advisors. *Alternative hypothesis* ( $H_1$ ). The variances in the levels of work engagement can be explained

by psychological capital and self-leadership among agricultural extension advisors.

#### 1.4.2. Hypothesis 2

*Null hypothesis* ( $H_o$ ). There are no statistically significant differences between male and female agricultural extension advisors regarding the levels of work engagement.

Alternative hypothesis  $(H_1)$ . There are statistically significant differences between male and female agricultural extension advisors regarding the levels of work engagement.

#### **1.5. OUTLINE OF THE STUDY**

Chapter 1: This chapter focuses on the background and problem statement of the research as well as the research questions, objectives, and hypothesis.

Chapter 2: This chapter will focus on the dependent variable, work engagement, in which the nature and definitions, theories, models and antecedents of work engagement will be discussed. This chapter will also explore the association between work engagement and gender as well work engagement within agricultural extension.

Chapter 3: This chapter will focus on the first independent variable, psychological capital, in which the nature and definitions, dimensions, theories and models of psychological capital will be discussed. Furthermore, the relationship between psychological capital and work engagement will be discussed and psychological capital within agricultural extension.

Chapter 4: This chapter will focus on the second independent variable, self-leadership, in which the nature and definition, theories, strategies and outcomes of self-leadership will be discussed. In addition, the relationship between self-leadership and psychological capital, self-leadership

and work engagement and the effects of psychological capital and self-leadership on work engagement will be discussed, lastly self-leadership within agriculture will be presented.

Chapter 5: This chapter comprises of the research methodology in which the research design, study population, data gathering instruments, statistical methods and ethical considerations will be discussed.

Chapter 6: This chapter will focus on the results and discussion. Firstly, the handling of missing data will be presented, followed by descriptive statistics, reliability results, principal components analysis for self-leadership and inferential statistics related to the study objectives. The chapter will conclude with a discussion on the results compared to previous literature.

Chapter 7: This chapter will present the final conclusions of the literature review and the present study, recommendations, and limitations that were identified will also be discussed.

## 1.6. SUMMARY

The above chapter focused on the construction of the background to the research topic and problem statement. This proceeded with a discussion of the research questions, objectives, and hypothesis, and ended with a brief outline of the chapters in the research report. The following chapter will explore the dependent variable, work engagement.

## **CHAPTER 2: WORK ENGAGEMENT**

### 2.1. INTRODUCTION

The concept of work engagement has been around for many years and has gained growing popularity in business as well as academia (Schaufeli & Bakker, 2010). According to Rana, Pant and Chopra (2019), human capital is an important resource in an organisation as it gives the organisation a more competitive advantage. Engaged employees are considered a gain for employers which is why work engagement has become a key human resources practice in striving for employee association and commitment towards an organisation (Rana, Pant & Chopra, 2019). Work engagement was first conceptualised by Kahn (1990) as the "harnessing" of organisational members" selves to their work roles, stating that people bring forward their personal selves into their work by expressing and engaging themselves cognitively, physically, and emotionally during the execution of their work roles (p. 694). Although the phrase employee engagement and work engagement have been interchangeably used the preferred term is work engagement as it specifically relates an employee's relationship with his or her work (Schaufeli & Bakker, 2010). In general, engagement refers to one's focused energy and effort where one displays involvement, commitment, and passion (Schaufeli, 2012). A great practical assessment of psychosocial factors at work is needed to improve the well-being of employees (Schaufeli, 2017). Poor working conditions have been associated with burnt out employees, occupational injury accidents and poor work performance and efficiency; however, in contrast, good working conditions have been associated with employee engagement (Schaufeli, 2017).

Globally, employee engagement is trending low (Qualtrics, 2020). According to a study conducted by Qualtrics (2020), employees' confidence in their senior leadership to make the correct decisions as well as employees experience of growth, development and management effectiveness were shown to be the top drivers of employee work engagement. According to Budriene and Diskiene (2020), employees who displayed better levels of work engagement gave more positive feedback about their organisation, want to form part of it, and make greater efforts in their work. Organisations who had the highest work engagement (were in the top quartile) have 18% higher productivity and 59% of the engaged employees stated that their work brings out the most creative ideas. In addition to this, the turnover rate for these companies were 40% lower than companies with less engaged employees (Gallup, 2019).

Improved mental and physical health in terms of depression, anxiety, better sleep and less psychological distress by employees is associated with work engagement (Schaufeli, 2018).

The following section will focus on exploring the term work engagement in further detail. Firstly, the nature and definitions of work engagement with discussions of the different dimensions of work engagement will be presented, this will be followed by a discussion of the various theories and models of work engagement. The antecedents of work engagement will be discussed next followed by a discussion of work engagement and gender. Lastly work engagement will be discussed within the target group, agricultural extension advisors.

# 2.2. NATURE AND DEFINITIONS OF WORK ENGAGEMENT

Work engagement has gained growing interest however despite this, challenges still exist such as the lack of a general definition of work engagement (Shuck, Ghosh, Zigarmi & Nimon, 2013). According to Shuck *et al.* (2013), questions remain about how the concept employee engagement differs to that of job satisfaction, job involvement and job commitment. Although definitions of work engagement have differed by consulting companies and within academia, employee engagement is essentially conceived in terms of one's emotional attachment to the organisation, in other words their commitment to the organisation as well as the desire to stay within the organisation (continuance commitment) and extra role behaviour (Schaufeli, 2012).

As previously stated, engagement was first conceptualised by Kahn (1990) as the expression and employment of one's preferred self in task behaviours. In other words, during role performances people will physically, cognitively, and emotionally employ and express themselves. He further identified three psychological antecedents that effect the levels of work engagement, namely, psychological meaningfulness, safety, and availability. Khan (1990) stated that employees will feel engaged at work when they experience a meaningful job, feel psychologically safe and have physical and psychological resources. Engaged individuals will bring all aspects of themselves into their work roles and performance; therefore, to experience full engagement at work they would need to display their full selves in the roles they are performing (Khan, 1990). This conceptualisation emphasises that engaged employees who identify strongly with their work will concentrate their efforts towards their work roles (Bakker, 2017).

Later, engagement was defined by Leiter and Maslach (1998) as the "energetic state of involvement with personally fulfilling activities that enhance one's sense of professional efficacy" (p. 351). Furthermore, Maslach and Leiter (2008) compared engagement to concepts

such as organisational commitment, job satisfaction and job involvement, and stated that the multi-dimensional concept of work engagement provides a more complex and exhaustive viewpoint of the relationship's employees have with their jobs.

In more recent studies, Budriene and Diskiene (2020) stated that the "principal work engagement implies the emergence of motivation, active participation and involvement of workers in all production processes" (p. 43). Necessary conditions for maximum interest of employees need to be created to build passion and therefore create the starting point for effective work (Budriene & Diskiene, 2020). Budriene and Diskiene (2020) defined the concept of engagement as the stable attitudinal characteristics of an employee which involves prolonged problem-solving concentration which brings about positive effects on the organisation and therefore leads to the emotional attachment of employees to the goals and values of the organisation. According to Meiyani and Putra (2019), a primary predisposition of employee engagement is to participate in labour activities, this consists of three components, namely knowledge, interest, and performance.

One of the more popular definitions of work engagement was defined by Schaufeli, Salanova, Gonzalez-Roma and Bakker (2002) as "a positive, fulfilling, work related state of mind that is characterised by vigor, dedication and absorption" (p.74). According to Schaufeli *et al.* (2002), engagement is seen as a more persistent and pervasive affective cognitive state rather than a monetary and specific state. Mental resilience and high energy levels while working characterises the dimension vigor. In other words, individuals who display vigor are willing to invest their efforts into their work and persist even when faced with difficulties. Dedication refers to the experience of a sense of significance, passion, and a strong involvement in one's job. Lastly, absorption is characterised as being fully involved and concentrated in one's work so that time passes quickly, and one finds difficulty in detaching from the work (Schaufeli *et al.*, 2002).

It was found in recent studies that job resources are not only associated with work engagement but can also ultimately predict work engagement (Lesener, Gusy, & Wolter, 2019). Nielsen *et al.* (2017) proposed to differentiate job resources at multiple organisational levels. The first level is group-level resources, this refers to interpersonal resources and exchange of information. The second level is referred to as leader-level resources which emphasises leaders' characteristics and the social interactions between employees and their leaders. Lastly, organisational level resources refer to the organisation, creation, and management of work in terms of psychosocial factors. The focus for this study will be placed on the work engagement definition by Schaufeli *et al.* (2002). Work engagement is defined by them as a work-related state of mind that encompasses high levels of energy and mental resilience, a strong sense of significance or enthusiasm for one's job and being fully involved and concentrated in one's work. The definition summarises the dimensions of work engagement namely, vigor, dedication and absorption which will be used to measure the constructs within this study. The dimensions of work engagement will be further explained below.

### 2.2.1. Dimensions of work engagement

According to Schaufeli and Bakker (2004), the dimensions vigor, dedication and absorption constitute the physical, cognitive, and emotional dimensions of work engagement.

#### 2.2.1.1. Vigor

As stated previously vigor refers to one's energy levels and draws attention to the physical component of work engagement. Increased levels of vigor indicate an employee's readiness to devote effort towards their work without becoming tired (Chughtai & Buckley, 2008). Vigor has also been described by Shirom (2011) as the physical strength, emotional energy, and cognitive liveliness that individuals feel they possess. Vigor can also be characterised as an individual's high level of energy and mental resilience while at work even when difficulties are faced (Schaufeli, 2018).

## 2.2.1.2. Dedication

Dedication refers to a strong sense of involvement in one's work, and the sense of significance, enthusiasm, and challenges in one's work. It is said to be the emotional side of work engagement. People who experience dedication towards their work are more willing to spend a considerable amount of time and effort in doing something meaningful (Sonn, 2015). Chughtai and Buckley (2008) describe dedication as a strong identification with one's work, which encompasses feelings of enthusiasm, inspiration, pride, and challenge. Dedicated individuals experience importance and enthusiasm within their work and are said to be strongly involved in their work (Biggs, Brough, & Barbour, 2014).

## 2.2.1.3. Absorption

Absorption refers to being fully focused and absorbed in ones work whereby time passes quickly, a person who has high levels of absorption would find it difficult to detach oneself

from work. The experience of absorption would result in being completely immersed within one's work and find difficulty in detaching from the work (Chughtai & Buckley, 2008). Absorption often refers to the cognitive component of work engagement where individuals find difficulty in detaching from the work and are fully engrossed and focused on their task so that time passes quickly (Coetzer & Rothmann, 2007).

## 2.3. THEORIES OF WORK ENGAGEMENT

According to Shaufeli (2012), a unique framework for work engagement does not exist however there are several theoretical perspectives that have been proposed that each emphasise a different aspects of work engagement.

#### 2.3.1. Khan's theory of work engagement

As stated previously, the term engagement was first conceptualised by Kahn in 1990. Kahn investigated the concepts of personal engagement and disengagement within a summer camp as well as an architecture firm. His studies focused on the experiences people have of themselves and their work situations. Khan (1990) first described personal engagement as behaviours that people introduce or omit about their personal selves while performing work roles. In other words, how people can express themselves in a physical, cognitive, and emotional manner during role performances. In his studies, Kahn (1990) found that there are three major psychological conditions that influence the employees' levels of engagement, namely psychological meaningfulness, safety, and availability.

Psychological meaningfulness can be described as a feeling that one is receiving a return on their investment (Kahn, 1990). When individuals feel worthwhile, useful, and valuable they experience psychological meaningfulness. Three behaviours were shown to influence one's psychological meaningfulness, namely task characteristics, role characteristics and work interactions. Task characteristics can be identified as doing challenging, creative, and somewhat autonomous work. Role characteristics can be identified with two components, the first is the role that one is required to assume when entering the organisation. The second influence on one's role characteristic is influence or status, when one has influence or has a sense of being valued, they experience a feeling of meaningfulness. The last behaviour to influence one's psychological meaningfulness is work interactions. When people experience rewarding interpersonal interactions with co-workers, they are said to experience psychological meaningfulness (Kahn, 1990).

The second condition to influence one's level of work engagement is psychological safety. Psychological safety can be described as the ability to show and employ oneself within the work without fear of negative consequences to status or career (Kahn, 1990). According to Kahn (1990), four factors influence one's psychological safety. The first factor is interpersonal relationships, it was shown that psychological safety was promoted when employees experienced support and trust. The second factor is group and intergroup dynamics, this includes the various unconscious or unacknowledged roles that an individual assumes. The third factor that influences one's psychological safety is management style and process, leaders who were shown to be supportive, resilient, and clarifying heightened the sense of psychological safety within the employees. A supportive environment allows one to try and fail without fear of consequences. Lastly, psychological safety is influenced by organisational norms. Norms are stated to be shared expectations about the general behaviour within an organisational environment (Hackman, 1986). Those who stay within the generally appropriate behaviour often felt safer than those who did not.

The last psychological condition that influences one's work engagement is psychological availability. This can be identified as the sense of having the physical, emotional, and psychological resources to personally engage in one's work (Kahn, 1990). Four factors influence one's psychological availability. The first factor is physical energy, it was shown in Kahn's study that personal engagement required more energy than disengagement. Emotional energy was another distraction that influences one's psychological safety. The third distraction that influences one's psychological availability is insecurity, when one feels more secure with their work and status one experiences higher psychological availability. Insecurity was shown to distract members from bringing themselves into their work. Lastly, outside life can also influence psychological availability, often if members are too preoccupied with personal non-work events, they are unable to invest themselves within their role performance; therefore, affecting their personal engagement (Kahn, 1990).

Therefore, this approach assumes that when a job is meaningful and challenging in which there is a safe social work environment and personal resources are available, the above psychological conditions are therefore met and thus one feels engagement (Shaufeli, 2012).

## 2.3.2. Social exchange theory (SET)

The social exchange theory encompasses a theoretical foundation to provide reasons for employees becoming increasingly and decreasingly engaged within their work (Saks, 2006). It

is argued that through a series of interactions between two parties, namely, the employer and employee, obligations are generated. The basic tenet is that if certain 'rules' of exchange are abided by trust, loyalty and mutual commitments will evolve over time (Cropanzano & Mictchell, 2005). Robinson, Perryman and Hayday (2004) stated that engagement involves a two-way relationship between an employer and employee. Rules of exchange are said to involve repayment rules in which the actions of one-party lead to a response or action from another party. Employees can therefore repay their organisations with their levels of engagement. In other words, employees can choose to be engaged within the workplace as a response to the resources that is received from the organisation (Saks, 2006). SET is seen as the theoretical foundation to explain why employees choose to be engaged within their workplace.

Khan's theory of work engagement as well as the social exchange theory was used as the theoretical foundation for the purpose of this study. Khan's theory is based on behaviours that people bring to work and how they convey themselves cognitively, physically, and emotionally at work. These three behaviours can be related to the main definition of work engagement that will be used for the study. The physical component according to Khan's theory relates to vigor, which refers to one's energy levels at work. The emotional component of Khan's theory can be related to dedication, as when one feels dedication at work they feel strongly involved and have a sense of meaningfulness within the workplace. Lastly, the cognitive component relates to one's absorption, whether one feels fully absorbed within their work and find it difficult to detach from their tasks (Khan, 1990). The social exchange theory was also used as a foundation for the study as it relates to rules of exchange within the workplace, employees are more likely to experience engagement when they have resources that are provided by the organisation. As can be seen above both theories are directly related to the definitions and models of work engagement (such as job resources), specifically the job demands-resources model that was used.

## 2.4. MODELS OF WORK ENGAGEMENT

#### 2.4.1. The job demands-resources model

The job demands-resources model is one of the most widely used framework for work engagement and was first published by Demerouti, Bakker, Nachreiner & Schaufeli (2001) to understand the antecedents of burnout. According to Bakker and Demerouti (2018), all job

resources can be classified into two main categories, namely, job demands and job resources. The early JD-R model proposed two processes for the development of burnout. The first process included excessive long-term job demands which could lead to sustained activation and overloading resulting in exhaustion. Job demands are aspects of work that cost energy, such as workload, complex tasks, and conflicts (Bakker & Demerouti, 2018). Job demands were identified by Wu and Norman (2006) to be in contrast with commitment and work engagement.

The second process that was identified in the development of burnout is job resources. These are aspects of work that help employees handle the job demands given and achieve their goals (Bakker & Demerouti, 2018). This can prevent job demands and work goals from being reached resulting in withdrawal or disengagement from work. According to Demerouti *et al.* (2001), job resources are aspects of the work roles that are instrumental in achieving one's work goals and reducing the jobs demands. Job resources are therefore identified as necessary to handle high job demands. Job resources come from the organisation in the form of pay, career opportunities or job security and can also involve interpersonal and social interactions (Bakker & Demerouti, 2008).

Job demands and resources have unique and independent effect on the well-being of employees (Bakker & Demerouti, 2018). According to Burney (2011), jobs can only be performed successfully when the appropriate and needed resources provided, and employees can cope with their role demands therefore leading to feelings of engagement. Job demands can initiate a process of health impairment when employees are exposed to daily workloads that lead to chronic overload over time resulting in chronic exhaustion and eventually may lead to problems with one's health (Bakker & Demerouti, 2018). Job resources, on the other hand, have the opposite effect as it can initiate a motivating process and can contribute positively to work engagement by satisfying employees basic needs (Bakker & Demerouti, 2018).

Schaufeli and Bakker (2004) in their revised version of the JD-R model included the component work engagement; therefore, introducing a positive counterpart to burnout. This model is often used when engagement is seen as the antithesis of burnout in which the two constructs are overarching. This model assumes that resources are the main driver of work engagement. Higher work engagement results from the motivational role that job resources provide, as the more resources that are available to employees the more likely they are to succeed (Burney, 2011). Thus, job resources play an important motivational role as they initiate the willingness to spend effort within the workplace thereby fostering goal attainment and

reducing job demands (Schaufeli & Taris, 2014). The antecedents and consequences of work engagement were combined by Bakker and Demerouti (2008) into an overall model of work engagement as seen below (Figure 2.1).



Figure 2.1: The JD-R model of work engagement (Bakker & Demerouti, 2008)

### 2.4.2. The affective shift model

This model observed that work engagement increases and decreases as a person progresses through the working day (Sonnentag, Dormann & Demerouti, 2010). This model believes that both positive and negative affect play important functions for work engagement. A core assumption of the affective shift model is that "work engagement will only result from the experience of negative affect if a shift to positive effect takes place" (Bledow, Schmitt, Frese, & Kuhnel, 2011, p. 1247). Work engagement is expected to be lower when people remain in a negative affective state without experiencing a positive effect. However, work engagement increases when people move to a positive state (Lyubomirsky, King, & Diener, 2005). The temporal sequence of a negative shift followed by a positive shift is called an affective shift. This can be seen in Figure 2.2 below:



Figure 2.2: The affective shift model of work engagement (Bledow et al., 2011)

This above figure shows that an affective shift is more pronounced when an increased level of negative affect is first experienced followed by the experience of increased positive affect. However, it's important to note that one doesn't have to experience a negative affect and then only a positive affect as positive and negative affect are two dimensions that can be experienced within a time interval (Bledow *et al.*, 2011). It states that a shift from positive to negative affect is the core mechanism that underlies the emergence of high work engagement. A negative affect therefore has motivating potential, in other words one becomes motivated to act when things are not going well, this motivating effort then shifts one towards a more positive state (Shaufeli, 2012).

The job-demands resources model was used for the purpose of this study as it can be applied to the three variables used within this study (work engagement, psychological capital, and self-leadership). The model will also be used as it relates to the definition and three dimensions of work engagement, namely vigor, dedication and absorption as identified by Schaufeli and Bakker (2004) that was adopted for this study. Furthermore, the model relates to the two theories that were chosen for this study, Khan's theory not only relates to the model but also to the dimensions of work engagement as previously discussed in section 2.3.2. The social exchange theory relates to the model as job resources play an important role in work as a response to the job and personal resources provided (Saks, 2006). In addition to this, the model directly relates to the Utrecht work engagement scale that was used for this study.

## 2.5. ANTECEDENTS OF WORK ENGAGEMENT

There are several antecedents of work engagement that have been identified by Kahn (1990) and Maslach, Schaufeli and Leiter (2001).

#### 2.5.1. Job resources

Job resources can be identified as the physical, social, and organisational aspects of the job that can reduce job demands, stimulate personal growth, learning and development and be functional in achieving work goals (Bakker & Demerouti, 2008). According to Albrecht, Green and Marty (2021), job resources such as job variety, opportunity for development, autonomy and feedback has a significant and positive relationship with work engagement; therefore, indicating that the more resources one has the more likely they are to be engaged. Employee's willingness to dedicate their efforts and abilities to work tasks increases when a resourceful work environment is created.

### 2.5.2. Job characteristics

According to Kahn (1990), psychological meaningfulness which is defined as a sense of return on investments of one's self-role performances can be achieved from challenging work tasks and the opportunity to make important contributions. Jobs that provide skill core job characteristics such as skill variety, task identity, task significance, autonomy and feedback provide incentives for individuals to bring more of themselves into their work and therefore become more engaged (Kahn, 1992). It was shown in a study by George, Jonathon, and Michael (2020) that as skill variety increases so does the level of work engagement among employees. A job that involves a variety of skills provide employees with a sense of challenge in their work, this can result in increased motivation, effort, and involvement in tasks (Kim, Han & Park, 2019). Task identity was also found to be intrinsically motivating for employees and thus encourage employees to be more engaged. According to Sonnentag (2017), when employees feel that their work provides them with an identity, they feel more meaningfulness and purposefulness, hence motivating employees to stay with the task and accomplish it. Autonomy and feedback were also shown to increase work engagement (George, Jonathan & Michael, 2020).

### 2.5.3. Rewards and recognition

Employees want appreciation and encouragement in their work to become motivated and engaged (Baqir, Hussain, Waseem & Islam, 2020). Organisations can use rewards and recognition, that have been shown to have a great impact on employees, to be become more engaged at work (Baqir *et al.*, 2020). In a study conducted by Victor and Hoole (2017), it was found that different types of organisational rewards (intrinsic and extrinsic) both had a positive relationship with work engagement, indicating that the higher the organisational reward the

more engaged employees are at work. Aktar and Pangil (2018) also discovered that employee engagement was positively influenced by rewards and recognition.

# 2.5.4. Perceived organisational and supervisor support

Perceived organisational support is described as the overall expectation that an organisation holds for its members and the recognition of personal values and contributions that employees make towards the organisation (Dai & Qin, 2016). According to Imran, Elahi, Abid, Ashfaq and Ilyas (2020), employees who perceive their organisational support to be high, flourish, thrive and engage more in their work. Employees who received more organisational support and think their organisation values their contribution are more likely to repay the organisation by meeting obligations and becoming more engaged in work (Imran *et al.*, 2020). Furthermore, when organisational support is perceived employees are more likely to give positive commitment and contributions and make active changes towards their attitudes and behaviours to achieve organisational goals (Dai & Qin, 2016).

# 2.6. SIGNS OF POOR WORK ENGAGEMENT

Disengaged employees is defined by Allam (2017) as displaying a lack of interest, commitment, and enthusiasm by employees in the workplace. Employees who have shown to be disengaged from work separate themselves from the organisation and its vision and values and display high intentions of leaving the organisation (Allam, 2017). Ismail *et al.* (2019) found that employees who are disengaged displayed attitudes and behaviours that negatively impacted on service delivery. Negative job attitudes, rigidness to accept feedback, absence from teamwork, lack of trust, low morale and higher turnover rates were found to be some of the aspects pertaining to disengagement of employees or poor work engagement (Allam, 2017). Table 2.1 displays the indicators of employee disengagement as identified by Allam (2017), Aslam *et al.* (2018) and Govindarajo, Kumar and Ramulu (2014).

 Table 2.1: Indicators of employee disengagement

Not willing to take part in problem solving
Display a negative attitude towards the vision, purpose, and values of the organisation
Lower loyalty to the organisation
Lack of interest in productivity maximisation
Work within, and display unwillingness to extend beyond, the stipulated organisational
standards

Do the minimum possible to accomplish tasks
Display a lack of commitment, interest, and enthusiasm to work
Disconnected from the organisation, management, and co-workers
Increased absenteeism and presenteeism
Display intentions to leave the organisation

Negatively engaged employees tend to withdraw by not participating in meetings or elective office gatherings and may call in sick more often (Stilwell, 2011). Individuals who are poorly engaged may also fail to make their commitments and uses excuses, explanations, and rationalisation rather than a rigorous and energetic desire to find the source of the problem (Bersin, 2015). Stilwell (2011) identified signs and symptoms of poor engagement as high turnover rates, absenteeism, disgruntled employees, lack of teamwork, difficulty attracting and retaining talent, poor product and service quality, customer dissatisfaction, and a lack of innovation and creativity.

### 2.7. WORK ENGAGEMENT AND GENDER

Individual differences can play a vital role in determining the level of work engagement among employees. Gender differences has been found to be one determinant that governs the level of work engagement in the workplace (Garg, 2014). Although work engagement is assumed to be implicitly gender neutral (Banihani et al., 2013), differences can come into play when looking at individual differences between men and women. Therefore, gender within work engagement is better viewed from a social perspective in which social differences between men and women are studied rather than just looking at biological differences (Tshilongamulenzhe & Takawira, 2015). When looking at the social perspective, factors such as resource distribution, hierarchical structures, work practices within organisations and task allocations within families are taken into consideration. According to Banihani et al. (2013), men find it easier to be engaged compared to women therefore work engagement is considered gendered. Men's characteristics can be regarded as more valued and more useful as compared to women, leading to the conclusion that men find it easier to experience psychological meaningfulness and therefore work engagement as processes, practices and interactions in organisations are designed in such a way that it is easier for men (Banihani et al., 2013). Banihani et al. (2013) concluded that men experience a sense of psychological safety easily and therefore display increased engagement within the workplace as compared to women.

Cromptom, Lewis and Lyonette (2007) indicated that the capacity to be fully engaged and available at work is influenced by women and men's experiences of the workplace and home. The Organisation for Economic Co-operation and Development [OECD] (2015) stated that when women perceive their homecare roles and work roles as incompatible, they disengage from work. Banihani *et al.* (2013) work engagement is considered gendered as women have less opportunities to experience psychological meaningfulness, safety, and availability than men. In a study conducted by Tshilongamulenzhe and Takawira (2015) within a South African university, gender was not found to be a predictor of work engagement. In an international study conducted by Schaufeli *et al.* (2006) men were found to have slightly higher work engagement on all dimensions in Belgian, Germany and Finland samples; however, women scored higher on work engagement in South Africa and Spain. Despite the many studies that have been conducted on gender and work engagement, most studies found that there were no significant differences between gender and work engagement (Abbott, 2017; Ellison, 2020; Martin, 2002; Weyrauch, 2010).

# 2.8. WORK ENGAGEMENT WITHIN AGRICULTURAL EXTENSION

Agricultural extension is the application of scientific research and knowledge to agricultural practices through farmer education. Generally, it can be defined as the "delivery of information inputs to farmers" (Anderson & Gershon, 2007). Extension services can be classified into three types, firstly technology transfer, this refers to the traditional model of the transfer of information, knowledge, and advice. Secondly, advisory, the farmers use extension services as a source of advice in relation to specific problems that they face, and lastly facilitation, the aim of extension services is to help farmers to define their own problem and to develop solutions to these problems (Beynon, Akroys, Duncan & Jones, 1998). A key problem in public extension services is the incentive failure by extension services to meet farmers needs and be accountable to them (World bank & IFPRI, 2010). According to Bitzer (2016), this problem can be attributed to the bureaucratic structure of extension administration in which few rewards are offered, there are low prospects of promotion based on performance and low recognition of the extension agents that leads to a general lack of motivation.

Unfortunately, no research has been conducted on work engagement within the agricultural sector or agricultural extension within South Africa indicating a serious gap. In a study conducted by Ellison (2020) with Florida extension agents, it was discovered that extension agents reported higher levels of work engagement. It was further shown that extension agents

have higher levels of dedication compared to absorption or vigor. In a study conducted by Weybrauch, Culbertson, Mills and Fullagar (2010) it was shown that those in the family and consumer science sector exhibited higher levels of dedication and absorption (which are components of work engagement) whereas people within agriculture and natural resources showed greater work-role salience.

## 2.9. SUMMARY

This chapter provided a brief overview of the literature for work engagement in which the nature and definitions of work engagement were discussed. The definition by Schaufeli, Salanova, Gonzalez-Roma and Bakker and the job-demands resource model will be used as the theoretical foundation for the purpose of this research as it directly relates to the Utrecht Work Engagement Scale. The chapter further discussed the different theories and models of work engagement, namely, Khan's theory of work engagement, social exchange theory, job-demands resources model and affective shift model. Next the antecedents of work engagement were discussed followed by a discussion of work engagement and gender. Lastly work engagement within agriculture was established to be a gap in the research. The following chapter will discuss the first independent variable, psychological capital.

### **CHAPTER 3: PSYCHOLOGICAL CAPITAL**

#### **3.1. INTRODUCTION**

At the end of the 1990s within the field of organisational behaviour the concept positive psychology was introduced by Prof Seligman and colleagues (Cavus & Kapusuz, 2015). Decades of research has placed the focus on negative perspectives and problems within organisational behaviour and human resource management which provided little understanding for optimal strengths of humans (Luthans, Youssef-Morgan & Avolio, 2015). The positive psychological perspective advocated as shift from negativity to positivity, one characterised by opportunity for growth rather than problems (Tedeschi, Blevins & Riffle, 2017). According to Warren, Donaldson, and Lee (2017), positive psychology is concerned with evaluating the human experience by looking at human assets rather than liabilities. Psychological capital stemmed from this theory of positive psychology and has been considered a key psychological capital is argued to be more capable of yielding substantial returns compared to other traditional forms of capital investment. Furthermore, it has been shown to have a significant effect on a variety of desirable workplace attitudes and behaviours (Luthans *et al.*, 2007; Luthans & Youssef-Morgan, 2017; Marcos, Salanova & Schaufeli, 2019; Santisi *et al.* 2020)

Psychological capital was influenced by two parallel movements which stemmed from this positivity. The first movement was positive organisational scholarship (POS), this movement focuses on developing human strength and fostering vitality through the focus on dynamics, leading to exceptional individual and organisational performance (Cameron & Caza, 2004). POS is viewed as an 'umbrella' concept in that it integrates various positive approaches including positive traits, states, processes, dynamics, perspectives, and outcomes. The second movement is positive organisational behaviour (POB). Luthans (2002) defined POB as the "study and application of positivity orientated human resource strengths and psychological capacities that can be measured, developed and effectively managed for performance improvement in today's workplace" (p. 59). Although both approaches are said to complement each other, POS concentrates more on macro and organisational level whereas POB starts at the micro or individual level. Both movements serve as the fundamental perspectives of psychological capital (Luthans, Youssef-Morgan & Avolio, 2015). However, to be included within POB the construct is required to meet the criteria of being state-like, open to development, measurable and performance related.

The following chapter will focus on the independent variable psychological capital. Firstly, the nature and definitions of psychological capital will be presented, this will be followed by a discussion of the dimensions on psychological capital. Theories and models of PsyCap will be discussed next followed by the relationship between psychological capital and work engagement, and lastly psychological capital within agriculture will be discussed.

# 3.2. NATURE AND DEFINITIONS OF PSYCHOLOGICAL CAPITAL

Psychological capital is considered a multi-dimensional construct consisting of hope, optimism, efficacy, and resilience and shown to be strongly related to employee performance and work-related attitudes and behaviours (Cerovic & Kvasic, 2018). Psychological capital was defined by Harms, Krasikova, and Luthans (2018) as a tendency to hold cognitions and appraisals about one's own ability to handle a variety of situations. According to Avey (2014) previous research has discovered seven boundary characteristics and conditions of PsyCap that are useful for operational understanding. Firstly, PsyCap is not considered a single dimension alone but rather as a multidimensional construct shared among four dimensions (Law, Wong & Mobley, 1998). The dimensions hope, efficacy, optimism, and resilience are members of the broader construct called PsyCap. The second characteristics of PsyCap is that it is domain specific. PsyCap is usually operationalised within a work context, in other words one may have a higher PsyCap to accomplish work goals however with another domain such as family hope and resiliency may be lower (Luthans, Avolio, Avey & Norman, 2007). Thirdly, PsyCap is referred to as a stable construct that is developable as its more stable than emotions but more open to change than personality. The fourth characteristics is self-opinion as the primary operationalisation of PsyCap is from the self (Norman, Avolio & Luthans, 2010). A fourth characteristics of PsyCap is that it is measurable as evidenced by the several instruments available that are currently in use (Luthans, 2002). The sixth characteristics of PsyCap is that it is consistently, positively, and significantly predictive of performance (Avey, Reichard, Luthans & Mhatre, 2011). The final characteristics of PsyCap is that it is analysed at the individual level however more studies are considering studies into more levels of analysis.

In more recent studies, psychological capital is seen as a combination of individual characteristics and qualities that aid the expression and promotion of positive resources and talents (Santisi, Lodi, Magnano, Zarbo & Zammitti, 2020). Having psychological capital supports people effectively to handle everyday life, to act proactively, trust in their possibilities and look at the future with a positive eye without being discouraged by difficulties that arise

(Santisi, Lodi, Magnano, Zarbo & Zammitti, 2020). Rather than focussing on human capital of 'what you know" and social capital of "who you know", PsyCap is concerned with "who you are" and "what can you become". PsyCap has an integrative motivational tendency to accomplish goals and succeed through all four dimensions (Avey, Luthans, Smith & Palmer, 2010). Luthans *et al.* (2007) stated that PsyCap has been demonstrated conceptually and empirically to be a higher order construct. To be included within POB, a psychological construct must meet four criteria. Firstly, it must be theory and evidence based. Second, it must be positively orientated. Thirdly it must be valid and reliable to allow for scientific study and research and lastly, it should be open to development and management (Luthans, 2002). Hope, efficacy, resilience, and optimism are referred to as positive psychological resources and form the common thread of meeting the above inclusion criteria (Luthans *et al.*, 2015). PsyCap integrates the above four psychological resources and when combined these resources form a higher order core construct that is based on shared commonalities of the four first-order constructs and their characteristics (Luthans *et al.*, 2007).

Several positive psychological resources were found in positive psychology and were considered for inclusion. Those that were determined to best meet the POB criteria were hope, efficacy, resilience, and optimism, together these concepts become psychological capital (Luthans, Youssef-Morgan & Avolio, 2015). Each construct stands on its own, however when they are all present and linked together, they can provide insight into individual satisfaction and potential for improved performance (Luthans, Avolio, Avey & Norman, 2007).

Psychological capital emphasises personal psychological resources and consists of four components namely, self-efficacy, hope, optimism, and resiliency (Gooty, Gavin, Johnson, Lance-Frazier & Snow, 2009). Luthans, Youssef-Morgan and Avolio define PsyCap as the:

"individual's positive psychological state of development and is characterised by: (i) having confidence (Self-efficacy) to take on and put the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) preserving toward goals and when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success (Luthans *et al.*, 2007, p. 3)".

Psychological capital includes positive outcomes in both personal and organisation levels and improves performance (Cavus & Gokcen, 2015). Research has also found that the development of psychological capital was positively linked with employees work performance and therefore

identified to be an essential psychological resource (Burhanuddin, Ahmad, Said & Asimiran, 2019). The definition by Luthans, Youssef-Morgan and Avolio (2007) will be used for the purpose of this study as it directly relates to the dimensions (hope, efficacy, resilience, and optimism) and measurement of psychological capital (PCQ-24).

# 3.3. DIMENSIONS OF PSYCHOLOGICAL CAPITAL

The dimensions of PsyCap can be summarised using the acronym HERO: hope, efficacy, resilience, and optimism (Luthans, Luthans & Luthans, 2004). Each element has a positive impact on one's attitudes, behaviour, and performance and each is considered a psychological state that can be developed (Luthans, Youssef & Avolio, 2007). Figure 3.1 below outlines the four dimensions of PsyCap with brief explanations. Detailed descriptions of the dimensions are provided thereafter:



Figure 3.3: Dimensions of positive psychological capital (Luthans & Youssef, 2004).

## 3.3.1. Hope

Hope is formed from the work of Rick Snyder and is defined as persevering towards a goal and redirecting paths to goals when necessary (Luthans *et al.*, 2007). Snyder *et al.* (1991, p.287) defined hope as "a positive motivational state that is based on an interactively derived sense of successful agency (goal-directed energy) and pathways (planning to meet goals)". Snyder *et al.* (1991) refers to hope as a cognitive or thinking state in which an individual can set realistic and challenging goals and reach for those goals through directed self-determination, energy, and perception of internalised control. Hope is also referred to as a motivational state that is based on the interaction of three factors namely, goals, agency, and pathways (Luthans & Youssef, 2004). A sense of agency drives people to accomplish their goals by internalising determination and willpower to invest their necessary energy into achieving these goals (Luthans & Youssef, 2004). Although agency shares similarities to self-efficacy, the hope pathways are unique to PsyCap hope. (Youssef & Luthans, 2012).

## 3.3.2. Efficacy

Self-efficacy draws from theory and research by Albert Bandura and refers to having the confidence to take on and put effort into succeeding at challenging tasks (Luthans *et al.*, 2007). Stajkovic and Luthans (1998) defined efficacy as the execution of specific actions in each context through the use of one's belief to mobilise motivation, cognitive resources and courses of action. Both positive and negative sides of motivation are influenced by high self-efficacy. People who display self-confidence can improve their motivation and therefore choose tasks that are challenging to extend their performance and motivate themselves against obstacles while working towards their goals (Cavus & Gokcen, 2015). Ozkalp (2009) stated that self-efficacy is related to one's belief about their personal abilities. Self-efficacy is considered as an inner agent that directs people and effectively executes different asks and roles in their life. Luthans, Youssef-Morgan and Avolio (2015) stated that self-efficacious people are distinguished by several characteristics. Firstly, self-efficacious people set high goals and select difficult tasks for themselves. They also invest the necessary effort to accomplish their goals and persevere through difficulties. Secondly, self-efficacious people welcome and thrive on challenges and are highly self-motivated.

## 3.3.3. Resiliency

Resiliency refers to the ability to sustain and bounce back when faced with adversity and problems to attain one's success (Luthans *et al.*, 2007). Psychological resiliency can be
described as the coping skills that people use in cases of uncertainty or negative situations (Luthans, Avey, Avolio, Norman & Combs, 2006). According to Cetin and Basim (2011) resiliency contains within itself the other components of psychological capital, hope, self-efficacy, and optimism. Various factors have been identified from positive psychology as contributing or hindering the development of resilience. These factors have been classified into assets, risk factors and values (Luthans *et al.*, 2015). Resilience assets are defined as "a measurable characteristic in a group of individuals or their situation that predicts positive outcome with respect to a specific outcome criterion" (Masten, Cutuli, Herbers & Reed, 2009, p. 119). Masten (2001) stated that individuals identify cognitive abilities, positive outlook on life, and emotional stability as potential assets that contribute to higher resilience. Resilience risk factors (also referred to as vulnerability factors) include destructive and dysfunctional experiences (such as stress or burnout) that can cause an elevated probability of an undesirable outcome (Masten *et al.*, 2009). PsyCap resilience is said to the "underlying value system that guides, shapes and gives consistency and meaning to one's cognitions, emotions and actions" (Luthans *et al.*, 2015, p. 151).

# 3.3.4. Optimism

In everyday language optimism is the expectation of positive and desirable events in the future. However, PsyCap optimism is more than the depositional tendency to expect good things to happen (Luthans et al., 2015). PsyCap optimism includes global positive expectations (Carver, Scheier, Miller & Fulford, 2009). These expectations are however also dependent on the reasons and attribution one uses to explain why specific events, whether positive or negative, occur in the past, present, and future (Seligman, 1998). Luthans et al. (2007) defined optimism as making a positive attribution about one's success now and in the future. Optimism can be conceptualised into two dimensional constructs. The first construct is the degree of permanence, this refers to the idea that positive events are permanent and negative events are temporary. The second construct is pervasiveness, this refers to the perception that positive causes are applicable to all events whereas negative causes are only applicable to some events (Dawkins, 2014). Therefore, optimism incorporates a positive explanatory style in which individuals attribute positive events directly to internal, pervasive, and permanent causes whereas negative events are attributed to temporary, external and situation specific factors (Seligman, 2002). Compared to self-efficacy which is context specific and hope which is goal specific, optimism is broader in scope as it includes overarching positive future expectations.

Compared to self-efficacy and hope which are internally derived, optimism also uses both internal and external attributions (Youssef & Luthans, 2013).

# 3.4. THEORIES OF PSYCHOLOGICAL CAPITAL

#### **3.4.1.** Positive psychology theory

Seligman (1998) devoted most of his career towards researching negative emotions and their contribution towards depression through concepts like "learned helplessness". Seligman (1998) detailed many ways in which psychology focused primarily on the disease model of mental health rather than focusing on factors that lead to joy and wholeness. Three main missions were identified in psychology as curing mental illness, making people's lives more fulfilling and identifying and nurturing high talent; however, according to Seligman (1998) the two latter goals have received less attention. Based on this, the field of positive psychology emerged. Positive psychology has been defined by Seligman and Csikszentmihalyi (2000) as the "scientific study of optimal human functioning that aims to discover and promote the factors that allow individual and communities to thrive". The positive psychology theory was developed with the goal of moving the emphasis away from what is wrong with people to what is right thus focusing on personal strength instead of weakness (Wright & Cropanzono, 2007). Lopez and Snyder (2009) defined positive psychology as the "scientific study of what makes life worth living". As stated by Luthans, Youssef-Morgan & Avolio (2015) positive psychology bases its conclusions on rigorous scientific methods and has served as a deliberate precedent and perspective for PsyCap.

As stated previously, two major parallel and complementary movements stemmed from the science-based positivity orientated approach. The first movement is referred to as Positive Organisational Scholarship (POS) and the second is referred to as Positive Organisational Behavior (POB) (Luthans, Youssef-Morgan & Avolio, 2015). Both movements serve as the fundamental perspective for psychological capital. POS is a "movement in organisational science that focuses on the dynamics leading to exceptional individual and organisational performance such as developing human strength, producing resilience and restoration and fostering vitality" (Cameron & Caza, 2004, p. 731). Although POS is considered as an "umbrella concept" in that it integrates a variety of positive approaches, it provides an important contribution towards PsyCap is its unique focus on the domain of organisational positivity (Youseff & Luthans, 2012; Luthans, Youssef-Morgan & Avolio, 2015).

Positive organisational behaviour is considered a framework for PsyCap and was first defined as "the study and application of positivity orientated 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). From the above definition, for a concept to be included into the conception of POB it should firstly be positive, be able to be measured, state-like, open to development and related to desired attitudinal, behavioural and performance outcomes. It should also meet the scientific criteria for being both research and theory based (Luthans, Youssef-Morgan & Avolio, 2015). The constructs of POB are also placed at the state end of the state-trait continuum (Youssef & Luthans, 2012). POB constructs are differentiated from pure traits which are defined as being stable across time (such as personality and intelligence) and pure states which are positioned at the other end of the continuum and includes things such as moods and emotions as shown in Figure 3.2 below:



Figure 3.4: The trait-state continuum (Luthans & Youssef, 2007).

Hope, efficacy, resilience, and optimism were shown to be fit in meeting the POB criteria and the higher order construct of PsyCap comprises of these four indicators (Luthans, Youssef & Avolio, 2007). Luthans, Youssef-Morgan & Avolio (2015) draws from the broaden and build theory (Fredrickson, 2001) and psychological resources theory (Hobfoll, 2002) and refers to the above four indictors as positive psychological resources that are part of an interactive and synergistic resource set.

The broaden and build theory of positive emotions states that certain positive emotions such as joy, pride and love all share the ability to broaden an individual's momentary through action repertoires and building on their personal resources (Fredrickson, 2001). According to Fredrickson (2004), the broaden and build theory suggests that positive emotions broaden people's attention and thinking, undo negative lingering emotional arousal, fuel one's psychological resilience, builds consequential personal resources, trigger upward spirals of greater wellbeing, and seed human flourishing.

#### **3.4.2.** Conservation of resources theory

The conservation of resources (COR) theory believes that individuals strive to obtain, retain, and foster those things that they centrally value (Hobfall, Halbesleben, Neveu & Westman, 2018). According to this theory, stress occurs when key resources is threatened with loss, has been lost or when there is a failure to gather key resources despite significant effort (Hobfall, Halbesleben, Neveu & Westman, 2018). At its core, COR is a motivational theory that explains human behaviours evolutionary need to acquire and conserve their resources. People build key resources to respond to stressors and build reservoirs of sustaining resources for future needs. In addition to this, obtaining personal and social resources creates in people and organisations the sense that they are capable of meeting stressful challenges when they arise (Hobfall, Halbesleben, Neveu & Westman, 2018). The COR theory has been used to describe the functioning of psychological capital as a higher order construct (Avey *et al.*, 2011). The positive psychology theory will be used as the theoretical framework for this study as it directly relates to the development and definition by Luthans *et al.* (2007) of psychological capital which was indicated as the basis for this study (see paragraph 3.2).

# 3.5. MODELS OF PSYCHOLOGICAL CAPITAL

#### 3.5.1. Comprehensive conceptual framework (Luthans & Youssef-Morgan, 2017).

The Comprehensive Conceptual Framework (Figure 3.3) synthesizes and provides a visual outline of PsyCap.



Figure 3.5: PsyCap conceptual framework (Luthans & Youssef-Morgan, 2017).

*Psychological capital as a state-like resource*. Firstly, psychological capital is seen as a state-like resource, as one of its distinguishing characteristics is its openness to change and development. Studies such as Avey *et al.* (2010) and Peterson *et al.* (2011) have supported that PsyCap changes over time. As stated previously, PsyCap has been conceptualised on a trait-state continuum in which "pure" states, those that are momentary, changeable, and unstable are at one end and pure traits (which are relatively difficult to change) are at the other end (Luthans & Youssef, 2007). Developments within the nature-nurture debate gives reasons for placing PsyCap on the continuum of stability and referred to be state-like rather than a state. Evidence from the research of positive psychology suggest that nature and nurture only determine half of the variance in one's levels of positivity whereas circumstances determine only 10% (Luthans and Youssef-Morgan, 2017). Thus, individuals only have 40% of positivity under their control and open to development and shaping. This is further supported by the developmental potential of PsyCap's resources (Hope, Efficacy, Resilience and Optimism).

**Psychological capital measures.** For PsyCap to be subject to rigorous scientific study and evidence-based applications, valid and reliable measures are required (Luthans and Youssef-Morgan, 2017). The PCQ-24 self-report measure is widely recognised and used in almost all PsyCap research (Avey *et al.*, 2011; Newman *et al.*, 2014). The measurements include six items measuring each of the four PsyCap resources that were adapted from established measures of hope, efficacy, resilience, and optimism. The items that have been selected for inclusion tap into the state-like psychological resources rather than focusing on traits or trait-like characteristics.

**Psychological capital theoretical mechanisms.** As shown in the centre of Figure 3.3 above, key theoretical mechanism in which PsyCap operates have been identified as agentic conation, cognitive appraisals, positive emotions, and social mechanisms (Youssef & Luthans, 2013). Conations are defined as the "personal, intentional, planful, deliberate, goal-orientated or striving component of motivation, the proactive aspect of behaviour" (Huitt, 1999, p. 3). Constituent positive psychological resources such as agency, intentionality, personal control of motivation and effort are important underlying themes of PsyCap. Goal-directed energy is also facilitated by conations. Motivation and resource development can be triggered through goal-directed energies that is necessary for goal pursuit and can promote a positive reaction to obstacles that are encountered (Luthans & Youssef-Morgan, 2017).

Positive cognitive appraisals are the next theoretical mechanism that has been identified, this mechanism is used to mentally reframe potentially negative situations into more positive light. This can lead to challenging goals being viewed as more appealing and worthy of one's energy. A key underlying theme of PsyCap is the perseverance when faced with obstacles and setbacks of which positive appraisals promote (Luthans *et al.*, 2007). Positive emotions and positivity in general are considered a by-product of PsyCap (Avey, Wernsing & Luthans, 2008). Positive affective states that facilitate broadening of ones thought-action repertoires can be triggered by the positive nature of PsyCap leading to higher creativity and a broader range of pathways (Snyder, 2000). Social mechanisms are included in PsyCap's theoretical mechanism as social support is an integral mechanism needed for building efficacy (Bandura, 1997) and resilience (Masten *et al.*, 2001). Optimism and hope pathways can also be facilitated by reliance on others when one's resources are scarce or lacking.

Antecedents and outcomes of psychological capital. A thorough look into the antecedents and outcomes of PsyCap is required to understand it from a systems perspective and as a developmental process; however, limited research has been conducted on these within PsyCap

(Luthans & Youssef-Morgan, 2017). A study conducted by Avey (2014) identified job characteristics, personality traits and supportive organisational climate as antecedents of PsyCap however demographic characteristics such as age and gender were found to have a weak relationship with PsyCap. Outcomes of PsyCap are particularly important as many businesses are concerned with how PsyCap influences the bottom-line which is consistent with the POB criteria of performance impact (Luthans & Youssef-Morgan, 2017). Studies conducted by Avey *et al.* (2011) and Newman *et al.* (2014) indicated that PsyCap is a predictor of performance and desirable employee attitudes. It was also found that PsyCap negatively relates to undesirable attitudes and behaviours. Another important finding by Avey *et al.* (2011) was that PsyCap related more strongly to outcomes in the service sector compared to the industrial sector.

**Psychological capital across levels of analysis**. The last component that will be discussed for the PsyCap Conceptual Framework is the level of analysis. PsyCap has mostly been conceptualised on the individual level however emerging research has shown that it is also relevant at higher levels of analysis (Luthans & Youssef-Morgan, 2017).



#### 3.5.2. A double-loop framework for PsyCap

Figure 3.6: Double-loop framework for PsyCap (Sweetman et al., 2011).

Luthans *et al.* (2007) argues that PsyCap is greater than some of its part, going beyond the four above-mentioned components. Common parts of cognitive and motivational resources are enabled through each facet of psychological capital. However, deeper, and broader effects are

expected when these resources are combined (Nafei, 2015). The double-loop framework (Figure 3.4) above demonstrates how combined PsyCap can better influence employee's performance. There are two loops within the framework, the first loop is the positive success loop in which the constructs hope, efficacy and optimism lie (Hsu, Wang, Chen & Dahlgaard-Park, 2014). People who experience high amounts of hope possess strong motivation and ability to generate multiple pathways to accomplish their goals (Sweetman, Luthans, Avey & Luthans, 2011). The second construct under this loop is self-efficacy. Self-efficacy is a selfmotivating mechanism which enables people to mobilize their actions towards reaching their goals, indicating that self-efficacious people will expend more effort towards goal achievement (Hsu et al., 2014). The last construct under the first loop is optimism, people who are optimistic tend to expect positive outcomes despite personal ability (Avey, 2014). Optimistic people generally have a more positive perspective. When this is combined with high levels of efficacy and hope individuals are more likely to pursue several alternative pathways to reach their goals. When goals are accomplished, higher levels of hope, efficacy and optimism are achieved, and individuals believe they can achieve future success; therefore, indicating a positive and cyclic loop (Luthans, Youssef & Avolio, 2015).

Even high levels of hope, efficacy and optimism do not guarantee success when setbacks occur (Kalla, 2016). The second loop, the bounce back loop, is significant as it takes people back to a normal psychological state from a devastated state. There are four constructs under this loop, namely resilience, efficacy, hope and optimism. Coutu (2002) states that elements of resilience include "a staunch acceptance of reality, a deep belief, often buttressed by strongly held values, that life is meaningful and uncanny ability to improvise" (p. 4). Based on this, resilience can be said to include characteristics of perseverance and adaptability. A range of problem-solving strategies and resources are more likely to be used by individuals with high levels of PsyCap as they are also less likely to dwell on problems. These individuals also remain optimistic during setbacks and generate plans for positive change. These increased positive emotions, perseverance and confidence help these individuals to bounce back from setbacks (Hsu *et al.*, 2014). The comprehensive conceptual framework will be used as the basis for this study as it directly relates to the dimensions of psychological capital and the positive psychology theory that is used as the theoretical foundation of the study.

# 3.6. RELATIONSHIP BETWEEN PSYCHOLOGICAL CAPITAL AND WORK ENGAGEMENT

Work engagement and psychological capital have shown direct links to each other in a study conducted by Soni and Rastogi (2019). The dimensions of psychological capital namely, hope, efficacy, optimism, and resilience showed a positive effect on the willingness of employees to perform extra role behaviour. It was also found that employees who rated higher on resilience were more engaged in their jobs as they were able to protect themselves from failure (Soni & Rastogi, 2019). Kotze (2017) found that psychological capital positively influenced two components of work engagement, namely vigor and dedication, with more influence on the dimension vigor. In a study conducted by Simons and Buitendach (2013) it was found that self-efficacy and optimism (which are dimensions of psychological capital) have a positive relationship with work engagement. Bakker and Demerouti (2008) support this view, as self-efficacy and optimism were shown to be personal resources that have predicted work engagement in South African organisations.

In more recent research, a study conducted by Erbasi and Ozbek (2016) found that the components of psychosocial capital (hope and optimism) can predict a person's work engagement significantly and can increase one's work engagement. In a study conducted by Soni and Rastogi (2019) high levels of psychological capital were shown to be associated with increased employee engagement. It was also found that the dimensions of psychological capital positively related to work engagement, indicating psychological capital has a strong connection with work engagement and that individuals who display higher levels of psychological capital are also more likely to be engaged at work (Costantini, De Paola, Ceschi, Sartori, Menenghini & Di Fabio, 2017). From the above studies, it can be deduced that PsyCap has positive impacts on employees work engagement; however, the effect of PsyCap on work engagement within the agricultural sector in South Africa has not yet been established.

# 3.7. PSYCHOLOGICAL CAPITAL WITHIN AGRICULTURE

In a study conducted by Chipfupa, Tagwi and Wale (2021) it was shown that there is a significant association between psychological capital and climate change adaptation behaviour, confirming the importance of such constructs within the agricultural industry. At a farmer's level, Chipfupa, Tagwi and Wale (2021) identified a need to integrate ideals of psychological capital in farmer days, farmer training and mentorship. According to Chipfupa (2017), farmers who have been endowed with positive psychological capital were found to be more persistent

and productive despite facing prevailing constraints. However, this study also indicated that farmers have less confidence in themselves as they have developed a dependency syndrome (expecting government to help them with everything). Abay, Blalock and Berhane (2018) found that improving the psychological capital of farmers can facilitate agricultural transformation.

In the study conducted by Chipfupa (2017) farmers displayed confidence, optimism, hopefulness, and resiliency which are all components of psychological capital, however it was also noted that aspects such as hopefulness needs boosting for them to succeed in farming. Many studies have been conducted on the role of psychological capital for farmers; however, little research has been conducted on extension officers; therefore, indicating a gap and need for such research.

# 3.8. SUMMARY

This chapter provided a brief overview of the independent variable, psychological capital. The definitions and dimensions of PsyCap were discussed. The definition by Luthans, Youssef-Morgan and Avolio (2007) will be used for the purpose of this study as it directly relates to the four dimensions of PsyCap as well as the PsyCap (PCQ-24) Scale. Along with this the comprehensive conceptual framework of PsyCap will be used as the basis for the study as it expresses the dimensions used to measure the constructs as well as being in line with the definition of PsyCap. In addition, the positive psychology theory will be used for the purpose of this study due to its relationship with the PsyCap definition adopted. The chapter further discussed the relationship between work engagement and PsyCap followed by a discussion of PsyCap within agriculture. The following chapter will discuss the second independent variable, self-leadership.

#### **CHAPTER 4: SELF-LEADERSHIP**

### 4.1. INTRODUCTION

Leadership has gained growing attention by researchers worldwide. According to Northhouse (2016), leadership can be defined as "a process whereby an individual influences a group of individuals to achieve a common goal" (p. 6). The primary focus of leadership was historically placed on discovering how leaders influence their followers. However, an alternative approach and perspective emerged in which focus was placed on how people manage and lead themselves (Stewart, Courtright & Manz, 2011). Due to increasing competition among organisations and the challenge of traditional assumptions of organisational behaviour and organisational psychology (Stewart, Courtright & Manz, 2019), the concept of self-leadership emerged and led to many organisations requiring employees to become more responsible and participate in decision making, moving from a top-down approach, and changing to an environment in which employees need to act on their own behalf and take greater control (Costello, Brunner & Hasty, 2002). Self-leadership, which can broadly be defined as "the process of influencing oneself", challenges the fundamental assumption that for leadership to occur, both a leader and a follower are required (Manz, 1983, p. 5). Therefore, the selfleadership concept suggests that a single individual can be both a leader and a follower (Stewart, Courtright & Manz, 2019). According to Martin (2020), the concept of selfleadership is useful in the leadership field as it has the potential to provide specific strategies for performance improvement using reflection, testing and self-coaching. According to Teschner (2019), people who are armed with self-leadership skills feel more positive about themselves and their jobs.

The structure of the chapter is as follows. Firstly, the nature and definitions of leadership and self-leadership will be explored, this will be followed by an examination of the different theories of self-leadership. The dimensions of self-leadership will be investigated next. The relationship between self-leadership and work engagement will follow, and lastly self-leadership within agriculture will be explored.

#### 4.2. NATURE AND DEFINITION OF SELF-LEADERSHIP

Self-leadership was first introduced by Manz and Sims (1980) as an extension to the selfmanagement theory and was defined as "the process of influencing oneself" (Neck & Manz, 2010). Self-leadership is considered a self-influence process where individuals learn navigation, motivation, and the ability to lead themselves towards achieving their desired behaviours and results (Manz, 1996). According to Crossen (2015), the extent to which leaders engage in self-leadership strategies can also influence how they lead others. Previous research focused on the influence of leaders towards their followers; however, self-leadership changes the perspective inward, towards examining how a leader leads and manages themselves (Furtner & Fauthmann, 2010). Self-leadership can be defined as the process of influencing oneself through different cognitive, affective, and motivational-volitional processes in leading one's thoughts and behaviours (Furtner, Baldeggar & Rauthmann, 2012; Neck & Manz, 2010). Stemming from a culture of psychological safety, self-leadership has been argued to be a form of advanced self-influence (Malinga, Stander & Nell, 2019).

Positive self-leadership was defined by Du Plessis (2019) as the identification and application of one's signature strengths to initiate, maintain and sustain self-influencing behaviours. Selfleadership as a normative process, includes strategies that addresses tasks, motivates one to achieved desired outcomes and the process one uses in the execution (Manz, 1991). Neck and Houghton (2006) further defined self-leadership as the process in which individuals influence and lead themselves through self-regulation and control their behaviour while using specific sets of behavioural and cognitive strategies. According to Joshi (2019), self-leadership is the enabling process in which an individual learns to know him/herself better and through this selfunderstanding can direct his/her life into a better direction. Blanchard (2007) summarised selfleadership as the systematic set of actions and mental strategies that individuals apply in order know and discover themselves better. Such information can be used by individuals to develop themselves and others through self-influence. The above definitions have been supported by Van Zyl et al. (2016) who defines self-leadership as the application of a set of behavioural actions and mental strategies that individuals use to discover and know themselves better. Bryant and Kazan (2013) define self-leadership as the intentional influencing of one's own thinking, feeling and behaviours to achieve one's aims.

For the purpose of this study the definition by Neck and Houghton (2006) was used as the definition shows practical relevance, has been used in several studies and provides a summary of self-leadership strategies. The definition is also in line with the measuring instrument namely, the abbreviated self-leadership questionnaire (ASLQ) combined with some questions from the revised self-leadership questionnaire (RSLQ) that was used to measure self-leadership.

# 4.3. THEORIES OF SELF-LEADERSHIP

The modern concept of self-leadership evolved from a broader theoretical framework in the field of psychology, including self-regulation (Carver & Scheier, 1981), social cognitive theory (Bandura, 1986), self-management (Manz & Sims, 1980), intrinsic motivation theory and positive psychology. Neck and Houghton (2006) argue that self-leadership is a normative concept that operates within the theoretical contexts of self-regulation, social cognitive theory, self-control, and intrinsic motivation theories that provide behavioural and cognitive prescriptions. In addition to these theoretical frameworks, self-leadership is also said to draw on content theories such as motivation and behaviour which include cognitive evaluation and self-determination theory (Deci, 1972). Self-leadership, therefore, focuses on a specific set of cognitive and behavioural strategies intended to influence an individual's performance (Harunavamwe, 2018). The following figure displays the conceptual foundations of self-leadership with a brief description of the self-management, self-regulation and social cognitive theories provided below:



Figure 4.7: Conceptual foundations: The building block of self-leadership (Neck, Manz & Houghton, 2019)

# 4.3.1. Self-management theory

Within the broader theory of self-control, Manz and Sims (1980) proposed the term selfmanagement. Self-management refers to the degree in which an employee within an organisation takes responsibility for the managerial aspect of the job and goes beyond mere execution of responsibilities. Good self-management includes abilities such as goal setting, decision-making, focussing, planning, and self-development. Self-management in the context of organisations is related to the ability to control one's own disruptive impulses, to work in a transparent manner, to take responsibility for manging oneself (work consciously), to be flexible and adaptable to changing situations, to be driven towards personal excellence and achievement, and readiness to act when needed (Bryant & Kazan, 2013). Compared to selfleadership, self-management is externally motivated and targets professional outcomes and efficiency. Self-leadership is a broader self-influence process aimed at personal fulfilment which includes self-motivating cognitive, behavioural, and mental strategies (Bryant & Kazan, 2013). Although self-leadership encompasses self-management it supersedes it as it anchors processes such as self-regulation and self-control to internally generated, superordinate standards of behaviour (Markham & Markham, 1995). According to Markham and Markham (1995), self-management is presented as a special subset of self-leadership; however, selfmanagement encompasses situations in which the individual takes responsibility for the results of the job when the means have already been established by the organisation. According to Neck, Manz and Houghton (2019), self-management is more concerned with how discrepancy reduction should be approached and allows little self-influence on what should be done and why it should be done; therefore, self-management falls within the middle of the continuum of self-influence. In contrast, self-leadership entails conditions in which responsibility for one's goals as well as the means for achieving them become internalised.

# 4.3.2. Self-regulation theory

According to Neck and Houghton (2006), "self-leadership strategies operate within a larger theoretical framework of self-regulation". Behavioural self-regulation can be described as a sensor monitoring performance in which the environment yields a signal that is compared to a desired state. Neck, Manz and Houghton (2019) state that people monitor their behaviours relative to a set standard or desired state. Individuals adjust their behaviours in an effort and attempt to improve their performance and eliminate dissimilitude when a difference exists between their level of performance and the standard set (Neck *et al.*, 2019). Behavioural change (which is facilitated through) the adjustment of effort; therefore, occurs when a discrepancy exists (Carver, 1979; Carver & Scheier. 1981). Self-leadership strategies are said to enhance the effectiveness of self-regulation (Neck & Houghton, 2006). Many self-leadership strategies are founded upon other established theories of motivation and self-influence; however, theorists have questioned the uniqueness of this construct with respect to other constructs such as motivation and personality (Neck & Houghton, 2006). Although self-leadership does overlap with other theories of motivation it fails to understand that self-leadership is a normative model rather than a deductive theory (Neck & Houghton, 2006). Self-leadership is

therefore seen as a complimentary set of strategies designed to improve the self-regulation process (Neck & Houghton, 2006).

### 4.3.3. Social cognitive theory

Self-leadership also operates within the concept of the social cognitive theory (Bandura, 1986). Social cognitive theory suggests that behaviour can be best explained by the threefold shared relationship among internal and external influences. This theory provides the other major conceptual framework in which the self-leadership strategy is based (Manz, 1986). The social cognitive theory primarily deals with the concept of discrepancy production which is then followed by discrepancy reduction (Neck & Houghton, 2006). Social cognitive theory, therefore, involves a dual-control system in which both the discrepancy is produced and reduced (Neck et al., 2019). Two important self-influence processes are suggested by the social cognitive theory and these help as a motivating factor for people to achieve their goals. The first is the triadic reciprocal model of behaviour, this suggests that human behaviour is best explained by eternal factors relating to the world in which we live (Neck et al., 2019). The second self-influence process is self-efficacy. Self-efficacy is described as a person's selfassessment of necessary capabilities needed to perform a specific task and is considered a key construct in the social cognitive theory. The basic assumption of this theory is that based on past performance experiences, individuals have control over setting their own performance standards. These performance goals are usually set in a manner that creates a discrepancy. Elimination of discrepancies results in higher standards that are set; therefore, beginning the process again (Neck & Houghton, 2006). In contrast to the self-regulation theory which focuses on internal regulation of standards, the social cognitive theory stresses the importance of selfreactive influences of satisfaction and self-efficacy (Neck & Houghton, 2006).

This study will use a combination of conceptual foundations, namely the self-management theory, social cognitive theory, and self-regulation theory as the theoretical framework. The above frameworks are in line with the definition of self-leadership by Neck and Houghton (2006) which outline the strategies that were used in the development of self-leadership and its measurement scale.

## 4.4. STRATEGIES OF SELF-LEADERSHIP

Self-regulatory effectiveness is enhanced using specific self-leadership behavioural and cognitive strategies. This contrasts with the self-regulation theory that tries to explain why

people behave the way they do (Breevaart, Bakker, Demerouti & Derks, 2016). Three strategies to self-leadership, namely behaviour-focused, natural reward, and constructive thought patterns indicate that self-leadership incorporates a set of three complimentary strategies which, therefore, impact subsequent outcomes (Manz & Neck, 2004). According to Neck and Houghton (2006) through increased self-focus, accurate feedback perceptions and appropriate goals, these strategies can support the effective self-regulation of individuals.

Three strategies of self-leadership, namely Behavioural-focused, natural reward, and constructive thought pattern strategies along with their components are shown in Figure 4.2 and explained in more detail below.



Figure 4.8: Self-leadership strategies (Manz & Neck, 2004).

#### 4.4.1. Behaviour-focused strategy

The first strategy reflects the behavioural domain and includes self-observation, self-goal setting, self-reward, self-punishment, and self-cueing (Furtner, Baldeggar & Rauthmann, 2012). Behaviour focussed strategies not only focus on behaviours but also on increasing individual's self-awareness so that behavioural management can be facilitated (Manz & Neck, 2004). According to Neck and Manz (2013), behavioural strategies specifically focus on the managing behaviours related to unpleasant but necessary tasks directed towards enhancing one's self-consciousness. Positive desirable behaviours are encouraged using behavioural strategies leading to successful outcomes while undesirable and negative behaviours that lead to unpleasant outcomes are suppressed (Neck & Houghton, 2006). The five strategies that

belong to behaviour focused strategies are self-observation, self-goal, self-reward, self-punishment, and self-cueing (Houghton & Neck, 2002).

#### 4.4.1.1. Self-observation

Self-observation comprises of self-attentional processes in which people monitor the why, how, and when to display certain behaviours to eliminate unproductive behaviours (Furtner, Baldeggar & Rauthmann, 2012; Ugurlouglu, Saygili, Ozer & Santas, 2013). Self-leadership begins with self-observation, noticing one's own thoughts, feelings, and behaviours. The focus of our observations shifts from other's actions towards paying attention to oneself and how individuals react to people and events (Byrant & Kazan, 2013). Self-observation is about the when, why and under what conditions certain behaviours are exhibited. According to Manz and Neck (2004), self-observing individuals are more aware of their behaviours and why and when these behaviours are shown. Behaviours that need to be changed, enhanced, or terminated for the sake of success are identified through self-observation. When accurate information about an individual is observed, it becomes easier to effectively manage behaviours which can result in behaviour altering goals to improve oneself (Neck & Manz, 2013).

# 4.4.1.2. Self-goal setting

Self-goal setting refers to the extent to which an individual provides self-direction using personal goals (Politis, 2006). Knowing where one is going is a core element of self-leadership, therefore, self-goal setting is an important strategy for creating direction, motivating, and keeping oneself accountable (Byrant & Kazan, 2013). According to Furtner, Balddeggar and Rauthmann (2012), for people to develop, enforce and promote constructive behaviours they need to set realistic goals. These goals need to be set within a certain amount of time and with a given number of resources.

# 4.4.1.3. Self-reward and self-punishment

Self-reward (such as mentally praising oneself for a job well done or treating oneself to something enjoyable when goals are attained) and self-punishment strategies (such as constructive criticism) can be used to motivate oneself towards achieving one's goal (Furtner, Baldeggar & Rauthmann, 2012; Houghton, Dawley & DiLiello, 2012; Houghton & Neck, 2002).

Self-reward is used as positive systematic reinforcement of one's own thoughts and behaviours regarding achievement (Furtner, Sachse & Exenberger, 2012). Self-reward and self-

punishment are essential to self-leadership as they help to disengage from the need for recognition from others to acting as one's own motivator (Byrant & Kazan, 2013). Self-reward has shown to significantly motivate an individual to achieve set goals (Neck & Manz, 2013). Self-punishment is described as the opposite of self-reward and should be used carefully as heavy self-punishment can lead to impaired motivation.

# 4.4.1.4. Self-cueing

The last strategy is self-cueing which refers to using reminders and attention focusers to help in identifying important moments and tasks (Byrant & Kazan, 2013). Using external cues such as using external memory devices (e.g., notes) and motivational posters can be used to remind oneself of important steps, goals and motivations and can keep one focused on goal attainment (Byrant & Kazan, 2013; Furtner, Baldeggar & Rauthmann, 2012).

#### 4.4.2. Natural reward strategy

The natural reward strategy focuses more on building natural motivation into the task itself thereby fostering positive affect (Manz, 2015). In other words, striving to create a motivating relationship with our work to perform tasks for their own value rather than for external rewards (Manz, 2015). According to Du Plessis (2019), the aim of natural reward strategies is to create or find situations where individuals find tasks or activities innately rewarding. These strategies could include building more pleasant and desirable features into a task or focussing one's attention on aspects of a task one finds inherently rewarding. Through the focus on enjoyable task features, natural reward aims to increase feelings of competence and self-determination (Alves et al., 2006). According to Norris (2008), these tasks become naturally rewarding when these features are built into activities. Two natural reward strategies are applied to a task. The first strategy includes building more pleasant and enjoyable features into a given task or activity. The second strategy aims at shaping one's own perception by focusing attention away from the unpleasant aspects of a task (Mahembe, Engelbrecht & De Kock, 2013). The former strategy represents making a task better by changing it in itself whereas the second strategy aims at cognitive reframing to make the task seem better (Mahembe, Engelbrecht & De Kock, 2013). The aim of these strategies is to increase feelings of competence and self-determination by focussing one attention to the more enjoyable features of a task (Kotze, 2016).

#### 4.4.3. Constructive thought pattern strategies

This strategy focuses on positive patterns of perceptions and thought to reduce dysfunctional thought patterns and foster optimistic and adaptive thinking patterns (Crossen, 2015). Constructive thought patterns deal with the changing patterns of thinking to create more positive ones (Bryant & Kazan, 2013). This can be done through mental strategies, where negative thoughts are replaced by optimistic self-talk (Byrant & Kazan, 2013). Byrant and Kazan (2013) identified four mental strategies to attain constructive thoughts as improving one's own belief system, using imagination to facilitate desirable performance, using self-talk, and learning and using new and improved scripts. Dysfunctional thoughts are therefore restructured into functional thinking patterns. Constructive thought pattern strategies use both positive self-talk (vocalising one's belief to complete a given task) and mental imagery to successfully execute tasks (Crossen, 2015; Furtner, Baldeggar & Rauthmann, 2012). These strategies aim at changing ones thinking patterns and can positively impact outcome expectations (Boss & Sims, 2008).

#### 4.4.3.1. Positive self-talk

Positive self-talk can be defined as one's inner speech to oneself (Hardy, 2006), or what we covertly tell ourselves. Manz and Neck (1991) recommended self-talk as a self-influencing tool to improve personal effectiveness of employees and managers. The goal is to develop and maintain constructive thought patterns (Godwin, Neck & Houghton, 1999). Positive emotional states and cognition, using constant self-dialogue, can be improved with positive self-talk (Harunavamwe, Nel & Van Zyl, 2020). Positive self-talk strategies can be used by employees to eliminate irrational and pessimistic thoughts and facilitate more optimistic self-dialogue. This can result in employees' abilities to lead themselves using cognitive thought pattern strategies (Harunavamwe et al., 2020). Constructive thought patterns have also been linked to optimistic thinking. This leads to greater persistence in the face of challenges as well as greater propensity to recognise the challenges that need to be overcome and trying a variety of approaches to find an effective solution (DiLiello & Houghton, 2006; Neck & Manz, 2010). According to Rogelberg et al. (2012), dysfunctional thinking can reduce the ability of a leader to develop innovative solutions to problems and adapt to new arising challenges. Obstacles that are perceived as problems rather than opportunities can also decrease one's willingness to persist, which is a necessary component of adapting and developing creative ideas (Neck & Manz, 2010).

# 4.4.3.2. Mental imagery

Mental imagery refers to imagining the successful performance of a task before it is completed (Neck & Manz, 1992). According to Harunavamwe *et al.* (2020), mental imagery is the process in which virtual behaviours like real ones are symbolically made and experienced by individuals. Imagery is defined by Blankert and Hamstra (2017) as a performance improvement tool in which the body and mind are "programmed" with the purpose of optimally responding in a performance situation. Mental imagery allows one to "pre-experience" future activities and anticipate their potential to be pleasant and rewarding (Holmes, Blackwell, Burnett Heyes, Renner & Raes, 2016). According to Renner and Holmes (2018), mental imagery can act as motivational amplifier. Actual engagement in activities is promoted by increasing the motivational aspects of planned activities (Renner & Holmes, 2018). Positive imagery is more likely to result in successful performance of the actual task as compared to negative imagery. Employees use mental imagery by picturing the desired results of a specific behavioural process being achieved before the actual process begins (Houghton, Neck & Manz, 2003).

# 4.4.3.3. Recognising and replacing negative beliefs and assumptions

According to Burns (1980), dysfunctional thinking involves hindering cognitive distortions in one's personal effectiveness and can lead to negative emotions such as depression. Common dysfunctional beliefs and assumptions are based on distorted thoughts and can be activated by troubling situations. Self-leaders can use positive beliefs and assumptions to eliminate negative beliefs and assumptions (Neck & Manz, 1992). Employees positive constructive thought processes can be automatically and inherently increased by reducing destructive thought patterns that affect employees emotional and behavioural states (Norris, 2008). Harunavamwe *et al.* (2020) stated that rather than seeing difficulties as obstacles, individuals thought patterns can be altered by focusing on potentially available opportunities in times of difficulties. Dysfunctional thought process can be minimized by identifying and changing distorted and irrational beliefs and assumptions and this can improve cognitive effectiveness (Neck & Houghton, 2006).

# 4.5. OUTCOMES OF SELF-LEADERSHIP

Neck and Houghton (2006) suggested several predictable outcomes associated with selfleadership strategies that may serve as the mechanisms that affect individuals and organisational performance.



Figure 4.9: Self-leadership predictable outcomes (Neck & Houghton, 2006).

Firstly, commitment and independence have been shown to be a positive outcome of self-leadership. Individuals engage in self-leadership when they develop a sense of ownership over tasks and demonstrate higher levels of commitment to their tasks, goals and organisations (Neck & Houghton, 2006). According to Cranmer, Goldmann and Houghton (2019), self-leaders embrace proactive attitudes and behaviours which encourages positive adjustment to specified tasks and activities. In addition to this, employees invest their psychological and job-related resources while practicing self-reward and behavioural strategies leading them to remain committed and develop ties within an organisation (Cranmer *et al.*, 2019). Heightened levels of independence in decision making are experienced by individuals with self-leadership, this is due to greater feelings of control and autonomy (Manz & Sims, 2001).

The second outcome of self-leadership is creativity. For organisations to be innovative they need to capitalise on employees' abilities to be innovative (Shaemi & Teimouri, 2019). Theorists such as Manz and Sims (2001) suggested a relationship between creativity and self-leadership. Phelan and Young (2003) spoke about creative self-leadership referring to one's reflective internal processes by which individuals consciously and constructively navigate their thoughts towards the creation of desired change, improvements, and innovations. A significant relationship was also found by Phelan and Young (2003) between creative self-leadership and

creativity. Shaemi and Teimouri (2019) stated that employees high in self-leadership, independence, feelings of self-determination and intrinsic motivation are positively related to the creative and innovative potential of employees.

Psychological empowerment is another outcome that has been identified with self-leadership. According to Wilson (2011) the degree to which individuals perceive to be empowered is known as psychological empowerment. Three conditions were identified by Peccei and Rosenthal (2001) for individuals to experience psychological empowerment. The first condition was identified as understanding their organisational role. The second condition is feeling as if they have the means and resources to accomplish their work and respond to unexpected adversity. Lastly, the third condition is the perception that they have autonomy to employ these means and resources towards their work. Carson and King (2005) stated that direction and motivation within organisations are influenced by empowerment and self-leadership as greater emphasis is placed on employee's mindsets and skills development. In the study by Wilson (2011) it was confirmed that there was a positive relationship between psychological empowerment and the two strategies of self-leadership, namely behavioural focused strategies, and natural rewards.

Trust and team potency have been presented as critical components in self-managing teams and is another identified outcome of self-leadership. According to Bligh, Pearce and Kohles (2006), individuals are influenced by interactions with team members within a team environment and this potentially impacts on the collective thoughts, beliefs, and attitudes of team members. Having self-leadership within teams can lead to a shift from individual-level independence to team level homogeneity in team members trust and team potency (Bligh et al., 2006). Trust, which is defined as an individual or team's belief in another individual or groups efforts to uphold commitments, being honest and not taking advantage of opportunities given (Cummings & Bromiley, 1996), has been cited as an important variable with strong potential to influence a groups behaviour. According to Bligh et al. (2006), the extent to which team members engage in self-leadership can positively affect their team interactions which can result in the development of higher trust amongst team members. Behaviour focused selfleadership strategies can also display to other team members an individual's efforts towards upholding commitments, being honest and not taking advantage of other team members (Bligh et al., 2006). Additionally, Bligh et al. (2006) argue that a critical component to the development of team potency, which can be defined as the collective belief within a team that it can be effective (Guzzo, Yost, Campbell & Shea, 1993), is self-leadership.

Job satisfaction, which was defined by Iverson and Maguire (2000) as an employee's attitude towards a job, positive or negative and the overall degree to which the employee likes the job, is another outcome associated with self-leadership. It was shown in a study conducted by Obondo (2019) that there was a strong relationship between self-leadership and job satisfaction, indicating a link between the two concepts.

#### 4.6. DEVELOPING SELF-LEADERSHIP

According to Stewart, Courtright and Manz (2019), although some people lead themselves more consciously and effectively compared to others, everyone can lead themselves. However, self-leadership skills or competencies can be developed by applying them. Tat and Zeitel-Bank (2013) state that self-leadership competencies develop when an individual undergoes real experiences on a physical level over a certain period. Self-leadership cannot be developed through formal education, but rather is a learning process of concrete experience and reflective observation. Tat and Zeitel-Bank (2013) mentioned many ways in which self-leadership competencies can be developed including concentration, self-awareness, self-discipline, creating positive thought patterns, flexibility and balance, empathy, communication, and relaxation. According to Neuhaus (2020), leading oneself requires knowledge of who you are and what experiences are important. This can be done by identifying your talents, skills and strengths that enable you to pursue your goals by using your strong points.

# 4.7. THE RELATIONSHIP BETWEEN SELF-LEADERSHIP AND WORK ENGAGEMENT

Evidence has emerged of a statistically significant positive relationship between self-leadership and work engagement. Breevaart, Bakker and Demerouti (2014) found that daily selfmanagement comprising of the five strategies self-goal setting, self-reward, self-punishment, self-observation, and self-cueing were all positively related to increasing an employee's daily work engagement. Self-leadership can enable employees to motivate themselves and optimise their working environment, therefore, leading to increased worked engagement (Breevaart, Bakker and Demerouti, 2014). However, in contrast to Breevaart, Bakker and Demerouti (2014), Knotts (2018) found no direct relationship between self-leadership and work engagement; however, they stated that self-leadership may impact work engagement but not without a mechanism through which this process can be transmitted. Harunavamwe *et al.* (2020) stated that self-leadership generates work engagement. According to Kotze (2018), selfleadership encourages and teaches one to use their resources to fulfil their needs which results in higher cognitive functioning and improved work engagement. Self-leaders also use their natural reward strategies to enhance their intrinsic motivation and work engagement (Houghton & Neck, 2002). Employees who show continuous self-management, through expanding and stimulating psychological and personal resources (performing self-management behaviours) will enhance their levels of work engagement as they as keen on conserving and mobilizing their resources to fit in with the organisation (Harunavamwe *et al.*, 2020). According to Inam, Ho, Sheikh, Shafqat and Najam (2021), self-leadership improves work engagement which further increases an employee's performance.

# 4.8. THE RELATIONSHIP BETWEEN SELF-LEADERSHIP AND PSYCHOLOGICAL CAPITAL

Little research has been conducted on the relationship between self-leadership and psychological capital; however, when looking at the sub-dimensions of these constructs some light may be shared on the possible relationship. Self-leadership has been shown to be related to higher psychological functioning (Kotze, 2017). According to the study conducted by Kotze (2017), PsyCap was found to be determined by self-leadership and mindfulness. Norris (2008) stated that employees who are more confident in their self-efficacy experienced self-leadership. Self-efficacy is a dimension of psychological capital therefore increasing one's self-efficacy may increase one's confidence to be a self-leader as self-efficacy is stated to be one of the most common outcomes of self-leadership (Neck & Houghton, 2006). It was also shown that selfleadership had statistically significant positive influences on PsyCap (Kotze, 2017). Maykrantz, Langlinais, Houghton and Neck (2021) further established that self-leadership is a key potential antecedent for developing the cognitive resources of PsyCap. Their results showed that a strong relationship existed between self-leadership and PsyCap. Self-leadership entails self-observation, this could enable employees to create alternative pathways which are inspired by hope (another dimension of psychological capital) to achieve their goals; therefore, indicating another possible relationship between the dimensions of these two constructs (DiLiello & Houghton, 2006). In a study conducted by Kotze (2017) it was found that selfleadership and mindfulness had a positive strong influence on psychological capital with selfleadership having a stronger influence than mindfulness.

# 4.9. SELF-LEADERSHIP IN AGRICULTURE

Very little research has been conducted on self-leadership within the agricultural sector, specifically within agricultural extension. In a study conducted by Khalil, Ismail, Suandi and

Silong (2008) the roles of the extension worker as a leader were assessed; however, specific research into the self-leadership of extension workers has not been investigated. Leadership is stated to be a crucial component of agricultural extension services as it serves as a critical strategic importance in developing groups of farmers within the community. Khalil, Ismail, Suandi and Silong (2008) stated that extension workers should enhance their skills and abilities required for the leadership role, this enhancement could happen through a process of self-leadership. In a study conducted by Kor (2016) it was found that people who display innovative work behaviour reported higher levels of self-leadership. For agricultural extension services to accomplish its goals, skilled agricultural extension workers are needed to coordinate human capital and material resources (Khalil, Ismail, Suandi & Silong, 2008) therefore indicating a need for innovative work behaviour. It is clear from the literature that research on self-leadership, and specifically the relationship between self-leadership and work engagement has not been established within agricultural extension hence the current study seeks to understand the relationship between these two constructs.

# 4.10. EFFECT OF PSYCHOLOGICAL CAPITAL AND SELF-LEADERSHIP ON WORK ENGAGEMENT

In a study conducted by Kotze (2017) it was found that PsyCap has a statistically significant relationship with the vigor and dedication components of work engagement. It was also found within the same study that self-leadership and mindfulness has a positive significant relationship with PsyCap (Kotze, 2017). PsyCap was also shown to explain the influence of self-leadership on the work engagement component, dedication. Overall, the study by Kotze (2017) found that self-leadership and PsyCap are factors that influences an employee work engagement indicating a good relationship between the three concepts. However, it should be noted that in a study conducted by Houghton and Yoho (2005) self-leadership and PsyCap showed no relationship however their sub-components interact; therefore, indicating a need to look at each individual sub-component of these two concepts.

#### 4.11. SUMMARY

This chapter provided a brief overview of the independent variable, self-leadership. The definitions and dimensions of self-leadership were explored. For this study the definition by Neck and Houghton (2006), who defined self-leadership as the process in which individuals regulate and control their behaviour, influencing and leading themselves while using specific sets of behavioural and cognitive strategies, was used. This definition is in line with the

measuring scale used by Houghton and Neck (2002), the revised self-leadership questionnaire (RSLQ) and the abbreviated self-leadership questionnaire (ASLQ) that will be used to measure self-leadership. The definition by Neck and Houghton (2006) also aligns with the theories of self-management, self-regulation and social cognitive theory which were used as the foundations in the development of self-leadership. Therefore, this definition is in line with the measuring scales and theories used in this study. The strategies of self-leadership which are behavioural focused, natural reward and constructive thought patterns was investigated next. The relationship between self-leadership and psychological capital as well as the relationship between self-leadership in agriculture. The following chapter will discuss the methodology that was used to conduct the study.

#### **CHAPTER 5: RESEARCH METHODOLOGY**

#### 5.1. INTRODUCTION

In the following chapter the research methodology that was used within the study will be discussed. A detailed description of the research methods that were followed in the process of conducting the research will be given including the research setting (namely the agricultural extension sector) and the study units (agricultural extension advisors in South Africa). The selection of test persons will be discussed, followed by a discussion on the data gathering methods, specifically the Utrecht Work Engagement Scale (UWES), PsyCap (PCQ-24) and the Abbreviated Self-Leadership Questionnaire (ASLQ) and Revised Self-Leadership Questionnaire (RSLQ). The last section of this chapter will reveal the statistical methods that was used in the data analysis. The primary focus of the study was to determine the effect that psychological capital and self-leadership have on the work engagement of agricultural extension advisors in South Africa.

#### 5.2. RESEARCH DESIGN

Research approaches or designs are plans and procedures used to span the steps taken in research from basic assumptions to detailed methods of data collection, analysis, and interpretation (Creswell & Creswell, 2018). According to Bryman and Bell (2019), research design involves the structure that guides the collection and analysis of data. When deciding on the research design to be used its important to consider the goal that you want to accomplish and the kind of explanation you would like to develop (Bryman & Bell, 2019). Three types of research designs have been identified by Creswell and Creswell: namely, quantitative research, qualitative research, and mixed-methods research (2018).

For research that involves validation and hypothesis testing the quantitative approach is considered the best research method. A post-positivist stance was taken in which a quantitative approach where empirical findings were tested statistically was used within this study as the relationships between three variables namely, psychological capital, self-leadership and work engagement was tested using established closed-ended research instruments.

### 5.3. SURVEY RESEARCH

Survey research is a popular method used in social sciences as the researcher selects a sample of respondents and administers a standardised questionnaire to each person in the sample

(Babbie, 2013). Survey research can be used for descriptive, explanatory, and exploratory research; however, they are mostly used in studies that have individual people as the units of analysis (Babbie, 2013). Despite its downfalls, survey research has become a widespread method as its derived considerable creditability within academic institutions (Rea & Parker, 2014). Survey research is also usually encouraged when primary data is collected through self-report questionnaires to conduct original research. The aim of survey research is to provide generalised findings about a large population by only studying a small portion of it (Rea & Parker, 2014). This study used a cross-sectional survey research design in which primary data was collected from respondents using several self-administrated questionnaires, thereafter the quantifiable data obtained was examined to detect relationships between the variables.

#### 5.4. STUDY POPULATION

The focus of the study was on agricultural extension advisors within and across South Africa. The main population that the study focused on was agricultural extension officers who mainly work outdoors with the farmers directly and spend time researching and developing sustainable farming plans, upper-level management was not included within the study. Agricultural extension officers spend most of their days working directly with farmers and therefore communication, persuasive abilities and interpersonal skills are highly important.

#### 5.5. DATA GATHERING METHODS AND SAMPLING PROCEDURE

The sample was drawn from the South African Society for Agricultural Extension (SASAE) database consisting of over 500 members. Permission was granted to gain access to the membership database by the Board of SASAE in which the database was emailed to the researcher. Responses was gathered through a non-probability sampling method as the sample was drawn based on willingness and availability. Convenience sampling can be defined by Shaughnessy, Zechmeister and Zechmeister (2012) as the selection of participants based primarily on their availability and willingness to participate in the study. Convenience sampling also includes individuals self-selecting to be part of the research study (Clow & James, 2014). This study method is preferred due to its benefits of being less time consuming. This sampling method was chosen as its less time consuming and was more efficient to collect data during the COVID-19 pandemic. The measuring instruments discussed below were placed onto EvaSys (online survey) and the link to the online survey was sent out to all participants on the SASAE database via email.

#### 5.6. STUDY SAMPLE

Out of the 500 questionnaires sent out, only 103 were returned in which most of the participants completed the scales on their questionnaires so no further responses were omitted. Links to the survey were sent out several times to the respondents to remind them to complete it; however, despite this the researcher was only able to attain a total sample of 103 participants. A response rate according to Bryman and Bell (2019) can be defined as the percentage of the sample that participated in the study. Unfortunately, the response rate for this study was only 20.6% which is very low and may not be representative of the population. The researcher made all attempts to collect more data; however, did not manage to and it was therefore decided to continue with the 103 responses returned.

# 5.7. DATA GATHERING INSTRUMENTS

The questionnaire consists of four sections: Section A: demographic information. The information in this questionnaire included questions regarding the gender, age, and occupation of the sample. Section B: Utrecht Work Engagement Scale, section C: PsyCap scale and lastly section D: Self-leadership scale. The participants were given a covering letter and informed consent form outlining the purpose of the study, name of the researcher, confidentiality, and voluntary consent. The participants were required to complete all questionnaires and clear instructions on how to complete the questionnaires was provided for each scale. Pre-established scales with acceptable reliability and validity were used and comprised of the following scales discussed below.

#### 5.5.1. Utrecht Work Engagement Scale (UWES)

#### 5.5.1.1. Nature and composition of UWES

The Utrecht work engagement scale (UWES) was used to measure work engagement. The scale was developed by Schaufeli and Bakker (2004) and is a widely recognised self-rated instrument. All items on the UWES are scored on a 7-point Likert scale ranging from 0 (never) to 6 (always) (Schaufeli, Bakker & Salanova, 2006). The scale consists of three sub-scales, namely dedication, vigor and absorption. Vigor consists of six items that refer to high levels of energy and resilience, a typical question for vigor would be "At my work, I feel bursting with energy". Dedication consists of five items and refers to the significance one receives from work and feelings of enthusiasm towards one's job. A typical question for dedication would be "My job inspires me". Lastly, absorption consists of six items that refer to being totally immersed

in one's work to the point that time passes quickly. A typical question for absorption would be "I feel happy when I am working intensely" (Schaufeli & Bakker, 2004).

# 5.5.1.2. Reliability and validity of UWES

Previous international studies have confirmed the factorial validity and internal consistency of the UWES. According to Schaufeli and Bakker (2004), the three-factor model of the UWES is more superior to the one-factor model; however, correlations between the three dimensions are closely related. The internal consistency of the three scales were also shown to be good, ranging between 0.80 and 0.90 (Schaufeli & Bakker, 2004). In a South African study conducted by Storm and Rothman (2003) it was shown that the scales have acceptable levels of internal consistency with Cronbach alpha reliability coefficients as follows; vigor = 0.78, dedication = 0.89, and absorption = 0.78. Based on the above the UWES has sufficient internal consistencies.

# 5.5.1.3. Rationale for the inclusion of UWES

The UWES was used for the current study as it relates directly with the job-demands resources model discussed in chapter two and the definition of work engagement by Schaufeli, Salanova, Gonzalez-Roma and Bakker (2002). In addition, the UWES will be used due to the sufficient internal consistencies and high validity (Storm & Rothman, 2003).

# 5.5.2. PsyCap (PCQ-24)

# 5.5.2.1. Nature and composition of PCQ-24

To measure psychological capital, the PCQ-24 scale developed by Luthans, Avolio, Avey and Norman (2007) was used. The PCQ-24 consists of four subscales namely, hope, optimism, self-efficacy, and resilience. Each subscale consists of six items on a six-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). High scores on this scale indicate high psychological capital (refer to Table 5.1) below:

Item No.	Item
1	I feel confident analysing a long-term problem to find a solution
7	If I should find myself in a jam at work, I could think of many ways to get out of
	it

# Table 5.1: Example of psychological capital scale

13	when I have a setback at work, I have trouble recovering from it, moving on.
19	When things are uncertain for me at work, I usually expect
	the best

# 5.5.2.2. Reliability and validity of PCQ-24

The Cronbach alphas for each of the four 6-item adapted measures were as follows: hope (.72, .75, .80, and .76); resilience (.71, .71, .66, and .72); self-efficacy (.75, .84, .85, and .75) and optimism (.74, .69, .76, and .79). The overall PsyCap Cronbach alpha was .89 indicating that the overall reliability of the measure is acceptable (Luthans *et al.*, 2007).

#### 5.5.2.3. Rationale for inclusion of PCQ-24

The PCQ-24 scale was used in this study as it has demonstrated high reliability and adequate internal consistency. It also directly relates to the different dimensions of PsyCap namely hope, resilience, self-efficacy, and optimism.

#### 5.5.3. Self-Leadership Scale

# 5.5.3.1. Nature and composition of the ASLQ and RSLQ

Self-leadership was measured using Houghton and Neck's (2002) Revised Self-Leadership Questionnaire (RSLQ) as well as the Abbreviated Self-Leadership Questionnaire (ASLQ). Houghton, Dawley and DiLello (2012) indicated limitations with regards to the ASLQ in that it does not include the natural reward strategy and self-cueing sub-dimensions of the behavioural strategy; however, these sub-scales form an important part of the current study. As suggested by Houghton *et al.* (2012) the 9 item ASLQ is useful when measuring the brief overall measure of self-leadership or when the use of the 35-item scale is impractical. Based on this, the ASLQ with added items of the natural reward and the self-cueing subscales from the RSLQ was used for the purpose of this research. The scale therefore consists of 16 items on a five-point Likert scale ranging from 1 not at all accurate to 5 completely accurate. Higher scores represent higher levels of self-leadership.

# 5.5.3.2. Reliability and validity ASLQ and RSLQ

Houghton *et al.* (2012) reported fairly good reliability of the ASLQ for the total scale ( $\alpha$ ) of 0.73. The RSLQ has also been consistently reported to be reliable and exhibit construct validity in a variety of settings including China, Portugal, Turkey, Germany, and South Africa

(Mahembe, Engelbrecht & Wakelin, 2017). Nel and Van Zyl (2015) reported good internal consistency of 0.89 which is a higher reliability estimate. From this above it can be deduced that the ASLQ has an acceptable reliability.

#### 5.5.3.3. Rationale for inclusion of ASLQ and RSLO

The ASLQ with the added natural rewards and self-cueing subscales has shown good promise as a brief self-leadership scale and has been established by Houghton *et al.* (2012) to be especially useful when measuring self-leadership as one variable in a larger context. Therefore, this scale with the added subscales of natural rewards and self-cueing was used for this study as it fits well with the overall aim of the study. It also directly relates to the different strategies of self-leadership as discussed in Chapter four.

## 5.6. STATISTICAL METHODS

According to Babbie and Mouton (2015), data analysis involves the conversion of large masses of information into manageable summaries. Hair, Page and Brunsveld (2019) state that an important task of data analysis is to convert data into knowledge. The next section outlines the ways in which the data collected from respondents was organised and presented in a meaningful way. Based on the research questions the study used a quantitative data analysis technique. Statistical analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 25. Initial examination was conducted using descriptive statistics in which the data was summarised using frequency distributions. A principal components analysis was conducted on the self-leadership scale to understand the structure of the self-leadership scale due to the components of ASLQ and RSLQ being combined to form the scale. Thereafter, each scale as well as their sub-scales were tested for reliability using Cronbach's alpha. The main objective of the study was to determine the effect of psychological capital and selfleadership on the work engagement of agricultural extension advisors. To address this objective a range of inferential statistics, namely Pearson product-moment correlation and stepwise multiple regression was applied. The secondary objective was explored using independent sample t-test to determine if there were any significant differences between males and females work engagement. The following section will provide detailed explanations for the various statistical methods that were applied within this study.

#### **5.6.1.** Descriptive statistics

According to Neuman (2014), descriptive statistics describe the numerical data. Descriptive statistics is also a term given to the analysis of data that helps to describe or summarise it in a meaningful way so that patterns may emerge from the data (Laerd, 2015). Descriptive statistics for a single variable can be described by means of frequencies, measures of central tendency and dispersion. Frequencies refer to the number of times the various subcategories of a certain phenomenon occur (Sekaran & Bougie, 2016). Measures of central tendency include the mean, median and mode whereas measures of dispersion include range and standard deviation. All demographic variables namely gender, race, education level, age and province were analysed using descriptive statistics and displayed in the form of frequency tables and graphs.

#### 5.6.2. Principal components analysis for self-leadership scale

Factor analysis is used as a technique to reduce data by taking a large set of variables and looking for ways to reduce or summarise them using a smaller set of components (Pallant, 2016). There are several uses for factor analysis, namely it can be used to develop and evaluate a test or scales, or it can also be used to reduce many related variables to a more manageable number prior to using them in analysis (Pallant, 2016). Principal component analysis (PCA) differs from factor analysis in that the original variables are transformed into small sets of linear combinations with all the variances in the variables being used (Pallant, 2016). According to Tabachnick and Fidell (2013), if you simply want an empirical summary of your data set then a PCA should be used. For this study a PCA was used to understand the structure of the self-leadership questionnaires as the components from the ASLQ and RSLQ were both used within the scale. PCA was run to reduce the 16 items of the self-leadership questionnaire into smaller sets of variables.

#### 5.6.3. Inferential statistics

Inferential statistics can be described as a collection of techniques that uses probability theory and hypothesis testing to draw inferences from a population of scores (Nesselroade & Grimm, 2019). Based on the data of a subset of a group, inferential statistics enables one to make generalisations about a larger group (Walsh & Ollenburger, 2001). This study will use stepwise multiple regression for the primary objective as well as correlations and independent sample t-tests to analyse the secondary objectives (work engagement levels with regards to self-

leadership and effect of gender on the levels of work engagement). Along with this reliability tests will be conducted on all scales.

# 5.6.3.1. Correlations

Correlation analysis is used to describe the strength and direction of a linear relationship between two variables (Pallant, 2016). Correlations are derived by assessing the variations in one variable as another variable varies (Sekaran & Bougie, 2016). It is unknown from a correlation analysis which variable causes which; however, one can determine if the two variables are associated with each other (Pallant, 2016). A Pearson product-moment correlation will be used for continuous variables in which a numerical summary will be provided on the direction and strength of the relationship between PsyCap, self-leadership and work engagement.

The Pearson's r coefficients have values ranging from 0 which indicates that there is no relationship between the two variables to +1 or -1, with the symbols indicating the direction, positive or negative of the relationship. Correlations that are closer to 1 indicate a stronger relationship whereas those closer to 0 indicate a weaker relationship. Negative relationships indicate that as the one variable increases the other decreases whereas a positive sign indicates that the two variables are both increasing in the same direction, either both going up or both going down (Bryman & Bell, 2019). Lastly, the strength of the relationship needs to be determined using the following guidelines as outlined by Pallant (2016).

Small	r = .10 to .29
Medium	r = .30 to .49
Large	r = .50 to 1.0

The guidelines provided apply regardless of the sign in the front of the r value as the sign only indicates the direction of the relationship and not the strength.

# 5.6.3.2. Stepwise multiple regression

Multiple regression is a technique that is used to explore the effect of one continuous dependent variable and several independent variables (Pallant, 2016). A multiple regression analysis allows for a more sophisticated investigation of the interrelationship among a set of variables (Pallant, 2016). There are various types of multiple regressions however for the purpose of this research a stepwise multiple regression will be used. According to Pallant (2016), within a

stepwise multiple regression, the researcher provides a list of independent variables and then allows the program to select which variables it will enter and in which order based on statistical criteria. The variables to be included and those to be excluded are based solely on the statistics computed from the particular sample (Tabachnick & Fidell, 2013). The above statistical technique was used to analyse the effect the independent variable's psychological capital and self-leadership have on the dependent variable, work engagement.

#### 5.6.3.3. Independent sample t-tests

An independent sample t-test is used to compare the means scores of two groups on a continuous variable (Pallant, 2016). It involves looking at the impact of only one independent variable on a dependent variable and lets one know whether the groups differ (Pallant, 2016). A p-value that is equal to or less than 0.5 indicates a significant difference in the mean scores of the dependent variable to each of the two groups. If the p-value is above 0.5 it indicates an insignificant relationship between the two groups (Pallant, 2016). The above statistical analysis was used to analyse the secondary objective of the influence of gender on the levels of work engagement.

# 5.6.4. Reliability

The reliability of each of the scales will be analysed using Cronbach's alpha. Cronbach alpha is a common measure of internal consistency and is often used to determine how many of the dimensions on the scale is measuring the same underlying dimension (Laerd, 2015). According to Bryman and Bell (2019), Cronbach's alpha is commonly used to test the internal reliability. The values can range from 1 indicating a perfect internal reliability to 0 indicating no reliability. A value of 0.80 is usually used to mark the minimum level of acceptable internal reliability; however, some researchers work with lower values (Bryman & Bell, 2019).

#### 5.7. ETHICAL CONSIDERATIONS

According to Neuman (2014), ethics guide behaviour and decisions regarding research, it informs us about what is moral and right. In social research, ethics guides researchers through a range of concerns, dilemmas and conflicts that may arise when conducting proper research (Neuman, 2014). Social researchers should have a clear moral and professional obligation to always behave in an ethical manner. For this study, ethical approval was applied for and granted by the Faculty of Economic and Management Sciences (Approval number: UFS-HSD2020/1654/1711) (see Appendix A). Permission was sought and granted from the Board

of the South African Society for Agricultural Extension to gain access to their membership database to conduct the study (see Appendix B). The survey was conducted online using EvaSys, a consent form was provided to the participants prior to the start of the survey which indicated the purpose of the research and the research procedures that was used, along with the researcher's details should they have any questions or inquiries (see Appendix C). The participants were informed that their participation is voluntary, and they may withdraw at any time without penalties. The participants were not required to give their names or any identifying criteria to ensure their confidentiality and privacy is maintained. All ethical principles of respect, protection of the rights of participants and no harm to participants were adhered to.

#### 5.8. CONCLUSION

The above chapter was used to discuss the research design that was chosen for this study to gather reliable and valid data. The study used a non-experimental survey research design that followed a quantitative method. The chapter explained the methodology that was used by the researcher to answer the research objectives and questions. The selection of test persons, the data gathering instruments namely, the UWES, PCQ-24 and the RSLQ used to collect the data was also discussed. Next the statistical methods that was used to analyse the data was discussed, lastly the ethical considerations that were taken within the study were explained. The next chapter will focus on the results and discussion of the research.
#### **CHAPTER 6: RESULTS AND DISCUSSION**

#### 6.1. INTRODUCTION

Chapter five discussed the methodology used to conduct the data analysis. The following chapter will focus on reporting, presenting and discussion of the research findings. Firstly, the handling of missing data will be discussed. Secondly, the descriptive statistics outlining the demographic characteristics of the population sample of the study will be discussed, the results will be summarised into graphs and frequency distribution tables for ease of reference. The chapter will then be followed by a discussion of the internal consistency reliability scores for each of the measuring instruments used within this sample (agricultural extension officers) by a means of Cronbach's alpha. Lastly, the statistical analysis that was run to answer the research questions, namely stepwise multiple regression, and correlations for the first objective and independent sample t-tests for the second objective and the findings thereof will be interpreted and discussed.

## 6.2. HANDLING OF MISSING DATA

During the initial examination of the data obtained, those who were not agricultural extension officers were removed from the database to ensure that the sample criteria was adhered to. The extent of missing values for each item was also analysed and it was deduced that very few missing values were present with no obvious patterns for the missing data. According to Davis, Pecar, Santana and Burke (2014), missing values that are randomly scattered through the data pose a lesser serious problem. If only 5% is missing from a random pattern in a dataset, then Davis *et al.* (2014) state that any procedure for handling missing values may yield similar results. A missing values analysis was run for each scale item in the PCQ-24 (PsyCap questionnaire), each item produced a percentage of below 5% with only item number 20 (If something can go wrong for me work-wise, it will) producing a result of 6.8%; however, this item was maintained in the overall analysis of the PCQ-24. All items in the self-leadership questionnaire produced missing values of below 5% and lastly, the Utrecht work engagement scale (UWES) items also produced missing values of below 5%. Therefore, all values were maintained within the data.

# 6.3. DESCRIPTIVE STATISTICS

The following presents the biographical data of the respondents using frequency distribution and percentages.

Demographic variables	Labels	Frequency	Percentage (%)	
Gender	Male	50	48.5	
	Female	49	47.6	
Race	Caucasian/White	5	4.9	
	African/Black	91	88.3	
	Coloured	4	3.9	
	Other	1	1.0	
Education Level	Tertiary qualification	103	100	
Respondents Age	19 – 25 years	1	1.0	
	26 – 30 years	13	12.6	
	31 – 40 years	39	37.9	
	41 – 50 years	29	28.2	
	51 – 60 years	16	15.5	
	Above 60 years	1	1.0	

 Table 6.1: Biographical data of the respondents (n=103)
 Image: Comparison of the second s

Table 6.1 above represents a summary of the biographical characteristics of the sample. The gender of the respondents was almost 50/50 with 48.5% males and 47.6% females. According to a study conducted by Mahlangu *et al.* (2020) in Gauteng, more female extension officers are starting to come into the profession, indicating the efforts to empower females in the agriculture sector. Most of the respondents were African/Black (88.3%) with only 4.9% Caucasian/whites working within the agricultural extension field. All respondents have a tertiary qualification, this could be due to the requirements that all extension officers should have a BSc (Agric) or BAgric degree to become an extension officer (go study, 2021). Respondents ages were asked as an open-ended question and later converted into categories for ease of reference. Most respondents fell into the category of 31 - 40 years (37.9%) with very few of the respondents falling into categories below 30 years of age, indicating a need for youth to become involved within agriculture. The average age for the total sample was 41 years. The totals for the variables gender, race and age will not add up to 103 as some respondents did not respond to the questions.



Figure 6.1: Respondent's province

The province represented by the most participants was Limpopo (26%), with Eastern Cape represented by 19% and Free State by 14%. Unfortunately, some provinces had very few respondents, this could be due to less people within these provinces being registered with the South African Society for Agricultural Extension (SASAE) in which the data was gathered from.

# 6.4. INTERNAL CONSISTENCY RELIABILITY FOR THE CONSTRUCTS

The reliability estimates for each scale as well as the sub-scales are represented below.

#### 6.4.1. PCQ-24

Cronbach's	
Alpha	N of Items
.879	24

From the above, it can be seen that the overall reliability for the PCQ-24 scale was 0.879 with 24 items. It is recommended that a minimum  $\alpha$  coefficient is between 0.65 and 0.8 or higher and that items with less than this are considered unacceptable. Therefore, as the reliability for this scale is above 0.8, this scale is considered highly acceptable (Goforth, 2015; Laerd Statistics, 2015). No items if deleted increased the overall reliability of the scale. Grobler and

Joubert (2018) and Harunvamwe, Nel and Van Zyl (2020) both obtained higher Cronbach's alpha for the overall PCQ-24 scale with Cronbach's alpha of 0.90 and 0.932 respectively.

Dimensions	Number of items	Cronbach's Alpha
Self-efficacy	6	0.824
Норе	6	0.802
Resilience	6	0.480
Optimism	6	0.583

Table 6.2: Cronbach's alphas for psychological capital dimensions

The sub-scales for PsyCap are displayed in Table 6.2 above, self-efficacy and hope both had highly acceptable internal consistency (0.824 and 0.802 respectively) with items resilience and optimism having values below the acceptable level. However, as all items are needed to determine one's psychological capital, it was decided that all items will remain in the analysis. The Cronbach's Alpha were similar to a study conducted by Grobler and Joubert (2018), in which the self-efficacy (0.90) and hope (0.86) dimensions were at an acceptable level. The resilience Cronbach's alpha was however, found to be lower in this study compared to the results received by Grobler and Joubert (2018) whose resilience produced an internal consistency of 0.67. Optimism was also reported to be lower by Grobler and Joubert (2018) with an internal consistency of 0.55 which is slightly lower than that achieved within this study (0.58). According to Grobler and Joubert (2018), the Cronbach's alphas for the resilience and optimism subscales could be slightly lower due the reversed/negative items. In a study conducted by Harunvamwe, Nel and Van Zyl (2020) among the banking sector in South Africa, the Cronbach's alphas were found to be highly acceptable for all four sub-scales (hope = 0.889, efficacy = 0.910, resilience = 0.810 and optimism = 0.772).

### 6.4.2. Utrecht work engagement scale (UWES)

Cronbach's Alpha N of Items .916 17 From the above, it can be seen that the overall reliability for the UWES scale was 0.916 with 17 items. Therefore, as the reliability for this scale is above 0.8, this scale is considered highly acceptable (Goforth, 2015; Laerd Statistics, 2015). No items if deleted increased the overall reliability of the scale. The developers of the UWES-17 scale (Schaufeli & Bakker, 2004) reported a similar internal reliability estimate for the overall scale of 0.94. Harunvamwe, Nel and Van Zyl (2020) also reported a high overall reliability of 0.967 for the UWES-17 scale.

DimensionsNumber of itemsCronbach's AlphaVigor60.784Dedication50.808Absorption60.779

Table 6.3: Cronbach's alphas for work engagement dimensions

Table 6.3 above displays the Cronbach's alphas for the sub-scales of work engagement. The sub-scale dedication has a good reliability score of 0.808, whereas the sub-scales vigor and absorption both had satisfactory reliability scores (0.784 and 0.779 respectively). Schaufeli and Bakker (2004) reported high internal consistency scores for all three dimension of work engagement (vigor = .83, dedication = .92 and absorption = .82). Compared to the current study the dimension vigor and absorption were reported to be a lot higher. In the study conducted by Harunvamwe, Nel and Van Zyl (2020), high internal consistency was also shown for each of the dimensions of work engagement.

#### 6.4.3. Self-leadership scale

Cronbach's	
Alpha	N of Items
.881	15

From the above, it can be seen that the overall reliability for the self-leadership scale was 0.881 with 15 items. Therefore, as the reliability for this scale is above 0.8, this scale is considered highly acceptable (Goforth, 2015; Laerd Statistics, 2015).

Dimensions	Number of items	Cronbach's Alpha
Behaviour-focused Strategies	4	0.772
Constructive thought pattern strategies	3	0.698
Natural rewards strategies	8	0.858

Table 6.4: Cronbach's alphas for self-leadership dimensions

Table 6.4 above displays the Cronbach's alphas for the dimensions of self-leadership. The dimensions behavioural-focused patterns and constructive thought patterns both had satisfactory reliability scores of 0.772 and 0.698 respectively, whereas the dimensions natural rewards had a good reliability score of 0.858. The developers, Houghton, Dawley and DiLiello (2012) reported an overall coefficient alpha of 0.73 for the ASLQ, whereas in this study the coefficient alpha was reported to be higher; therefore, indicating good internal consistency. The results are similar to the study conducted by Harunvamwe, Nel and Van Zyl (2020) whose reliabilities for each scale were considered good.

# 6.5. PRINCIPAL COMPONENTS ANALYSIS FOR SELF-LEADERSHIP QUESTIONNAIRE

According to Field (2018), Principal Components Analysis (PCA) have three main uses, firstly to understand the structure of a set of variables, secondly to construct a questionnaire to measure an underlying variable and lastly to reduce a data set to a more manageable size while retaining valuable information as far as possible. For this study, a PCA was performed in order to understand the structure of the self-leadership questionnaire for this study as components of the ASLQ and RSLQ were both used within the survey. The items within the self-leadership questionnaire form part of several larger constructs (for example, behavioural-focused strategies, constructive thought patterns and natural reward). Therefore, the PCA was run to reduce the 16 items within the self-leadership questionnaire into smaller sets of variables. This was only conducted on the self-leadership questionnaire since the items were attained from both the ASLQ and RSLQ.

To conduct a PCA, four basic requirements need to be met. Firstly, the variables used within the PCA need to be measured at a continuous level with multiple variables. Secondly, there should be a linear relationship between the variables, there should be no outliers and lastly a large sample size should be used to produce a reliable result (Laerd Statistics, 2015). When checking for patterned relationships, all variables showed a pattern with other variables as evidenced by having correlations greater than 0.5 with any of the other variables. Therefore, all items were maintained within the PCA and all assumptions have been met. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.80 which according to Kaiser's (1974) classification is meritorious/good. KMO measures for each of the items also indicated meritorious or middling as no values were below the absolute minimum of 0.5. The Bartlett's Test of Sphericity was considered statistically significant as the p value was below .05 (p = .000) indicating that the data is appropriate for PCA (Laerd Statistics, 2015). According to the literature, three dimensions of self-leadership have been identified namely, behaviour-focused strategies, constructive thought patterns and natural rewards; therefore, a prior decision was made to restrict the number of components to be extracted to three.

	Components		
		Behavioural-	Constructive
		focused	Thought
Items	Natural Rewards	Strategies	Patterns
1. When I have a choice, I try to do my	.738	.132	.336
work in ways that I enjoy rather than just			
trying to get it over with (NR)			
2. I seek out activities in my work that I	.692	.080	.027
enjoy doing (NR)			
3. I focus my thinking on the pleasant	.685	.135	.227
rather than the unpleasant aspects of my			
job activities (NR)			
4. I work toward specific goals I have set	.652	.455	094
for myself (NR)			
5. I make a point to keep track of how	.637	.480	119
well I'm doing at work (NR)			
6. I try to surround myself with the	.610	.006	.419
objects and people that bring out my			
desirable behaviours (NR)			

Table 6.5: Component loadings for principal components analysis for self-leadership scale

7. I visualize myself successfully	.605	.286	.356
performing a task before I do it (NR)			
8. Sometimes I picture in my mind a	.556	.308	.349
successful performance before I actually			
do a task (NR)			
9. I use concrete reminders to help me	.215	.846	.203
focus on the things I need to accomplish			
(BF)			
10. I use written notes to remind myself	.082	.810	.146
of what I need to accomplish (BF)			
11. I establish specific goals for my own	.429	.528	.098
performance (BF)			
12. When I have successfully completed	.177	.523	.402
a task, I often reward myself with			
something I like (BF)			
13. I try to mentally evaluate the	.169	.168	.817
accuracy of my own beliefs about			
situations I am having problems			
with (CTP)			
14. I think about my own beliefs and	.055	.280	.747
assumptions whenever I encounter a			
difficult situation (CTP)			
15. Sometimes I talk to myself (out loud	.159	.006	.616
or in my head) to work through difficult			
situations (CTP)			

Note: Major loadings for each item are bolded

The above results (Table 6.5) showed that the model with three components was a good fit for the data. The three-component solution explained 58.8% of the total variance. According to Hair *et al.* (2019), when using a sample of 100 respondents, the factor loadings of 0.5 and above are considered significant; therefore, items were included in the three dimensions only if they loaded above 0.5 on at least one of the components; however, if items loaded above 0.5 on more than one component then the highest loading was taken for that particular component

(Hair *et al.*, 2019; Laerd Statistics, 2015). Based on this, the item "I find my own favourite ways to get things done" was removed from the analysis as the item loaded below 0.5. According to Table 6.5 above, items number 1 - 8 will make up the dimension natural rewards, items number 9 - 12 will make up the dimension behavioural focused strategies and lastly, items number 13 - 15 will make up the dimension construct thought patterns for this study.

#### 6.6. INFERENTIAL STATISTICS

Inferential statistics was used to analyse the relationship between the variable's psychological capital, self-leadership, and work engagement. The first research objective, to determine by means of a non-experimental research design whether psychological capital and self-leadership influence the levels of work engagement among agricultural extension officers was analysed using stepwise multiple regression. Before the regression analysis was conducted, a Pearson product-moment correlation was performed to determine whether a significant relationship exists between the variable's psychological capital and work engagement and self-leadership and work engagement. The second objective, to determine by means of a non-experimental research design whether differences exist between male and female agricultural extension advisors regarding the levels of work engagement was analysed using a Pearson product-moment correlation and independent sample t-tests.

#### 6.6.1. Results related to the primary objective/research question

The primary research question of this study: Does psychological capital and self-leadership have an effect on work engagement among agricultural extension advisors in South Africa? To address this question an initial examination of the variables was performed using a correlation analysis to determine if relationships exist between the variables concerned. Firstly, the overall correlation of the variables will be shown, thereafter the indicators/dimensions of the independent variables, namely psychological capital and self-leadership will be correlated with work engagement. Once the initial examination of the relationships was completed, a stepwise multiple regression was used to evaluate the effect of the independent variables (psychological capital and self-leadership) on the dependent variable (work engagement).

# 6.6.1.1. Results of the Pearson product-moment correlation analysis

		Psychological	Work engagement
		capital Total	Total
Psychological	Pearson Correlation	1	.721**
capital	Sig. (2-tailed)		.000
	N	103	103
Work	Pearson Correlation	.721**	1
engagement	Sig. (2-tailed)	.000	
	Ν	103	103

# Table 6.6: Correlation analysis between psychological capital and work engagement

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

Table 6.6 above indicates that there is significant positive correlation (r = .721, p=.000) between psychological capital and work engagement. According to the guidelines provided by Pallant (2016) of the magnitude of r, this relationship can be interpreted as a large, substantial relationship.

Table 6.7: Correlation analysis between psychological capital dimensions and workengagement

		Work Engagement Total
Self-Efficacy	Pearson Correlation	.567**
	Sig. (2-tailed)	.000
	N	103
Норе	Pearson Correlation	.722**
	Sig. (2-tailed)	.000
	N	103
Resilience	Pearson Correlation	.334**
	Sig. (2-tailed)	.001
	N	103
Optimism	Pearson Correlation	.618**
	Sig. (2-tailed)	.000

Ν	103

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

Table 6.7 above indicates that all dimensions of psychological capital had statistically significant positive relationships with work engagement. Hope, self-efficacy, and optimism showed a medium correlation, indicating a substantial relationship; however, resilience indicated a medium correlation according to the guidelines by Pallant (2016).

Table 6.8: Correlation analysis between psychological capital and dimensions of workengagement

		Psychological Capital
Vigor	Pearson Correlation	.717**
	Sig. (2-tailed)	.000
	Ν	103
Dedication	Pearson Correlation	.647**
	Sig. (2-tailed)	.000
	Ν	103
Absorption	Pearson Correlation	.632**
	Sig. (2-tailed)	.000
	Ν	103

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

Table 6.8 above indicates that all the dimensions of work engagement had a statistically significant relationship with psychological capital. All dimensions of work engagement shows a large correlation, indicating a substantial relationship.

Table 6.9: Correlation analysis between self-leadership and work engagement

		Self-leadership	Work engagement
Self-leadership	Pearson	1	.585**
	Correlation		
	Sig. (2-tailed)		.000
	N	103	103

Work engagement	Pearson	.585**	1
	Correlation		
	Sig. (2-tailed)	.000	
	N	103	103

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

Table 6.9 above indicates that there is significant positive correlation (r = .585, p=.000) between self-leadership and work engagement. According to the guidelines provided by Pallant (2016) this relationship can be interpreted as a large relationship.

Table 6.10: Correlation analysis between self-leadership dimensions and work engagement

		Work Engagement
		(Total)
Behaviour-focused strategies	Pearson Correlation	.474**
	Sig. (2-tailed)	.000
	Ν	103
Construct thought pattern	Pearson Correlation	.274**
strategies	Sig. (2-tailed)	.005
	Ν	103
Natural reward strategies	Pearson Correlation	.584**
	Sig. (2-tailed)	.000
	Ν	103

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

Table 6.10 above indicates that all dimensions of self-leadership had statistically significant positive relationships with work engagement. Behaviour-focused strategies showed a medium correlation and natural rewards strategies indicated a large relationship; however, construct thought pattern strategies indicated a small correlation, indicating a definite but small relationship.

		Self-Leadership
Vigor	Pearson Correlation	.611**
	Sig. (2-tailed)	.000
	N	103
Dedication	Pearson Correlation	.509**
	Sig. (2-tailed)	.000
	N	103
Absorption	Pearson Correlation	.514**
	Sig. (2-tailed)	.000
	N	103

Table 6.11: Correlation analysis between self-leadership and dimensions of workengagement

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

Table 6.11 above indicates that self-leadership has a statistically significant positive relationship with all the dimensions of work engagement. All dimensions of work engagement above showed a large correlation, indicating a substantial relationship with self-leadership. The above results indicate that a relationship does exist between the variables, psychological capital, self-leadership, and work engagement, thus answering the first part of the primary research question. The results of the stepwise multiple regression will be presented below to completely address the primary research question.

# 6.6.1.2. Results of the stepwise multiple regression analysis

According to the results (Table 6.12 below) of the stepwise multiple regression, three variables were shown as significant predictors of work engagement, namely hope (psychological capital), optimism (psychology capital) and behaviour-focused strategies (self-leadership). The three variables explain 62.8% of the variance in work engagement. The regression model was also found to be statistically significant (F = 55.64, p = .000). Hope was shown to be the best predictor of work engagement, with optimism being the second-best predictor and behaviour-focused strategies being the last predictor of work engagement. It can thus be concluded that the above three variables are all significant predictors of work engagement.

		Unstandardized		Standardized		
		Coeffi	cients	Coefficients		
Model		B Std. Error		Beta	t	Sig.
	(Constant)	-4.791	7.330		654	.515
	Норе	1.822	.289	.483	6.300	.000
	Optimism	1.157	.254	.325	4.554	.000
	Behaviour focused	.700	.293	.164	2.390	.019
	strategies					

Table 6.12: Stepwise multiple regression analysis

a. Dependent variable: Work engagement (Total)

According to Table 6.13 below, the  $R^2$  values were further analysed to determine the contribution that each independent variable had towards work engagement and to examine the amount of variance in the dependent variable. The model showed that hope had the highest contribution to the variance in work engagement ( $R^2 = 0.52$ ) which is 52% meaning that hope makes the strongest contribution in determining work engagement. The second contributor towards work engagement was optimism ( $R^2 = 0.60 - 0.52 = 0.08$ ) therefore, according to this model, optimism contributes 8% towards work engagement. The last contributor, behaviour focused strategies contributed the least towards work engagement ( $R^2 = 0.62 - 0.60 = 0.02$ ) accounting for 2% variance towards work engagement.

#### Table 6.13: Stepwise regression analysis for individual variable contributions to R2

			Adjusted R	Std. Error of
Model	R	R Square	Square	the Estimate
1	.722 <sup>a</sup>	.522	.517	11.52146
2	.779 <sup>b</sup>	.606	.598	10.50634
3	.792 <sup>c</sup>	.628	.616	10.26710

a. Predictors: (Constant), Hope

b. Predictors: (Constant), Hope, Optimism

c. Predictors: (Constant), Hope, Optimism, Behaviour-

Focused

Out of the seven dimensions of the independent variables only three variables made a significant contribution towards the variances in work engagement. The dimensions that did not make a valuable contribution towards work engagement were constructive-thought patterns, natural rewards, self-efficacy, and resilience. Based on the above, the alternative hypothesis 1 proposed in this study, the variances in the levels of work engagement can be explained by psychological capital and self-leadership among agricultural extension advisors is partially supported.

### 6.6.2. Relationship between psychological capital and work engagement

From the correlation analysis shown in Table 6.6 above, it can be seen that psychological capital had a significant and positive relationship with work engagement (r = .721, p = .000), indicating that the two do have an impact on each other. Hope and optimism were shown to have the strongest correlation to work engagement which is similar to the results of Harumvame (2018) who also found hope and optimism to have a higher relationship to work engagement than self-efficacy and resilience. All the dimensions of work engagement, namely vigor, dedication and absorption had a moderate relationship with psychological capital. This result was higher to that of Kotze (2018) who found that psychological capital had a stronger influence on the dimension of vigor than dedication. In a study conducted by Erbasi and Ozbek (2016) it was also found that hope and optimism predicted and increased the work engagement of employees. Two psychological capital dimensions namely hope, and optimism were the first major predictors of work engagement in the current study. The model indicated that hope and optimism contributed significantly towards the work engagement levels of agricultural extension advisors. Together, the two components of psychological capital, hope and optimism, made up 60% to the variance of work engagement. This result is slightly lower to that of Harumvame (2018) who reported that hope, optimism, and self-efficacy made up 68% of the total variance in work engagement among the banking sectors. Ferreira (2016) reported a slightly lower variance (43%) of psychological capital to work engagement.

A significant correlation was found between hope and work engagement (r = .722, p = .000). Hope, which can be defined by Luthans *et al.* (2007) as the persevering towards a goal and redirecting paths to goals, when necessary, was also found to be the strongest predictor of agricultural extension advisors' levels of work engagement ( $R^2 = .522$ ). According to Alessandri *et al.* (2018), personal resources such as hope, optimism, resilience, and selfefficacy can positively increase the work engagement and job performance levels of employees. Karatepe (2014) found that hopeful employees pursue strategies to reach their goals and are euthanasic and happily engrossed in their work. Yavas *et al.* (2013) stated that employees who are high in hope have more frequent positive moods and positive goal directed outlooks which helps them to be more engaged in their work. Bakker (2017) further acknowledged that work engagement levels peak when employees experience positive events and interesting daily job demands.

A significant positive correlation was found between optimism and work engagement (r = .618, p = .000). Optimism, which was defined in chapter three as making a positive attribution about one's success now and in the future (Luthans *et al.*, 2007), was also found to the be the second highest predictor of work engagement among agricultural extension advisors ( $R^2 = 0.08$ ). These results are consistent with a study conducted by Harumvame (2018) who also found a significant and positive correlation between work engagement and optimism. In addition, Harumvame (2018) also found optimism to be the second highest predictor of employees work engagement levels. These results are contrary to that of Rotich (2020) who found optimism to have an insignificant relationship with work engagement. According to Grover, Teo, Pick, Roche and Newton (2018) resilience and optimism allow people to view their job demands in a more positive light, which leads to a more psychologically healthy well-being and allows employees to enjoy energy, vitality and enthusiasm for their work.

From the theoretical perspective, hope and optimism is considered as a psychological resource in the JD-R model which can contribute to the engagement of employees. Hope is regarded as a resource as hopeful employees remain focused towards goal achievement and become more goal orientated and motivated (Joo *et al.*, 2016). In a training intervention that aimed to increase the hope, optimism, self-efficacy, and resilience of employees it was found that those who aimed to increase their personal resources improved their well-being and job performance (Lupsa *et al.*, 2019). In a study conducted by Grover *et al.* (2018) it was found that psychological capital affects the perceptions of job demands and in turn the engagement of employees. They further found that psychological capital reduces the perception of job demands and that the mediation through job demands and psychological well-being promote the work engagement of employees.

The double-loop framework can be used to explain how hope and optimism were the main contributors for psychological capital as there are two loops in the framework, a positive success loop and a bounce-back loop (Luthans *et al.* 2007). Hope is the first construct in the positive success loop as people who have exhibited high levels of hope posse's strong

motivation and the ability to generate several pathways for goal accomplishment (Hsu, Wang, Chen & Dahlgaard-Park, 2014). Resilience is important when challenges arise for people to bounce-back; however, within this study it was not found to be an important construct, although optimism was found to be an important contributor. Optimistic employees can appraise their daily hassles in a positive way by expecting growth in such events leading them to remain optimistic and therefore positive (Hsu *et al.*, 2014). According to Harumavame (2018), individuals who remain optimistic during setbacks are more engaged as they experience a wider range of emotions and can maintain a positive outlook when setbacks occur. From this perspective it can be safely concluded that hope and optimism is a significant predictor and contributor towards work engagement.

#### 6.6.3. Relationship between self-leadership and work engagement

A significant positive correlation was found between self-leadership and work engagement (r = .585, p = .000); however, self-leadership had a smaller relationship to work engagement as compared to psychological capital. When looking at the dimensions of self-leadership, natural reward strategies had a higher contribution towards work engagement compared to the other two dimensions, constructive thought pattern had the lowest relationship to work engagement although still considered significant. Results from the current study also indicated that behavioural-focused strategies were the third predictor of employee's levels of work engagement however only showing 2% of the variance towards work engagement. The results are slightly lower to that of Harumvame (2018) whose relationship between behavioural strategies and work engagement were shown to be slightly larger. However, in contrary, constructive thought patterns had a small relationship whereas Har (2018) found that constructive thought strategies had a moderate relationship to work engagement. The results of the stepwise regression model were consistent with Harumvame (2018) study in which behaviour focused strategies only explained 2% of the variance in work engagement. According to Alnakhli et al. (2020) and Marques-Quinteiro et al. (2019), self-leadership is considered an individual motivator that facilitates work engagement and performance among employees. In a study conducted by Inam et al. (2021) it was found that self-leadership had a significant and positive association with improving work engagement furthering increasing the work performance of employees. Behavioural focused strategies stood out in the current study as a significant predictor of work engagement. Bakker (2017) highlighted those employees who use behavioural strategies such as self-observation, self-goal setting and self-cueing mobilise more job resources and this then leads to higher engagement. According to Harumvame (2018),

individuals who are aware of why and when they exhibit certain behaviours leads them to change these behaviours to increase their effectiveness. It is clear that a relationship exists between work engagement and self-leadership, specifically behaviour-focused strategies therefore it can be concluded that behaviour-focused strategies have a significant effect on the work engagement of agricultural extension advisors.

#### 6.6.4. Results related to the secondary objective/research question

The second research questions states: do differences exist between male and female agricultural extension advisors regarding the levels of work engagement? An independent samples t-test was conducted to identify whether differences exist between male, and females work engagement levels. Independent sample t-tests have three important assumptions that should be tested prior to running the t-test. Firstly, there should be no significant outliers in the two groups of the independent variables in terms of the dependent variable. On initial examination of the data, one outlier was found, the analysis was run once including this outlier and then again without the outlier, the results of the analysis did not significantly change due to this and therefore it was decided that the outlier should remain in the analysis (Laerd Statistics, 2015). The second assumption is that the dependent variables. According to the normal Q-Q plots displayed below (Figure 6.2) both male and female were approximately normally distributed as the data points are close to the diagonal line (Laerd Statistics, 2015).



Figure 6.2: Normality of male and female distribution on work engagement

The last assumption that needs to be met is homogeneity of variances. This is determined using the independent sample t-tests output (Table 6.14 below). According to Levene's test for equality of variances there was homogeneity of variances for the work engagement scores for males and females (p = .201). Since all important assumptions have been met, the results of

the independent sample t-test can now be interpreted. Firstly, the mean rank for males on the variable work engagement was 89.62. The mean rank for the females on the variable work engagement was 85.94. The male group therefore scored higher than the female group. However, the result is not statistically significant as the p-value (.272) is higher than 0.05.

		Levene's Test									
		for Equ									
		of Variances				ns					
										95% Confidence	
						Sig.			Interva	al of the	
						(2-	Mean	Std. Error	Diffe	erence	
		F	Sig.	t	df	tailed)	Difference	Difference	Lower	Upper	
Work	Equal	1.658	.201	1.105	97	.272	3.68122	3.33123	-	10.29279	
Engagement	variances								2.93034		

Table 6.14: Independent samples t-tests for overall work engagement scale and gender

The independent samples t-test was run for each dimension of work engagement namely, vigor, dedication and absorption to assess whether differences exist between the dimensions and gender (Table 6.15 below). According to Levene's test for equality of variances there was homogeneity of variances for each work engagement dimension for males and females (vigor -p = .310, dedication -p = .761, absorption -p = .173). The mean ranks for males (31.58) were higher than the mean rank for females (29.78) on the dimension vigor. The mean rank for males (27.56) was only slightly higher than the females (27.02) for the dimension dedication and lastly the mean rank for the males was higher (30.48) than for females (29.14) for the dimension absorption. All the results for the three dimensions of work engagement were not statistically significant as the p-values were higher than 0.05 (vigor = .140, dedication = .623) and absorption = .309). Indicating that for the total work engagement scale as well as the dimensions of work engagement there are no significant differences that exist between male and female agricultural extension advisors. Therefore, the null hypothesis for this study: There are no statistically significant differences between male and female agricultural extension advisors regarding the levels of work engagement was supported. Similar results were produced by Tshilongamulenzhe and Takawira (2015) who also found no statistically significant differences between the levels of engagement for males and females, it was shown within this study that male, and females exhibited almost equal levels of engagement in their

work activities. In a study conducted by Sudershana, Satpathy and Patnaik (2019) in the IT sector it was also found that gender did not have an influence on the work engagement of these employees. Lee and Eissenstat (2018) also found no differences in the work engagement levels of males and females.

		Levene	's Test									
for Equality of												
		Varia	nces		t-test for Equality of Means							
									95% Coi	95% Confidence		
						Sig.			Interval of the			
						(2-	Mean	Std. Error	Diffe	Difference		
		F	Sig.	t	df	tailed)	Difference	Difference	Lower	Upper		
Vigor	Equal	1.043	.310	1.487	97	.140	1.80449	1.21380	60457	4.21355		
	variances											
	assumed											
Dedication	Equal	.093	.761	.493	97	.623	.53959	1.09367	-1.63105	2.71023		
	variances											
	assumed											
Absorption	Equal	1.880	.173	1.023	97	.309	1.33714	1.30761	-1.25810	3.93238		
	variances											
	assumed											

Table 6.15: Independent samples t-tests for work engagement dimensions and gender

# 6.7. SUMMARY

Overall, the chapter presented the results, interpretation and discussion of the constructs psychological capital, self-leadership, and work engagement in relation to previous literature. The internal consistencies of each of the scales (UWES, PCQ-24 and self-leadership) were firstly identified to ensure good reliability for the scales and sub-scales. A principal components analysis was conducted on the self-leadership scale to understand the scale structure as components of both the ASLQ and RSLQ were used within this study, it was concluded that all components except for "I find my own favourite ways of getting things done" were maintained in the study as the items loaded above 0.5. Therefore, the new structure for self-leadership was used for the remainder of the results and discussion section. The primary objective "to determine by means of a non-experimental research design whether psychological capital and self-leadership have an effect on the levels of work engagement among agricultural extension advisors" was addressed using the Pearson product-moment correlation analysis to

determine whether any significant relationships existed between the constructs, in which it was concluded that significant relationships do indeed exist. To properly address this objective, a stepwise regression analysis was also performed in order to identify which constructs of psychological capital and self-leadership explained the variances in work engagement. The model was found to the statistically significant and hope was found to be the best predictor of work engagement. Lastly the second objective was analysed using independent sample t-tests to determine whether differences existed between the levels of work engagement for males and females in which it was found that no statistically significant differences existed. The following chapter will focus on the conclusion, recommendations and limitations based on the findings of this study.

# CHAPTER 7: CONCLUSIONS, RECOMMENDATIONS, LIMITATIONS AND FUTURE RESEARCH

#### 7.1. INTRODUCTION

The previous chapter presented the results and discussion based on the data obtained. The following chapter focuses on summarising the main findings, drawing conclusions, and identifying the limitations of the study. Recommendations for the practical application of the findings and directions for future studies will also be provided.

### 7.2. LITERATURE REVIEW CONCLUSIONS

The literature review was framed around the three major variables within the study namely, work engagement (independent variable), psychological capital (dependent variable) and self-leadership (dependent variable). The literature review also aimed at evaluating the relationships between the three variables to determine whether psychological capital and self-leadership influence work engagement specially within agricultural extension advisors. Furthermore, the research aimed to determine whether plays a role in the work engagement levels of the agricultural extension advisors.

# 7.2.1. Conceptualisation of psychological capital, self-leadership, and work engagement from the literature

The above variables were conceptualised by conducting a literature review as these concepts have sub-dimensions that can act as personal and psychological resources that can be used to boost work engagement within the workplace (Harumvame, 2018). The dependent variable, work engagement was addressed within the literature review by reviewing the background, nature and definitions, dimensions, theories, and models of work engagement. Although there have been several studies conducted on the relationship between positive work behaviour and employee engagement the literature found that more studies need to be conducted within the area of agricultural extension to understand the concepts and how they interact with other organisational concepts such as self-leadership and psychological capital. Within the current study, work engagement was conceptualised as the "positive, fulfilling, work related state of mind that is characterised by vigor, dedication and absorption" (Shaufeli, Salanova, Gonzalez-Roma & Bakker, p. 74).

Vigor can be identified as high energy levels and mental resilience while working, vigor indicates that employees are willing to invest their efforts and time into their work even during the face of difficulties. Dedication was referred to as being strongly involved in one's work and the sense of significance and enthusiasm within one's work. Lastly, absorption was characterised in the literature as being fully concentrated and involved within ones work such that time passes quickly and one has difficulty detaching from the workplace (Shaufeli *et al.*, 2002). The job demands-resources model indicates that one's personal and psychological resources such as psychological capital and self-leadership can influence the work engagement of employees.

Psychological capital is considered a multi-dimensional construct. Within this study, psychological capital was conceptualised from the perspective of Luthans, Youssef-Morgan and Avolio (2007) as an individual's positive psychological state of development that is characterised by self-efficacy or having the confidence to take on challenging tasks, having optimism or making an positive attribution towards succeeding, having hope or persevering towards ones goal and redirecting paths if necessary, and lastly resiliency or sustaining and bouncing back in order to attain success. Psychological capital was positively shown to be linked to employee's performance and identified by Burhanuddin *et al.* (2019) as an essential psychological resource.

Self-leadership was approached from the perspective of Neck and Houghton (2006) who defined self-leadership as the process in which individuals regulate and control their behaviour. Individuals influence and lead themselves using a specific set of behavioural and cognitive strategies. Behavioural strategies were defined by Neck and Manz (2013) as strategies that focus on managing behaviours related to unpleasant however necessary tasks. Five strategies were identified under behavioural focused strategies, these strategies are self-observation, self-goal, self-reward, self-punishment, and self-cueing (Houghton & Neck, 2002). Natural reward was identified as another strategy for self-leadership which focuses on building one's natural motivation by fostering positive affect using strategies such as building more pleasant and desirable features into a task or shaping one's own perceptions by focusing their attention away from the unpleasant task (Manz, 2015). The last strategy identified is constructive thought pattern strategies in which positive patterns of perception and thought are used to reduce dysfunctional thought patterns that foster optimistic and adaptive thinking patterns (Crossen, 2015). Constructive thought patterns involve strategies such as positive self-talk, mental imagery and recognising and replacing negative beliefs and assumptions.

# 7.2.2. Relationship between psychological capital, self-leadership, and work engagement according to the literature

The JD-R model that was first published by Demerouti, Bakker, Nachreiner and Schaufeli (2001) was used as the conceptual model that informed the relationship between the variables within the study. This model states that for an employee to experience work engagement, personal resources and job resources are important. Job resources are said to initiate a motivating process that can positively contribute towards a person's experience of engagement by satisfising their basic work needs (Bakker & Demerouti, 2018). Positive motivational resources that are provided by job resources such as autonomy, performance feedback, social support and personal resources such as optimism, self-efficacy, resilience, and self-esteem (which are dimensions identified under psychological capital) can result in higher success rates and work engagement for employees (Burney, 2011). A conceptual framework established by Breevaart et al. (2016) suggested that self-leadership is a starting point for achieving work engagement within the workforce. Providing employees with different self-leadership strategies such as self-talk and evaluating one's beliefs and assumptions can provide important tools for employees to experience more positivity and eventually become engaged with their work (Breevaart et al., 2016). Direct links have been shown between work engagement and psychological capital by Soni and Rastogi (2019). It was also found that employees who rated higher on resilience were more engaged in their jobs. According to the literature it was also found that psychological capital influences two components of work engagement, namely vigor and dedication, however more influence was shown with vigor (Kotze, 2017). The dimensions of psychological capital positively relate to work engagement and individuals who displayed higher levels of psychological capital also displayed more engagement at work (Costantini et al., 2017).

Self-leading individuals can positively influence the resourcefulness of the work environment and in so doing, results in contributing towards employees work engagement (Bakker & Demerouti, 2014), therefore self-leadership can act as a foundation for positive thinking with psychological capital (and it is dimensions) acting as resources that can boost the work engagement of employees, therefore, indicating that both self-leadership and psychological capital can have a significant impact on work engagement.

#### 7.2.3. Relationship between work engagement and gender according to the literature

Gender differences were identified by Garg (2014) as an important determinant that governs the levels of work engagement. However, future research conducted by Tshilongamulenzhe and Takawira (2015) found that gender within work engagement is better viewed from the point of a social perspective in which social differences rather than biological differences of men and woman are investigated. Banihani *et al.* (2013) found that men experienced higher work engagement levels compared to woman, this may be due to men experiencing more psychological safely. According to the 2019 employee engagement and modern workplace report, it was shown that woman experience higher engagement compared to men. Due to contradicting results from the different studies presented in the literature, it remains unclear as to whether a relationship exists between work engagement and gender hence this was further explored within this study.

## 7.3. CONCLUSIONS REGARDING THE CURRENT STUDY

As stated previously the study had two objectives. The primary objective looked at the effect of psychological capital and self-leadership on the work engagements levels of agricultural extension advisors. The secondary objective was to determine whether a relationship exists in the levels of work engagement with regards to gender. The conclusions of the primary objective will be examined first.

#### 7.3.1. Primary objective

The first objective of this study was to determine the effect of psychological capital and selfleadership on the work engagement levels of agricultural extension advisors using a nonexperimental research design. The following research hypothesis was tested:

Null hypothesis: The variances in the levels of work engagement cannot be explained by psychological capital and self-leadership among agricultural extension advisors.

Alternative hypothesis: The variances in the levels of work engagement can be explained by psychological capital and self-leadership among agricultural extension advisors.

The following conclusions were drawn.

Firstly, a Pearson product-moment correlation analysis was performed to determine whether a relationship does exist between the independent variables (psychological capital and self-leadership) and the dependent variable (work engagement). The results showed that a

significant and large relationship exists between psychological capital (r = .721) and work engagement as well as with self-leadership and work engagement (r = .585). Further investigation also indicated that self-efficacy, hope, and optimism had a medium significant correlation with work engagement, whereas resilience a lower correlation. Natural reward strategies and behavioural-focused strategies indicated a larger relationship with work engagement compared to constructive thought patterns strategies which had a small correlation. According to the stepwise multiple regression analysis, three variables were shown to be significant predictors of employee engagement, these variables are hope, optimism (which are dimensions of psychological capital) and behaviour focused strategies (which is a dimension of self-leadership). The results revealed that hope made the largest contribution towards the variance in work engagement with  $R^2 = .52$ , which is 52%. The second predictor optimism made a modest contribution of 8% towards the variances in work engagement. Lastly, behaviour focused strategies were found to be last and smallest contribution to the variance in work engagement with only 2%.

The empirical results therefore concluded that within the current study, three variables which predict work engagement (hope, optimism, and behaviour focused strategies) explain 62.8% of the variance in work engagement. These results are consistent with Harumvame (2018) who also noted that hope to be the highest predictor of work engagement. It was therefore concluded that the three variables explaining the variance in work engagement, hope make the strongest contribution. Therefore, the alternative hypothesis, variances in the levels of work engagement can be explained by psychological capital and self-leadership among agricultural extension advisors was not rejected however partially accepted.

## 7.3.2. Second objective

The secondary objective of the study was to determine by means of a non-experimental research design whether differences exist between male and female agricultural extension advisors regarding the levels of work engagement. The following hypothesis was tested:

Null hypothesis: There are no statistically significant differences between male and female agricultural extension advisors regarding the levels of work engagement.

Alternative hypothesis: There are statistically significant differences between male and female agricultural extension advisors regarding the levels of work engagement.

An independent samples t-test was used to analyse the secondary objective. Based on the findings, (as can be seen in Table 6.15), no significant differences were found between male and female agricultural extension advisors regarding their levels of work engagement. These results were consistent with studies conducted by Tshilongamulenzhe and Takawira (2015) and Ellison (2020) who also found no statistically significant differences between the levels of work engagement among male and females. From the literature it was concluded that there are no differences in gender and work engagement. Therefore, the null hypothesis, there are no statistically significant differences between advisors regarding the levels of work engagement was not rejected.

# 7.4. CONCLUSIONS ON THE CONTRIBUTION TO THE FIELD OF INDUSTRIAL PSYCHOLOGY

The findings of the literature review as well as the current study contribute new knowledge to the field of industrial psychology as well to the field of agricultural extension within South Africa. The literature review provided new and recent insight into the conceptualisations of the constructs that were relevant to the study and the possible relationship between these constructs. Based on the literature review, practitioners, especially those within the field of industrial psychology should consider the theoretical models of psychological capital, selfleadership and work engagement when fostering positivity and engagement within the workplace. Self-leadership strategies can be used as the building blocks for the creation of personal resources which can therefore improve the use of individuals job resources and assist employees to build work engagement and avoid stressful environments.

This study has provided evidence that the dimensions of psychological capital (namely, hope and optimism) and self-leadership (behaviour-focused strategy) can provide interventions to facilitate positive behaviour change within the workplace. Therefore, it's important that industrial psychology looks at self-leadership with a more positive view. The current study has contributed to the field of agricultural extension by providing extensionist and governmental departments with information on how work engagement can influence the productivity of their employees and how they can increase the work engagement levels of their employees by applying psychological capital and self-leadership strategies. Individuals that engage in selfleadership and display psychological capital through hope and optimism can increase the psychological and personal resources of individuals which results in higher and more stable levels of work engagements (Gawke, Gorgievski & Bakker, 2017). This study provides empirical conclusions for the agricultural extension sectors as the advisors as well as the governmental departments that employ them can focus on developing the psychological resources and the use of behavioural focused strategies to boost the work engagement levels of their employees. This study is therefore important as it provides theoretical development and knowledge within the field of industrial psychology as well as to improving the work engagement and productivity levels of agricultural extension advisors.

#### 7.5. LIMITATIONS OF THE STUDY

Several limitations were identified within the study. Although much research has been conducted on work engagement, psychological capital, and self-leadership the study has not been conducted within the agricultural sector and therefore literature was limited to determine the influence of these constructs within agricultural extension. Much effort was applied to minimize the limitations of the empirical investigation; however, the present limitations need to be acknowledged. An online questionnaire had to be distributed due to the limitations of COVID-19 as well as financial and time constraints. According to Andrade (2020), online surveys have the disadvantage of only being completed by individuals who are literate and have access to internet; furthermore, they can be sufficiently biased as individuals will only complete the survey if they are interested in this subject. The study unfortunately did not gain a large sample size as was originally hoped and due to time constraints the study had to continue with a smaller sample size than initially intended, this restricted the generalisation and representation of the findings. The study focused on the agricultural extension sector and specifically on agricultural extension advisors who work within the field with the farmers, focus was therefore not placed on those of higher-level positions. Despite the limitations, the study provided new insights into the work engagement of agricultural extension advisors and the interactions between the variables measured.

## 7.6. RECOMMENDATIONS FOR ORGANISATIONS

From the literature and this empirical study, it can be concluded that both psychological capital and self-leadership enhance the work engagement of employees. The results clearly indicated that hopeful and optimistic employees who apply behaviour focused strategies are at a higher advantage of being more engaged at work and can therefore offer an organisation a competitive advantage. According to Luthans *et al.* (2007), the dimensions of psychological capital, namely hope, optimism, resilience and self-efficacy are situationally based and open to be developed

and changed; therefore, indicating that they can be trained. This study recommends that organisations that want to boost the work engagement levels of their employees should incorporate and develop personal resources of individuals through hope and optimism. Job resources of employees can also be used to boost engagement using behaviour focused strategies such as self-observation, self-goal setting, self-punishment, and self-cueing.

Governmental organisations can coach their extension advisors to assist them to set achievable goals, which can facilitate hope and provide the necessary personal resources to employees to help them accomplish these goals. In addition, these organisations can add meaning to agricultural extension advisors work to give them a sense of purpose in their work and in this way create motivational pathways for these extension advisors to strive towards. Hope was found to be the highest predictor of work engagement and it is therefore recommended that organisations develop this capacity within the workplace to increase the work engagement of the extension advisors. Due to its motivational state, hope can be increased among employees through goals, agency, and pathways. Optimism of employees can be strengthened through keeping employees informed, communicating regularly, and providing feedback to employees. According to Kotze (2017), psychological capital plays a key role in the relationship between personal and job resources and is therefore important to produce work engagement. As these constructs are regarded as state-like and open to development (Malinowski & Lim, 2015) it is recommended that organisations develop and use their capacities within individuals to improve their work engagement levels.

Agricultural extension advisors should be encouraged to participate in seminars, webinars, and conferences as a way of learning from peers, this can assist in increasing the hope of these advisors as they can learn how to set realistic goals and reach those goals through self-determination. Success stories provided at conferences can provide agricultural extension advisors with hope and optimism to achieve goals that they set for themselves and in so doing, improve their work engagement. A lot of focus is placed on helping farmers to build hope and optimism; however, there is a lack of building these characteristics among extension advisors, it is important for extension advisors to carry these characteristics to help farmers develop. Behaviour-focused strategies are another way in which extension advisors can improve their work engagement, this can be done by rewarding oneself or praising oneself when goals are achieved and observing one's behaviour to eliminate unproductive behaviours therefore becoming self-leaders.

### 7.7. DIRECTIONS FOR FUTURE RESEARCH

Firstly, it was noted within the limitations that a small sample was used, it is therefore recommended that a longitudinal study with a larger sample size be used to ensure the generalisability and representativeness of the study to the larger population of agricultural extension advisors. To gain more in-depth detail of how psychological capital and self-leadership effects the work engagement levels of agricultural extension advisors', future researchers could consider a mixed method approach which could add more value and decrease method bias within the study. This study only focused on the agricultural extension advisors who work in the field with farmers and did not consider higher positions; therefore, its recommended that future studies look at all levels within agricultural extension to assess the work engagement of all employees that work within this sector. In summary, it is recommended that future studies use a longitudinal study that addresses the same or similar topics and make use of probability sampling to confirm the research results and achieve better representation and generalisability of the findings.

### 7.8. SUMMARY

This chapter discussed the conclusions that were drawn from the findings and the limitations that occurred within the current study. Focus was placed on both the literature review and this study itself. Recommendations for future research were provided and practical suggestion for improving the work engagement levels of employees using psychological capital and self-leadership were provided. The chapter closes with direction for future researchers. The following research objectives were achieved within this study:

- To determine by means of a non-experimental research design whether psychological capital and self-leadership have an effect on the levels of work engagement among agricultural extension advisors.
- To determine by means of a non-experimental research design whether differences exist between male and female agricultural extension advisors regarding the levels of work engagement.

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#### **APPENDIX A: ETHICAL CLEARANCE LETTER**



#### GENERAL/HUMAN RESEARCH ETHICS COMMITTEE (GHREC)

20-Nov-2020

Dear Mrs Kirsty-Leigh Green (Bauser)

#### Application Approved

Research Project Title: The effect of Psychological Capital and Self-Leadership on Work Engagement among Agricultural Extension Advisors.

Ethical Clearance number: UFS-HSD2020/1654/1711

We are pleased to inform you that your application for ethical clearance has been approved. Your ethical clearance is valid for twelve (12) months from the date of issue. We request that any changes that may take place during the course of your study/research project be submitted to the ethics office to ensure ethical transparency. furthermore, you are requested to submit the final report of your study/research project to the ethics office. Should you require more time to complete this research, please apply for an extension. Thank you for submitting your proposal for ethical clearance; we wish you the best of luck and success with your research.

Yours sincerely

Dr Adri Du Plessis Chairperson: General/Human Research Ethics Committee

Adlevon

205 Ne kon Mandela Drive Park West Bloemfontein 9301 South Africa

P.O. Box 339 Bloemforte in 9300 Te1:+27 (0)51 401 9337 dmlessis A @fs.ac za www.ufs.ac.za

#### APPENDIX B: APPROVAL LETTER FROM SASAE



07 September 2020

Dear Sir/Madam

On behalf of the Board of SASAE, I am writing to formally indicate our awareness of the research proposed by Mrs Kirsty-Leigh Green a master's student at the Department of Industrial Psychology. We are aware that Ms Green intends to conduct her research by administering questionnaires to agricultural extension advisors to assess the effect of psychological capital and self-leaderhsip on work engagement.

Permission is therefore granted to Ms Green to gain access to the SASAE membership database in order to distribute her questionnaires electronically to the members of SASAE.

If you have any questions regarding the above, please feel free to contact Ms Mantombi Mbongo at 0792279938.

Kind regards

PRESIDENT SASAE: MS M. MBONGO

### **APPENDIX C: INFORMED CONSENT LETTER**

Г	DRAFT	
EvaSys The effect of I	Psychological Capital and Self-Leadership on Work Er	ngagement among
University of the Free State Department of Industrial Psychol	Mrs Kirsty Green logy Survey	$\bigotimes$
Mark as shown:	ease use a ball-point pen or a thin felt tip. This form will be processed ease follow the examples shown on the left hand side to help optimiz	d automatically. ze the reading results.
<ul> <li><b>1. RESEARCH INFORMA</b> <ul> <li>Dear Participant</li> <li>I, Kirsty Green am currentlipresent, I am busy with my <i>The effect of Psychologica</i> <li>Before you decide to participant</li> <li>I. PURPOSE OF THE REIThe concept of work engagleadership is how leaders id development that is charace effects that psychological of 2. NATURE OF PARTICIP/ If you volunteer to participa capital, self-leadership and convenient to you and wout</li> <li>CONFIDENTIALITY Any information that is obta and will be disclosed only vidissertation, but confidentiany results.</li> <li>VOLUNTARY PARTICIEF You can choose whether twithout consequences of a in the study. Once the quee which questionnaire below.</li> </li></ul> </li> <li>Should you have any quees study, please contact me as <b>RESEARCHER:</b> Mrs Kirsty Green 0829229224 GreenK@ufs.ac.za</li> <li>SUPERVISOR: Prof. Ebben Van Zyl yanzyles@ufs.ac.za</li> </ul>	ATION by studying towards my masters in industrial psychology a y dissertation and would like to invite you to participate in al Capital and Self-Leadership on Work Engagement amo cipate in this study, it is important that you understand wh he time to read the following carefully. Please ask the resen- normation. SEARCH gement is important to any organisation as it affects oness lead and manage themselves and psychological capital is cterized by having self-efficacy, optimism, hope and resili- capital and self-leadership have on work engagement am ATION ate in this study, you will be asked to complete a question d work engagement. The completion of the questionnaire uld require approximately 10-15 minutes of your time. tained in connection with this study and that can be identi- with your permission. The results of this study will be pub ality will be maintained. Participants' names will not be re PATION AND WITHDRAWAL o be in this study or not. If you volunteer to be in this study any kind. You may also refuse to answer any questions y stionnaire has been submitted it is not possible to withdra gs to you. stions regarding this study or wish to report any problems at the details listed below:	It the University of the Free State. At the research. The title of my thesis is: <i>ing Agricultural Extension Advisors</i> . y the research is being done and what it earcher if there is anything that is not work related state of mind. Self- s ones positive psychological state of ency. The study aims to understand the iong agricultural extension advisors. Inaire that will asses your psychological e can be done online at a time that is ified with you will remain confidential hished in the form of a completed equested in the survey, nor published in dy, you may withdraw at any time ou don't want to answer and still remain aw as I would not be able to identify a you have experienced related to the

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Εv	EvaSys The effect of Psychological Capital and Self-Leadership on Work Engagement among								
2. F	RESEARCH CONSENT								
2.1	I confirm that I have read and understood the information sheet explaining the above research project and I have had the opportunity to ask questions about the project.	☐ Yes	☐ No						
2.2	I understand that my participation is voluntary and that I am free to withdraw at any time without giving a reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or question, I am free to decline.	☐ Yes	□ No						
2.3	I understand my responses and personal data will be kept confidential. I give permission for members of the research team to have access to my anonymised responses. I understand that my name will not be linked with the research material, and I will not be identifiable in the results of the research.	☐ Yes	☐ No						
2.4	I agree to take part in the above research project:	Yes	🗖 No						

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DRAFT

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## **APPENDIX D: TURN IT IN REPORT**

## Final turn it in 2

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