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MASTERS DEGREE IN ORGANISATIONAL PSYCHOLOGY



Career Uncertainty, Transition Resources and Well-being

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A research project submitted in partial fulfillment of the requirements for the degree of MA by Coursework and Research in the field of Industrial/Organisation Psychology in the Faculty of Humanities, University of the Witwatersrand, Johannesburg, 15 March 2019.

PLAGIARISM DECLARATION

I, Prashanthi Mundree, declare that this research proposal is my own, unaided work. It has not been submitted before for Ethics at this or any other university.

_____

Prashanthi Mundree

29 May 2019

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ABSTRACT

This study aimed to explore whether perceived control, perceived social support, self efficacy and style of coping serve to moderate the relationship between career uncertainty and well-being. Schlossberg's Transition Theory was used as a framework to explore how people with different resources experience the consequences of being uncertain about their careers. The sample consisted of 265 employees working for a minimum of 6 months, from a wide variety of South African organisations, working in a variety of different jobs. Seven instruments were combined to form one questionnaire which was used to collect the data for the current study. The questionnaire was set up using Survey Monkey and was distributed via a number of social media platforms to gain participants. Multiple Moderated Regressions as well as two-way ANOVA's were used to conduct the analysis. The only transition resource which resulted in moderation was self-efficacy. The results also showed that higher scores of career uncertainty are associated with higher scores of anxiety and/or depression. This is an important result as it shows that career uncertainty and well-being are related. Additionally, there were a number of main effects found in the regressions, which suggested that lower levels of perceived control, social support, self-efficacy and certain coping styles, along with high levels of career uncertainty, are associated with higher levels of psychological distress, namely anxiety and depression. This research adds to the existing literature regarding transitions affecting well-being and is useful as it can be used to guide the development and evaluation of interventions designed to improve well-being and uncertainty in individuals.

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Chapter One: Introduction and Rationale

Career uncertainty plays an important role in an individual's career decision making process. It is assumed that the relationship between career uncertainty and well-being may be stronger for individuals who perceive themselves as lacking in career relevant resources. These resources are the transition resources from Nancy Schlossberg's Model; having access to a range of these resources may mitigate any consequences of career uncertainty experienced by individuals. Similarly, if individuals perceive themselves as currently uncertain about their career choices, and at the same time perceive themselves as unable to transition to alternative choices (or lacking in resources), the effects upon well-being could be exacerbated.

In South Africa, fluctuations within the economic, social, and political spheres tend to affect the structure of the world of work and ultimately the well-being of individuals (Coetzee, 2008). At any stage of an individual's life, the individual may experience uncertainty about what they aspire to do or what they are able to do. Due to an increasing pace for change, as well as the boundaries between jobs, organisations, and life roles becoming blurred, individuals may subsequently undergo a variety of transitions (Fugate, Kinicki, & Ashforth, 2004).

The changing nature of careers has resulted in employees experiencing an increased level of uncertainty in their career (Trevor-Roberts, 2006). This could be due to organisations undergoing a far greater number of changes, or due to the decline of employment security; as seen in South Africa currently (Coetzee, 2008). Over the past few decades, these factors have led to an increase in different career options and have the potential to increase confusion when choosing careers and uncertainty when forming career-related goals.

The investigation of well-being at work involves studying the relationship between stressful aspects of a job and the presumed results of a stressor exposure. There are a number of elements within the work environment that can be classified as a stressor. These include, but are not limited to: poor working conditions, a lack of organisational support, career uncertainties, career transitions and insecurity; these stressors have been associated with stress and anxiety (De Frank, & Cooper, 1987; Ito & Brotheridge, 2001). Career transitions may increase the possibility of negative outcomes, such as failure within the career, demotion, job loss, and possibly having to seek new employment. There is a growing body of evidence which shows that these rapid changes in the labour market can cause career

uncertainty and instability in individual's careers and may lead to greater levels of psychological distress (Alexander, Hicks, & Bartman, 2011; Campagna & Curtis, 2007; Constantine & Flores, 2006; Ito & Brotheridge, 2001; Trevor-Roberts, 2006). Career uncertainty not only has detrimental consequences to the individual in terms of employee health, work-related stress and anxiety; it also has negative consequences for organisations, including the significant cost implications as stress leads to increased turnover, poor performance and absenteeism (Trevor-Roberts, 2006).

Consequently, as a result of the labour market and organisational transitions, an increasing number of individuals will be exposed to career uncertainty, and as a result, to job stress and strain and this will impact their well-being (Itu & Brotheridge, 2001). It is therefore not surprising that the search for how individuals can cope or mobilise the resources necessary to alleviate the negative outcomes that career uncertainty has on well-being is becoming increasingly more important. This is because an abundance of literature is focused on the factors that influence career uncertainty and limited studies have looked at the coping mechanisms or how employees can better manage any transition that result when they are uncertain about their careers (Alexander, Hicks, & Bartman, 2011; Campagna & Curtis, 2007; Constantine & Flores, 2006; Ito & Brotheridge, 2001; Trevor-Roberts, 2006).

Campagna and Curtis (2007, p.91) state that "...deciding on a career is one of the most important aspects of an individual's development and personal happiness." For that reason, once researchers are able to understand how uncertainty may influence an individual's experience of their career, it may lead to the formation of career frameworks that are more in line and targeted towards effective counselling interventions that may help individuals flourish in their working environment (Trevor-Roberts, 2006). This highlights the need for Career Counsellors and Career Theorists; they would need to be concerned about the changing nature of work and the potential impact it may have on individuals, the incorporation of mental health concerns relating to career uncertainty, as well as preventative interventions (Jacobs & Blustein, 2008). Knowing how uncertainty can influence an individual in their career, organisations can then focus on ways to minimise and cope with the existence of uncertainty (Trevor-Roberts, 2006). Helping employees manage their career uncertainty could have a positive organisational impact as employees may be more productive, more motivated and be less inclined to leave (Trevor-Roberts, 2006). Therefore, the results from this research could possibly provide a framework to organisations to

understand the detrimental effects of uncertainty on the individual as well as how these effects may be mitigated. As well as the resources employees use to alleviate such stressors.

In this sense, this study will focus on how career uncertainty may influence well-being. Furthermore, research suggests that certain resources may alleviate the impact of stressors within an employee's environment (Cousins et al., 2004). We are thus interested in these resources or variables that moderate the relationship between well-being and career uncertainty. Nancy Schlossberg has put forth a basket of resources that the individual may draw upon when experiencing or going through a transition (Schlossberg, 2011). We have then chosen a number of resources, based on Schlossberg's Transition Theory, to see if they have an impact on an individual's well-being. In this study these potential resource will be looked at as moderators of the career uncertainty-wellbeing relationship; whereby such resources may alleviate the impact of negative health outcomes associated with career uncertainty.

AIM

The aim of this study is to explore whether these transition resources moderate the relationship between career uncertainty and well-being. Specifically, this study aims to explore whether perceived control, self efficacy, style of coping and perceived social support serve to moderate the career uncertainty and well-being relationship.

Chapter Two: Theoretical and Conceptual Background

2.1. Introduction

The aim of this chapter is to present a review of the aspects of career uncertainty as well as to understand how career uncertainty will be defined within the study. Psychological well-being in terms of anxiety and depression will be discussed with a focus on how it emerges within the workplace. A review of the relationship between career uncertainty and well-being will be examined. Schlossberg's Transition Theory will also be considered more in-depth: the theory will first be defined, followed by the different types of resources that the theory proposes, followed by which resources were chosen for this study and why.

2.2 Career uncertainty

Many employees may experience confusion in their careers as they are unsure what they want from their careers or unsure about how to achieve such things (Ito & Brotheridge, 2001). Subsequently, this may lead to a period of being undecided. Careers operate in an environment of constant change, as shown above and therefore increase the level of uncertainty with which employees are faced (Trevor-Roberts, 2006). Uncertainty does not only exist within an individual's career; rather, it is a central experience of living (Trevor-Roberts, 2006). Individuals on a daily basis establish routines and habits to increase the certainty within their lives in order to decrease the possibility of experiencing uncertainty; it is this drive to decrease or prevent uncertainty that motivates many human endeavours (Sully de Luque & Javidan, 2004).

Uncertainty is not experienced when something is predictable or completely unpredictable; rather, uncertainty exists between absolute certainty and absolute unpredictability (Trevor-Roberts, 2006). For example, an individual's career may not be perfectly certain, nor absolutely unpredictable. Therefore, since careers now operate in this environment of instability and change, more individuals are said to be experiencing career uncertainty (Trevor-Roberts, 2006). Uncertainty may arise from the meaning an individual attaches to a particular event; therefore, uncertainty is common within one's career, firstly because the individual searches for meaning and secondly, because there is a multitude of possibilities for action (Trevor-Roberts, 2006).

In this sense, uncertainty is generally experienced when career-related decisions are made and most of the research on career uncertainty has focused on decreasing uncertainty during this process (Gati, Krausz, & Osipow, 1996). The notion of uncertainty is important in understanding how career issues may influence stress (Latack, 1989). Uncertainty can be seen as a fundamental experience that can affect people's behaviours, attitudes and emotions (Trevor-Roberts, 2006). Where career certainty can be described as the level of decidedness or confidence after making a career choice or one's level of certainty about a chosen career path (Grier-Reed, Skaar, & Parson, 2009), career uncertainty reflects an absence of these characteristics.

It should be noted that career indecision is a related but separate construct from career certainty. Career indecision is the wavering or uncertainty that individuals go through when making a career choice (Osipow, 1979). Greenhaus and Callanan (1992) view career indecision as the difficulty in setting goals, the inability or unwillingness to choose a goal or experiencing uncertainty when choosing a career goal.

Employees may face different uncertainties within an organisation; the successful management of these uncertainties and their possible career uncertainty as a whole has implications for organisational outcomes (Trevor-Roberts, 2006). These outcomes include stress, productivity, job satisfaction and retention (Trevor-Roberts, 2006). Employees who are faced with high levels of uncertainty, either in their organisation or because of their career choice face the challenge of building new relationships, mastering new tasks and establishing an identity in order to reduce stress and role ambiguity (Trevor-Roberts, 2006). When uncertainty is experienced, Ito and Brotheridge (2001) stated that the more perceived control they have over the situation, the better they will be able to cope with the stress or transition.

It is evident that individuals may experience increased levels of uncertainty as the working world and environment continue to change. Extant findings have focused on the context that generates uncertainty, rather than individuals and how they experience uncertainty (Trevor-Roberts, 2006) and the resources available (if any) in order for them to better to cope with such a transition (beyond the few examples mentioned above). This is what this research study aims to do, namely to better understand the relationship between career uncertainty and well-being and to look at the transition resources that may influence this relationship.

2.3 Well-being

Over the last 30 plus years, considerable changes have occurred within the workplace. Advancements in technology, the globalisation of many industries, changes in work contracts and work hours, and organisational restructuring have radically transformed the nature of work in many organisations (Sparks, Faragher, Cooper, 2001). The workforce itself has also become more diversified. This section will discuss the impact of workplace transitions on employee well-being and define well-being as operationalised in this study.

There are different types of well-being and there is a consensus within researchers as to the core dimensions of well-being, namely: psychological, physical and social (Page & Vella-Brodrick, 2009). Psychological aspects of well-being may include self-respect, satisfaction and capabilities; whereas healthcare, shelter and nourishment are aspects of physical well-being (Grant & Christianson, 2007). Social aspects may include being accepted by the public or at work, participating in community projects or helping others (Liu, Siu, Shi, 2010).

Wright and Cropanzano (2000) note that psychological well-being has three defining characteristics. Firstly, they state that well-being is a phenomenological event, namely that happiness is subjectively construed. Secondly, well-being involves some emotional conditions, specifically that psychologically well individuals are more prone to experiencing positive emotions and less prone to experiencing negative emotions. Lastly, it is stated that well-being refers to an individual's life as a whole (Wright & Cropanzano, 2000).

Many studies emphasize the importance of psychological well-being; however, the measurement of psychological well-being has been hindered in two ways (Daniels, 2000). Firstly, some measures used by organisational researchers confuse well-being with cognitive processes that influence well-being (Daniels, 2000). Secondly, work-related psychological well-being (i.e. sometimes referred to as employee well-being) has often been narrowly conceptualized as job satisfaction (Daniels, 2000).

Psychological well-being is said to be compromised when negative emotions are extreme or very long lasting and interfere with an individual's ability to function in their daily life (Gardner & O'Driscoll 2007). The concept of functioning in a psychological sense may therefore involve the development of an individual's potential, having some control over life, having a sense of purpose, or experiencing positive relationships (Gardner & O'Driscoll 2007). This however may be difficult when one is experiencing career uncertainty as they

may not feel like they have control over their life; their well-being may also be affected by their level of support experienced from friends, family and their significant other. This will be expanded on in the next chapter.

In this study, well-being will be measured using the Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983). Zigmond and Snaith (1983) wanted a short questionnaire to focus specifically on two aspects of emotional disorder, namely anxiety and depression. They made sure these concepts would be distinct from one another, as they 'aimed to define carefully and distinguish between the concepts of anxiety and depression' (Zigmond & Snaith, 1983, p. 362). Items that were related to both emotional and physical disorder were not considered, such as dizziness, headaches, and tiredness (Zigmond & Snaith, 1983). In addition, a variety of states of distress were not considered, such as grief, loss of self-esteem, demoralisation from prolonged suffering and a pessimistic outlook on life (Snaith, 2003) as well as symptoms relating to severe mental disorders, such as constant thought about suicide or phobic limitation were also excluded (Zigmond & Snaith, 1983). Hence, the scale scores are not affected by the presence of bodily illness.

It was decided that the scale would focus on the loss of pleasure response, also termed anhedonia and accordingly so a lot of the statements of the scale were based upon the state of reduced ability to experience pleasure (Snaith, 2003). An example of this type of question would be 'Do you take as much interest in things as you used to?' Items that were included had to be necessary to achieve their aim of maximum separation between the concepts of anxiety and depression, thus the items for the depression scale were limited by the abovementioned considerations (Zigmond & Snaith, 1983). Items were not only based on the anhedonic state; anxiety was measured by using questions such as 'Do you worry a lot?' or 'Do you feel something awful is about to happen?' (Zigmond & Snaith, 1983). The scale can be used to assess an individual's emotional state, as well as for the presence or absence of clinically significant degrees of anxiety and depression (Snaith, 2003).

Psychological well-being is usually understood as the overall effectiveness of an individual's psychological functioning; it is said to measure the pleasantness or hedonic aspects of a person's feelings "(i.e. happiness vs. sadness or depression)" (Wright & Cropanzano, 2000, p.86). For example, some individuals with depression may have very low self-esteem, exhibit reduced motivation, and tend to be pessimistic. The reason psychological well-being is used, in terms of anxiety and depression, is because it is considered to be a 'context-free'

or global construct (Wright & Cropanzano, 2000). In addition, theorists have recognised that it is very costly, for both individuals and the organisation, when an employee is experiencing anxiety or depression (i.e. dysfunctional psychological well-being) (Wright & Cropanzano, 2000). For example, depression and decreased self-esteem have been shown to be related to work-related dysfunctional psychological well-being and therefore it is possible that psychological well-being and something like career uncertainty would be related.

2.4 Career uncertainty and well-being

Very few studies have solely looked at career uncertainty in the workplace despite the concern that career uncertainty has detrimental consequences to the individual in terms of employee health, work-related stress and anxiety (Trevour-Roberts, 2006). There have been a number of further studies which have linked uncertainty to other variables, such as stress (Ito & Brotheridge, 2001), decision-making (Gati, Krausz, & Osipow, 1996), job transfer (Kramer, 1993) and negative health affects (Catalano, Rook, & Dooley, 1986; Dekker & Schaufeli, 1995; Volinn, Lai, McKinney, & Loeser, 1988). Thus, there is still a need for future research to link career uncertainty specifically (and not just uncertainty) to well-being; within a work context.

A study done by Ito and Brotheridge (2001) investigated workplace stress, focusing on uncertainty; they provided two examples of when uncertainty may be experienced. The first is going through a career transition and the second is when one experiences job insecurity. The study also suggested that the individuals' perceived control of their situation is an important mechanism for coping with stress (Ito & Brotheridge, 2001). As stated previously, the increase in globalisation, rapid technological advancements and industrial restructuring has led to flexible staffing arrangements and employees no longer having the security of long-term employment (Jacobs & Blustein, 2008). As a result, today's workforce experiences feelings of insecurity, which results in work-related stress; this in turn is related to lower levels of job satisfaction and an increase in both turnover and cardiovascular risk of the employee (Jacobs & Blustein, 2008). Therefore, career uncertainty can be as a result of job insecurity; job insecurity can be defined as an employee's negative reaction to any changes which concern their job (Jacobs & Blustein, 2008). It has been linked to problems affecting the individual, such as physical and mental health problems; and problems affecting the organisation, such as reduced levels of job satisfaction (Jacobs & Blustein, 2008).

Similar results have been reported by Campagna and Curtis (2007) when examining the relationship between career indecision and anxiety and by Creed, Prideaux and Patton (2005) where undecided students were reported to have lower well-being and career outcomes than decided students. The former study was done within a university population and the latter study within a high school student population. A further study by Constantine and Flores (2006) found a relationship between psychological distress and career indecision; which they stated that was in turn related to lower levels of career certainty. Career uncertainty reflects the specific experience of apprehension over one's career choices once employed and is therefore conceptually different to 'career indecision', as defined by Campagna and Curtis (2007); where the focus is on uncertainty prior to employment and career choice. Nonetheless, there are similarities between these constructs, as both focus on the experience of career focused anxiety or distress, lending support to the hypothesised relationship between career uncertainty and impaired psychological well-being, as explored in this study.

Based on the research above, it can be seen that career uncertainty can influence an individual's well-being. However, it should be noted that most of the studies on career uncertainty and career indecisiveness have used an adolescent sample (Campagna & Curtis, 2007; Constantine & Flores, 2006; Creed, Prideaux, & Patton, 2005). Since there is increasing evidence to suggest that organisational changes as well as labour market uncertainty may be impacting levels of career uncertainty as well as having negative health effects on employees and leading to psychological distress (Alexander, Hicks, & Bartman, 2011; Campagna & Curtis, 2007; Constantine & Flores, 2006; Ito & Brotheridge, 2001; Trevor-Roberts, 2006), it is reasonable to suggest that more employees might consider transitioning from one career to another, or feeling more uncertain about their career choice. A central concern is the employee's affective and behavioural coping response to the uncertainty and thus it is their ability to deal with such uncertainty that will affect their well-being, career success and productivity within the organisation (Trevor-Roberts, 2006).

Therefore this research will examine the relationship of career uncertainty and well-being; as well as look at the transition resources that may moderate this relationship. Specifically, this study aims to explore whether perceived control, self efficacy, style of coping and perceived social support serve to moderate the career uncertainty and well-being relationship.

2.5 Transition Resources

The research above has clearly shown that career uncertainty has negative impacts on the well-being of individuals. The proposed research aims to argue that, whilst this may be true, people who perceive themselves as capable of transitioning to alternative careers may experience less profound consequences for their well-being. In the section below we explore the notion of transition resources

2.5.1 Schlosberg's Transition Theory and transition resources

Schlossberg's Transition Theory, first presented in 1981, suggests an individual's capacity to negotiate transitions is in part influenced by the individual's access to a particular set of resources. The theory offers a model for understanding the impact that change has on the needs and resources of the individual undergoing the transition (Kotewa, 1995). The relevance of this model for the current research stems from the assumption that the relationship between career uncertainty and poor psychological health will be stronger for those individuals who perceive themselves as lacking in career relevant resources. Having access to a range of career relevant resources (transition resources in Schlossberg's model) may mitigate any consequences of career uncertainty experienced by individuals. Similarly, if individuals perceive themselves as currently uncertain about their career choices, and simultaneously perceive themselves as unable to transition to alternative choices (or lacking in resources), the effects upon well-being could be exacerbated.

According to Schlossberg, there are numerous forces that affect an individual's ability to manage transitions (Griffin & Gilbert, 2015). The type of transition, nature of the transition process, and context of the transition are all important; specific assets and resources can influence the transition (Griffin & Gilbert, 2015). These assets and resources that influence one's ability to cope are grouped and referred to as "the 4 S's," namely: situation, self, support and strategies (Griffin & Gilbert, 2015). Thus, this study uses Schlossberg's Transition Theory to explore how certain transition resources may mitigate the negative impact of anxiety and depression on an individual's well-being when they are experiencing career uncertainty.

Schlossberg defines a transition as "any event or non-event, which results in changed relationships, routines, assumptions and roles" (Schossberg, 2011, p.161). When dealing with change, the first step is to understand the different types of transitions. There are three types of transitions Schlossberg differentiates between: anticipated, unanticipated and non-event

transitions (Schlossberg, 2011). Anticipated transitions are normal or predictable life events, such as getting married or starting a first job (Schlossberg, 2011). Unanticipated transitions are disruptive, as they occur unexpectedly, such as acquiring an illness or a being involved in a car accident. Non-event transitions are expected events which do not occur, such as not receiving a promotion that was expected, or not being admitted into university. Hence, it may be assumed that everyone experiences transition some time during their life; however, Schlossberg emphases that it is not the transition that is important, but how much that transition can alter one's life (Schlossberg, 2011).

The second part of the theory refers to the 4 S's framework for coping with transitions, which can be seen in the figure below. This theory suggests that individuals bring a combination of different resources or liabilities into each transition (Kotewa, 1995). Each individual will experience transitions differently, depending on their situation, self, support and strategy (i.e. the 4 S's) (Schlossberg, 2011).

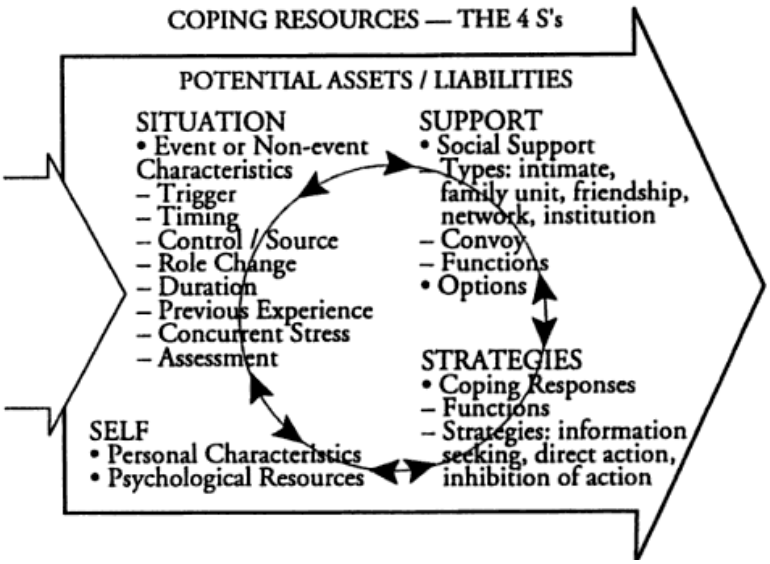


Figure 1. The 4 S's Framework. (From *Counseling Adults in Transition: Linking practice with theory by Schlossberg et al., 1995, p. 48*)

Schlossberg's framework can also be used in line with the Transactional Model of Stress put forth by Richard Lazarus and his colleagues (Lazarus, 1999; Lazarus, 1966; Lazarus & Folkman, 1984). The model states that stress and well-being are integral parts of both the behavioural and cognitive process by which individuals encounter demands and identify resources to help them deal with such demands (Lazarus, 1999). The core of the model is based on individual and situational factors which interact with the appraisal of demands to

produce outcomes. Namely, that stress and well-being are subjective and affected by cognitive process (such as appraisal and coping) as well as situational and individual factors. This is seen by Schlossberg's 4 S Framework, whereby there are a number of potential assets or liabilities which may help the individual experiencing or going through a transition – again, the appraisal of both the demands and resources is based on how it is perceived by the individual (Kotewa, 1995).Within the transactional model of stress, demands are seen as factors which activate the process of appraisal and coping; such as: the job itself, workload, work role problems, relationships at work and so forth (Lazarus & Folkman, 1984). In the model, appraisal involves identifying and assessing options for coping with the demands. In our study, the demand would be the uncertainty behind either choosing ones career or not being certain about one's career choice. Once the individual realises they are career uncertain, they may try and find options to deal with this uncertainty; however, this will only happen if they appraise the situation as being 'relevant and stressful' (Gardner & O'Driscoll 2007). Thus, it is evident how the transactional model of stress can be viewed in relational to Schlossberg's 4 S's Framework for coping with transitions.

2.5.2 Coping Resources - The 4 S's

The next section will discuss the list of resources that Schlossberg had identified. Schlossberg identified multiple elements for each of the situation, support, self, and strategy components of the model. The current study identified one variable for each component of Schlossberg's model. For the situation, perceived career control was specifically considered; for support, perceived social support was focused upon; for the self-component, general self-efficacy was explored; and for the strategy dimension, coping strategies for stress were highlighted. The choice of these specific variables was in part informed by the specific presence these variables have in career research. Few studies have quantitatively operationalised Schlossberg's model; as an initial attempt, this study chose a limited subset of each element based on its capacity to help manage uncertainty and transitions as identified in previous research. Below, the various components of Schlossberg's model, and the subsets of each component, are considered.

2.5.2.1 Situation

The 'situation' variable refers to what kind of situation with which a person is faced and the timing of the situation. Potential liabilities or assets in terms of the situation can include whether it is an event or non-event as well as the characteristics of the event (Kotewa, 1995). In addition, it refers to how the transition is assessed by the individual and their sense of control over what is happening (Griffin & Gilbert, 2015). This can include, the control one has over the event, any role changes that take place as a result of the event and the previous experience or duration of the event (Schlossberg, 2011). Further characteristics under the situation event can include trigger, duration, concurrent stress and assessment. Trigger refers to what precipitated the transition or what caused this transition to occur; in this instance career uncertainty could be caused by decreased job security, unhappiness at work, low motivation, amongst a number of other reasons. Duration is whether the event is seen as permanent, temporary or uncertain; namely how long the event is perceived to be expected to last. Concurrent stress refers to whether or not other sources of stress are present as well, such as having multiple stressors and not just one stressor in ones immediate environment. Lastly, assessment is about who or what is seen as responsible for the transition and following this, how does this impact the individuals' behaviour once the assessment of who or what is responsible, has been made.

In the current study, job control is considered of particular importance when examining the situation factor. Rodriguez, Bravo, Perio, and Schaufeli (2001) state that job control is just one of many psychosocial resources that play an important role in moderating a stressor or demand, they further state that social support plays a similar role. Thus, in line with the Transactional Model of stress mentioned above, the factor that will be looked at under the 'situation' variable is the control an individual has over the event. A further reason as to why control was chosen under the Situation variable is because many studies have linked control to well-being (Bordia, Hunt, Paulsen, Tourish & DiFonzo, 2004; Ganster & Fusilier, 1989; Terry & Jimmieson, 1999). In this study, this would refer to the control one has over their career choices. Therefore control over one's career choices can be defined as an overall perception to influence one's career trajectory (Ito & Brotheridge, 2001). Employees may try to cope with stress by trying to understand, control or reduce stressors to try and alleviate the outcomes of the strain themselves (Lazarus & Folkman, 1984). Researchers have suggested that control is an important factor to reduce stress and strain and could moderate the relationship between the stress one has and the strain that is experienced (Lazarus &

Folkman, 1984). Ito and Brotheridge (2001) have suggested that an individual's perceived control of their situation is an important coping mechanism for stress; it is further stated that how you perceive your control over the situation, including one's own career, may be negatively associated with strain.

Albrecht and Adelman (1987) found a link between communication, uncertainty and control; they state that supportive communication decreases the perception of uncertainty, thus allowing the individual to gain a sense of perceived control over the stressful situation. Therefore, it has been suggested that increased career uncertainty and low levels of control have a negative impact on individuals' health (Bordia, Hunt, Paulsen, Tourish & DiFonzo, 2004). Furthermore, it has been stated that control is an important predictor of employee well-being (Ganster & Fusilier, 1989; Terry & Jimmieson, 1999), as low levels of control are related to poorer psychological well-being (Bordia, Hunt, Paulsen, Tourish & DiFonzo, 2004). Thus, in general, the more control we have over a situation, the less harmful the stressor could be – this can be seen by using the demand control model. The model suggests that control can buffer the negative impact of workplace stressors; hence stress literature considers control as a moderator variable (Bordia, Hunt, Paulsen, Tourish & DiFonzo, 2004). There is also support for the direct effect of work control on psychological well-being (Bordia, Hunt, Paulsen, Tourish & DiFonzo, 2004). In the current study, the negative effects upon well-being that may be expected when an individual is uncertain of their current choice could be mitigated against if the individual perceives themselves to be in control of their career possibilities.

2.5.2.2 Support

The 'support' variable refers to the individual's network and social support received from their family, friends, employees and even organisation (Kotewa, 1995). Schlossberg highlights the importance of social support as a 'buffer' against stress, social support comprises of the resources provided by other people, such as sympathy, understanding and practical help which play a very important role in managing stress (Siedlecki, Salthouse, Oishi & Jeswani, 2013). The current research explores whether social support mitigates the negative effects of career uncertainty upon an individual's wellbeing as put forth by literature.

An early definition of social support refers to "various forms of aid and assistance supplied by family members, friends, neighbours and others" (Siedlecki, Salthouse, Oishi & Jeswani,

2013, p.562). Social support has also been defined broadly as "the availability of helping relationships and the quality of those relationships" (Viswesvaran, Sanchez & Fisher, 1999, p.314). The amount of support the individual has available (if any) can either help or hinder the individual in their transition. Schlossberg (2011) states that the amount of support that an individual has available at the time of the transition, will be critical to their sense of well-being.

Siedlecki and colleagues (2013) state that individuals with satisfying relationships generally experience more feelings of happiness than sadness, in addition to having greater life satisfaction than individuals who do not have satisfying relationships. Therefore, it can be inferred that that when stressors are present, individuals will then mobilise their resources, and as a result, strain upon well-being is reduced. Viswesvaran, Sanchez and Fisher (1999) put forth a moderating hypothesis for this, which states that social support interacts with different stressors to affect strains; the relationship between stressor and strain is thought to be stronger for those individuals with low levels of social support. A possibility for this is that support is readily available for individuals with satisfying relationships than those who do not have such relationships (Siedlecki, Salthouse, Oishi & Jeswani, 2013). Another possibility is that the expectation of being able to rely on other individuals when one needs comforting, may contribute to a sense of well-being (Siedlecki, Salthouse, Oishi & Jeswani, 2013).

Karademas (2006) states that social support is related to both subjective well-being as well as to depression; he further adds that individuals who receive more social support are healthier and have a faster recovery rate from illness, unlike those who receive less social support. Another study by Thompson, Kaslow, Short and Wyckoff (2002) found that self-efficacy and suicide attempts can be partially accounted for by the mediation of perceived social support from family and friends. Social support was also found to mediate the relationship between optimism and distress in individuals who have experienced a traumatic event (Dougall, Hyman, Hayward, McFeeley, & Baum, 2001). Thus, social support is often studied as a mediating variable. However, this is not to say that social support could not have a moderating effect, as this study aims to suggest; hence a different pattern may be possible: having high career uncertainty and a perception of strong social support can lead to enhanced well-being, and through this lower anxiety and depression symptoms.

Cohen and Wills (1985) researched and presented theory on 'Stress Buffering', in the simplest sense this is when social support buffers (or protects) individuals from the negative effects of stress. This theory is predominant in social support research; this theory is an extension of the coping theory by Lazarus and Folkman (1984). Both theories suggest that a stable resource which can counter stress is social support, and it can include friends, family and significant others. The theories further state that social support is effective in countering stress when the support meets the demands of the stressor (Lakey & Orehek, 2011).

Perceived social support will be measured under this variable; it is suggested that individuals with more supportive family, friends and/or a significant other will have a better health status as well as recover faster from health-related problems, as opposed to individuals who receive less social support (Karademas, 2006). Perceived social support in this study will be measured by asking individuals to rate their levels of perceived support from their friends, family, and significant others.

Perceived support can refer to the satisfaction with support exchanges and anticipated support; generally, the perception of being able to receive social support has been linked to better outcomes during the stressful situation (Siedlecki, Salthouse, Oishi & Jeswani, 2013). A perceived sense of social support may increase an individual's optimism and subsequently, better health outcomes (Karademas, 2006). For the current study, the negative effects to well-being experienced as a result of being uncertain about one's current career choice may be negated if an individual perceives themselves to have access to significant social support.

2.5.2.3 Self

"Self-related factors focus on how internal resources and personal characteristics influence coping" (Griffin & Gilbert, 2015, p.73). The 'self' factor has two dimensions; the first refers to the individual differences or personal characteristics which influence coping and the second is any psychological resources that an individual may possess (Kotewa, 1995). Certain personal characteristics such as: gender, age, socioeconomic status, etc can influence the manner in which an individual handles change, thereby equipping some individuals to better handle transitions than others (Griffin & Gilbert, 2015). Psychological resources refer to personality characteristics and internal states which may influence the way in which one manages transitions (Griffin & Gilbert, 2015). The 'self' can also be related to the individuals' inner strength in terms of coping with the transition (Schlossberg, 2011). Schlossberg and colleagues have highlighted the importance of resilience, optimism, self-

efficacy, and values and commitments in this process; noting that greater perceptions of control and positive assessments of situations are more likely to result in positive outcomes (Anderson, Goodman, & Schlossberg, 2012).

Self-efficacy will be measured under the 'self' factor. The reason self-efficacy was chosen under the self factor, is because it addresses how individuals cope with stressors; which is in line with the Transactional Theory of Stress and Schlossberg's notions of resources discussed above. Furthermore, self-efficacy has been correlated with well-being in multiple studies, including specific focuses on anxiety and depression (Luszczynska, Scholz & Schwarzer, 2005).

Self-efficacy refers to the positive beliefs an individual has when dealing with stress; in addition, it refers to ones competency to deal with challenging encounters (Schwarzer, 1999). High self-efficacy is related to increased self-esteem, better well-being and better recovery from acute chronic diseases; whereas as low self-efficacy is related to more symptoms of anxiety and depression (Karademas, 2006). Individuals with a high level of self-efficacy may choose to perform more challenging and difficult tasks; whereas those with a low level of self-efficacy may feel more anxious and hopeless because they lack faith in their ability to perform the task, they then start doubting their capabilities and thus get more easily stressed and more frequently depressed (Singh & Udainiya, 2009). The opposite is true for self-efficacious individuals; high self-efficacy is said to enhance individual's well-being in many ways, as it may lead to increased levels of engagement and satisfaction with life (Singh & Udainiya, 2009).

Bandura (1997) explains that individuals who are self-efficacious may experience low levels of negative emotions in a threatening situation, and may therefore feel a sense of control within the situation. In addition, people with a strong sense of self-efficacy may realize that they are able to withstand challenges and focus on opportunities and thus self-efficacy may lead to effective problem solving (Karademas, 2006). Individuals with a low self-efficacy however, may experience self-doubt, thus leading to negative emotions such as anxiety (Luszczynska, Scholz & Schwarzer, 2005).

Caprada and colleagues (2006, p.31) have stated that "self-esteem [has] found to be correlated with psychosocial well-being and various other positive outcomes across the life span". They continue to state that high levels of self-esteem have been linked to a lower risk for anxiety and depressive symptoms. For the current study, based upon Schlossberg's model,

it is expected that self-esteem would moderate the relationship between career uncertainty and well-being as the negative effect of career uncertainty may be reduced if an individual has high self-esteem.

2.5.2.4 Strategy

The last factor, namely 'strategy' refers to one's strategies for coping and the plan of action or set of skills they can use to cope with the transition; this can include information seeking, direct action or taking no action at all (Schlossberg, 2011). It also speaks to an individual's ability to manage a transition through their own behaviour. There are three categories of coping responses namely, being able to change the situation, controlling the meaning of the problem, and managing the stress experienced after the transition (Griffin & Gilbert, 2015). The strategy one employs can relate to the level of well-being one experiences, it is said that emotion focused coping could lead to distress and mental health problems whereas more active coping styles may lessen the effect of stressful situations on physical health (Park & Adler, 2003). Coping in general, can influence health in healthy and clinical populations and thus shows that the way in which an individual copes with stressful situations will influence their psychological well-being (Park & Adler, 2003).

Based on previous literature, coping has been defined as how an individual changes, in terms of both cognitive and behavioural efforts, to manage their internal or external demands which they have considered to be demanding or exceeding the resources capable from the individual (Cicognani, 2011). The manner in which an individual is able to cope may be based on the nature of the event, therefore coping styles may not be assumed to be consistent across situations (Cicognani, 2011). While these strategies are useful independently, it is important that individuals utilise multiple strategies (Griffin & Gilbert, 2015). The coping strategy that an individual chooses may be related to how the individual appraises the nature of the stressor(s) or the amount of resources available within that specific situational context (Lazaras and Folkman, 1984). There are also many structural as well as cultural factors that may influence the coping resource and the strategies utilised (Cicognani, 2011).

Coping will be operationalised by using the Coping Inventory for Stressful Situations (CISS). This scale assess three different types of coping styles. The first style is task-oriented coping, which is the effort that the individual makes in order to resolve the stressful situation, such as coming up with solutions for similar stressful situations or engaging in corrective action (Endler & Parker, 1990). It can also involve changing or managing the situation or issue that

is causing the stress (van Berkel, 2009). This strategy is highly action focused and requires individuals to focus their time and energy on gathering any resources, such as skills, tools and knowledge; which may be necessary to deal with the stressor (Lazarus & Folkman, 1984). This coping style can involve a number of strategies such as decision-making, resolving conflict and gathering information (van Berkel, 2009).

The second coping style is emotion-oriented coping which focuses on minimising feelings of stress and concentrating on the individuals own feeling such as self-blame (Endler & Parker, 1990). This coping style may involve seeking for social support, venting, and looking for acceptance; even though these forms of emotion-oriented coping is varied – they all seek to decrease negative emotions (Admiraal, Korthagen, & Wubbels, 2000). Emotion-focused coping involves a number of different coping styles; some coping styles regulate emotion and may be effective, as they prevent individuals from spending too much time on their negative psychological state and rather enable them to deal with and resolve the negative emotions (van Berkel, 2009). This can be seen by individuals seeking social support, which may be effective as it encourages individuals to obtain advice from others on effective coping strategies to utilise (Bouteyre, Maurel, & Bernaud, 2007). Another coping style may be acceptance; this requires individuals to take proactive steps to accept a displeasing situation, rather than to continue experiencing negative emotions (Carver, Scheier, & Weintraub, 1989). On the other hand, emotion-focused strategies that focus on negative emotions are maladaptive as it requires individuals to focus on their negative emotions instead of removing them; such as when individuals vent, because venting does not remove the negative emotion, but rather increases it and prolongs the existing feelings of distress (van Berkel, 2009).

Lastly, avoidance-oriented coping is seen as behaviours, such as distraction (i.e. purchasing something) or social diversion (i.e. visiting a friend) that aim to avoid having to deal with the stressful situation (Endler & Parker, 1990). These behavioural and cognitive efforts are directed towards delaying, denying, or ignoring the stressful situation.

There are both individual and social resources which can influence a person's view of a stressful event or coping strategy, one individual resource is self-efficacy (Lazarus & Folkman, 1984); which has been spoken about previously. The idea is that individuals who have a high assurance in their capability may approach tasks as challenges to be mastered instead of threats to be avoided; thus they can set challenging goals and commit to them as well as recover from setbacks (Luszczynska, Scholz & Schwarzer, 2005). Hence, when

stressors are felt to be controllable, this outlook can not only produce personal accomplishments but also reduce stress and lower the vulnerability to depression. Thus individuals may use more problem-solving strategies and be less inclined to employ withdrawal strategies as a coping mechanism (Cicognani, 2011). Another resource is social support, also discussed above, it is stated that perceptions of social support, either from friends or family, is associated with a higher use of active coping strategies and may reduce the use of dysfunctional coping strategies (Cicognani, 2011). Active coping strategies have been correlated with positive change and fewer depressive symptoms, unlike avoidance coping strategies which has been linked to poor adaption and higher levels of depressive symptoms (Griffith, Dubow, & Ippolito, 2000).

The Transition Model provides a structure for analysing any transition, and demonstrates that people bring in certain recourses or liabilities to transitions (Schlossberg, 2011). These resources or liabilities will then firstly, influence whether the individual has enough resources to manage the transition successfully and secondly, the individual can discover how to strengthen their areas of weakness (Kotewa, 1995).

Researchers have examined the link between coping strategies and strain, between resources and coping strategies; as well as a link between resources and strain (Ito & Brotheridge, 2003). The literature further suggests that resources and coping strategies have a positive impact in reducing stress (Ito & Brotheridge, 2003). Coping in this instance can refer to "... constantly changing cognitive and behavioural efforts to manage the internal and external demands of transactions that tax or exceed a person's resources" (Ito & Brotheridge, p.491, 2003). Therefore, a person's choice of strategy, in terms of how to deal with the stressful situation (in this case career uncertainty) will depend on the fit between how much, and what resources the person has available as well as the requirements needed to cope with the situation. Resources can play multiple roles in supporting coping strategies; their influential role provides support to address difficulties (Ito & Brotheridge, 2003). They can also influence how individuals define a situation as well as how they assess their ability to cope and the likelihood of the success of such coping strategies (Ito & Brotheridge, 2003).

From the above, it can be seen that there is a relationship between career uncertainty and poor psychological health and that this relationship will be stronger for individuals who perceive themselves as lacking in career relevant resources (i.e. the transition resources from Schlosberg's model). The importance of using Schlossberg's model for the current study

stems from the assumption that having access to a range of career relevant resources may mitigate the negatives experience of career uncertainty. Similarly, if individuals perceive themselves as uncertain about their career choice and at the same time perceive themselves as lacking in resources (or unable to transition to alternative career choices), the effects upon well-being could be exacerbated. Hence, this study aims to use Schlossberg's model to explore how people with different resources experience the consequences of being uncertain about their careers.

2.6 Research Questions

The research questions are presented below in relation to each aspects of Schlossberg model:

1. Situation
    a. Does perceived career control moderate the relationship between career uncertainty and anxiety?
    b. Does perceived career control moderate the relationship between career uncertainty and depression?

2. Support
    a. Does perceived support from family moderate the relationship between career uncertainty and anxiety?
    b. Does perceived support from family moderate the relationship between career uncertainty and depression?
    c. Does perceived support from friends moderate the relationship between career uncertainty and anxiety?
    d. Does perceived support from friends moderate the relationship between career uncertainty and depression?
    e. Does perceived support from significant other moderate the relationship between career uncertainty and anxiety?
    f. Does perceived support from significant other moderate the relationship between career uncertainty and depression?

3. Self
    a. Does self-efficacy moderate the relationship between career uncertainty and anxiety?

b. Does self-efficacy moderate the relationship between career uncertainty and depression?

4. Strategy
    a. Does task-based coping moderate the relationship between career uncertainty and anxiety?
    b. Does task-based coping moderate the relationship between career uncertainty and depression?
    c. Does avoidant coping moderate the relationship between career uncertainty and anxiety?
    d. Does avoidant coping moderate the relationship between career uncertainty and depression?
    e. Does emotional coping moderate the relationship between career uncertainty and anxiety?
    f. Does emotional coping moderate the relationship between career uncertainty and depression?

Chapter Three: Methodology

3.1 Research Design

The research design that was adopted in the current study was a quantitative, non-experimental, cross-sectional, correlational design. This design is quantitative in nature as numerical data was collected and subjected to several forms of analysis (Wilkinson, 2005). The study is non-experimental as no manipulation, no control group and no random assignment were present (Howell, 2012). Cross-sectional studies provide the beneficial feature of having the ability to compare results of samples from different population groups at a single point in time; in addition it allows researchers to compare many different variables simultaneously (Wilkinson, 2005). Lastly, the study is correlational in nature, as it assessed the relationship between two or more variables (Howell, 2012). More specifically, it attempted to investigate the relationship between career uncertainty, well-being and the transition resources identified by Schlossberg.

3.2 Sample

The sample used in this study consisted of employees working for a minimum of 6 months, from a wide variety of South African organisations, working in a variety of different jobs. The criterion that was used for the inclusion of this sample were South African working citizens with at least a grade 12 qualification, this was to ensure that each individual was able to understand and interpret the questionnaires appropriately. Participants were not selected on any other basis such race, age or gender; this sample was appropriate for this study since it represented actual employees in a real-world professional environment.

A combination of non-probability, convenience sampling and snowball sampling was used to obtain the final sample. Non-probability sampling refers to the notion that not every subject has an equal chance of being selected (Acharya, Prakash, Saxena, & Nigam, 2013). Participation was voluntary and only employees who were available, accessible and willing to take part in the study made up the sample, (Wilkinson, 2005). Firstly, the Human Resources Manager(s) of various organisations were contacted via email. The email included the letter requesting organisational access (see Appendix A). However, gaining organisational access proved to be difficult, after an extended period of time it became necessary to resort to snowball sampling. This was done by posting the survey, with the participant information

sheet, onto social media sites such as LinkedIn, Whatsapp and Facebook Groups. Only those who were willing to take part in the study, as the study was voluntary, participated.

A total of 364 questionnaires were submitted on Survey Monkey. Ninety nine participants were removed because they had not answered any of the questions, or they had failed to provide sufficient responses to one or more of the scales in the questionnaire. Consequently, the final sample consisted of 265 participants. Fifteen participants had failed to answer some of the questions, creating a small percentage of missing values in the data set.

The sample comprised of 232 females (87.8%) and 32 males (12.2%) (see Table 1). Participants were between the ages of 19-69 (M = 37.5; SD = 11.5) (see Table 2). The majority of the participants were White employees (80%), followed by Indian employees (9.4%), then Coloured employees (4.2%), then Black employees (3,4%), a category labelled 'Other' consisted of 2.3% of the participants, and finally Asian employees made up 0,8% of the sample (see Table 3). The majority of the sample were English speaking (79.2%), followed by Afrikaans (15.5%) while the remaining participants listed an African language as their home language (5.3%) (see Table 4). The majority of the sample stated that the highest qualification that they had obtained was a diploma (25.7%), follow by Matric (22.3%), then Undergraduate degree (18.1%), then Postgraduate/Honours qualification (15.8%), then Masters or Higher (15.1%), and Other (3%) (see Table 5). Finally, looking at the participants marital status, the majority of participants were married (47.9%), followed by unmarried (27.2%), next was divorced (11.7%), then cohabitating (10.6%), and lastly widowed (2.6%) (see Table 6).

Table 1

Sample Demographic Characteristic: Gender

Age	Frequency	Percentage (%)
Male	32	12.1
Female	232	87.5
Total	264	99.6
Missing	1	0.4

Table 2

Sample Demographic Characteristic: Age

Age	Frequency	Percentage (%)
19 - 25	44	16.5
26 – 30	40	15
31 – 35	54	20.5
36 – 40	34	12.8
41 – 45	21	7.9
46 – 50	28	10.6
51 – 55	17	6.4
56 – 60	21	8
61+	6	2.3
Total	265	100

Table 3

Sample Demographic Characteristic: Ethnicity

Ethnicity	Frequency	Percentage (%)
Other	6	2.3
Black	9	3.4
White	212	80.0
Indian	25	9.4
Coloured	11	4.2
Asian	2	0.8
Total	265	100

Table 4

Sample Demographic Characteristic: Home Language

Home Language	Frequency	Percentage (%)
Other	6	2.3
English	210	79.2
Afrikaans	41	15.5
IsiZulu	1	0.4
IsiXhosa	2	0.8
Spedi	1	0.4
Setswana	3	1.1
IsiNdebele	1	0.4
Total	265	100

Table 5

Sample Demographic Characteristic: Highest qualification obtained

Education	Frequency	Percentage (%)
Other	8	3
Matric	59	22.3
Diploma	68	25.7
Undergraduate	48	18.1
Postgraduate	42	15.8
Masters/Higher	40	15.1
Total	265	100

Table 6

Sample Demographic Characteristic: Marital Status

Marital Status	Frequency	Percentage (%)
Never married	72	27.2
Married	127	47.9
Divorced	31	11.7
Widowed	7	2.6
Cohabiting	28	10.6
Total	265	100

3.3 Sampling procedure

The procedure that was followed to secure the intended sample for the study and to collect the relevant data was as follows. The first step was to submit a proposal to the University of Witwastersrand's Human Ethics Committee to obtain ethical clearance. Once ethical approval was obtained [MORG/18/008 IH] (Appendix M), I, as the researcher, then contacted a number of Human Resource Managers within various organisations by providing a letter requesting access and outlining the purpose of the research and what is entailed upon participation (Appendix A). Despite the fact that many people within various organisations were approached, organisational access was not granted and after a period of time I had to resort to using a snowball sampling technique. Thus, this became the next necessary step in order to obtain an adequate number of responses for data analysis.

Survey monkey was used, as an electronic data platform, to allow easy distribution of the questionnaires for participants to complete and submit. The participant information sheet (Appendix B), the demographic questionnaire (Appendix F), the Perceived Control Over Career Choice (Appendix G), the MSPSS (Appendix H), the GSE (Appendix I), the CISS (Appendix J), the CCS (Appendix K) and the HADS (Appendix L) were all compiled onto Survey Monkey. The questionnaire link, along with a description of the purpose of the research and the requirements to take part in the survey was distributed to as many people as possible via various social media platforms such as LinkedIn, Whatsapp and Facebook. Those who received the link were asked to pass it onto as many people as possible, who fit the requirements of the study. Once a sufficient number of questionnaires were submitted, they were scored and coded into an Excel spread sheet, where the cleaned data was subsequently analysed.

3.4. Measuring instruments

Seven instruments were combined to form one questionnaire which was used to collect the data for the current study. Career uncertainty was measured by using the Career Certainty Scale. Well-being was measured by using the Hospital Anxiety and Depression Scale. Transition resources were measured by using 4 different scales: (1) Perceived Control Over Career Choice (2) Multidimensional Scale of Perceived Social Support (3) The General Self Efficacy Scale and (4) Coping Inventory for Stressful Situations. The combined questionnaire comprised of 72 items which took approximately 8-12 minutes to complete.

3.4.1 Demographic Questionnaire (See Appendix F)

A biographical questionnaire was administered to examine and describe the demographic composite of the participants. The questionnaire comprised of 8 items which measured the following demographic variables: age, gender, race/ethnicity, language, level of education, marital status, the type of job and the duration of current employment. No identifying or personal information was asked, to maintain and ensure anonymity of the participants. The first question, before the biographical questionnaire or the scales were given; was a question on consent. The question asked whether the individual consented to their information and answers being used for the study. Every participant ticked ‘yes’ and therefore consent was not an issue and all information obtained could be used for this studies’ analysis.

3.4.2 Perceived Control Over Career Choices (See Appendix G)

The Perceived Control Over Job Search Outcomes Scale assesses how employees perceive their control in terms of their job search outcomes (Saks & Ashforth, 1990). However, a modified version of this scale was used to measure control over career choice. The scale consists of 5 items measured on a 5-point Likert-type scale ranging from (1) 'Strongly Disagree' to (5) 'Strongly Agree' (Saks & Ashforth, 1990). An example item is 'I can influence the outcomes of my job search' which was subsequently adapted to 'I can have influence over the outcomes of my career choice'. Three out of the 5 items of the original scale is reversed scored; an example of a reversed scored item is 'Finding a job depends on things I can't control' which was changed to 'I do not have very much control when it comes to choosing my career'. A high score indicates high levels of control over ones career choices, whereas a low score indicates a low level of control over ones career choices. The original scale has been reported to have a Cronbach's alpha of 0.74 (Saks & Ashforth, 1990). The self-adapted scale which was used in this study was first piloted on a sample of 10 industrial psychology participants to assess the face and content validity of the newly modified items. There were no major comments that were mentioned which needed to be addressed and all industrial psychology participants said the self-adapted scale had adequate face and content validity. Thus, no changes were needed to be made to the scale. Appendix D consists of the information participant sheet which was used as a cover letter to inform the participants about the pilot study and Appendix E was the actual evaluation sheet for the scale.

In the current study, items 2, 4 and 5 were reversed scored. The Cronbach alpha coefficient for the current study was 0.73, for Perceived Control Over Career Choices. Cronbach alpha coefficients are used to determine the internal consistency reliabilities of the scales (Streiner, 2003). Internal consistency refers to the degree in which each item of a scale correlates with each other item of the same scale (Terre Blanche, Durrheim & Painter, 2006). This is typically done by using a mathematical formula which estimates the inter-item correlation; this is presented in a Cronbach alpha coefficient which ranges from 0 to 1 (Streiner, 2003). When interpreting the Cronbach alpha coefficients, the scale reliability is considered to be acceptable at a cut-off of 0.7 and any value below this is deemed questionable (Lee, 2014). However, other researchers believe that values of 0.75 and greater are considered reliable and therefore the items are considered to have good internal reliability (Terre Blanche, Durrheim & Painter, 2006). Table 7 shows the measures of reliability for self-report scales that was

proposed by Walker and Almond (2010) which is interpreted as follows: 0.8+ is good; 0.7 – 0.79 is fairly good; 0.6 – 0.69 is just acceptable and anything <0.6 is unacceptable. This is the criteria for acceptable reliability that the current study will follow and thus the Cronbach alpha coefficient score for the Perceived Control Over Career Choices is considered 'fairly good'. Table 9 provides a summary of the Cronbach coefficients for each variable. Thus, it can be seen that all measures were internally consistent in the study.

Table 7

Measures of Reliability Interpretation

Cronbach Alpha Value (α)	Interpretation
0.8 +	Good
0.7 – 0.79	Fairly good
0.6 – 0.69	Just acceptable
< 0.6	Unacceptable

Table 8

Cronbach Alpha Coefficients for the main variables

Variable	Item(s)	Cronbach Alpha (α)
Career Uncertainty	3	0.97
Well-being	14	0.90
Anxiety	7	0.88
Depression	7	0.82
Control	5	0.73
Social Support	12	0.92
Family	4	0.92
Friends	4	0.93
Significant Other	4	0.92
Self-efficacy	10	0.89
Coping	21	0.75
Avoidant	7	0.75
Task-Orientated	7	0.84
Emotional	7	0.86

3.4.3 Multidimensional Scale of Perceived Social Support (See Appendix H)

The MSPSS first composed of 24 items and was first distributed to university students before it got shortened to 12 items (Zimet, Dahlem, Zimet & Farley, 1988). Since then, the scale has been validated among a number of different samples such as pregnant women (Zimet, Powell,

Farley, Werkman, & Berkoff, 1990), adolescents living abroad and psychiatric patients (Zimet et al., 1990).

The revised and current version of the MSPSS includes 12 items which directly address social support. These items are divided into three factor groups relating to the source of social support, namely Family, Friends or Significant Other. Each group consists of four items and each item is rated on a 7-point Likert-type scale ranging from very strongly disagree (1) to very strongly agree (7).

In the initial study, alphas for the subscales ranged from 0.91 to 0.85 indicating good internal reliability. The overall reliability of the scale was 0.88; test-retest reliability for the scale was at 0.85 with subscales ranging from 0.72 to 0.85 (Zimet, Powell, Farley, Werkman & Berkoff, 1990). Furthermore the scale displayed support for construct validity as it was negatively related to Hopkins Symptom Checklist, which measures anxiety and depression. In another study, a moderately strong correlation was found between the family subscale of the MSPSS and the Adolescent Family Caring Scale thus further supporting construct validity (Canty-Mitchell & Zimet, 2000). The internal consistency of the MSPSS in the present study was established with a coefficient alpha. Cronbach's alpha for this scale was 0.92 overall. Alpha coefficients for the three subscales were as follows: Family = 0.92; Friends = 0.93; and Significant Other = 0.92. According to Almond and Walder (2010) all these scores are considered 'good'.

3.4.4 The General Self Efficacy Scale (See Appendix I)

The General Self Efficacy Scale (GSE) was first developed by Jerusalem and Schwarzer in 1979; the scale originally consisted of 20 items but in 1981 the items were reduced to only 10 (Scholz, Doña, Sud, Schwarzer, 2002). The scale is scored on a 4 point Likert-type scale ranging from (1) Not true at all to (4) Exactly true. An example item from the scale is: 'I am certain that I can accomplish my goals'. Internal consistencies for the GSE have been found in a number of different studies which yield an alpha between 0.75 and 0.91 (Schwarzer, 1999). The re-test reliability has been shown to be between 0.55 and 0.75 for the scale as a whole (Scholz, Doña, Sud, Schwarzer, 2002). The scale has also been proven to be valid in terms of both discriminate and convergent validity, as it correlates positively with both self-esteem and optimism, and correlated negatively with depression and anxiety (Schwarzer,

1999). The current study revealed a Cronbach's alpha of 0.89, which is considered to be 'Good' (Almond & Walker, 2010).

3.4.5 Coping Inventory for Stressful Situations (See Appendix J)

The 'strategy' variable will be operationalised by using the Coping Inventory for Stressful Situations (CISS). This scale assess three different types of coping styles, the first style is task-oriented coping which can be defined as making an effort to purposefully resolve the stressful situation such as by thinking about solutions for similar stressful situations or by engaging in corrective action (Endler & Parker, 1990). The second coping style is emotion-oriented coping which focuses on minimising feelings of stress and concentrating on the individuals own feeling such as self-blame or hoping for the improvement of things themselves (Endler & Parker, 1990). Lastly, avoidance-oriented coping is seen as behaviours, such as distraction (i.e. buying something) or social diversion (i.e. visiting a friend) that aim to avoid having to deal with the stressful situation (Endler & Parker, 1990).

The scale was designed by Endler and Parker (1990) and consisted of 48 items; however the 21 item CISS-SF (short form) was used in this study. The short form was created by eliminating 21 items from the original CISS scale which had the lowest item correlations; this resulted in a 21 item measure with 7 items per subscale. The CISS-SF used a 5-point Likert-type scale ranging from 'Not at all' to 'Very much' whereby respondents had to rate the extent which they engage in certain coping activities when confronted by a upsetting or stressful situation. The instructions were consistent with those used in the 48 item CISS. Items include 'Take some time off and get away from the situation' (avoidant), 'Focus on the problem and see how I can solve it' (task-oriented) and 'Blame myself for having gotten into this situation' (emotional).

Internal consistency coefficients have been found for the task oriented (0.78 to 0.87), emotional (0.78 to 0.87) and for avoidant coping subscale (0.70 to 0.80); these Cronbach alphas are considered to be good (Endler & Parker, 1990). In adult samples, the CISS-SF has proven to have good psychometric characteristics (Calsbeek, Rijken, Henegouwen & Dekker, 2003); however, no studies to date have specifically used a work sample to validate the scale against. Test-retest correlations within a Chinese population in a 6 week period (rs = 0.78 - 0.90) and Turkish population, within a 15 day period (rs = 0.66 - 0.79) were found to range from moderate to high (Boyson, 2012; Brands, Köhler, Stapert, Wade, & Heugten, 2014).

The scale had an overall Cronbach's alpha of 0.89 in this study. Alpha coefficients for the three sub-scales are as follows: task-oriented coping = 0.84; emotion-oriented coping = 0.89 and avoidance-oriented coping = 0.75. Thus the reliability was found to be 'good', except for the subscale of avoidance-oriented coping which is considered to be 'fairly good' (Almond & Walker, 2010).

3.4.6 Career Certainty Scale (See Appendix K)

The Career Certainty Scale (CCS) assesses the extent to which individuals are certain about pursuing the career they intended as their current career choice (Osipow, Carney, Winer, Yanico & Koschir, 1979). The CCS is adapted from the Carer Decision Scale by Osipow and colleagues (1979) and consists of only 3 items. The advantage of using the CCS, besides its length, is that it has high face validity.

The CCS is rated on 6-point Likert-type scale ranging from (1) strongly disagree to (6) strongly agree. This scale was reversed scored, so that the analysis would refer to Career Uncertainty and not Career Certainty; this made the analysis more interpretable. Internal consistency reliability was 0.92 for this scale (Campagna & Curtis, 2007) whereas the original 2-item version of the scale had test-retest reliability of 0.82 and internal consistency estimates between 0.80 and 0.85 (Campagna & Curtis, 2007). The overall reliability as well as the test-retest estimates is considered to be quite high (Bowling, & Hammond, 2008). The CCS, in this study, has a Cronbach's alpha of 0.97 which is considered to be 'good' according to Almond and Walker (2010).

3.4.7 Hospital Anxiety and Depression Scale (See Appendix L)

The Hospital Anxiety and Depression Scale (HADS) was developed by Zigmond and Snaith in 1983 (Zigmond & Snaith, 1983) as a self-report instrument that measures distinct dimensions of anxiety and depression in non-psychiatric populations. It has been used in health settings as well as within general populations; the scale consists of 14 items divided equally between the subscales of anxiety and depression. The scale is quick and easy to administer and includes items such as 'Worrying thoughts go through my mind' from the anxiety subscale and 'I look forward with enjoyment to things' from the depression subscale. In terms of scoring, scores can range from 0-21, whereby 0 to 7 is considered 'normal', 8-10 is 'borderline' and 11-21 is considered to be 'abnormal'. Therefore higher scores will denote a greater number of anxiety and depression symptoms.

The Cronbach alpha for this scale has been measure in multiple studies, with different populations; reliabilities for the subscales range from 0.68 to 0.93 (mean 0.83) for anxiety and 0.67 to 0.90 (mean 0.82) for depression (Bjelland, Dahl, Haug & Neckelmann, 2002). The correlations between both the subscales ranged from 0.40 to 0.74 (mean 0.56). The risk of a false positive bias was reduced as the scale does not access any symptoms related to physical disorders such as fatigue and insomnia. The scale was also shown to have adequate diagnostic accuracy. In addition, if the cut-off score is 8, the anxiety subscale of the HADS gives 78% sensitivity and 74% specificity for detecting generalised anxiety disorders (Norton, Cosco, Doyle, Done, Sacker, 2013). Whereas the depression subscale of the HADS gives 74% specificity and 82% sensitivity for detecting major depressive disorders (Norton et al., 2013). Cronbach's alpha for this scale was 0.97. Alpha coefficients for the Anxiety and Depression subscale was 0.88 and 0.82 respectively; which were both considered to be 'good' (Almond and Walker, 2010).

3.5 Statistical Analysis

Once the data was gathered and the information was collected it was sorted and coded into an excel spreadsheet. The sheet was then imported into SPSS version 25 for statistical analysis. Analysis relating to each of the research questions was conducted by using correlations and multiple moderated regressions. Descriptive statistics was carried out; in addition the reliability of the instruments (scales) was assessed using Cronbach's alpha coefficients.

Firstly, descriptive statistics as well as summary statistics such as means, standard deviations and frequencies will be carried out to describe the demographic characteristics of the sample. All variables will also be checked for skewness and kurtosis of the data by using skewness and kurtosis coefficients as well as histograms; this will then be used to describe the normality and distribution of the data (Howell, 2012).

To check whether the scales are relevant to use in this study, scale reliabilities was established and reported on above. Reliability is the extent to which the scale continuously produces consistent results; namely its stability and dependability (Howell, 2012). Internal consistency reliability assess whether each item within a scale effectively measures the same concept (Weir, 2005). In order to determine the internal consistency reliability of the scales used in the study, Cronbach alpha coefficients were calculated for each scale and relevant subscales (if applicable).

The main research questions were analysed by using moderated multiple regression (MMR). Moderation occurs when the relationship between two linear variables is influenced by a third variable (Aquinis, & Stone-Romero, 1997); thus referred to as a moderator. Moderation implies an interaction affect whereby the moderator would change the direction or magnitude of the relationship between two variables (Aquinis, & Stone-Romero, 1997). There are a number of statistical assumptions that need to be met in order to make use of a MMR. In no particular order these assumptions are as follows. The first assumption is multivariate normality this refers to normally distributed data, which will be assessed through skewness and kurtosis coefficients as well as by histograms (Howell, 2012). Secondly, multicollinearity refers to high correlations between independent variables; for the assumption of multicollinearity to be met, the independent variables must not be highly correlated with one another; this is done by using correlations and variance inflation factors (Weir, 2005). Another assumption is that of homoscedasticity, this is when the variance across error terms is different; thus the size of the error terms should be similar across all independent variables (Howell, 2012). Linearity and causal direction refers to the relationship between X and Y; a known relationship needs to be present between you your independent and dependent variable(s) for this assumption to be met. Lastly, measurement error is the difference between a measured quantity and its true value; it includes both random and systematic error (Fornell, & Larcker, 1981). This will be reduced by insuring the data is collected as systematically as possible, by double checking the data and adjusting for measurement error if needed.

3.6 Ethical Considerations

There are a number of ethical principles that need to be addressed when carrying out a research study. Before the study was conducted, ethical clearance was requested and subsequently granted by the University of Witwatersrand's Human Research Ethics Committee (Appendix M).

The participant information sheet (Appendix B) clearly outlined the guidelines for submission and completion of the questionnaire. It also stated that participation in the study is voluntary and that any participant may withdraw from the study up until the point of completion. The first question in the survey, before any other questions were asked, queried whether the participant would consent to the study and subsequently allow their information to be used. This was in the form of a yes or no option, this question was also mandatory to complete and was how informed consent was obtained.

All participants who volunteered to participate in the study were assured confidentiality and anonymity. Confidentiality was maintained by not asking for any identifying information such as the name of the organisation at which participants work or any other information that could be directly related back to the employee. Any data reported on was also done at a group level and not at an individual level and therefore responses will only be discussed in relation to other responses. In addition, it was made clear to the participants that only the researcher and supervisor would have access to the completed questionnaires. Anonymity was upheld by not requesting any identifying information from the participants such as their name or ID number anywhere on the questionnaire. It was also made clear to participants that no IP address would be recorded when submitting online.

The participant information sheet will also include contact details of both the researcher and supervisor should a participant have any queries or concerns or would like to know the outcome of the study. Since the researcher will not be able to trace the respondents, respondents will not be disadvantaged in any way through participating in the study. The data collected will be stored on a secure and password protected computer on a spreadsheet document.

Chapter Four: Results

The following section provides a description of the statistical results obtained from the data that was collected in the present study. The statistics were produced using SPSS Version 25. The section below will outline the summary statistics of the data as well outline the MMR assumptions which were tested. Each research question is then discussed separately with regards to the results of the study.

4.1 Summary Statistics and Normality

Summary statistics, skewness and kurtosis coefficients were obtained for each variable in order to examine the degree of normality of the data. Table 10 provides the summary statistics for all variables. Histograms were also used to assist in determining the normality of the variables (see figures 2-15 in Appendix N). Skewness coefficients that fall between -1 and +1 indicate a normal distribution; whereas kurtosis coefficients can fall between -2 and +2 to indicate a normal distribution (Singh, 2007).

Table 9

Descriptive statistics for the Main Variables

Variable	N	Mean	Standard Deviation	Skewness coefficient	Kurtosis coefficient
Career Uncertainty	265	2.88	1.50	0.61	-0.58
Anxiety	265	1.43	0.69	0.18	-0.62
Depression	265	0.84	0.56	0.80	0.78
Control	265	3.50	0.78	-0.44	-0.24
Family	265	5.35	1.44	-1.16	1.05
Friends	265	5.40	1.21	-1.02	1.34
Significant Other	265	5.79	1.30	-1.34	1.43
Self-efficacy	265	3.28	0.44	-0.65	1.23
Avoidant	265	2.90	0.70	-0.61	0.27
Task-oriented	265	3.78	0.59	-0.51	1.34
Emotional	265	3.09	0.83	0.26	-0.54

Most of the skewness coefficients indicated that the variables were normally distributed due to the fact that all the coefficient values fall between the range -1 and +1. All of the kurtosis coefficients indicated that the variables were normally distributed due to the fact that the

coefficient values fall between the range -2 and +2. In addition, the histograms further indicate that a normal distribution is present. However, the only scales that do not fall within this range are the subscales of the Social Support Scale. In order to correct this, a square root transformation was performed on each social support subscale in order to obtain a normal distribution. The scales had to firstly be reversed scores, as such when interpreting these scales it is important to realise that after the transformation, low scores on the scale are now indicative of high levels of perceived support. The table below shows the descriptions for the reversed scored square-rooted social support scales.

Table 10

Transformed Descriptive Statistics for Social Support

Variable	N	Mean	Standard Deviation	Skewness coefficient	Kurtosis coefficient
Family	265	1.57	0.42	0.61	-0.17
Friends	265	1.57	0.37	0..39	-0.01
Significant Other	265	1.43	0.40	0.83	0.12

As a result, the Social Support Scale is now in line with the skewness and kurtosis coefficients that have been proposed. The histograms also assist in confirming that the scales are normally distributed (see figures 16-18 in Appendix O). Since the data was thus proposed to be normal in nature, parametric analysis was used to answer the current study's research questions.

4.2 Assumptions of Multiple Moderated Regressions (MMR)

Before any analysis can be carried out, certain assumptions for a MMR should be considered. Tranmer & Elliot (2008) suggest testing the assumptions helps avoid both Type I and Type II errors within the interpretation and results of the data. In the section that follows, the testing of these assumptions is presented.

4.2.1 Linearity

With regards to MMR, linearity states that the relationship between the IV's and the DV should be linear for the assumption to be fulfilled (Cohen & Cohen, 1983). The way in which this is checked is by using the data set to generate residual plot graphs; the data should occur in a linear pattern across the graph rather than a curvilinear pattern (Cohen & Cohen, 1983).

After an examination of each graph (see Appendix P and Q) it can be seen that the data is linear for majority of the variables, except for the emotional-oriented coping scale. Since the assumption of linearity is deemed to be met for the other variables, multiple moderated regressions will be run. However, because the assumption of linearity is not met for the emotion-oriented scale, a Two-way Analysis of Variance (ANOVA) was used instead.

4.2.2 Normality of residuals

Normality refers to whether or not the data set is normally distributed (Cohen & Cohen, 1983). This is done by confirming that the residuals are normally distributed, the way this is done is by looking at the Normal P-P Plot, to see if the data clusters tightly along the line in the plot (see figure 37 and 38). Looking at the figures below, we can infer that the residuals are normally distributed. In addition, both histograms for the residuals are included (see figure 39 and 40) to show that the data is normally distributed. Another way in which this assumption is met is by making sure that the studentized residuals are not being bigger than ±3 (Hayes, 2013). There were 2 participants that had studentized residuals over ±3 and so did not meet this assumption, therefore they were removed from the sample; otherwise the assumption of linearity would not have been met. After an examination of the plot as well as the residual values, it can then be concluded that normality was met.

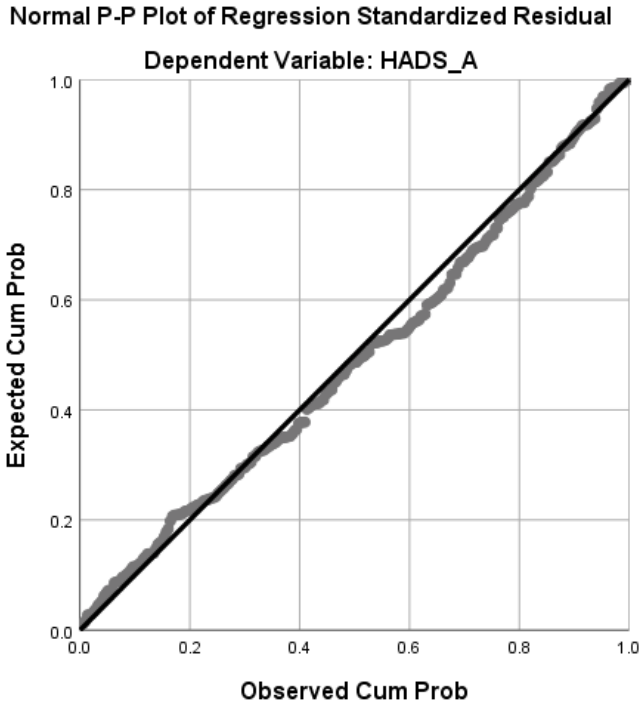


Figure 37: Normal P-P Plot of Regression Standardized Residual (Anxiety)

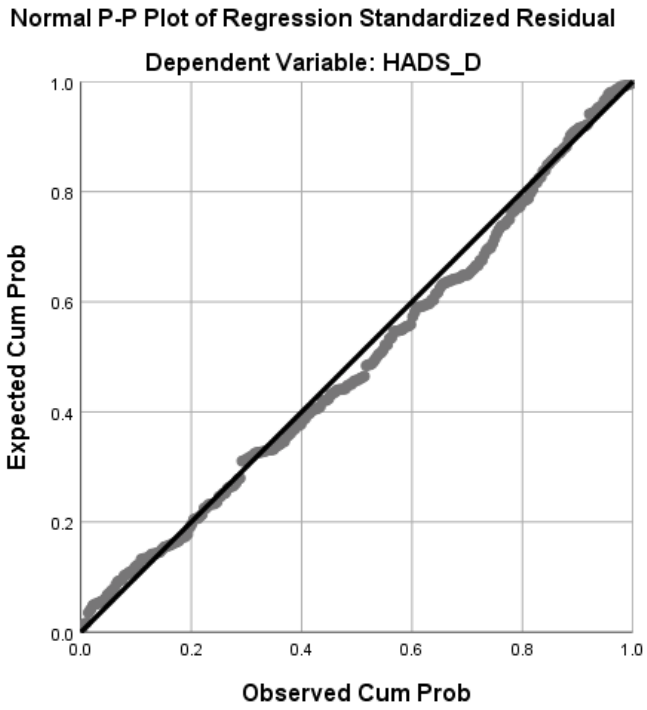


Figure 38: Normal P-P Plot of Regression Standardized Residual (Depression)

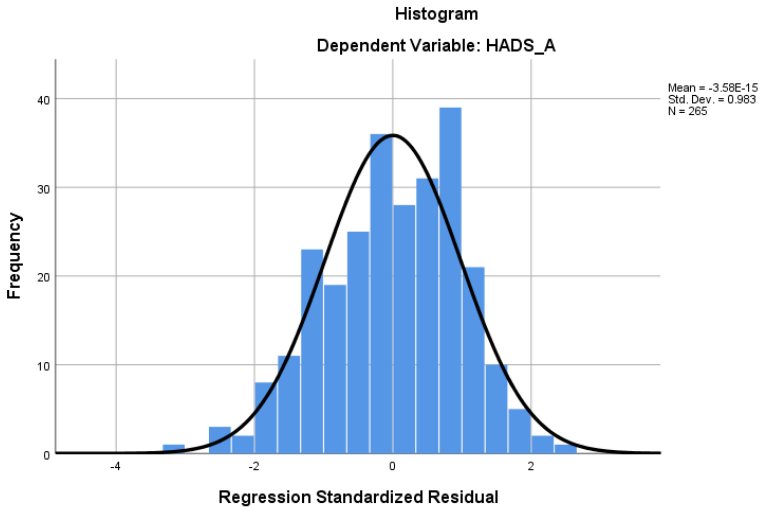


Figure 39: Histogram for Anxiety

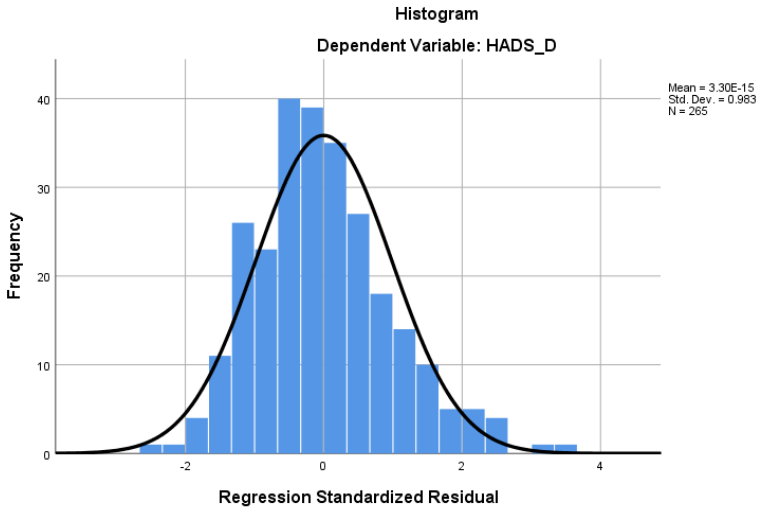


Figure 40: Histogram for Depression

4.2.3 Measurement error

This refers to the difference between a measured value of a variable and its true score (Tranmer & Elliot, 2008). Some form of measurement error may always exist; nonetheless, it is essential to confirm that as little as possible measurement error exists (Tranmer & Elliot, 2008). This is done by ensuring that all scale reliabilities have an alpha coefficient of at least 0.60. The alpha coefficients of the variables in this study range from 0.73 to 0.97 (see Table 8) therefore indicating suitable internal reliability. Since most alpha coefficients of the variables in this study are considered to be high, it therefore confirms the low existence of measurement error in the current data and hence the second assumption for MMR has been fulfilled.

4.2.4 Multicollinearity

Multicollinearity refers to the extent to which the independent variables are correlated; if the independent variables are very highly correlated, variables are said to be multicollinear (Montgomery, Peck & Vining, 2012). This is checked by composing a correlation matrix between the independent variable (career certainty) and the moderator(s) (perceived control, social support subscales, self-efficacy and coping subscales) through the use of Pearson correlation coefficients. For variables not to be multicollinear, the correlation coefficient should not exceed 0.80 (Lewis-Beck, 1980). Table 11 below shows the person correlation coefficients for career certainty and the moderator variables, it can be seen that none of them exceed 0.80. The second way in which multicollinearity is investigated is by using the

variance inflation factor (VIF) value, which should be below 10 (Hayes, 2013). Since no variables are highly correlated and because all VIF values are below 10, there is enough evidence showing that variables are not multicollinear.

Table 11

Pearson's correlation coefficients for career uncertainty, anxiety, depression and moderator variables

		CU_Avg	HADS_A	HADS_D	PCC_Avg	PSS_Fam	PSS_Fri	PSS_Sig	CISS_Avo	CISSTask	CISS_Emo
CU_Avg	Pearson Correlation	1	.409**	.431**	-.470**	-.166**	-.161**	-.126*	.042	-.216**	.339**
	Sig. (2-tailed)		.000	.000	.000	.007	.009	.041	.502	.000	.000
	N	262	262	262	262	262	262	262	262	262	262
HADS_A	Pearson Correlation	.409**	1	.677**	-.313**	-.236**	-.241**	-.248**	-.026	-.302**	.621**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.671	.000	.000
	N	262	262	262	262	262	262	262	262	262	262
HADS_D	Pearson Correlation	.431**	.677**	1	-.384**	-.387**	-.350**	-.332**	-.141*	-.404**	.454**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.023	.000	.000
	N	262	262	262	262	262	262	262	262	262	262
PCC_Avg	Pearson Correlation	-.470**	-.313**	-.384**	1	.127*	.194**	.186**	.101	.201**	-.246**
	Sig. (2-tailed)	.000	.000	.000		.039	.002	.003	.102	.001	.000
	N	262	262	262	262	262	262	262	262	262	262
PSS_Fam	Pearson Correlation	-.166**	-.236**	-.387**	.127*	1	.459**	.429**	.207**	.201**	-.147*
	Sig. (2-tailed)	.007	.000	.000	.039		.000	.000	.001	.001	.017
	N	262	262	262	262	262	262	262	262	262	262
PSS_Fri	Pearson Correlation	-.161**	-.241**	-.350**	.194**	.459**	1	.501**	.447**	.292**	-.143*
	Sig. (2-tailed)	.009	.000	.000	.002	.000		.000	.000	.000	.020
	N	262	262	262	262	262	262	262	262	262	262
PSS_Sig	Pearson Correlation	-.126*	-.248**	-.332**	.186**	.429**	.501**	1	.370**	.191**	-.110
	Sig. (2-tailed)	.041	.000	.000	.003	.000	.000		.000	.002	.074
	N	262	262	262	262	262	262	262	262	262	262
CISS_Avo	Pearson Correlation	.042	-.026	-.141*	.101	.207**	.447**	.370**	1	.185**	.160**
	Sig. (2-tailed)	.502	.671	.023	.102	.001	.000	.000		.003	.009
	N	262	262	262	262	262	262	262	262	262	262
CISSTask	Pearson Correlation	-.216**	-.302**	-.404**	.201**	.201**	.292**	.191**	.185**	1	-.358**
	Sig. (2-tailed)	.000	.000	.000	.001	.001	.000	.002	.003		.000
	N	262	262	262	262	262	262	262	262	262	262
CISS_Emo	Pearson Correlation	.339**	.621**	.454**	-.246**	-.147*	-.143*	-.110	.160**	-.358**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.017	.020	.074	.009	.000	
	N	262	262	262	262	262	262	262	262	262	262

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

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

4.2.5 Homoscedasticity

Homoscedasticity refers to establishing an equality of variance, namely that residuals should have roughly the same variance across all independent variables (Hayes, 2013). To test this assumption we look back at the scatterplots that were utilised to prove the linearity assumption (Appendix P and Q). The pattern on each scatter plot should appear more rectangular than funnel shaped; thus scores concentrated across the centre indicate an equality of variance and hence providing evidence to conclude that the final assumption is met. Looking at each scatter plot, it is evident that all scatterplots, except for the emotion-oriented scatter plot, produces a funnel shape, meeting the assumption of homoscedasticity. Since the emotion-oriented scatter plot does not meet the assumption of homoscedasticity, Two-way ANOVA's were run, instead of moderated multiple regressions. Lastly, according to Cohen and Cohen (1983), a moderator model should only be applied to a sample that has a minimum of 100 participants. The current study has a sample of 265 participants and thus it is deemed appropriate to use an MMR analysis.

4.3 Moderated Multiple Regression

All of the MMR's were structured similarly. Firstly anxiety was entered as the dependent variable, then career uncertainty was entered as the independent variable and then each moderator were entered into the equation which resulted in a total of seven moderated regression equations for each moderator variable. This was then repeated, but this time with depression as the dependent variable, producing another seven moderated regression equations. Therefore this study produced a total of 14 moderated regression equations.

In the final step the product terms of each independent variable with each moderator is inserted into the equation to determine the existence of any interactive effects (Hayes, 2013). To establish a moderation, the interaction result needs to be significant (<0.05). If either variable reveals significance on its own, without the interaction term being significant, then this is considered to be a main effect of an IV on a DV (revealing an association between the IV/Moderator and the DV, independent of the interaction term) (Baron & Kenny, 1986).

Of the 14 MMR analyses done, only one regression revealed significant interaction results. There was however main effects of the predictor (IV) and moderator variables which were found to be significant. The following section will discuss each research question separately in line with the moderated multiple regression output.

4.3.1 Situation

a) Does perceived control moderate the relationship between career uncertainty and anxiety?

Table 12

Moderated multiple regression for anxiety on career uncertainty and perceived control

Variable	Beta	Standardised Error	T	p-value
PC_Avg	-0.14	0.06	-2.33	**0.02**
CU_Avg	0.15	0.03	5.28	**0.00**
PC_Avg* CU_Avg	0.00	0.03	0.04	0.94

R-Square = 0.19
Overall model of significance: F(3, 258) = 19.63, p < 0.0000

Anxiety was regressed onto career uncertainty and perceived control, followed by the addition of an interaction term of perceived control with career uncertainty. Findings indicated a non significant result for the interaction term of perceived control by career uncertainty on anxiety (p=0.94) (Table 12). However, career uncertainty yielded a positive main effect (β=0.15; p=0.00) on anxiety, the direct nature of this relationship indicates that high scores of career uncertainty are associated with higher scores of anxiety. a negative main effect (β=-0.14; p=0.02) was found between perceived control and anxiety, the direct nature of this relationship indicates that lower scores of perceived control are associated with higher scores of anxiety. Thus, career uncertainty and perceived control explain approximately 19% of the variance in anxiety.

b) Does perceived control moderate the relationship between career uncertainty and depression?

Table 13

Moderated multiple regression for depression on career uncertainty and perceived control

Variable	Beta	Standardised Error	t	p-value
PC_Avg	-0.17	0.05	-3.67	**0.00**
CU_Avg	0.12	0.02	5.18	**0.00**
PC_Avg* CU_Avg	0.01	0.02	0.27	0.79

R-Square = 0.23
Overall model of significance: F(3,258) = 25.44 p < 0.0000

Depression was regressed onto career uncertainty and perceived control, followed by the addition of an interaction term of perceived control with career uncertainty. Findings indicated a non significant result for the interaction term of perceived control by career uncertainty on depression (p=0.79) (Table 13). However, career uncertainty yielded a positive main effect (β=0.12; p=0.00) on depression, the direct nature of this relationship indicates that high scores of career uncertainty are associated with high scores of depression. Whereas a negative main effect (β=-0.17; p=0.00) was found between perceived control and depression, the direct nature of this relationship indicates that low scores of perceived control are associated with high scores of depression. Thus career uncertainty and perceived control explain approximately 23% of the variance in depressive symptoms.

4.3.2 Support

a) Does perceived support from family moderate the relationship between career uncertainty and anxiety?

Table 14

Moderated multiple regression for anxiety on career uncertainty and perceived social support (family)

Variable	Beta	Standardised Error	t	p-value
PSS_Fam	0.30	0.09	3.19	**0.00**
CU_Avg	0.18	0.03	6.81	**0.00**
PSS_Fam *CU_Avg	-0.05	0.05	-0.94	0.35

R-Square = 0.20
Overall model of significance: F(3, 258) = 21.49, p < 0.0000

Anxiety was regressed onto career uncertainty and perceived social support from family, followed by the addition of an interaction term of perceived social support from family with career uncertainty. Findings indicated a non significant result for the interaction term of perceived social support from family by career uncertainty on anxiety (p=0.35) (Table 14). However, career uncertainty yielded a positive main effect (β=0.18; p=0.00) on anxiety, the direct nature of this relationship indicated that high scores of career uncertainty are associated with high scores of anxiety. In addition, a positive main effect (β=0.30; p=0.00) was found

between perceived social support from family and anxiety. Because this scale was reverse scored in the process of a square root transformation, the direct nature of this relationship indicates that low levels of social support from family are associated with high levels of anxiety. Career uncertainty and perceived social support from family were also seen to explain approximately 20% of the variance in anxiety.

b) Does perceived support from family moderate the relationship between career uncertainty and depression?

Table 15

Moderated multiple regression for depression on career uncertainty and perceived social support (family)

Variable	Beta	Standardised Error	t	p-value
PSS_Fam	0.43	0.07	6.28	**0.00**
CU_Avg	0.13	0.02	6.94	**0.00**
PSS_Fam *CU_Avg	0.04	0.04	0.97	0.33

R-Square = 0.30
Overall model of significance: $F(3, 258) = 36.93$, $p < 0.0000$

Depression was regressed onto career uncertainty and social support (the family subscale); followed by the addition of an interaction term of perceived social support by family on career uncertainty. Findings indicated a non significant result for the interaction term of perceived social support (family) by career uncertainty on depression (p=0.33) (Table 15). However, career uncertainty yielded a positive main effect (β=0.13; p=0.00) on depression, the direct nature of this relationship indicated that high scores of career uncertainty are associated with high scores of depression. In addition a positive main effect (β=0.43; p=0.00) was found between perceived social support by family and depression. Since this scale was reverse scored in the process of a square root transformation, the nature of this relationship indicated that low scores of perceived social support from family are associated with high scores of depression. Thus career uncertainty and perceived social support from family explain approximately 30% of the variance in depressive symptoms.

c) Does perceived support from friends moderate the relationship between career uncertainty and anxiety?

Table 16

Moderated multiple regression for anxiety on career uncertainty and perceived social support (friends)

Variable	Beta	Standardised Error	T	p-value
PSS_Fri	0.32	0.11	2.95	**0.00**
CU_Avg	0.18	0.03	6.82	**0.00**
PSS_Fri * CU_Avg	0.05	0.07	0.68	0.50

R-Square = 0.20
Overall model of significance: F (3, 258) = 21.37, p < 0.0000

Anxiety was regressed onto career uncertainty and social support (friends subscale); followed by the addition of an interaction term of perceived social support by friends with career uncertainty. Findings indicated a non significant result for the interaction term of perceived social support from friends by career uncertainty on anxiety (p=0.50) (Table 16). However career uncertainty yielded a positive (β=0.18; p=0.00) main effect on depression, the direct nature of this relationship indicates that high scores of career uncertainty are associated with high scores of anxiety. In addition, a positive main effect (β=0.32; p=0.00) was found between perceived social support from friends and anxiety. As above, this scale was reverse scored in the process of a square root transformation and therefore the nature of this relationship indicates that low scores of perceived social support from friends are associated with high scores of anxiety. Career uncertainty and perceived social support from friends were also seen to explain approximately 20% of the variance in anxiety.

d) Does perceived support from friends moderate the relationship between career uncertainty and depression?

Table 17

Moderated multiple regression for depression on career uncertainty and perceived social support (friends)

Variable	Beta	Standardised Error	t	p-value
PSS_Fri	0.39	0.08	4.77	**0.00**
CU_Avg	0.14	0.02	7.31	**0.00**
PSS_Fri * CU_Avg	0.07	0.05	1.40	0.16

R-Square = 0.27
Overall model of significance: $F(3, 258) = 31.14$, $p < 0.0000$

Depression was regressed onto career uncertainty and social support (the friends subscale); followed by the addition of an interaction term of perceived social support by friends with career uncertainty. No main effect was found and therefore findings indicated a non-significant result for the interaction term of perceived social support from family by career uncertainty on depression (p=0.16) (Table 17). However, career uncertainty yielded a positive main effect (β=0.14; p=0.00) on depression, the direct nature of this relationship indicates that high scores of career uncertainty are associated with high scores of depression. In addition, a positive main effect (β=0.39; p=0.00) was found between perceived social support by friends and depression. Since this scale was reverse scored in the process of a square root transformation, the nature of this relationship indicates that low levels of perceived social support from friends is associated with high scores of depression. Thus, career uncertainty and perceived social support by friends explain approximately 27% of the variance in depressive symptoms.

e) Does perceived support from significant other moderate the relationship between career uncertainty and anxiety?

Table 18

Moderated multiple regression for anxiety on career uncertainty and perceived social support (significant other)

Variable	Beta	Standardised Error	t	p-value
PSS_Sig	0.32	0.10	3.32	**0.00**
CU_Avg	0.17	0.03	6.84	**0.00**
PSS_Sig * CU_Avg	0.07	0.06	1.20	0.23

R-Square = 0.21
Overall model of significance: F (3, 258) = 22.71, p < 0.0000

Anxiety was regressed onto career uncertainty and social support (significant other subscale); followed by the addition of an interaction term of perceived social support from ones significant other with career uncertainty. Findings indicated a non significant result for the interaction term of perceived social support (significant other) by career uncertainty on anxiety (p=0.23) (Table 18). However, career uncertainty yielded a positive main effect (β=0.17; p=0.00) on anxiety, the direct nature of this relationship indicates that high scores of career uncertainty are associated with high scores of anxiety. In addition, a positive main effect (β=0.32; p=0.00) was found between perceived social support by ones significant other and anxiety. The direct nature of this relationship is negative; because this scale was reverse scored in the process of a square root transformation, which indicates that low scores of perceived social support from ones significant other, is associated with high scores of anxiety. Career uncertainty and perceived social support from ones significant other were also seen to explain approximately 21% of the variance in anxiety.

f) Does perceived support from significant other moderate the relationship between career uncertainty and depression?

Table 19

Moderated multiple regression for depression on career uncertainty and perceived social support (significant other)

Variable	Beta	Standardised Error	t	p-value
PSS_Sig	0.37	0.07	5.15	**0.00**
CU_Avg	0.14	0.02	7.34	**0.00**
PSS_Sig * CU_Avg	0.09	0.04	1.96	0.05

R-Square = 0.28
Overall model of significance: $F(3,258) = 33.21$, $p < 0.0000$

Depression was regressed onto career uncertainty and social support (significant other subscale); followed by the addition of an interaction term of perceived social support from ones significant other with career uncertainty. Findings indicated a non significant result for the interaction term of perceived social support (significant other) by career uncertainty on depression (p=0.05) (Table 19). However, career uncertainty yielded a positive main effect (β=0.14; p=0.00) on depression, the direct nature of this relationship indicates that high scores of career uncertainty are associated with high scores of depression. In addition, a positive main effect (β=0.37; p=0.00) was found between perceived social support by ones significant other and depression. The direct nature of this relationship is negative, because this scale was reverse scored in the process of a square root transformation, which indicates that low scores of perceived social support form ones significant other is associated with higher scores of depression. Career uncertainty and perceived social support from ones significant other were also seen to explain 28% of the variance in depression.

4.3.3 Self

a) Does self-efficacy moderate the relationship between career uncertainty and anxiety?

Table 20

Moderated multiple regression for anxiety on career uncertainty and self-efficacy

Variable	Beta	Standardised Error	t	p-value
AveSES	-0.61	0.09	-7.14	**0.00**
CU_Avg	0.14	0.02	5.59	**0.00**
AveSES * CU_Avg	0.04	0.05	0.85	0.39

R-Square = 0.30
Overall model of significance: F(3,258) = 37.72, p < 0.0000

Anxiety was regressed onto career uncertainty and self-efficacy; followed by the addition of an interaction term of self-efficacy with career uncertainty. No main effect was present as findings indicated non-significant result for the interaction term of self-efficacy by career uncertainty on anxiety (p=0.39) (Table 20). However, career uncertainty yielded a positive main effect (β=0.14; p=0.00) on anxiety, the direct nature of this relationship indicates that higher scores of career uncertainty are associated with higher scores of anxiety. Whereas a negative main effect (β=-0.61; p=0.00) was found between self-efficacy and anxiety, the direct nature of this relationship indicates that low levels of self-efficacy are associated with high levels of anxiety. This career uncertainty and self-efficacy explain approximately 30% of the variance in anxiety.

b) Does self-efficacy moderate the relationship between career uncertainty and depression?

Table 21

Moderated multiple regression for depression on career uncertainty and self-efficacy

Variable	Beta	Standardised Error	t	p-value
AveSES	-0.50	0.06	-7.74	**0.00**
CU_Avg	0.11	0.02	5.87	**0.00**
AveSES * CU_Avg	- 0.08	0.04	-2.07	**0.04**

R-Square = 0.36
Overall model of significance: F(3,258) = 48.50 p < 0.0000

Depression was regressed onto career uncertainty and self-efficacy; followed by the addition of an interaction term of self-efficacy with career uncertainty. Findings indicated that career uncertainty yielded a positive main effect (β=0.11; p=0.00) on depression, the direct nature of this relationship indicates that high scores of career uncertainty are associated with high scores of depression (Table 21). In addition, a negative main effect (β=-0.50; p=0.00) was found between self-efficacy and depression. The direct nature of this relationship is negative indicates that low scores of self-efficacy are associated with higher scores of depression.

Furthermore, findings indicated a moderator effect of self-efficacy by career uncertainty (β=-0.08; p=0.04) which explained 36% of the variance in depression. In addition, the R^2 increased by 0.01 between the basic (R^2=0.35) and interaction (R^2=0.36) models. Thus the moderated model explains an additional 1% of the variance found between self-efficacy, career uncertainty and depression. The direct nature of this relationship is negative and so it can be concluded that as the interaction term decreases, thus illustrating that self-efficacy other is likely to moderate the depressive symptoms caused by career uncertainty.

4.3.4 Strategy

a) Does task-based coping moderate the relationship between career uncertainty and anxiety?

Table 22

Moderated multiple regression for anxiety on career uncertainty and task-based coping

Variable	Beta	Standardised Error	t	p-value
CISS_Task	-0.27	0.07	-4.14	**0.00**
CU_Avg	0.16	0.03	6.41	**0.00**
CISS_Task * CU_Avg	0.05	0.04	1.26	0.21

R-Square = 0.22
Overall model of significance: F(3,258) = 24.26 p < 0.0000

Anxiety was regressed onto career uncertainty and task-based coping; followed by the addition of an interaction term of task-based coping with career uncertainty. Findings indicated a non-significant result for the interaction term of task-based coping by career uncertainty on anxiety (p=0.21) (Table 22). However, career uncertainty yielded a positive main effect (β=0.16; p=0.00) on anxiety, the direct nature of this relationship indicates that

higher scores of career uncertainty are associated with higher scores of anxiety. Whereas a negative main effect (β=-0.27; p=0.00) was found between task-based coping and anxiety, the direct nature of this relationship being that low scores of task-based coping is associated with high scores of anxiety. Thus career uncertainty and task-based coping explain approximately 22% of the variance in anxiety.

b) Does task-based coping moderate the relationship between career uncertainty and depression?

Table 23

Moderated multiple regression for depression on career uncertainty and task-based coping

Variable	Beta	Standardised Error	t	p-value
CISS_Task	-0.29	0.05	-5.86	**0.00**
CU_Avg	0.13	0.02	6.70	**0.00**
CISS_Task * CU_Avg	-0.02	0.03	-0.83	0.41

R-Square = 0.29
Overall model of significance: F(3, 258) = 35.04, p < 0.0000

Depression was regressed onto career uncertainty and task-based coping; followed by the addition of an interaction term of task-based coping with career uncertainty. Findings indicated a non significant result for the interaction term of task-based coping by career uncertainty on depression (p=0.41) (Table 23). However career uncertainty yielded a positive main effect (β=0.13) on depression, the direct nature of this relationship indicates that higher scores of career uncertainty are associated with higher levels of depression. Whereas a negative main effect (β=-0.29; p=0.00) was found between task-based coping and depression, the direct nature of this relationship indicates that low scores of task-based coping are associated with high scores of depression. Thus career uncertainty and task-based coping explain approximately 29% of the variance in depression.

c) Does avoidant coping moderate the relationship between career uncertainty and anxiety?

Table 24

Moderated multiple regression for anxiety on career uncertainty and avoidant coping

Variable	Beta	Standardised Error	t	p-value
CISS_Avoid	-0.04	0.06	-0.77	0.44
CU_Avg	0.19	0.03	7.22	**0.00**
CISS_Avoid * CU_Avg	-0.00	0.04	-0.11	0.92

R-Square = 0.17
Overall model of significance: F(3,258) = 17.51, p < 0.0000

Anxiety was regressed onto career uncertainty and avoidant coping; followed by the addition of an interaction term of avoidant coping with career uncertainty. Findings indicated a non significant result for the interaction term of avoidant coping by career uncertainty on anxiety (p=0.92) and therefore there was no moderation present (Table 24). However, career uncertainty yielded a positive main effect (β=0.19; p=0.00) on anxiety, explaining 17% of the variance in anxiety. The direct nature of this relationship indicates that higher scores of career uncertainty are associated with higher scores of anxiety.

d) Does avoidant coping moderate the relationship between career uncertainty and depression?

Table 25

Moderated multiple regression for depression on career uncertainty and avoidant coping

Variable	Beta	Standardised Error	T	p-value
CISS_Avoid	-0.12	0.04	-2.88	**0.00**
CU_Avg	0.16	0.02	8.07	**0.00**
CISS_Avoid * CU_Avg	-0.05	0.03	-1.83	0.07

R-Square = 0.22
Overall model of significance: F(3,258) = 24.43, p < 0.0000

Depression was regressed onto career uncertainty and avoidant coping; followed by the addition of an interaction term of avoidant coping with career uncertainty. Findings indicated a non significant result for the interaction term of avoidant coping by career uncertainty on depression (p=0.07) therefore there was no moderation present (Table 25). However, career uncertainty yielded a positive main effect (β=0.16; p=0.00) on depression. The direct nature

of this relationship indicates that higher scores of career uncertainty are associated with higher scores of depression. Whereas a negative main effect (β=-0.12; p=0.00) was found between avoidant coping depression, the direct nature of this relationship indicates that low scores of avoidance coping is associated with high scores of depression. Thus, career uncertainty and avoidant coping explain approximately 22% of the variance in depressive symptoms.

e) Does emotional coping moderate the relationship between career uncertainty and anxiety?

Table 26

Illustrating Between-Subjects Factors (Anxiety)

		Value Label	N
GroupEmotion	1	Low	121
	2	Med	94
	3	High	47
GroupCU	1	Low	111
	2	Med	100
	3	High	51

Table 27

Levene's Test of Equality of Error Variances (Anxiety)

		Levene Statistic	df1	df2	Sig.
HADS_A	Based on Mean	1.008	8	253	.430
	Based on Median	.903	8	253	.514
	Based on Median and with adjusted df	.903	8	237.759	.514
	Based on trimmed mean	1.016	8	253	.425

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: HADS_A

b. Design: Intercept + GroupEmotion + GroupCU + GroupEmotion * GroupCU

Table 28

Tests of Between-Subjects Effects (Anxiety)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	49.209[a]	8	6.151	21.218	.000	.402
Intercept	487.729	1	487.729	1682.428	.000	.869
GroupEmotion	23.361	2	11.680	40.292	.000	.242
GroupCU	5.931	2	2.966	10.230	.000	.075
GroupEmotion * GroupCU	.316	4	.079	.272	.896	.004
Error	73.344	253	.290			
Total	653.128	262				
Corrected Total	122.552	261				

a. R Squared = .402 (Adjusted R Squared = .383)

Table 29

Multiple Comparisons for Emotion-Focused Coping (Anxiety)

(I) GroupEmotion	(J) GroupEmotion	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Low	Med	-.5674*	.07403	.000	-.7419	-.3929
	High	-1.0363*	.09254	.000	-1.2545	-.8181
Med	Low	.5674*	.07403	.000	.3929	.7419
	High	-.4689*	.09619	.000	-.6957	-.2422
High	Low	1.0363*	.09254	.000	.8181	1.2545
	Med	.4689*	.09619	.000	.2422	.6957

Based on observed means.

The error term is Mean Square(Error) = .290.

*. The mean difference is significant at the .05 level.

Table 30

Multiple Comparisons for Career Uncertainty (Anxiety)

(I) GroupCU	(J) GroupCU	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Low	Med	-.4582*	.07423	.000	-.6332	-.2832
	High	-.7422*	.09108	.000	-.9570	-.5275
Med	Low	.4582*	.07423	.000	.2832	.6332
	High	-.2841*	.09265	.007	-.5025	-.0656
High	Low	.7422*	.09108	.000	.5275	.9570
	Med	.2841*	.09265	.007	.0656	.5025

Based on observed means.

The error term is Mean Square(Error) = .290.

*. The mean difference is significant at the .05 level.

Since the assumption of linearity and homoscedasticity were not met, a two-way ANOVA was run. A two-way analysis of variance tested whether participant's differing levels of career uncertainty and emotion-oriented coping resulted in differences in level of anxiety. There is an insignificant interaction effect between career uncertainty and emotional-oriented coping ($F(4,253) = .272$, $p = .869$, partial $\eta^2 = .004$) (Table 28). This means that differences in career uncertainty and the resultant relationship with anxiety does not change because of the emotion-oriented coping style adopted by individuals. Significant main effects are however found for both level of career uncertainty ($p=0.00$) and level of emotion ($p=0.00$) on anxiety. Looking at the Pairwise Comparisons in ANOVA Table 29, there were significant differences across all the groups. If we interpret this, those who are highly career uncertainty had the highest levels of anxiety, those with medium levels of career uncertainty had moderate levels of anxiety and those low on career uncertainty had the lowest levels of anxiety. To conclude, participants who score higher in emotional-oriented coping, experience higher levels of anxiety when they are career uncertain. The same is true for career uncertainty, those who are more career uncertain experience higher levels of anxiety.

f) Does emotional coping moderate the relationship between career uncertainty and depression?

Table 31

Illustrating Between-Subjects Factors (Depression)

		Value Label	N
GroupEmotion	1	Low	121
	2	Med	94
	3	High	47
GroupCU	1	Low	111
	2	Med	100
	3	High	51

Table 32

Levene's Test of Equality of Error Variances (Depression)

		Levene Statistic	df1	df2	Sig.
HADS_D	Based on Mean	1.973	8	253	.051
	Based on Median	1.793	8	253	.079
	Based on Median and with adjusted df	1.793	8	190.282	.081
	Based on trimmed mean	1.977	8	253	.051

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: HADS_D

b. Design: Intercept + GroupCU + NCISS_Em + GroupCU * NCISS_Em

Table 33

Tests of Between-Subjects Effects (Depression)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	21.958[a]	8	2.745	12.648	.000	.286
Intercept	168.725	1	168.725	777.533	.000	.754
GroupEmotion	6.725	2	3.362	15.495	.000	.109
GroupCU	4.724	2	2.362	10.886	.000	.079
GroupEmotion * GroupCU	1.616	4	.404	1.861	.118	.029
Error	54.901	253	.217			
Total	254.071	262				
Corrected Total	76.859	261				

a. R Squared = .286 (Adjusted R Squared = .263)

Table 34

Multiple Comparisons for Emotion-Focused Coping (Depression)

(I) Percentile Group of CISS_Emo	(J) Percentile Group of CISS_Emo	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Low	Med	-.140	.082	.271	-.338	.058
	High	-.400*	.080	.000	-.592	-.207
Med	Low	.140	.082	.271	-.058	.338
	High	-.260*	.077	.003	-.445	-.074
High	Low	.400*	.080	.000	.207	.592
	Med	.260*	.077	.003	.074	.445

Based on observed means.

The error term is Mean Square(Error) = .290.

*. The mean difference is significant at the .05 level.

Table 35

Multiple Comparisons for Career Uncertainty (Depression)

(I) GroupCU	(J) GroupCU	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Low	Med	-.231*	.067	.002	-.394	-.069
	High	-.432*	.086	.000	-.638	-.225
Med	Low	.231*	.067	.002	.069	.394
	High	-.200	.085	.057	-.405	.004
High	Low	.432*	.086	.000	.225	.638
	Med	.200	.085	.057	-.004	.405

Based on observed means.

The error term is Mean Square(Error) = .290.

*. The mean difference is significant at the .05 level.

As the research question above, because the assumption of linearity and homoscedasticity were not met, a two-way ANOVA was run. A two-way analysis of variance tested whether participant's differing levels of career uncertainty and emotion-oriented coping style resulted in differences in levels of depression. There is an insignificant interaction effect between career uncertainty and emotional-oriented coping ($F(4,253) = 1.861$, $p = .188$, partial $\eta^2 = .029$) (Table 33). This means that differences in career uncertainty and the resultant relationship with depression does not change because of the emotion-oriented coping style. Significant main effects are however found for both level of career uncertainty (p=0.00) and level of emotion (p=0.00) on depression. Looking at the Pairwise Comparisons in ANOVA Table 34, there were significant differences across all the groups. If we interpret this table, it shows that there is no difference between the low and medium group, but the high group is different from the other two. To conclude, participants who score higher in emotional-oriented coping, experience higher levels of depression when they are career uncertain. For career uncertainty, the low group is different from the other two groups, but there is no difference between the high group and the medium group.

Chapter Five: Discussion

This section aims to discuss the overall results obtained from the current study in the context of previous findings and literature. The aim of the current study was to explore whether certain transition resources (perceived control, perceived social support, self-efficacy and coping style) moderated the relationship between career uncertainty and well-being. For the purposes of this discussion, each transition resource will be discussed independently. In addition, the limitations of the current study, as well as directions for future research will be outlined.

5.1 Key Findings

From the 14 Multiple Moderated Regressions and 2 ANOVA's that this study ran, only one significant moderation result was found. Self-efficacy was found to moderate the relationship between career uncertainty and depression. The implications of this result will be discussed in the sections below. All 14 MMR's, and both the ANOVA's did, however, have at least one main effect; each main effect in relation to the transition resources will be discussed in detail below. One of the important main effects that were present in all MMR's and ANOVA's was between career uncertainty and anxiety and/or depression. The direct nature of this relationship was always that higher scores of career uncertainty are associated with higher scores of anxiety and/or depression. The importance of this finding is considered below.

A number of factors may possibly explain the absence of moderation in the majority of regressions undertaken. Career uncertainty represents a degree of decidedness and confidence in the career choices individuals have made but it may not represent the decision to change careers (transition). As such, it may be that we were measuring if participants had those resources available to them prior to the transition and not while the transition was occurring. Thus, if the person was not actively looking to transition to a new career, then we were assessing factors which have not come into play yet. This is one of the limitations of the study, namely that we did not measure if the participants were in transition.

Another likely reason as to why no moderation may be because of the way in which the transition resources may have been operationalised. This will be broken down further when discussing each transition resource separately. In summary, the results have outlined that lower levels of perceived control, social support, self-efficacy and certain coping styles, along

with high levels of career uncertainty, are associated with higher levels of psychological distress, namely anxiety and depression.

5.1.1 Career Uncertainty and Well-being

All 14 MMR's, and both the ANOVA's did have at least one main effect; one of the most important main relationships that were present in all MMR's and ANOVA's was that between career uncertainty and anxiety and/or depression. In every MMR and ANOVA, the results showed that higher scores of career uncertainty are associated with higher scores of anxiety and/or depression. This is an important result as it shows a degree of relatedness between career certainty and well-being which was argued for in Chapter 1. Furthermore the correlations between career uncertainty and anxiety and depression were .409 and .431 respectively. This correlation shows that the more career uncertain an individual is, the more anxiety the individual experiences. Research by Miller and Monge (1985) found that uncertainty was related to anxiety and had negative health impacts on employees, so did other studies by Alexander, Hicks, and Bartman (2011); Campagna and Curtis (2007); Constantine and Flores (2006); Ito & Brotheridge (2001) and Trevor-Roberts in 2006. Ashford (1988) found similar results between uncertainty and stress; stress in his study was measured using a range of symptoms such as tiredness, depression and nervousness.

Career certainty can be described as the level of decidedness or confidence after making a career choice or one's level of certainty about a chosen career path (Grier-Reed, Skaar, & Parson, 2009) and so career uncertainty reflects an absence of these characteristics. People who don't have confidence in their career choices, or similarly people who are undecided of their career path, might experience high levels of anxiety and depression. This finding suggests that there is a correlation between reduced or decreased career uncertainty, and improved employee well-being. Literature suggests that the way in which to improve employee well-being may be through clear career paths. One possible way in which this has been implemented in organisations, is through career planning (Granrose & Portwood, 1987).

There are a number of factors to consider as to why career planning is useful, the first is because it allows individuals the opportunity to become involved in the process of determining where their career is headed; this may make them more likely to achieve personal career aspirations within the organisation. In addition, it allows for the clarification of organisational plans and employee opportunities, which reduces uncertainty, frustration and anxiety within employees; leading to more positive attitudes towards their career progression,

which leads to improved well-being (Granrose & Portwood, 1987; Nota, Ginevra, Santilli, & Soresi, 2014). Lastly, when an organisation provides career relevant information and assistance, it narrows the employee focus and binds the employee to the organisation more closely (Granrose & Portwood, 1987).

There should also be a match between personal and organisational goals; this should be mentioned at the start, either during the interview process or through psychometric testing. This will help both organisations and employees to make sure that the people being hired will fit into the organisation, in terms of what they are looking for in an organisation as well as whether their goals matches the opportunities available within the organisation (Prewitt, 1998). Research suggests that organisations with well-developed planning procedures will be better able to identify the type of individuals they require (Super & Hall, 1978). There can also be training and development programs used to train selectors and recruiters on how to hire the right fit for the organisation. If organisational selection processes are effective, turnover rates may reduce and employee satisfaction and well-being levels improved. Acting to reduce career uncertainty from the start of employees engagement with an organisation may increase the employees knowledge of what is expected of them facilitating career path decisions made by the individual (Trveor-Roberts, 2009).

Otherwise, if this is not done and employees are hired with certain expectations, goals and career plans; which are not met by the organisations' career plans, employees perceive a mismatch between the organisations career plans and their own (Super & Hall, 1978). They become uncertain in their career plans, resulting in them seeking clarification and searching for new alternatives. This may act to lower job satisfaction, higher turnover and decreased well-being (Trevor-Roberts, 2006). The rationale behind this is that if organisations are involved in individual career planning and have formal career management programs may lead to a reduction in the uncertainty felt by employees, the effect of this is increased employee well-being and satisfaction (Super & Hall, 1978).

In light of this studies results, guidance and counselling professionals should also develop their clients' skills to reduce their anxiety. This can be through coping strategies and stress-management skills in addition to relaxation techniques that may also reduce anxiety and facilitate the career decision making process (Campagna & Curtis, 2007). Mindfulness-based stress interventions have been shown to reduce the anxiety of individuals living with employment uncertainty (Blustein, 2008). Mindfulness is described as the intentional

consciousness learned through meditation. In a study by Jacobs and Blustein (2008) results showed that mindfulness could reduce psychological suffering by reducing the anxiety of employees who faces high degrees of employment uncertainty. Considering the findings, from the current study, organisational practitioners should, if organisational practitioners should consider a range of interventions, aimed at reducing career uncertainty that may be able to have a positive influence over the well-being of their employees.

5.1.2 Perceived Control on Well-being

Perceived career control did not moderate the relationship between career uncertainty and anxiety; neither did it moderate the relationship between career uncertainty and depression. A significant negative main effect was however, found between perceived control and anxiety (β=-0.14; p=0.00) and perceived control and depression (β=-0.17; p=0.00). In both instances lower scores of perceived control are associated with higher scores of anxiety and depression.

This is in line with the literature considered as researchers state that being exposed to stressors with the ability to control them might not have adverse biological effects; but being exposed to the same stressors without the ability to control them impairs the immune system, leads to mental health issues and impacts an individual's well-being (Bordia et al., 2004). Perceived control over career choices in employees associated with higher well-being which may include less depression and anxiety symptoms, such as tiredness, nervousness and low motivation (Bordia et al., 2004). Berger and Bradac (1982) propose this should be done is by using 'knowledge' (the opposite of uncertainty). They argue that if employees do not know their role, the nature or consequences, or any aspect of their job; that they will feel ill-equipped to deal with the uncertainty they are experiencing and consequently will lack the personal control to deal with this uncertainty.

In addition, those individuals who dislike being in situations where they lack control may try to regain control by information seeking or acquiring mastery over a skill or task (Bandura, 1997). Organisations can help increase employees control by making sure that they have the right resources available to them and have role clarity within the organisation. This goes hand in hand with effective communication – as communication not only increases a sense of control but also reduces uncertainty (Bordia et al., 2004). This could be due to the fact that most knowledge gained is acquired via communication, either from supervisors, managers or

other employees; although, this will only be beneficial if the content of what is being communicated to the employees is credible and informative (Bordia et al., 2004).

Organisations therefore should invest a great deal of time and effort in communication programs to inform and empower individuals so as to enhance their sense of control. Control, as shown in the current study, is associated with reduced anxiety and depression symptoms in employees. The association identified in the current study is consistent with previous research which has revealed that low levels of control are associated with poorer psychological well-being (Bordia, Hunt, Paulsen, Tourish & DiFonzo, 2004; Ganster & Fusilier, 1989; Terry & Jimmieson, 1999). Within the work population, previous research by Bordia et al. (2001) also supports the current study's findings, namely that control is an important detriment of employee well-being at work. A study by Daniels and fellow researchers (2010) revealed that individuals, who felt they could exert influence over their situation, were less likely to experience career-related anxiety and indecision; and that interventions aimed to increase individuals' perceptions of control may be a way to decrease both indecision and career anxiety.

Research has suggested that control is an important factor to reduce strain and stress and could moderate the relationship between the stress one has and the strain experienced, in addition the demand control model suggests that control could buffer the negative impact of workplace stressors (Bordia, Hunt, Paulsen, Tourish & DiFonzo, 2004; Lazarus & Folkman, 1984). Since job control is one of the psychological resources that play a role in moderating a stressor or demand and since many studies has linked control and well-being (Bordia, Hunt, Paulsen, Tourish & DiFonzo, 2004; Ganster & Fusilier, 1989; Rodriguez, Bravo, Perio and Schaufeli, 2001; Terry & Jimmieson, 1999), it would be expected that career control would have the same effect. One of the reasons that the moderation result in the current study is not consistent with previous research could be the way in which perceived career control was operationalized. It is reasonable to suggest that measuring control in a different way could have produced the expected result, of moderation. Another possibility for the absence of moderation may be that the person was not yet in a career transition or actively looking to transition to a new career at the time of completing the survey. The utility and efficacy of the resources to buffer the effect of career strain may only be realised in the context of a person negotiating the actual process of change. It is possible that were the results obtained from a sample undergoing career change processes, and not just the decision making process prior to

career change of which career uncertainty would form a part, alternative results may have been obtained.

Perceived job control was measured as the control one has over their career choices. Control over one's career choices was defined as the overall perception to influence one's career trajectory (Ito & Brotheridge, 2001). Future researchers may choose to use an alternative method to operationalise control in this setting of research. One of the ways in which this could be done is by using perceived employability (Fugate, Kinicki, & Ashforth, 2004). Hence, instead of control, perceived employability could be such a resource to help individuals to cope with stressors, such as career uncertainty; which may give alternative results. In the study by Silla and Colleagues (2009), perceived employability was seen to moderate the relationship between job insecurity and life satisfaction; whereby highly employable individuals reported more life satisfaction when they perceived high job insecurity; compared to less employable employees. This is related back to the Theory of Stress by Lazarus and Folkman which states that in order to cope with a stressful event; the individual should have the resources to cope with this stressful event. Furthermore, if the individual perceives that they have adequate coping resources, then they are more likely to feel in control of the stressful situation, which is in turn related to well-being (Vanhercke, De Cuyper, De Witte, 2016). So, perceiving oneself as highly employable may then provoke feelings of control, enabling the individual to experience more control over their employment, which then promotes the experience of well-being (Vanhercke, De Cuyper, De Witte, 2016).

5.1.3 Perceived Social Support on Well-being

Perceived social support from family did not moderate the relationship between career uncertainty and anxiety; neither did it moderate the relationship between career uncertainty and depression. A negative main effect was however, found between perceived social support from family and anxiety (β=0.30; p=0.00), and social support from family and depression (β=0.43; p=0.00), indicating that lower scores of perceived social support from ones family are associated with higher scores of anxiety and depression respectively[1].

The same is true for perceived social support from friends. There was no moderation present between perceived social support from friends with career uncertainty and anxiety; nor for

[1] It should be remembered that the beta values for these regressions need to be interpreted in the context of the reverse scoring that was done prior to the square root transformation of the data.

depression. There were however, main effects for social support from friends found for both anxiety (β=0.32; p=0.00) and depression (β=0.39; p=0.00) indicating that low scores of perceived social support from friends are associated with higher scores of anxiety and depression. The results for perceived social support from ones significant other are also in line with this. There was no moderation for perceived social support from ones significant other with either anxiety or depression. A main effect was found for both anxiety (β=0.32; p=0.00) and depression (β=0.37; p=0.00); again indicating that low scores of perceived social support from ones significant other, is associated with high scores of anxiety and depression.

These results are consistent with the literature on perceived social support which states that lower levels of perceived social support are associated with lower scores of well-being (Cohen and Wills, 1985; Karademas, 2006; Siedlecki, Salthouse, Oishi & Jeswani, 2013). This is because individuals that have more satisfying relationships report feelings of happiness more frequently compared to those who perceive themselves to have a low level of social support (Siedlecki, Salthouse, Oishi & Jeswani, 2013). There are many documented links between perceived social support and well-being or mental health which reflect main effects rather than stress buffering effects; as was the case in this study.

Many organisations today have social support groups or employee initiatives that employees can join, should they wish to do so. These are usually to show awareness and support in terms of how the organisation can help or what processes and policies the organisation has in place for employees, should they need them (Cohen, Underwood & Gottlieb, 2000). Some organisations have also incorporated a buddy system, or a mentorship program whereby if an employee is ever uncertain about something or needs help with a specific issue, they can go to this person and get the support and help needed (Grossman & Tierney, 1998). Receiving social support though systems mentioned above, has been shown to increase perceived group benefits and group satisfaction, whereby providing such support has been positively related to well-being and group appraisal (Hogan, Linden, Najarian, 2002). Studies have further shown that interventions which target social skills, by teaching relationship skills, social support skills, coping styles as well as effective ways in which to foster relationships can lead to individuals feeling a higher sense of perceived social support (Hogan, Linden, Najarian, 2002). In addition, organisations that foster and encourage supportive networks and encourage employees to be supportive of each other, improve their employees well-being (Van den Bossche & Segers, 2013). Consequently, organisations may want to consider these types of interventions to increase social support within a workplace.

Although many studies have found a relationship between social support and well-being (Cohen and Wills, 1985; Karademas, 2006; Siedlecki, Salthouse, Oishi & Jeswani, 2013) there are a few studies which report no evidence for this 'buffering effect' or moderation (Beeble, Bybee, Sullivan, & Adams, 2009; Burton, Stice, & Seeley, 2004; Wade & Kendler, 2000). It may be that just as people receive love in different ways, they can receive support in different ways (Wills & Shinar, 2000); but the way in which an individual perceives how this support is received may be problematic. One possible explanation is that an individual could receive social support from their friends, family and significant other; but they might not classify it as support, or enough support. Hence, access to support, or the quantity of social support that may be received, may not be perceived as enough social support. Another reason may be due to the quality of the support received, depending on how the person perceives the support received; could result in them experiencing lower levels of anxiety and depressive symptoms.

Further to this, we could suggest that perceived levels of social support may not be the most accurate measure of social support and therefore if this study were to be replicated, another measure of social support may be tested to see if the measure is more accurate in measuring support. Kotewa (1995, p.49) describes the concept of social support to be the idea of an individual moving through a life cycle and being "surrounded by a set of significant others related to that person by giving and receiving social support"; those that receive high social support are then less likely to suffer from stress and stress related problems such as poor health and well-being (Brammer & Abrego, 1981). One of the social support networks that are referred to in this article by Kotewa (1995) is the interpersonal support that people receive, and the other is the institutional support that people receive. The current study measured perceived social support, namely interpersonal support that an individual receives. However, another type of support that could be measured is institutional support; this is the support received from clubs, social welfare groups, religious organisations and other community support groups to outside agencies that the individual may turn to for help (Schlossberg, 1981). Another type of support that could be measured is support received from one's job; such as from colleagues or managers or supervisors at work. Using this type of support as a resource for combating the negative effects of career uncertainty may increase the individual's well-being and lead to less symptoms of anxiety and depression being felt.

Thus, from this study, it can be seen that no moderation or stress buffering is present between career uncertainty and well-being. However, there was a relationship between perceived

social support and well-being; this relationship was mentioned in relation to the literature on perceived social support and well-being. Ways in which to increase social support, to improve well-being were put forth as well as an alternative way in which perceived social support could be measured.

5.1.4 Self-efficacy on Well-being.

Self-efficacy did not moderate the relationship between career uncertainty and anxiety ($p=0.39$), however a negative main effect ($\beta=-0.61$; $p=0.00$) was found between self-efficacy and anxiety. The nature of this relationship indicates that low levels of self-efficacy are associated with high levels of anxiety. Further findings indicated a moderator effect by self-efficacy in the relationship between career uncertainty and depression ($\beta=-0.08$; $p=0.04$). The direct nature of this relationship is negative and so it can be concluded that self-efficacy is likely to moderate the depressive symptoms caused by career uncertainty.

Self-efficacy was seen as a resource because it refers to the optimistic belief that an individual has about how they would cope when faced with a variety of stressors, it also relates to ones competency to deal with difficult situations (Schwarzer, 1999). It is premised that high self-efficacy is related to high self-esteem and therefore better well-being and better recovery from chronic illness; whereas lower levels of self-efficacy are related to more symptoms of anxiety and depression. From our results, it is evident that self-efficacy did moderate the relationship between career uncertainty and depression; resulting in higher levels of self-efficacy leading to improved levels of depression when an individual is experiencing career uncertainty.

Firstly, the results show that there is a definite association between self-efficacy and well-being; this is reiterated in many studies (Bandura, 1997; Karademas, 2006; Luszczynska, Scholz & Schwarzer, 2005; Scheier & Carver, 1992; Singh & Udainiya, 2009). These studies all suggest that high levels of self-efficacy enhance individuals' well-being, as it contributes to a higher engagement and life satisfaction of individuals. It has further been found that high levels of self-esteem have been associated with a low risk for anxiety and depressive symptoms (Caprara et al., 2006). Bandura (1997) conceptualises 'self-efficacy expectations' as the beliefs about one's ability to successfully perform a given task or behaviour.

Expectations of one's personal efficacy is said to influence an individual's choice of behavioural settings and activities, as well as how much effort will be exerted and how long the individual will persist when faced with obstacles (Bandura, 1997). This is not the way in which self-efficacy was measured in this study; as the current study measured General Self Efficacy. However, when looking at ones self-efficacy expectations, it is reasonable to expect that these expectations could be linked to career uncertainty and may influence one's well-being. Hackett and Betz (1981) infer that self-efficacy beliefs or expectations can be related to individual's range of perceived career options, their persistence and their success in their chosen career field.

These results found are in line with the Schlossberg's Transition Model, which includes the 4 Ss System for coping with transitions. As the research above has clearly shown that career uncertainty has negative impacts on the well-being of individuals. Whilst this may be true, the aim of this research was to examine whether people who perceive themselves as capable of transitioning to alternative careers may experience less profound consequences for their well-being. Using the resource of self-efficacy, we see that the relationship between career uncertainty and depression is altered; whereby depressive symptoms decrease, if one's self-efficacy levels are high enough. This model provided a structure for analysing a transition (namely career uncertainty) and was important as it determined that self-efficacy was sufficient to support the change or lesson the negative impact on well-being. Thus, this result from the current study shows support for Schlossberg's Transition Model.

As stated above, the higher the individuals' self-efficacy, the more likely they will be able to sustain effort toward performing a task and persist even when faced with problems or after failure (Luthans & Peterson, 2002). Depending on one's level of self-efficacy, will depend on whether behaviour will be imitated, for how long it will be sustained and how much effort will be applied (Schopp, Bike, Clark, & Minor, 2015). A study showed that self-efficacy could be enhanced through a group setting programme which could include skills mastery, modelling, alternative explanations for physiological symptoms, as well as social persuasion (Schopp, Bike, Clark, & Minor, 2015). Other research additionally revealed that behavioural activities such as goal-setting and behavioural feedback from others may also be effective (Schopp, Bike, Clark, & Minor, 2015). If these interventions are specifically tied to the activities that enhance the capacity of an individual to move between careers, it is possible the benefits of such programmes could be enhanced.

A more complex method that has been used by organisational practitioners more frequently is the cognitive mastery modelling (Luthans & Peterson, 2002). This method involves individuals observing reasoning strategies and decision rules that have been successfully used previously, to arrive at solutions and problems (Luthans & Peterson, 2002). This then allows individuals to learn thinking skills and how to apply them, as well as how to arrive at solutions to problems and make effective decisions.

These techniques and interventions may be an effective way for workers to increase their self-efficacy when dealing with uncertainty and to cope with the associated strain experienced; resulting in improved levels of well-being.

5.1.5 Coping on Well-being

The first style of coping, namely task-oriented coping had a negative main effect (β=-0.27; p=0.00) with anxiety as well as a negative main effect (β=-0.29; p=0.00) with depression. The nature of this relationship suggests that low scores of task-oriented coping are associated with high scores in anxiety; and that low scores of task-oriented coping are associated with high scores of depression. The second style of coping, namely avoidant coping had no moderation (p=0.92); nor were there main effects found between avoidant coping and anxiety (p=0.44). A negative main effect (β=-0.12; p=0.00) was found between avoidant coping and depression, the direct nature of this relationship indicated that low scores of avoidance coping is associated with high scores of depression. The last form of coping, emotional-oriented coping, was measured using two-way ANOVA's. There was an insignificant interaction found between career uncertainty and emotional-oriented coping on both anxiety ($F(4,253) = .272$, $p = .869$, partial $\eta^2 = .004$) and depression ($F(4,253) = 1.861$, $p = .188$, partial $\eta^2 = .029$), however, main effects were found for the different levels of emotion, on both anxiety and on depression. So, individuals who score higher in emotional-oriented coping, experience higher levels of anxiety and higher levels of depression. In summary, the results show that neither of the coping styles resulted in a moderation between career uncertainty and well-being. However, that there is an association between the coping styles and well-being.

The task-oriented coping style is said to be the most adaptive coping style and is associated with reduced symptoms of stress, anxiety and depression (Ben-Zure, 1999; Folkman, 1997; Knibb & Horton, 2008; Wijndaele et al., 2007). Wijndaele et al. (2007) found that individuals who engaged in task-oriented coping had reduced symptoms of stress, anxiety and depression, compared to those participants who engaged in other styles of coping. Again, it is

shown how these resources are inter-related as task-oriented coping is used in uncontrollable situations and provides individuals with an increased sense of control (Folkman, 1997).

Another study by Penland et al (2000) found that individuals who engaged in task-oriented coping experienced a decrease in depressive symptoms compared to individuals who engaged in other coping styles. This is in line with the results found in the current study; whereby high scores of task-oriented coping was associated with low scores of depression. This type of coping style relates to ones level of self-efficacy and control, as task-oriented coping requires individuals to set and accomplish goals, and this individuals are provided with a sense of mastery and control; thus reducing their anxiety and stress (Folkman, 1997).

Avoidant coping is assumed to be the most maladaptive and is associated with increased distress, more than the other coping styles (Folkman, 1997; Knibb & Horton, 2008; Wijndaele et al., 2007). In general, clinically depressed individuals experience lower improvement and greater dysfunction when engaging in avoidant coping (Billings & Moos, 1984). A longitudinal study by Moos and Holahan (2007) showed that avoidant coping is positively associated with depressive symptoms and found that people who engage in this type of coping style are more likely to display acute stress. However, this is not what the results of this study indicated. The current study's results indicated that low scores of avoidance coping are associated with high scores of depression. In addition, no main effect was present for the relationship between avoidance coping and anxiety, one study mentions that the possible reason for this could be that individuals using this coping style have the tendency to distract themselves from stressors to reduce stress, such as sleeping, watching television, complaining or venting and browsing the internet (Chao, 2011). To understand why the results from this study are not in line with other literature (Billings & Moos, 1984; Folkman, 1997; Knibb & Horton, 2008; Moos and Holahan 2007; Wijndaele et al., 2007), more research will need to be done in the future, to fully understand the logic underlying this outcome.

Emotion-focused coping is more complex as this style of coping has been associated with both increased and decreased levels of distress (Ben-Zur, 1999; Knibb & Horton, 2008; Wijndaele et al., 2007). As put forth in the first chapter, coping styles that focus on negative emotions and thoughts appear to increase psychological distress unlike coping styles that regulate emotion, such as seeking social support, which appears to reduce distress (Chao, 2011).

Enhancing task-oriented coping can help individuals in crucial ways. One of the ways in which this could be achieved is through a structured seminar or counselling. Ways in which to manage big tasks, showing individuals how to break problems in to workable steps or having mentors to guide individuals will help facilitate this (Chao, 2011). Another option is to teach individuals to how to solve problems to work through stress could decrease their levels of anxiety and depression. To help try and understand avoidant coping better, counsellors or facilitators should allow individuals to describe how, what, when and why they use avoidant coping (Chao, 2011). The more that is understood about this way of coping, the more effective interventions could be. For example, individuals might struggle with work stress without knowing how to combat it, and may then avoid the problem, task, or person by resorting to complaining, listening to music, or mentally disengaging (Chao, 2011). Literature on coping strategies suggest that emotion-oriented coping may be effective in situations where an individual has little or no control over the stressor (Folkman & Lazarus, 1985; Zakowsji, Hall, Klein & Baum, 2001). An article by Worthington and Scherer (2004) suggest that forgiveness could be regarded as an emotion-oriented coping strategy that may promote positive well-being; and since many people use forgiveness to deal with transgressions. Emotional-oriented coping can include wishful thinking, self-isolation and self-blame (Scheier, Weintraub, & Carver, 1986) and so reducing these aspects of emotion-oriented coping may help increase well-being.

In summary, research has shown that coping styles are associated with psychological distress, anxiety and depression. The first style of coping, namely task-oriented coping had a negative main effect with both anxiety and depression. This indicates that the higher the task-oriented coping style one uses, the less anxiety and depression experienced. On the other hand, no main effects were found between avoidant coping and anxiety, but a negative main was found between avoidant coping and depression, the direct nature of this relationship indicated that low scores of avoidance coping is associated with high scores of depression. Lastly, main effects were found for level of emotion-oriented coping on anxiety and on depression. So, individuals who score higher in emotional-oriented coping, experience higher levels of anxiety and higher levels of depression, when they are career uncertain.

To conclude, from the 14 Multiple Moderated Regressions and 2 ANOVA's that this study ran; only one significant moderation result was found. Self-efficacy was found to moderate the relationship between career uncertainty and depression. All MMR's, and ANOVA's did, however, have at least one main effect in relation to the transition resources (perceived

control, perceived social support, self-efficacy and coping style). One of the important main effects found, was between career uncertainty and well-being (anxiety and depression); namely that higher scores of career uncertainty are associated with higher scores of anxiety and/or depression. The next section will discuss the possible limitations of the study, followed by the recommendations for future research.

5.6 Limitations of the study

In order to avoid over generalising the results of this study, limitations need to be considered when drawing final conclusions. The research design that was utilised was cross sectional, correlational, quantitative and non-experimental in nature. A combination of non-probability, convenience sampling and snowball sampling was used to obtain the final sample. These techniques do not allow for all elements of the population having an equal chance of being chosen to participate in the study and therefore may limit the generalisability of the study (Leedy, 1989). However, all individuals who met the criteria were given an equal opportunity to participate in the study, should they wish to do so. Participation was not limited to certain jobs, nor was it limited to a certain age group or level of education. Therefore, the criterion for the inclusion of the study was broad enough to include most employees. On the other hand, the sample may not be representative of the South African population, and therefore the results cannot necessarily be generalised; this is seen by the sample been comprised of mostly women (87.8%) with only 12.2% of the sample being male. Non-experimental studies, by nature, cannot establish cause and effect because they do not involve manipulating factors in a controlled way (Howell, 2012). Hence, the non-experimental nature of this study does not allow for causal conclusions to be drawn and therefore only descriptive relationships and associations may exist between career uncertainty, transition resources and well-being.

Furthermore, all the measures used in this study to assess each variable were self-report, which raises a range of possible concerns such as participants being unable to recall information or responding in socially desirable ways (Feeley, 2002). The halo effect (or faking good) refers to the idea that participants' responses may be distorted by the desire to meet socially desirable expectations in order to please the researcher (Feeley, 2002). This may have affected the results, as participants may not have answered truthfully or may have answered randomly and thus the results may not be a true reflection of their actual levels of career uncertainty, self-efficacy, social support, control, coping style or well-being. It is possible that participants' in the current study may feel embarrassed or they may believe that

they will be judged, by the researcher, if they answer truthfully. However, the researcher attempted to control for this through attempting to eliminate this intimidation and uncertainty by ensuring confidentiality and anonymity and making this known to the participants.

In addition, participants' ability to appraise, reappraise and deal with stressors is dependent on individual personality characteristics as well as the nature of the environment in which the stressor occurs (Schlossberg, 2011). This highlights how multiple factors are at play in research addressing the topic of well-being and its subsequent outcome. In using a non-experimental design, there is no way for the researcher to manipulate, control or account for the impact of extraneous variables on the participants responses (Leedy, 1989). Hence, it is possible that personality as well as other environmental factors may have influenced the participants' responses on the scales for all variables.

The statistical technique used, namely Moderated Multiple Regression (MMR) may be seen as a potential limitation to the current research; this is because the statistical technique used to address moderation sometimes fails to effectively support the existence of a moderating effect, even when such a relationship exists (Helm & Mark, 2012). Moderating effects may have been present but as a result of MMR being affiliated with what is criticised as too low a statistical power, suggesting that the possibility that this statistical technique may have incorrectly concluded that no additional moderating effects were present (Aguinis & Pierce, 1999). It may be possible that using MMR as the prominent statistical technique in this research has hidden significance that could have been identified by an alternative statistical tool. Nonetheless MMR has been identified as the most popular statistical technique for addressing moderating effects, especially in organisational studies (Helm & Mark, 2012) and therefore MMR was considered to be the most suitable statistical technique for this research study.

A further limitation of this study is that no measure was used to determine whether or not participants were in transition at the time of the study. Career uncertainty represents a degree of decidedness and confidence in the career choices individuals have made but it may not represent the decision to change careers (transition). As such, it may be that we were measuring if participants had those resources available to them prior to the transition and not while the transition was occurring. Thus, if the person was not actively looking to transition to a new career, then we were assessing factors which have not come into play yet. In addition, there are many other ways in which to operationalise the transition resources, which

may result in alternate results. A number of other ways in which the measures could have been operationalised, were put forth whilst discussing the results of each transition resource.

Despite these limitations, the study does offer several strengths. The high internal consistency of the Perceived Control over Career Choices, the Career Certainty Scale, the Hospital Anxiety and Depression Scale, the Multidimensional Scale of Perceived Social Support, the General Self Efficacy Scale and the Coping Inventory for Stressful Situations indicate that these measure may be used with a certain degree of confidence and may be developed further for standardisation in the South African context.

The results of this study help to better understand the factors related to and involved in predicting career uncertainty on well-being. The results of this study are also highly beneficial, even though it is an initial attempt at using various components from Schlossberg's model to view the relationship between career uncertainty and well-being; it can be used to guide future research and intervention for individuals who are undergoing career transitions and how this impacts on their well-being. This research could also potentially be expanded to other life transitions in other aspects of life and across different domains.

5.7 Recommendations for future research

The current study did not challenge any theoretical points of view regarding the variables that were explored, as it was an initial attempt at using factors from Schlossberg's model to look at the relationship between career uncertainty and well-being. Nonetheless this research may have important practical implications for future research. In light of the limitations mentioned above, this section will begin by making suggestions for improving on those limitations. It will then discuss opportunities for future research that are based on the key findings of the current research.

The current study was incapable of making causal inferences as a direct consequence of the non-experimental nature of the research design. Future research may want to allow for the manipulation or control of extraneous variables that may have influenced the results of the current research study. In addition, the sample size, although sufficient for the purposes of this research, should be improved on in order to allow for better generalisations to the South African population; it should additionally be more representative. Furthermore, an improvement of the sample size could also reveal further significant results that were hidden

as a result of the low statistical power of MMR. Finally, a different statistical tool, or a different moderator analysis could be utilised to reveal if further significant results exist.

Although all measures of the study indicated a high statistical validity, it is recommended that future studies make use of different measures which operationalise the variables used in the study differently; this will allow for the exploration of whether the scales used was the right choice from the variety of scales to choose from, for each variable. An example of this is that there are multiple scales used to measure self-efficacy and well-being; it is possible using a different measure to operationalise this variable might impact differently on the results. This could provide researchers with insight into which measures of well-being, perceived control, perceived social support, self-efficacy, and coping strategies are the most accurate measure to use within a South African context.

Future research may aim to explore other aspects of Schlosberg's 4s framework to determine the relationship it has between career uncertainty and well-being. Future research should also explore the possible reasons the transition resources did not produce significant results, and potentially these transition resources should be revised. Either in the way it was operationalised or the chosen transition resources itself. Further validation of the measures used should be conducted, especially in regards to using these measures within a South African context. This is essential, as once revised and validated, the measures can be used with greater confidence in consequent studies, and greater inferences can be made.

Future research may also explore the reasons for the skewness of the social support subscales, and which transition resource may have the greatest influence on the career uncertainty and well-being relationship. It may also be interesting to investigate whether the transition resources have a different effect over individuals who are within the transition period verse those who are not in transition as yet. As stated earlier in the discussion, one of the possible reasons as to why no moderation was found might be that individuals have not yet begun the transition period; therefore the transition resources would not be applicable as they were not transitioning in their career.

This is interesting to investigate, as the results could be used to determine the most important resource during an individual's transition period. These results will help researchers to better understand the resources most important to individuals when undergoing transitions. Also, reasons as to why there were no moderating effects between these transition resources, career uncertainty and well-being should be explored. It may be interesting for researchers to assess

whether other transition resources, other than the ones chosen, have an impact on the career uncertainty and well-being relationship. This research would assist in the development of transition resources which individuals may draw upon when experiencing a transition, to help with the process and untimely their well-being.

Research may also look into whether there is a difference between well-being and stress; namely operationalising well-being in terms of stress and not anxiety and depression. This could open different avenues for exploration. Well-being is a subjective experience and as mentioned above, individuals appraise well-being differently based on their personality, culture or environments (Gardner & O'Driscoll 2007). Another recommendation is that instead of assessing well-being as an outcome related to career uncertainty, rather address psychological strain or general health to understand if the variables may play a stronger moderating role for an outcome more directly related to the experience of career uncertainty. Also, there may be other factors that play a greater role in moderating the effect between career uncertainty and well-being other than transition resources, and therefore this is important to explore. These research ideas would assist researchers in developing appropriate techniques and interventions for individuals to utilise.

It should also be noted that these transition resources may not work in isolation; rather they may all be integrally related. For example, people's belief about their coping capabilities may affect how much anxiety and depression they experience when faced with a difficult or threatening situation (Moos & Holahan, 2007). In addition, people who believe that they can exercise control over threats that they are faced with, do not invoke disturbing thought patterns upon themselves (Bordia, Hunt, Paulsen, Tourish & DiFonzo, 2004). On the other hand, individuals who believe that they cannot manage a situation or a threatening event will experience high anxiety arousal levels; this is because they view many aspects of their environment as being dangerous, which magnifies the severity of possible threats and hence they worry more about things that rarely happen (Lazarus & Folkman, 1984). This type of thinking leads individuals to distress themselves and thus impair their level of functioning (Lazarus & Folkman, 1984). An interesting study by Wijndaele et al. (2007) explored the relationship between emotion-focused coping and psychological distress and found that people had lower anxiety and depressive symptoms when they regularly received social support; as seeking social support has been negatively associated with stress, anxiety and depression.

Thus, it can be seen how the transitions resources are so interrelated and can be looked at as one big resource instead of 4 different resources; resulting in the 4S's framework been seen as one whole instead of dividing it into 4 different parts. This could result in using a Structural Equation Model (SEM) to see if the 4S's' make one whole 'transition resource' and not running multiple moderated regressions with 4 different resources. One way in which this could be done is by giving the transition basket of resources one name, example: transitionability – and then see how much people score on this 'transitionability' scale. Their level of 'transitionability' will then affect their level of well-being when they are career uncertain.

The research report adds to the existing literature regarding transitions affecting well-being; and future research could use these findings to guide their study, possibly exploring other factors affecting the career uncertainty and well-being relationship; as mentioned above. This research can also be used to guide the development and evaluation of interventions designed to improve well-being and uncertainty for individuals.

5.8 Conclusion

Given that career uncertainty is detrimental to one's personal growth and career development and that it usually has a negative impact on psychological well-being (Daniels, Stewart, Stupnisky, Perry & LoVerso, 2011), it is important to understand what transition resources may mitigate these effects and to understand the relationships between these resources and well-being. In line with this, the aim of this study was to explore whether these transition resources moderate the relationship between career uncertainty and well-being. Specifically, this study aimed to explore whether perceived control, perceived social support, self efficacy and style of coping served to moderate the career uncertainty and well-being relationship.

An analysis of the data revealed that only one moderation was significant; self-efficacy was found to moderate the relationship between career uncertainty and depression. One of the key findings of this study was the relationship found between career uncertainty and anxiety. It was found that high scores of career uncertainty were associated with high scores of anxiety and depression. In addition, all MMR's, and ANOVA's had at least one main effect in relation to the transition resources. There was a negative main effect found between perceived control and well-being, results indicated that low perceived control was associated with high scores of anxiety and depression. Negative main effects were also found for perceived social support from family on anxiety and depression; as well as negative main effects for perceived

social support for both anxiety and depression. This indicates that lower scores of perceived social support from ones friends and family are associated with higher scores of anxiety and depression. The same relationship is present with perceived social support from ones significant other; low perceived social support from ones significant other was associated with higher scores of anxiety and depression.

Further analysis of the data revealed that self-efficacy had a negative moderating effect on career uncertainty and depression. Self-efficacy however did not moderate the relationship between career uncertainty and anxiety; but did have a negative main effect, indicating that low levels of self-efficacy are associated with high levels of anxiety.

The first style of coping, namely task-oriented coping had a negative main effect with both anxiety and depression. Indicating that the higher task-oriented coping style one uses the less anxiety and depression experienced. On the other hand, no main effects were found between avoidant coping and anxiety, but a negative main was found between avoidant coping and depression, the direct nature of this relationship indicated that low scores of avoidance coping is associated with high scores of depression. Lastly, main effects were found for level of emotion-oriented coping on anxiety and on depression. So, individuals who score higher in emotional-oriented coping, experience higher levels of anxiety and higher levels of depression, when they are career uncertain. In addition those who were highly career uncertainty had the highest levels of anxiety and depression, whereas those with medium levels of career uncertainty had moderate levels of anxiety and depression and those low on career uncertainty had the lowest levels of anxiety or depression.

The results show that none of the transition resources resulted in a moderation between career uncertainty and anxiety or depression (except for self-efficacy on depression). However, there were main effects found for all of the transition resources, as well as a main effect for career uncertainty and well-being. These results highlight the importance of providing individuals with appropriate strategies and interventions in order to increase certain transition resources so that less anxiety and depression related symptoms will be experienced. Accounting for these relationships in the workplace, should allow practitioners to improve employees' well-being with positive outcomes for both the individual and the organisation; as new routes to explore employee well-being have been shown.

In summary, the current research provided evidence for the relationships that exist between perceived job control, perceived social support, self-efficacy and coping styles on well-being;

as well as provided evidence for the relationship between career uncertainty and well-being. This has practical implication for organisations that wish to facilitate and assist their employees in issues regarding career uncertainty and how to improve well-being.

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Appendices

Appendix A: Letter Requesting Organisational Access

Psychology
School of Human & Community Development
University of the Witwatersrand
Private Bag 3, WITS, 2050
Tel: (011) 717 4500 Fax: (011) 717 4559

Good Day

My name is Prashanthi Mundree and I am conducting research for the purpose of obtaining a Masters Degree in Organisational Psychology at the University of the Witwatersrand. As part of my Masters degree I am required to complete a research project and present a research dissertation on the results obtained. My research focuses on the relationship between career uncertainty and employee well-being and how this relationship can be influenced by an employee's ability to transition or the resources they have.

Participation in this research will involve completing a hard copy questionnaire, or a online version (if preferred) which will be made available. The questionnaire will take approximately 25-30 minutes to complete and must be submitted or returned within 2 weeks. **Participation is strictly voluntary and will not advantage or disadvantage employees in any way, whether they choose to complete the questionnaire or not.**

No identifying information, such as employees' names or ID numbers will be asked for; in addition the organisation name will not be asked for so the data analysed will not analysed on the basis of any specific organisation. Thus employees will remain completely anonymous and the data they provide cannot be linked to them in any way. Only the researcher and supervisor will have access to the completed questionnaires and the data from the questionnaires; which will not be seen by any other person. There are no foreseeable risks or benefits to taking part in this study.

If employees choose to participate in the study, they will be asked to complete the questionnaire either in their free time at work or at home. If they choose to participate, questionnaires as well as a sealed box will be left in a central location where employees can collect and complete questionnaires in their own time and return it to the same location. Participants will be asked to read the information participant sheet as well as the consent form which will accompany the questionnaire. Completion of the returned consent form as well as the questionnaire will be considered as consent to participate in the study. It should be noted that the consent from will not ask for any identifying information such as a name or signature, it will just be a 'yes' or 'no' box that participants can tick.

If you choose to allow the study to be conducted in your company by giving us access to your employees, it would be greatly appreciated. Should you have any queries or concerns, please do not hesitate to contact me or my supervisor. If you have any ethical queries about the study, this can be directed to the courser co-ordinator, Colleen Bernstein at Collen.Bernstein@wits.ac.za.

Kind regards,

Prashanthi Mundree
0765657801
prashanthi.mundree@gmail.com

Supervisor: Ian Siemers
Tel: (011) 717 4586
ian.siemers@wits.ac.za

_____ _____

Appendix B: Participant Information Sheet

Psychology
School of Human & Community Development
University of the Witwatersrand
Private Bag 3, WITS, 2050
Tel: (011) 717 4500 Fax: (011) 717 4559

Good Day

My name is Prashanthi Mundree and I am conducting research for the purpose of obtaining a Masters Degree in Organisational Psychology at the University of the Witwatersrand. As part of my Masters degree I am required to complete a research project and present a research dissertation on the results obtained. My research focuses on the relationship between career uncertainty and employee well-being and how this relationship can be influenced by an employee's ability to transition or the resources they have. **I would like to invite you to participate in this research**. Please note that to take part in this research, you will need to be a South African citizen, employed by an organisation, and have at least a grade 12 qualification.

Participation in this research will involve completing a hard copy of the questionnaire which is attached. The questionnaire will take approximately 25-30 minutes to complete and please submit your questionnaire within two weeks. **Please note that your participation is strictly voluntary and you will not be advantaged or disadvantaged in any way, whether you choose to complete the questionnaire or not.**

No identifying information, such as your name or ID number will be asked for; in addition the organisation name will not be asked for so the data analysed will not analysed on the basis of any specific organisation. Furthermore, no one at your organisation will be aware of whether you choose to participate or not, thus you will remain completely anonymous and the data you provide cannot be linked to you in any way. Only the researcher and supervisor will have access to your completed questionnaire and the data from your questionnaires; which will not be seen by any other person. There are no foreseeable risks or benefits to taking part in this study.

If you choose to participate in the study please complete the following questionnaire as completely and as honestly as you can. You may take the questionnaire home to be completed. Once you have completed your questionnaire, you can place the questionnaire in the sealed box labelled 'completed questionnaires' in [enter central location]. Completion of the returned consent form as well as the questionnaire will be considered as consent to participate in the study.

Should you have any queries or concerns, please do not hesitate to contact me or my supervisor. If you decide to complete the questionnaire, your participation will be greatly appreciated. You may detach this sheet from the questionnaire before submission and keep it if you would like.

Kind regards,

Prashanthi Mundree
0765657801
prashanthi.mundree@gmail.com

Supervisor: Ian Siemers
Tel: (011) 717 4586
ian.siemers@wits.ac.za

Appendix C: Consent Form

Psychology
School of Human & Community Development
University of the Witwatersrand
Private Bag 3, WITS, 2050
Tel: (011) 717 4500 Fax: (011) 717 4559

Please read the following information and tick the appropriate box

I have read the information participant sheet attached and I understand that I may withdraw at any point up to submission of the completed questionnaire.

- ☐ I give my consent to participate in this study
- ☐ I do not give my consent to participate in this study

Should you have any queries or concerns, please do not hesitate to contact me or my supervisor. If you decide to complete the questionnaire, your participation will be greatly appreciated.

Kind regards,

Prashanthi Mundree
0765657801
prashanthi.mundree@gmail.com

Supervisor: Ian Siemers
Tel: (011) 717 4586
ian.siemers@wits.ac.za

_____ _____

Appendix D: Participant Information Sheet (For pilot study)

Psychology
School of Human & Community Development
University of the Witwatersrand
Private Bag 3, WITS, 2050
Tel: (011) 717 4500 Fax: (011) 717 4559

Good Day

My name is Prashanthi Mundree and I am conducting research for the purpose of obtaining a Masters Degree in Organisational Psychology at the University of the Witwatersrand. As part of my Masters degree I am required to complete a research project and present a research dissertation on the results obtained. My research focuses on the relationship between career uncertainty and employee well-being and how this relationship can be influenced by an employee's ability to transition or the resources they have. **I would like to invite you to be a judge in a pilot study that I am conducting to see whether items in a scale have adequate face and content validity.**

Participation in this research will involve completing out the following section according to the instructions that follows and sending the completed section back to the researcher. The questionnaire will take approximately 10-15 minutes to complete and submit. **Please note that your participation is strictly voluntary and you will not be advantaged or disadvantaged in any way, whether you choose to complete the questionnaire or not.**

If you choose to participate in the study please complete the following questionnaire as completely and as honestly as you can. Should you have any queries or concerns, please do not hesitate to contact me or my supervisor. If you decide to complete the questionnaire, your participation will be greatly appreciated. You may detach this sheet from the questionnaire before submission and keep it if you would like.

Kind regards,

Prashanthi Mundree
0765657801
prashanthi.mundree@gmail.com

Supervisor: Ian Siemers
Tel: (011) 717 4586
ian.siemers@wits.ac.za

Appendix E: Evaluation Sheet (For pilot study)

Please fill in the information below by placing a tick/circle on the relevant box and where applicable by writing in the required details. This information will only be used to help the researcher better adapt the scale items for the study and to assess face and content validity.

Description of the Perceived Control Over Career Choices:

The aim of this scale is to assess how employees perceive their control over their career choice. Control over one's career choices can be defined as an overall perception to influence one's career trajectory.

Instructions:

1**.** Please could you read through the list of questions provided and tick whether or not you believe the question relates to the construct being measured (based on the description of the construct above).

- Very representative of the construct
- Somewhat representative of the construct
- Not representative of the construct

2. In addition, please could you change the wording of any items so that, when modified, they would be somewhat representative of the construct, if need be.
3. Lastly, could you rate the scale as a whole by checking the items in the last table and provide any additional comments.

Judge each item based on the construct definition

	Representative of Construct		
	Very	Somewhat	Not
My career choices are within my control.	1	2	3
My career choices are controlled by the labour market.	1	2	3
I have influence over the outcomes of my career choices.	1	2	3
I do not have very much control when it comes to choosing my career	1	2	3
My career decision depends on things I can't control.	1	2	3

Checklist for the scale

	Rating (No ⟶ Yes)	Comment
Face Validity i.e. What you look at the scale, does it measure what it says it measures? Is it easy to answer? Is it clear and understandable?	**1 2 3 4 5**	
Content Validity i.e. Does it measure what it says it measures	**1 2 3 4 5**	
Lack of ambiguity i.e. Were any questions vague or that you were uncertain about	**1 2 3 4 5**	
No double-barrelled statements i.e. I like to go out AND talk to people	**1 2 3 4 5**	
Reverse Meaning i.e. Are there any questions that have opposite views to what is being measured and opposite views to the definition?	**1 2 3 4 5**	
Social Desirability i.e. if you were an employee at work, would you be okay with completing such a scale? Was it too long? Did you feel it would be harmful to your career in anyway?	**1 2 3 4 5**	
Offensiveness i.e. Did the scale offend you in any way?	**1 2 3 4 5**	
Repetition i.e. Too many questions asked the same thing to the point where it was not useful (please indicate the question numbers in the comment box).	**1 2 3 4 5**	

Additional Comments

_____

_____

_____

_____

Thank you for your participation in this evaluation

Appendix F: Demographic Questionnaire

Please fill in the information below by placing a tick (or clicking) on the relevant box and where applicable by writing in the required details. This information will only be used to describe the overall sample for the study.

1. What is your gender?

- ☐ Male
- ☐ Female

2. What is your age? (in years)

☐ years old

3. Which race or ethnicity best describes you?

- ☐ Black
- ☐ White
- ☐ Indian
- ☐ Coloured
- ☐ Asian
- ☐ Other (please specify) _____

4. What is your home language?

- ☐ English
- ☐ Afrikaans
- ☐ IsiZulu
- ☐ IsiXhosa
- ☐ Sepedi
- ☐ Sesotho
- ☐ Setswana
- ☐ SiSwati
- ☐ Tshivenda
- ☐ Xitsonga
- ☐ IsiNdebele
- ☐ Other (please specifiy) _____

5. What is your level of education?

- ☐ Matric
- ☐ Diploma
- ☐ Undergraduate Degree
- ☐ Honours Degree / Posgraduate Degree
- ☐ Masters Degree or Higher

- Other (please specify) _____

6. What is your marital status?

- Never married
- Married
- Divorced
- Widowed
- Cohabitating

7. How long have you been in your current position?

- Less than 1 year
- 2 – 4 years
- 5 - 7 years
- 8 – 10 years
- 11+ years

Appendix G: Perceived Control Over Career Choices

Perceived Control Over Career Choices						
Instructions: Below are statements that you may agree or disagree with. Using the 1 - 5 scale, indicate your agreement or disagreement with each question by placing a cross over the appropriate number for each question.	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
My career choices are within my control.	1	2	3	4	5	6
My career choices controlled by the labour market.	1	2	3	4	5	6
I have influence over the outcomes of my career choices.	1	2	3	4	5	6
I do not have very much control when it comes to choosing my career	1	2	3	4	5	6
My career decision depends on things I can't control.	1	2	3	4	5	6

Appendix H: Multidimensional Scale of Perceived Social Support

Multidimensional Scale of Perceived Social Support							
We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.	Very Strongly Disagree	Strongly Disagree	Mildly disagree	Neutral	Mildly Agree	Strongly Agree	Very Strongly Agree
1. There is a special person who is around when I am in need.	1	2	3	4	5	6	7
2. There is a special person with whom I can share my joys and sorrows with.	1	2	3	4	5	6	7
3. My family really tries to help me.	1	2	3	4	5	6	7
4. I get the emotional help and support I need from my family.	1	2	3	4	5	6	7
5. I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7
6. My friends really try to help me.	1	2	3	4	5	6	7
7. I can count on my friends when things go wrong.	1	2	3	4	5	6	7
8. I can talk about my problems with my family.	1	2	3	4	5	6	7
9. I have friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
10. There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7
11. My family is willing to help me make decisions.	1	2	3	4	5	6	7
12. I can talk about my problems with my friends	1	2	3	4	5	6	7

Appendix I: General Self Efficacy Scale

General Self Efficacy Scale				
Instructions: Below are statements that may or may not be true to you. Use the following scale to indicate your level of agreement or disagreement with each statement.	Not true at all	Hardly true	Moderately true	Exactly true
I can always manage to solve difficult problems if I try hard enough.	1	2	3	4
If someone opposes me, I can find the means and ways to get what I want.	1	2	3	4
I am certain that I can accomplish my goals.	1	2	3	4
I am confident that I could deal efficiently with unexpected events.	1	2	3	4
Thanks to my resourcefulness, I can handle unforeseen situations.	1	2	3	4
I can solve most problems if I invest the necessary effort.	1	2	3	4
I can remain calm when facing difficulties because I can rely on my coping abilities.	1	2	3	4
When I am confronted with a problem, I can find solutions.	1	2	3	4
If I am in trouble, I can think of a good solution.	1	2	3	4
I can handle whatever comes my way.	1	2	3	4

Appendix J: Coping Inventory for Stressful Situations

Indicate how much you engage in these types of activities when you encounter a difficult, stressful or upsetting situation.

1. Take some time off and get away from the situation

1	2	3	4	5
Not at all				Very much

2. Focus on the problem and see how I can solve it

1	2	3	4	5
Not at all				Very much

3. Blame myself for having gotten into this situation

1	2	3	4	5
Not at all				Very much

4. Treat myself to a favourite food or snack

1	2	3	4	5
Not at all				Very much

5. Feel anxious about not been able to cope

1	2	3	4	5
Not at all				Very much

6. Think about how I solved similar problems

1	2	3	4	5
Not at all				Very much

7. Visit a friend

1	2	3	4	5
Not at all				Very much

8. Determine a course of action and follow it

1	2	3	4	5
Not at all				Very much

9. Buy myself something

1	2	3	4	5
Not at all				Very much

10. Blame myself for being too emotional about the situation

1	2	3	4	5
Not at all				Very much

11. Work to understand the situation

1	2	3	4	5

Not at all Very much

12. Become very upset

1	2	3	4	5

Not at all Very much

13. Take corrective action immediately

1	2	3	4	5

Not at all Very much

14. Blame myself for not knowing what to do

1	2	3	4	5

Not at all Very much

15. Spend time with a special person

1	2	3	4	5

Not at all Very much

16. Think about the event and learn from my mistakes

1	2	3	4	5

Not at all Very much

17. Wish that I could change what had happened or how I felt

1	2	3	4	5

Not at all Very much

18. Go out for a snack or a meal

1	2	3	4	5

Not at all Very much

19. Analyse my problem before reacting

1	2	3	4	5

Not at all Very much

20. Focus on my general inadequacies

1	2	3	4	5

Not at all Very much

21. Phone a friend

1	2	3	4	5

Not at all Very much

Appendix K: Career Certainty Scale

1. “I am certain that I am in the right career?”

Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly Agree
1	2	3	4	5	6

2. “I definitely want to pursue this career.”

Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly Agree
1	2	3	4	5	6

3. “I have decided this is the career I am most interested in pursuing.”

Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly Agree
1	2	3	4	5	6

Appendix L: Hospital Anxiety and Depression Scale

Tick the box beside the reply that is closest to how you have been feeling in the past week. Don't take too long over your replies: your immediate response is best.

	I feel tense or 'wound up':		**I feel as if I am slowed down:**
	Most of the time		Nearly all the time
	A lot of the time		Very often
	From time to time, occasionally		Sometimes
	Not at all		Not at all
	I still enjoy the things I used to enjoy:		**I get a sort of frightened feeling like 'butterflies' in the stomach:**
	Definitely as much		Not at all
	Not quite so much		Occasionally
	Only a little		Quite often
	Hardly at all		Very often
	I get a sort of frightened feeling as if something awful is about to happen:		**I have lost interest in my appearance:**
	Very definitely and quite badly		Definitely
	Yes, but not too badly		I don't take as much care as I should
	A little, but it doesn't worry me		I may not take quite as much care
	Not at all		I take just as much care as ever
	I can laugh and see the funny side of things:		**I feel restless as I have to be on the move:**
	As much as I always could		Very much indeed
	Not quite so much now		Quite a lot
	Definitely not so much now		Not very much
	Not at all		Not at all
	Worrying thoughts go through my mind:		**I look forward with enjoyment to things:**
	A great deal of the time		As much as I ever did
	A lot of the time		Rather less than I used to
	From time to time, but not too often		Definitely less than I used to
	Only occasionally		Hardly at all
	I feel cheerful:		**I get sudden feelings of panic:**
	Not at all		Very often indeed
	Not often		Quite often
	Sometimes		Not very often
	Most of the time		Not at all

	I can sit at ease and feel relaxed:		**I can enjoy a good book or radio TV program:**
	Definitely		Often
	Usually		Sometimes
	Not often		Not often
	Not at all		Very seldom

Please check that you have answered all the questions

Appendix M: Ethical Clearance Certificate

Appendix N: Histograms for Main Variables

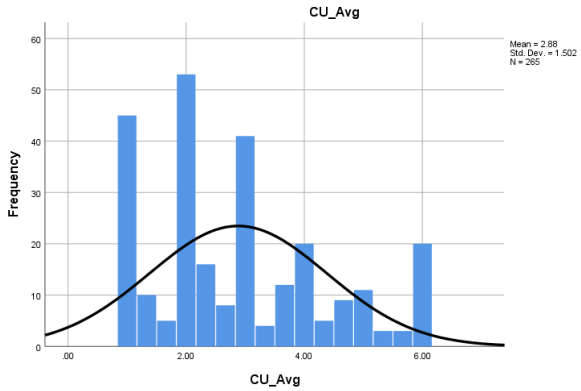


Figure 2: Histogram for Career Uncertainty

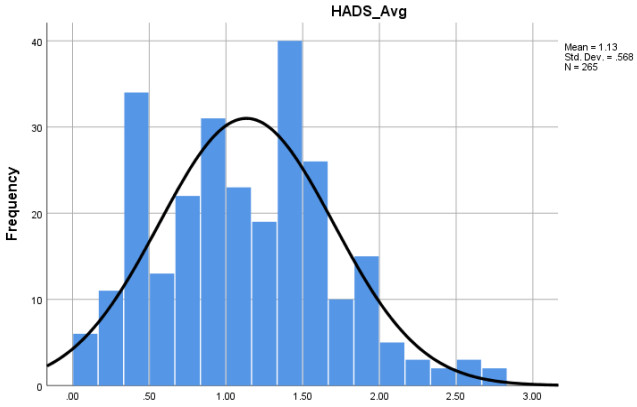


Figure 3: Histogram for Well-being

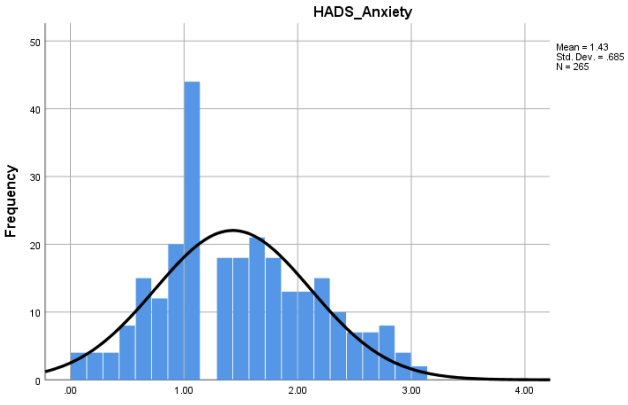


Figure 4: Histogram for Anxiety

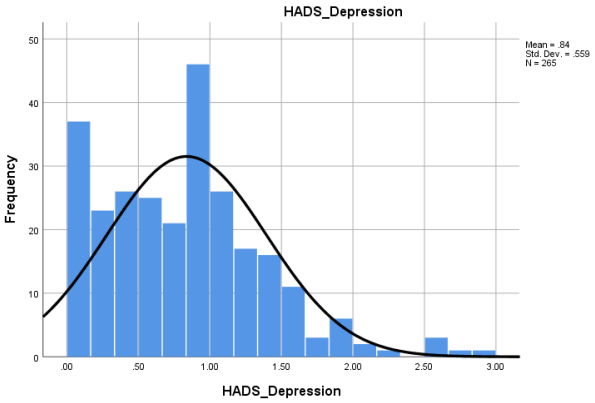


Figure 5: Histogram for Depression

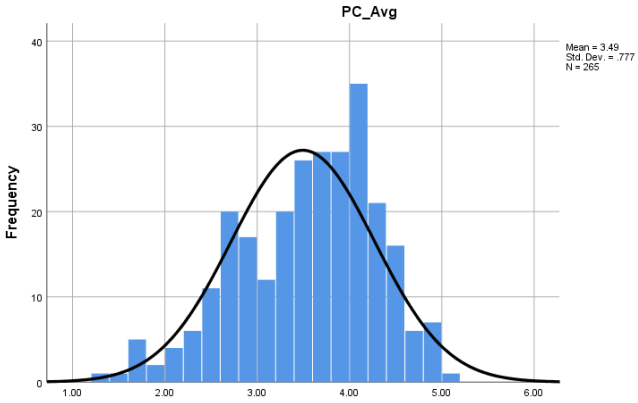


Figure 6: Histogram for Control

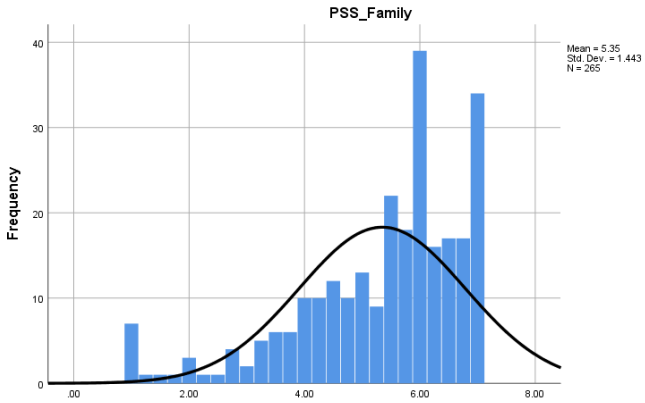


Figure 7: Histogram for Social Support

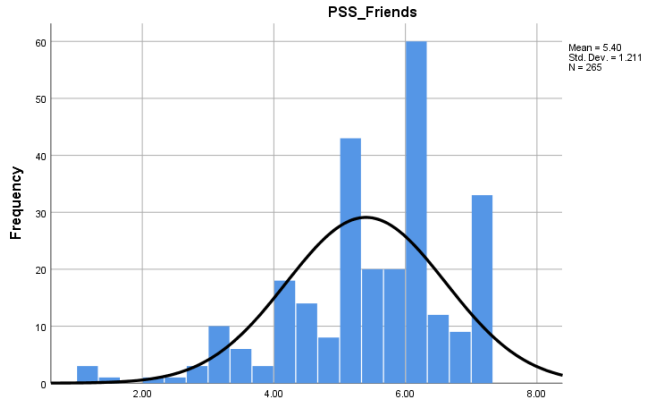


Figure 8: Histogram for Social Support (Friends)

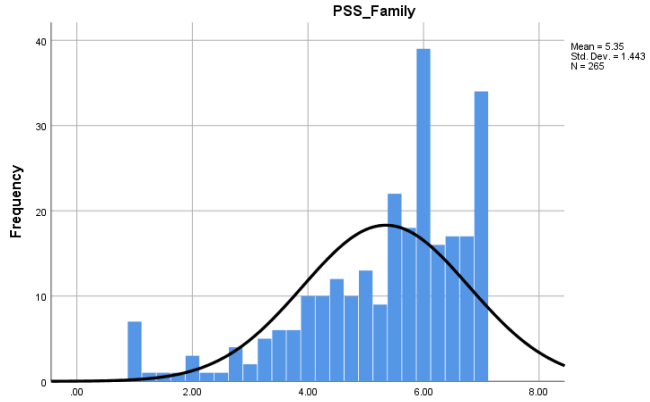


Figure 9: Histogram for Social Support (Family)

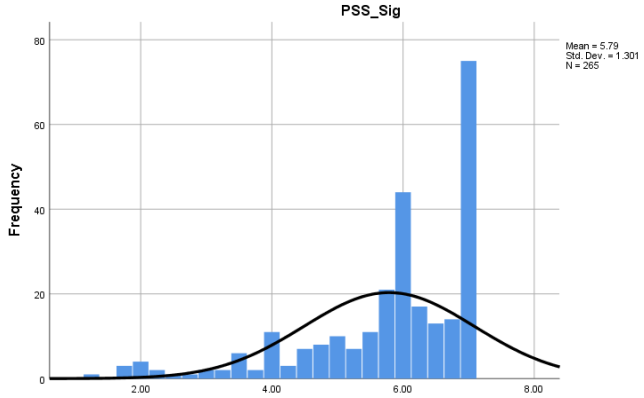


Figure 10: Histogram for Social Support (Significant Other)

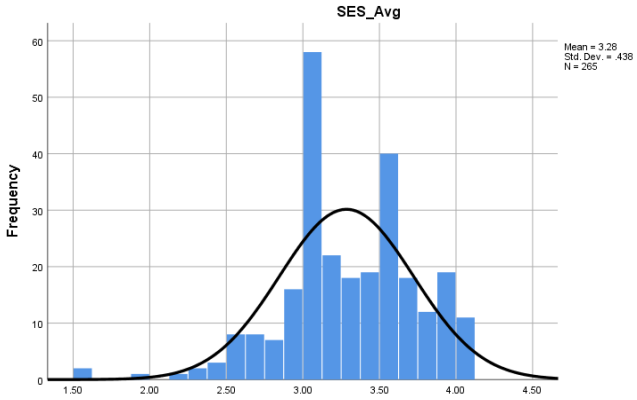


Figure 11: Histogram for Self-efficacy

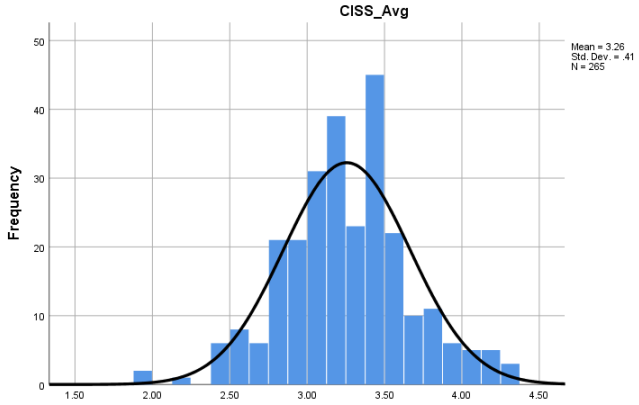


Figure 12: Histogram for Coping

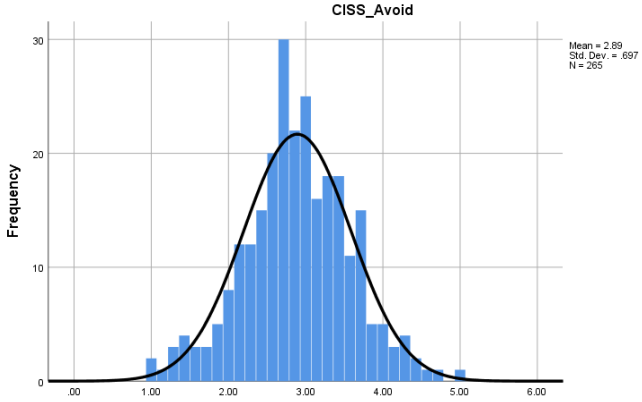


Figure 13: Histogram for Coping (Avoidant)

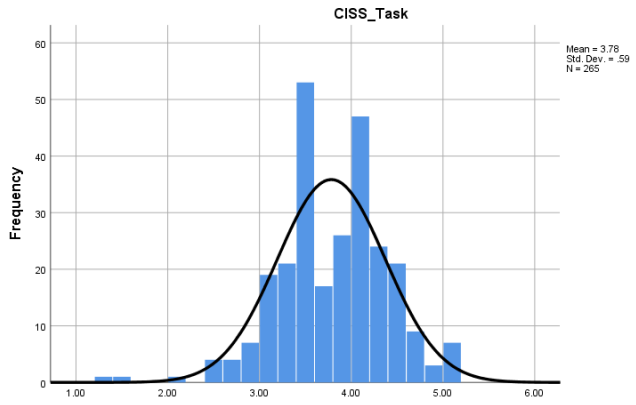


Figure 14: Histogram for Coping (Task-orientated)

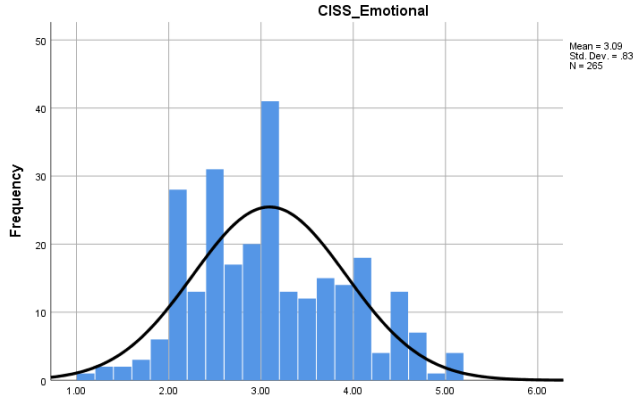


Figure 15: Histogram for Coping (Emotional-orientated)

Appendix O: Histograms for Transformed Social Support Scale

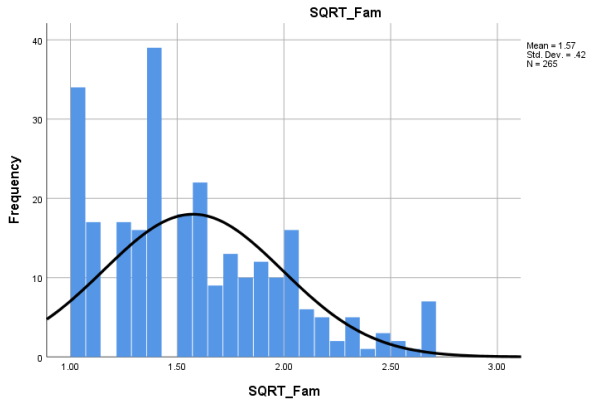


Figure 16: Transformed Histogram for Family

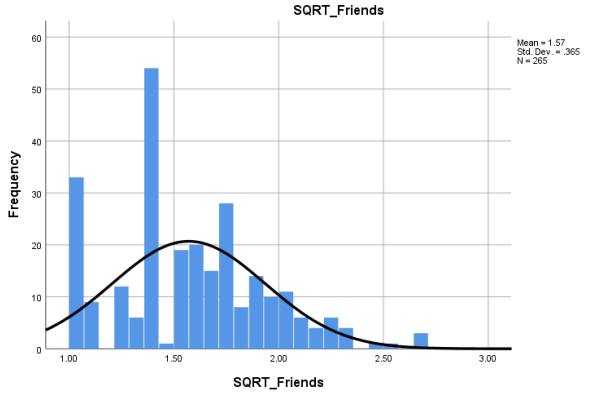


Figure 17: Transformed Histogram for Friends

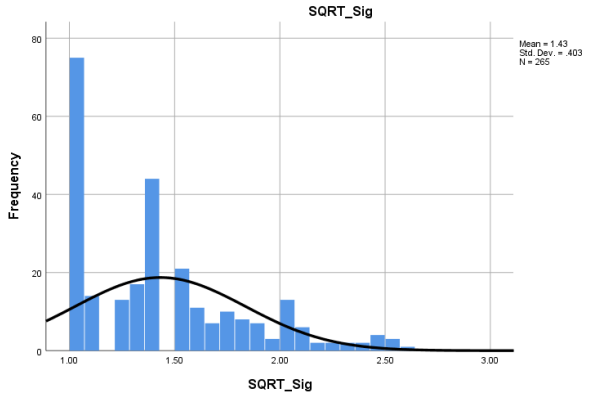


Figure 18: Transformed Histogram for Significant Other

Appendix P: Partial Regression Plots for Main Variables (Anxiety)

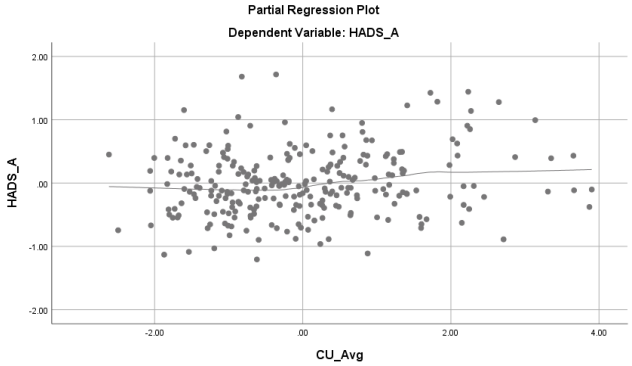


Figure 19: Partial Regression Plot for Career Uncertainty

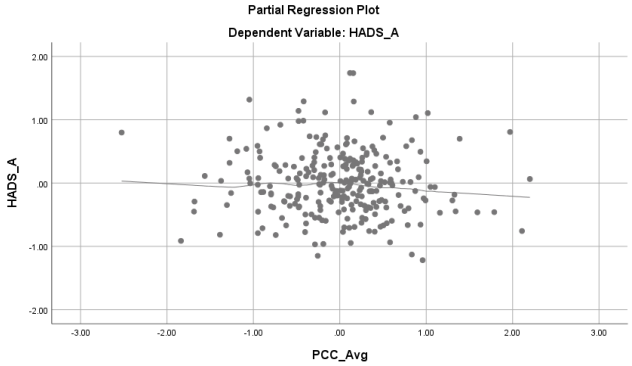


Figure 20: Partial Regression Plot for Perceived Control

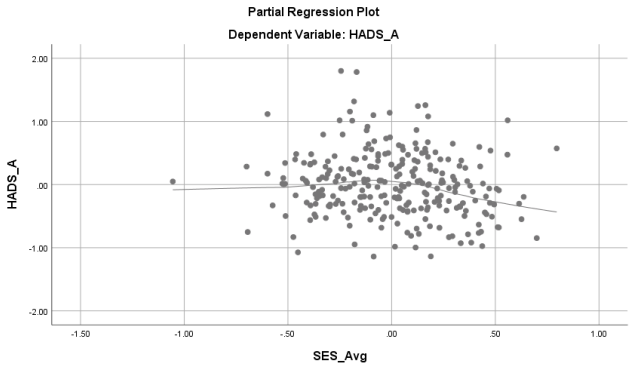


Figure 21: Partial Regression Plot for Self Efficacy

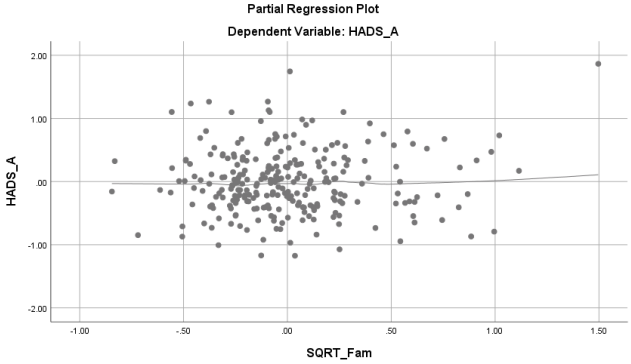


Figure 22: Partial Regression Plot for Social Support (Family)

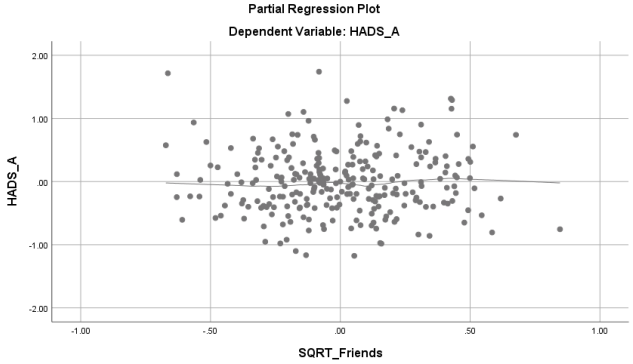


Figure 23: Partial Regression Plot for Social Support (Friends)

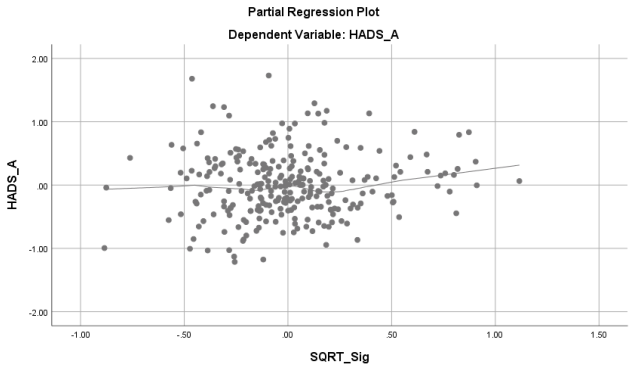


Figure 24: Partial Regression Plot for Social Support (Significant Other)

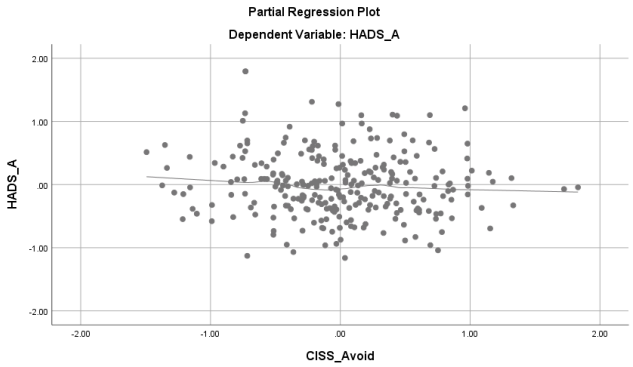


Figure 25: Partial Regression Plot for Coping (Avoidance)

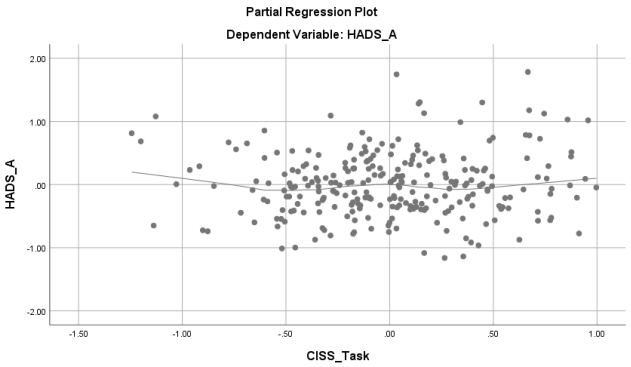


Figure 26: Partial Regression Plot for Coping (Task)

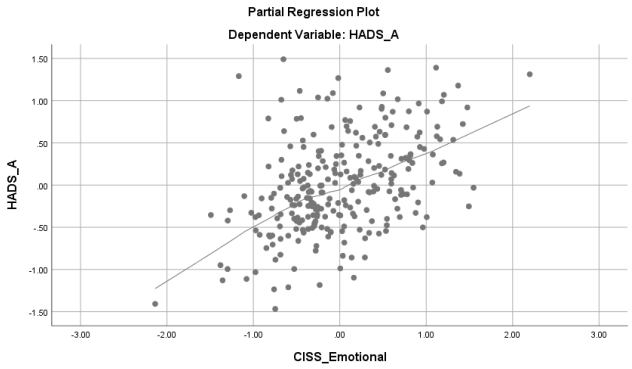


Figure 27: Partial Regression Plot for Coping (Emotional)

Appendix Q: Partial Regression Plots for Main Variables (Depression)

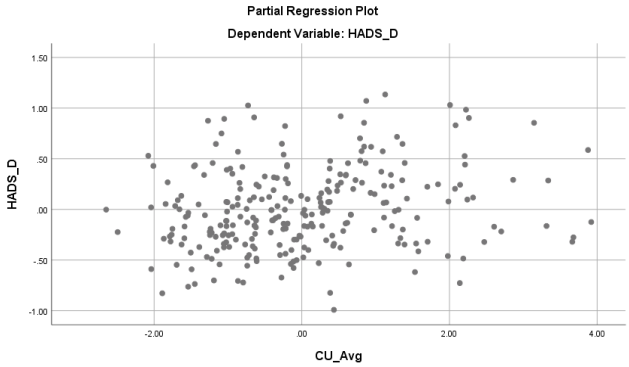


Figure 28: Partial Regression Plot for Career Uncertainty

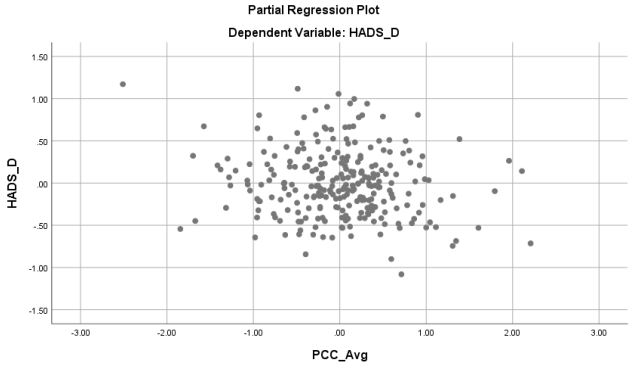


Figure 29: Partial Regression Plot for Perceived Control



Figure 30: Partial Regression Plot for Self Efficacy

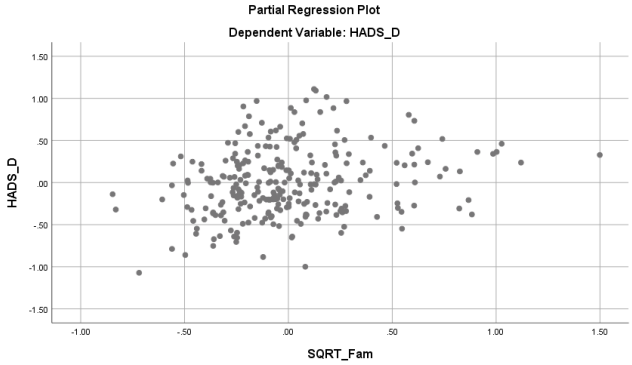


Figure 31: Partial Regression Plot for Social Support (Family)

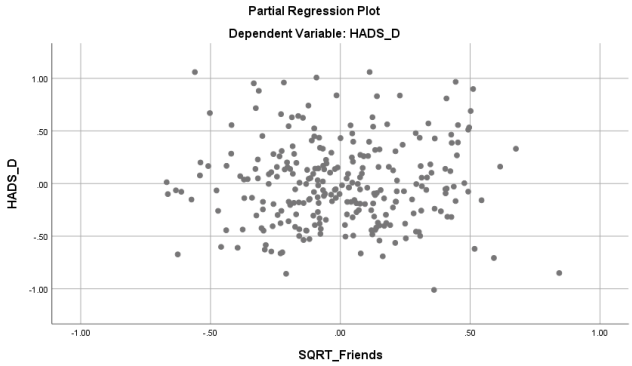


Figure 32: Partial Regression Plot for Social Support (Friends)

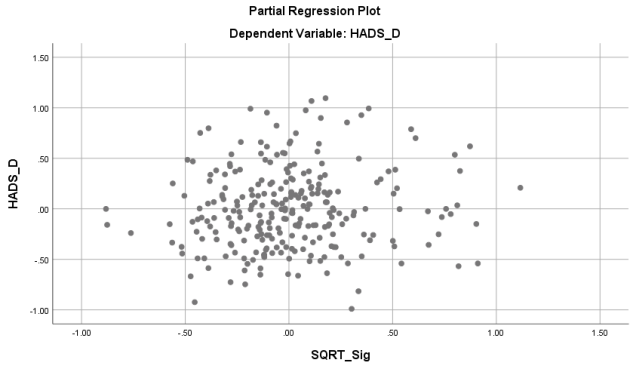


Figure 33: Partial Regression Plot for Social Support (Significant Other)

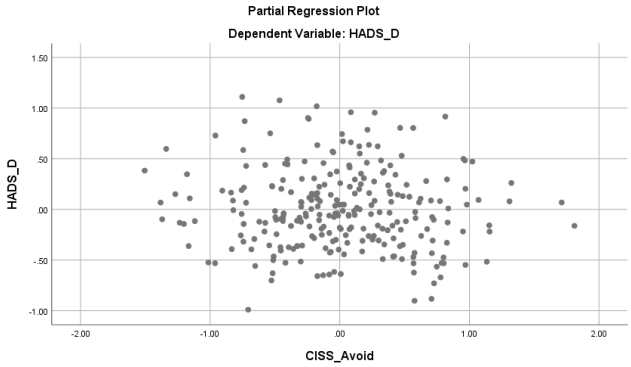


Figure 34: Partial Regression Plot for Coping (Avoidance)

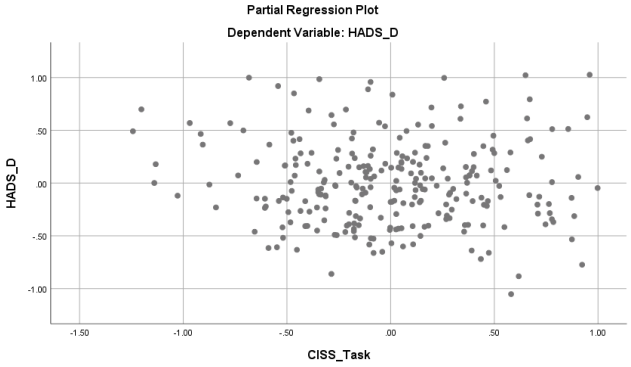


Figure 35: Partial Regression Plot for Coping (Task)

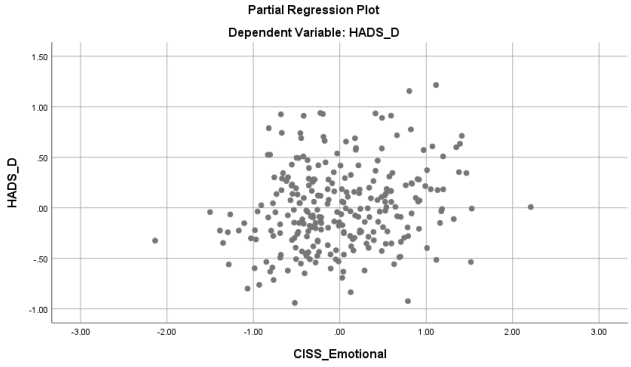


Figure 36: Partial Regression Plot for Coping (Emotional)