



**PSYCHOLOGICAL CAPITAL AND ORIENTATION TO HAPPINESS AS
PROTECTIVE FACTORS IN COPING WITH STRESSORS AMONG FIRST YEAR
PSYCHOLOGY STUDENTS, UNIVERSITY OF KWAZULU-NATAL, DURBAN,
SOUTH AFRICA**

BY

DANIEL CHINEDU OKAFOR

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College of Humanities, University of KwaZulu-Natal South Africa..

SUPERVISOR: PROF. ANNA MEYER-WEITZ

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DECLARATION

I hereby declare that this dissertation, Psychological Capital and Happiness as protective factors in coping with stressors among First Year Students of University of KwaZulu-Natal Howard Campus Durban, South Africa is my own original work. All citations, references and borrowed texts have been duly acknowledged. This research has not previously been submitted to any other institution for degree or examination purposes.

Name: **Daniel Chinedu Okafor**

Student Number: **213572695**

Signed:

Date:

DEDICATION

This dissertation is dedicated to my parents
Sir and Lady Gregory I. Okafor (Ichie Uno)

ACKNOWLEDGMENT

God is able (Eph 3:20)

I continually thank God, who has given me the ability, strength, courage and determination to face life challenges. May His name be praised forever and ever. Amen. I express my immense joy and gratitude to the Archbishop of Onitsha Archdiocese, His Grace Most Rev. Valerian M. Okeke, for his paternal kindness in my life and support in accomplishing this project.

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ABSTRACT

Psychological Capital, a recently developed, higher-order construct, and happiness applied to the environment of work have been hypothesized to aid employees cope with stressors and job satisfaction in the workplace. The current study extends these concepts to investigate their applicability in the academic environment. Psychological capital is hypothesized to empower students with the necessary mental strength to cope up with adverse circumstances. This study aims to explore the use of Psychological capital (PsyCap) and Happiness among first year students in the context of coping with stressors.

University no doubt provides a platform on which academic achievements can be made, and authentic human formation realized. Its role in the growth of individuals and development of a nation cannot be underestimated. However, this life transition for the first year students can be stressful and requires some coping strategies to deal with academic stressors in order to savor a happy career and more so maintain general well-being. Drawing from the emerging field of positive organizational behaviour, and using the theoretical framework of the Broaden-and-Build Theory, this study aimed to investigate the association between Psychological capital, happiness and coping styles as well as the demographic differences on the measures. It determined the extent of students' PsyCap, happiness and ways of coping. It also explored the predictors for productive and non-productive coping styles.

The study used a quantitative research design with two hundred and seven (N=207) completed survey packages from first year psychology students of University of KwaZulu-Natal Howard College. The following measures were used namely the Demographic Survey, The Psychological Capital Questionnaire (PCQ), the Orientation to Happiness Scale (OHS) and Adolescent Coping Scale (ACS). Data analysis included exploratory factor analysis and descriptive statistics which was conducted on the statistical program SPSS 21. Independent samples T- tests were used to compare means. Correlational statistics (Pearson's product moment) was used to explore relationships between pairs of variables. Standard multiple regression analyses were applied to assess and explain the factor(s) that predict productive and non-productive coping.

The results indicated that there was a statistically significant positive relationship between PsyCap and Happiness, and productive coping. Africans reported a significant difference in mean scores of resilience and meaningful-engagement than other race groups. This was explained on the basis of “African connectedness.” The age groups showed similar results on the measures while the t-test result on gender reported statistically significant difference in resilience between male and female, with female showing a relatively higher score than male. The results of standard multiple regressions showed that psychological capital and happiness are predictors of productive coping as well as hope, pleasure and meaningful-engagement, while resilience was a predictor of non-productive. In essence, a more positively oriented appraisal of the psychological capital resources and happiness along with productive coping styles may shield protective effects of well-being on students who might be facing stressors on campus. This provides important windows of action for prevention and intervention programs to foster students’ well-being.

This study has furthered our insight into the role of positive psychology constructs such as the role of PsyCap and happiness in adapting a constructive coping style in dealing with stressors, an important finding not previously explored. There seems thus a need to begin to cultivate psychological capital and positive emotions i.e. feelings of happiness in fostering academic progress and general well-being among students.

CHAPTER ONE

INTRODUCTION

1.1 Background and rationale for the study

First year students face various difficulties in efforts to successfully complete their academic programme, which would inadvertently leads to fruitful future careers. In the bid to surmount the university expectations, first year students may experience various stressors. Therefore, stress occupies a crucial academic subject matter in an academic institution (Agolla, 2009). The result of broad research on stress among university students makes its cogent to engage attentively on the area of school stress (Ahmad & Lama, 2012; Misra & Castillo, 2004; Sayiner, 2006).

Entering university entails a period of major change for the greater proportion of first year students who leave home's comfort for the first time, to pursue an education towards later self-sufficiency and enabling life experiences. By leaving their parents' homes, first year students are distanced from family and are removed from other people who used to support and provide for them. It is possible then, and quite understandable, that they may experience academic and other stressors. Past research has identified that for many students, the first time university journey is stressful as it is overloaded with unfamiliar experiences (Dyson & Renk, 2006; Fisher & Hood, 1987; Shaikh & Deschamps, 2006). For example, in a study that surveyed the psychological impacts of the shift to university life, Hazel, Miora and Tania, (2007) determined that the transition to university includes adjustment-learning for students. This is necessary because they have to disengage with former practices and life-styles and learn to adapt to a new environment and its different and various expectations. These changes and stressful experiences, undoubtedly, require students to employ effective coping styles for a healthier physical, mental, social, academic life.

According to Wilcox, Winn and Fyvie-Gault (2005), the first year of university may be a very stressful experience and a tremendous challenge as the individual student usually faces the tension of keeping a balance between his/her academic requirements, interpersonal relationship and personal goals. This period of transition may have far reaching consequences that may be long lasting for an individual, some of which may be difficult to overcome (Arslan et al., 2009; Lui, Nagato, Shono & Kitamura, 2009). Therefore, individuals that are faced with such experiences are

in dire need of support to employ effective coping strategies along with the increasing demands that they face in their changing circumstances and personal lives.

There may be different ways of coping as noted by the study of Yeh and Inose (2003) who concluded that when switching to a new education environment, students use close social support networks when confronted with problems as a way to cope and combat stress and psychological issues, particularly when they are far away from their homes. Apart from close social networks, other ways of coping that may be implemented like leisure activities, reading, watching television, and computer use (Holder, Coleman & Sehn, 2009) and physical exercise and consulting professionals for counselling sessions (Mazzucchelli, Rees, & Kane, 2009). In addition to these coping strategies, the present study mainly focuses on the adolescent's coping triadic steps viz: productive, non-productive and references to others in the face of stressors.

Students' stressors among other things have often been bracketed to include academic workload, too many tests and assignments, difficult courses, achievement of exam grades, peer pressure, lecturer characteristics, family pressures, work, financial challenges, as well as maintaining a social life alongside academic projects. These stressors, if unguarded, may leave students vulnerable to sometimes use negative coping techniques such as alcohol and other substance abuse, risky sexual activity, and isolation i.e. keeping to oneself. The fact that university programmes are meant to develop the potential of students to pursue a future career, and thus contribute to nation building, when the stress that accompanies the programs are deep and not monitored and handled properly, the opposite may occur .It might lead to dropping out of college (Pocock, 2012) and in some instances leads mental problems (Herman, Stein, Seedat, & Heeringa, 2009). It is indeed evidenced that even if a moderate level of stress can stimulate student's resourcefulness and success, the extreme stresses and persistent loads of academic works may perhaps harm students' performance, diminish education, affect special relationships, and eventually, derail one's future plans (Lazarus, 1989). In essence, a disproportionate level of stress leads to health and mental problems. Undue stress, if not properly managed, will hamper students' educational success, personal and capability development.

The introduction of the recently conceptualised Psychological Capital (PsyCap), developed from the Positive Psychology paradigm (Luthans, 2004), is likely to play a significant role in students' ability to cope with stressors. It is therefore argued that the essential components of Psychological

Capital namely resilience, hope, self-efficacy and optimism boost positive mood, support and offer protection when coping with stress. PsyCap has been successfully applied in organizational behaviour and performance outcomes among employers and employees including their well-being (Luthans, 2007). On the other hand, not enough studies have been conducted to explore PsyCap and coping styles among students. In fact, in the South African literature, certainly no investigation, to the knowledge of the researcher, has engaged psychological capital, happiness and coping styles among university students. In the light of the existing gaps in the literature, it seems appropriate to explore the role of PsyCap and happiness in the coping styles that students use when confronted with problems and stressors.

Hence, the above information inform the aim of this research study to investigate the role of psychological capital and happiness as playing a protective role in the coping strategy that students use when faced with difficulties. The fact is that the pervasiveness of stress including academic stress among first year students may account for the high dropout rate experienced among this group of students (Letseka & Maile, 2008; Modisaotsile, 2012).

Students, indeed, have different expectations, objectives, and beliefs that they want to fulfil, which can be easily achieved if their expectations, objectives, and beliefs align with that of the school (Purna Prabhakar Nandamur, 2007). As students are expected to acquire knowledge and indispensable skills for nation building, growth and development, then it is vital to undertake a study into a potential danger that might hinder their positive contributions to the society. It is hoped that the research study will shed light on possible psychological resources that could be developed to support first year students to better cope with university life.

1.3. STUDY AIM AND OBJECTIVES

Against this background and rationale for this study, the central aim of the study is to understand the protective role of psychological capital and happiness in using constructive coping for problems and stressors they may encounter.

The particular objectives of this study are to:

- Determine the extent of psychological capital and happiness among students.
- Explore group differences in psychological capital, happiness and coping styles.

- Examine the association between Psychological capital, happiness and coping styles.
- Determine whether Psychological Capital and Happiness are predictors of both productive and non-productive coping styles.

1.4. Ethical Considerations

Permission to conduct this research was firstly obtained from the Head/ Dean of the School of Psychology. Secondly, before data collection began permission was also granted by the Humanities and Social Science Ethics Committee of the University of KwaZulu-Natal (Protocol number: HSS/0293/014M). Indeed participants were informed of the objective(s) of the study through a letter of informed consent which stated that participation is voluntary and that individuals are allowed to withdraw from the study at any time. The maintenance of confidentiality and anonymity throughout the study was emphasised. Finally the ethical procedure concerning the storage of data at the end of the research study was adhered to by making sure that all questionnaires would be protected in a locked cupboard of the University of KwaZulu-Natal's School of Applied Human Sciences department for a period of five years.

1.5. Overview of the chapters

Chapter 1: Introduction

Chapter one presents the background and rationale of the research by formulating the problem-statement for the study. It furthermore presents the objectives and aims that address the research problems.

Chapter 2: Literature Review

In this chapter, the conceptual definitions and literature review on stress, (its etymology, students' stressors, stress models, stress and coping), psychological capital, and happiness are presented. Furthermore, the theoretical framework of the study namely the Broaden-and-Build theory of Positive Emotions (Fredrickson, 1998) is presented.

Chapter 3: Research Methodology

Chapter three includes the research methodology, research design, sampling method, research instrument and the ethical considerations used in the study. It besides offers an account of the investigation technique and the statistical methods of data analysis employed.

Chapter 4: Results

Chapter four presents the results of the statistical analyses in relation to the key research objectives. The factor structure and psychometric properties of the measures i.e. Psychological Capital, Happiness and the Adolescent Coping Scale are presented, and the descriptive statistics of these measures. Frequencies were calculated, the central tendency was explored and inferential statistic results are presented. The results of the Pearson correlation as well as Independent samples T-test and multiple regression analysis are presented.

Chapter 5: Discussion of results

The results of the study are discussed in relation to the literature and theoretical framework in chapter five.

Chapter 6: Conclusions, Limitations and Recommendations

The final chapter includes the conclusions based on the study findings. The study limitations are outlined and recommendations for future research in the focused area are suggested.

1.6. Summary

In this chapter the research topic is introduced and some background information is presented as background to the rationale for the study. The main aim for the study is presented as well as the objectives. The next chapter (2) will provide the literature review on stress, coping, psychological capital, and happiness and the theoretical framework of the research study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides an overview of the general academic literature on stress in general; its etymology, definition and models including coping styles. Furthermore, the positive psychological constructs viewed as protective factors namely psychological capital and happiness is presented followed by the Broaden and Built theory located in the positive psychological paradigm is lastly discussed.

2.2 Stress

In the 17th Century, stress a Latin derivation *strictus* “drawn tight” denotes distress, oppression, hardship and adversity (Spielberger, 1979). Subsequently in the 18th and 19th Century, there was a change in the meaning of stress implying a force, pressure or strong influence acting upon a physical object or person (Spielberger, 1979). Inherently the understanding of strain, exertion or trying to uphold its balance by fighting the altering pressure of this strain is suggested (Spielberger, 1979).

According to Fontana (1989) the word stress seemed rooted in ancient French *estresse/ destresse*, meaning to be positioned beneath constriction or repression. However its English evolution was formerly ‘distress’ but overtime the ‘di’ was gone through overlapping, and hence ‘stress’ and ‘distress’ carries different meanings as the first can be viewed as ambivalent and the latter, an understanding that always indicates something unpleasant.

Therefore, stress has to do with constriction or oppression of some kind and ‘distress’ the state of being under this constriction or oppression. Fontana (1989) argues that Modern English seemed to need a word that lies partway between “pressure” and “emphasis” and with the course of time “stress” has become that word.

The explanation of a stressful situation by people as unsafe or frightening involves feelings of pressure, anxiety and fear. They tend to experience a variety of biological and behavioural modifications coming from the stimulation or awakening of the autonomic nervous system (REF).

Unarguably as a first step towards coping, one needs to be knowledgeable and conscious of these changes. There is therefore a need for a proper definition.

A definition of stress

There have been varied and differing opinions regarding the exact definition of stress. Teasdale and Mckeown (1994) argue that although it is hard to define, stress can be likened to love or electricity – because it is evident in experience. The dilemma of theorists in defining stress was aptly captured by some authors (Selye, 1956; Cooper & Williams, 1991; Cox, 1987, Hart & Cooper, 2001). There seems to exist no single agreed upon definition of stress in the available literature, however many theorists have provided their own definition (Viljoen & Rothmann, 2009).

Stress is a consequence of a development where an individual is affected by the tasks, difficulties and demands of life pressure, work expectations, academic goals, home challenges etc. (Williams and Cooper 2002). The father of stress research Hans Selye, an endocrinologist argues that “stress is an adaptive syndrome or non-specific response to demands placed upon the extensive literature review (Selye 1956 as cited in Grey, 1998. This position of Selye has been criticized by Helman (2001) though but not the major preoccupation of this study; it has opened the room widely for more investigation into stress theories. For Cox (1987, p.1155), it is “multifarious psychological state arising from the individual’s cognitive appraisal of the acclimatisation to the demands of the situations.” Furthermore, Cox (1987) found that the appraisal of the stressful account included the demands placed on the individual, individual characteristics, constraints placed on the individual and support given to the individual.

A more recent definition of stress is provided by Anderson (2002) whose interpretation focused on an individual’s response on the perceived inconsistency between the demands of the existing situation and the resources available to respond effectively.

Despite the fact that definitions of stress differ, a famous definition by Richard S. Lazarus (1966) is worth noting. Stress happens as soon as an individual sees that the demands of an external situation are above his or her perceived ability to cope with them. This understanding is indeed succinct and appropriate. This definition of Lazarus occupies a central place in this study, that is, the ability to cope, and of course effectively and productively with stress.

However, stress is an existential reality among humans of all climates and times, and can yield positive results e.g. improved resourcefulness (Le Fevre, et al., 2003; Selye, 1974). This kind of “good” stress is otherwise known as eustress (Selye, 1976) as opposed to negative stress. It inspires achievement, exhilaration and encouragement, while distress or negative stress is bad because of irritation, decreased spirit often expressed as feelings of uncertainty and inadequacy which ultimately impact on the quality of life and health of (Grobler, Warnich, Carrell, Elbert & Hatfield, 2011).

Because Lazarus and Folkman (1984) had contended that the inability to cope in difficult events lead to stress, they recognised the existence and importance of cognitive processes that may influence the emotional impact of the stressful events. Thus, the mere interpretation and belief of being able to cope with the event may change the outcome of the potentially stressful event (Lazarus & Folkman, 1984). They therefore suggest the potential role of other developable resources for coping. This study would highlight PsyCap and positive emotions like happiness in this regard as presented in later sections.

From the above distinct definitions it can be seen that defining stress has indeed been a challenge over the years. However, all the above definitions make reference to demands placed on an individual, the perception of the demands and the ability of an individual to deal with those demands (Cooper, 1998).

As already noted, stress touches everyone in one way or another. Hence, students’ stress can be considered central to their lives as students because of the demanding nature of the academic programmes, especially for first year students who are making a transition from school to university. According to the Student's Dictionary of Psychology (Stratton & Hayes, 1999) most important life changing events (in this case university transition) are common sources of stress that may predispose people to depression. This vulnerability and the possible negative consequences call for a study into constructive ways of coping with foreseen and other university stressors. In the next section an overview will be given to the models of stress.

2.3. Models of stress

Historically, stress has been defined in terms of either stimulus or response. While the former refers to an occurrence in the environment, where the situation is considered to be stressful (Selye,

1956, cited in Lazarus and Folkman, 1984a), the latter refers to a state of stress, where the system is 'stressed' (Wolff, 1953, cited in Lazarus). This is why Lazarus and Folkman (1984) take these concepts to engage further on the relationship between the individual and the environment that develops over time. This particular relationship between an individual and the environment could be viewed as demanding or beyond the person's available resources and therefore would endanger his or her well-being. This can be in the form of environmental, medical, and psychological consequences.

2.3.1. Environmental model of stress

An unstable environment poses a threat to stress. This model originates as an 'elastic limit' to an individual where a certain degree of strain is tolerated allowing the individual to return to homeostasis. In this perspective, Zegans (1984) theorized stress as an environmental stimulus, Selye (1956) as the organism's response to external stimuli. However, Lazarus and Folkman (1984) saw this as the interaction between the environment and a response. At this point, one begins to understand the confusion around the notion of stress among authors and the implied disciplinary differences in the understandings.

The response-based definition posits that stress is the biological and psychological response of the individual to environmental demands. This definition has been used widely in the understanding of the health-related consequences of stress, that is, to underscore the bodily reaction to daily events and to how one perceives these events. An example is where a student might perceive an assignment as an opportunity to excel while another perceives the same as an overwhelming task.

2.3.2. Medical model of stress

This is an understanding of stress as a result of a universal physiological response of the body to some demand place upon it (Selye, 1956; Cox and Griffiths 1995). These scholars accentuated the 'General Adaptation Syndrome,' which comprise of three steps specifically the alarm, resistance and adaptation or exhaustion steps. The argument of these scholars was that physiological responses activate stored energy to protect individuals in the short term, which however can be harmful if it is persistent.

The physiological response i.e. increased heart rate, respiratory rate and galvanic skin response are all part of the different physiological reactions to stress. This is plausible as different kinds of stress impacts the body differently. For instance the use of catecholamine release like adrenalin and sympathetic nervous system activation in active coping which leads to inactive removal effect of corticosteroids (stress inducing hormones). It should be noted that stress hormones in response to stressors are divided into two types: catecholamine (e.g. adrenaline and /noradrenaline) and glucocorticoid-steroid (e.g. corticosterone). These hormones have been noted as playing a role in the body stress response and that a continuing release of these hormones can be harmful (Romero, 2007). This is a critical issue as events that stimulate nervousness have been associated to rise in adrenaline secretion, and events that stimulate aggression linked to noradrenaline discharge (Isaac, 2008).

2.3.3. Psychological model of stress

The psychological model refers to the close link between the mind and the body as stress can impact the body without the conscious mind knowing (James & Lange, 1885). This dimension is vividly highlighted in Tyrer's (1980) view on the reaction of the mind and body to change. He sees not the cause (stressor) but an individual's reaction (of the mind and body) to the purported cause. The issue is then the adaptation to unavoidable life changes which may be perceived as pleasant, unpleasant, exciting, taxing and boring. The lack of capacity to adapt appropriately is likely to result in distress while it may not even be noticed if the individual adapts easily to the event. In the same vein, if the inability to cope persists, then there is bound to be breakdown in mental and physical health.

One needs to know what goes on in our minds and bodies when we are under stress and to decide when the stress is helpful and when it is harmful. The focus of stress is often the mind rather than the body. There are many ways in which stress can show itself. It is difficult to adjust to severe changes if they tend to catch one unprepared and this necessitates a look into students' stressors. In this study the psychological model is combined with the medical model of stress.

2.4. Students' stress and stressors

Stressors are circumstances that are perceived as threatening and demanding to an individual's well-being in which case he/she lacks the resources to cope with demands. Hence, they are events that cause stress and can be transient or long lasting (Edworthy, 2000).

Students, especially the first year students, have to deal with many changes. The changing nature of the university environment in itself have been argued by Hamaidehh (2011) to possibly cause great intensities of stress among students, which in turn might impact negatively on their health and academic performance. Another study by Healy (2010) reported an increase in the number of university students that experience substantial mental health issues, partly related to stress. It is highly possible that students who experience high levels of stress are likely to experience more ill health as a clear link between stress and illness has been reported (Houghton et al., 2012).

Previous research on students' stressors have been listed to include too little time to complete the many assignments, peer pressure, confrontations with lecturers, failures, family problems, (Fairbrother & Warn, 2003). Other issues include, financial difficulties, sleeplessness, students' awareness of the broad understanding needed in modules and class presentations and limited time to study for exams, especially when writing two exams on one day (Laura Rioli1, 2012; Purna Prabhakar Nandamuri, 2007). In addition other students' stressors refer to academic registration, starting a new semester, missing a class, worrying to get distinctions, and a difficult module (Purna Prabhakar Nandamuri, 2007).

Apart from the academic stress, the institution itself may also pose a challenge to students and contribute to them experiencing stress. Awino and Agolla (2008) observed that an institution with overcrowded lecture halls, inadequate hostel accommodations, a disorganised year planner and inadequate resources to accomplish academic work, contributes to stress among students. The same could be said of both human resources (qualified and enough lecturers) and other learning facilities like computers, projectors, microphones, to mention but a few. If these students' stressors are known by university and students themselves, then the question is why some universities pay little attention to the infrastructural requirements that will enable learning and wellbeing of students.

Interpersonal relationships with peers have been reported to contribute to student stress e.g. peer pressure, and competitions with other students (Fairbrother & Warn, 2003). There is also the other side of social relationships namely the various expectations, intimacy and close relationships that may be perceived as challenging. Some of the first year students find it difficult to make new friends on campus, while others try so hard to maintain their existing relationships (Anderson, Isensee, Martin, Godfrey & O'Brien, 2012). As so much is demanded from the first year students to adapt to their new environments, it is likely that they may not have the time or opportunities to cultivate close interpersonal relationships (Prabhkar 2007). Other events that may also be perceived to be new and stressful include: going on first date, boyfriend/girlfriend quarrels and, getting into a physical fight (Frydenberg, 1996). In addition, financial difficulties with tuition, departmental fees, buying hand-outs, etc. can be a stressful challenge to successful academic career/performance. This may impair learning ability. A student who usually fall sick, and is not given a close medical attention stands a great risk of being stressed out in school also; death of a close family, difficulties with parents, pregnancy etc. are not left out in the list. Therefore, these students' stressors can be characterized in terms academic, peer pressure/relationship, family related stress, other life events and contextual stressors. When students perceive these academic, social and contextual demands as exceeding their ability to cope, it is likely that these will result in physical and psychological impairment.

2.5. Stress and coping

Whatsoever the cause, stress requires coping. It is a process that involves stress management through cognitive and behavioural efforts (Lazarus, 1993). Lazarus (1976) and Dewe (1993) considered coping as a way of solving problems. It refers to dealing with demanding situations which are experienced as stressful. Coping at best is seen as the concrete effort that is made in the face of a perceived stressor in order to make it bearable while lessening the distress stemming from the stressor Lazarus and Folkman (1984) argued that persons who cope very well with stressful events are low in psychological distress. Through coping, the individuals attempt to master those situations that cause a stress response. Lazarus (1966, 1976) believed coping can involve two processes, namely direct action and palliation or better known as (emotion-focused coping).

2.5.1. Lazarus and Folkman's: transactional model of coping through appraisal

The transactional model examines the interaction between an individual and the environment, and the imbalance between demands placed on individuals and their capacities to cope. This model evaluates stress as an appraisal of the stressor and appraisal of the individual's resources to cope. Coping is therefore a continuous cognitive and behavioural effort to deal with demands that are appraised as exceeding an individual's capacities. The concept of appraisal is part of the transactional theory because individuals are perceived as engaging actively rather than passively with their environments. Appraisal gives meaning to stressful situations in that individuals who express confidence in overcoming these stressful situations will in turn affect their methods of coping (Lazarus & Folkman, 1984). Eden (1990) sees appraisal as an individual's interpretation of events.

There are two types of appraisals namely primary and secondary (Lazarus et al, 1984, Ogden, 1996, Edworthy, 2000). Primary appraisal includes a perception of an event and being focused and inspired by the situation in order to make meaning out of it, that is evaluating the significance of a stressor. Here, the question that is asked refers to whether it is stressful or not. It is through this process that the stressor is appraised only to conclude that it is irrelevant, beneficial or challenging. Secondary appraisal is a perception of the event as harmful in which case an individual begins to ask "can I cope with this?" The judgement of available resources to cope relates to individuals' self-efficacy, past experiences, motivation and social support (Moller, 1990).

2.5.2. Types of coping

Psychologists have differentiated two types of coping namely direct and defensive coping (Charles, 2002). Direct coping is a deliberate effort to adjust to stressful situations. When an individual is threatened, frustrated or in conflict three options are directly used to cope namely confrontation, compromise and withdrawal. These three options are about accepting a stressful situation and making effort to find a way out of a difficult situation (confrontation); thinking for an alternative pathway when initial plan is not possible (compromise); and staying away from stressful situations (withdrawal). It has been reported that withdrawal as a form of coping is mixed and could be dangerous (Charles, 2002). This is because an individual might be inclined to avoid all similar situations.

Defensive coping, on the other hand, is another way of minimizing stressful situations by adopting defence mechanisms namely denial, repression, projection, identification, regression, intellectualisation, reaction formation, displacement and sublimation (Charles, 2002). Denial is a refusal to accept a stressful situation. Repression is rejecting painful feelings from consciousness. Imputing one's repressed thoughts on others is projection. Identification is the opposite of projection because it looks at other successful individuals to take up their traits to cope adequately. Behaving like a helpless and dependent child in order to elicit sympathy is regression. Intellectualisation is distancing oneself from disturbing emotions by using logical thinking in considering the situation as if it is the problem of others. In reaction formation, an individual shows intensely an opposite feelings of his/her repressed thoughts. Through displacement, individuals change their original repressed emotions and substitute them. Shifting one's repressed thoughts and channelling them into more socially acceptable practices is sublimation.

These two styles, direct and defensive coping, could be closely examined side by side with productive and non-productive coping styles (Frydenbery, 1993). In fact some of the elements of the direct coping are observable in productive coping. This includes practical efforts to find solutions to problems by working hard and finding alternatives. In addition, direct coping much like productive coping, is problem-oriented and focused. The items of a non-productive coping style (Frydenbery, 1993) also reflect in defence mechanisms, for example, "keeping my feelings to myself (repression)," "ignore the problem (denial)," and make myself feel better by taking alcohol or cigarettes (sublimation)." Also, the distinction between problem-focused coping and emotion-focused coping by Lazarus (1984), Carver (1989), Moller, (1990) and Gage (1992) found its way into Frydenberg's (2004) categorisations. Productive coping is problem-focused while reference to others and non-productive coping are emotion-focused. Nonetheless, past studies on adolescents' coping especially with stress reported that reference to others and non-productive strategies are likely to be linked to psychological problems, while productive coping is closely associated with well-being (Frydenberg & Lewis, 1999; Lewis & Frydenberg, 2002).

Previous studies have reported other ways that students try to cope with stress in the form of active time management, social support, positive reassessment, and relaxation/recreation (Murphy & Archer, 1996). Furthermore, other ways of coping reported are expressing one's feelings, praying about the situation, working hard to solve the problem, wishful thinking, hoping for the best,

ignoring the problem and meeting professionals for assistance (Plunkett 2000). Other coping strategies frequently used are seeking help from others, worrying, alcohol and drugs, physical exercises, watching TV and listening to music, and spending time with friends (Frydenberg, 2004). In a breakdown, young men and women differ in employing coping strategies (Plunkett, 2000). Male coping strategies seem to tend towards distraction and alcohol use which may in turn be associated with higher rates of aggression, alcoholism and substance abuse. Hormonal factors may also contribute to higher rates of reported depression in women (Frydenberg, 2004) who usually seek peer and social support at times of stress (Isaac, 2008).

The idea that underlies the development of the Adolescent Coping Scale (ACS) and its employment in the research study is that Frydenberg (2004) articulated the various types of coping of previous researchers which embedded the patterns. Students are active agents of histories and are faced with the choice of overcoming obstacles from collections of past developed coping mechanisms (Frydenberg, 2004). Since coping is influenced by the interaction between demands and capacities to cope, then it is appropriate that the study used ACS that determines unique ways of coping. Consistent with the underpinning of ACS, it was developed within an educational context and summarised students' concerns as academic achievement, relationship and social issues.

Underlying the unique ways of coping, are the psychological resources that play a role in the stress appraisal process. It was argued by Folkman and Lazarus (1988) that the coping individuals engage in are linked to available emotional and social resources while coping may in turn increase positive emotions. Lazarus (1984) was also of the view that in the interaction between individuals and their external environment some cognitive processes, appraisals and coping might appear as hidden, but which all influence the outcome of stressful situations. There has been calls for further research into the role of other factors that may impact stress management processes (Costa & McCrae, 1990, Podsakoff, 2007).

In this study it is argued that psychological resources such as psychological capital and happiness, positive emotions, are likely to support coping among students. The emphasis on positive psychological resources embedded in psychological capital of self-efficacy, resilience, hope and optimism services to support constructive coping. In a study by Susan (2008), psychological capital was argued as one of the hidden factors needed for individuals to cope with stressful

situations. In her studies, Lazarus (2003) acknowledged the constructs of psychological capital as important possibilities which can be considered for better understanding of how individuals adapt and cope.

The literature on positive psychology argues that individuals who are incapable to control the psychological influence of stressors are likely to feel physical and psychological health signs (Youssef & Luthans, 2007). It was further argued that some individuals have the ability to bounce back and experience slight or no change in their capacity to overcome obstacles. It means therefore that the individual are capable to engage in the adaptation that is required in times of difficulty. This has been referred to as the demonstration of psychological resiliency (Tugade & Fredrickson, 2004). In the research by Roddenberry and Renk (2010) it was found that individuals capable of creative problem solving reported higher positive psychological adjustment than those who do not believe they can do something about their stress. Although Lazarus argued earlier that stress and loss inevitably influence individuals' development of strengths, she reported in later years on the potential of PsyCap as a psychological strength and a resource in coping with stress (Lazarus, 2003).

2.6. Psychological capital: providing support for coping

Psychological capital a relatively new conceptualisation of psychological resources is open to further development and has demonstrated to play a significant role in improving well-being of employees and job satisfaction (Luthans, 2007). In addition, it was found to impact on individual satisfaction and performance according (Avery et al., 2010). Thus, it seems possible that it may also increase performance and capacities of university students to cope with stress. This likelihood was also expressed by Folkman (2003) as this builds on the argument of the hidden factors that may impact the appraisal as well as views about coping in stressful situations. In fact, Psychological capital has been shown to increase academic achievement in a sample of management students (Luthans, Avolio, Avey, & Norman, 2007). It therefore implies that it is likely to support coping among students as well. The components of psychological capital are self-efficacy, optimism, hope, and resilience.

Psychological Capital according to Luthans (2007) refers to an individual's positive psychological state of development and is regarded as confidence and ability to adopt and to have the required

determination to succeed in challenging situations (self-efficacy); (2) making positive attribution about being successful at the moment and in the future (optimism); (3) being determined to achieve set goals and, being able to adapt and consider alternatives in order to succeed (hope); and (4) in the face of hardships and difficulties, to bounce back in order to succeed (resilience). These four factors have been shown to have an interactive effect when put together and as mentioned are viewed as open to further development (Luthans et al., 2007). These four constructs of psychological capital has been useful and also shown a positive and significant contribution to students regarding academic performance (Luthans et al, 2006, 2007). Therefore each of the constructs is likely to impact on students' ability to cope with stress. The factors are described separately in more detail below.

2.6.1. Self-Efficacy

Self-efficacy founded on Albert Bandura's (1997) Social Cognitive Theory is about the individual's confidence to activate and stimulate his or her cognitive resources, and motivation needed to perform optimally in performing a particular behaviour in a certain situation (Stjkovic & Luthans, 1998). Self-efficacy affects the way an event is appraised by an individual, either as beneficial or harmful. It means that an individual with lower efficacy level is likely to despair easily when faced with challenges while individuals with higher levels of efficacy are more likely to overcome difficulties (Bandura, 2007). The efficacy beliefs results from task mastery where set goals are successfully achieved. This sense of efficacy is also generated through processes of modelling where an individual observes and thus learns from other successful people and develops a confident instinct of being successful in the required tasks. It is also derived from social persuasion with authority persons to encourage or motivate the individual that he or she has the capability to achieve a set task. Finally self-efficacy is achieved when individuals experience emotional confidence and experience significant positive impacts on outcomes (Bandura, 2000).

The argument therefrom is that appraisal of stress is dependent on individual beliefs in coping. It follows then that people who are higher in self-efficacy have the belief that they are capable to achieve their goals and therefore make every effort towards attaining their goals as also found in the meta-analysis conducted by Van der Klink and Blonke (2001). Stjkovic & Luthans' (1998) research study found support for the positive association between self-efficacy and academic related performance.

2.6.2. Hope

Hope has been widely explored as one of the constructs of positive psychology with a strong theoretical foundation and supportive evidence (Luthans, Youssef, & Avolio, 2007; Luthans, 2002; Snyder et al, 1996; Snyder 1994; Snyder et al., 1991). Hope according Snyder (2000, p.287) is a “positive inspiration which is achieved through the integration of agency and pathways”. It is therefore the outcome of the interaction between inspirations towards specific goals and concrete planning to meet these goals. The pathway (or way-power) element of hope plays an important function as it enhances self-motivation, self-regulation, and goal directed actions. Willpower, also known as agency, helps motivate an individual to persevere towards goals even in the face of difficulties and obstacles. This agentic and pathway approach are critical in overcoming obstacles, stressors towards goal achievement (Bandura, 2007; Snyder, 2002). In a study by Podsakoff (2007) it was found that people with a high learning orientation are more likely to have a positive view about stressors.

It is therefore argued that students who are hopeful are likely to consider different pathways to achieve goals and are therefore more likely to adopt productive coping styles to address stressors. It therefore requires a back-up plan to emerge successful and capable to consider multiple alternatives to overcome obstacles in one's path to success. This alternative pathway thinking is likely to enhance feelings of empowerment that will enable them to continue striving to succeed. Researchers have reported the dramatic contribution of hope as a positive motivational state among children, adolescents, and college students (Curry, Snyder, Cook et al., 1997; Curry & Snyder, 2000; Gilman, Dooley, & Florell, 2006; Peterson, Gerhardt, & Rode, 2006; Snyder et al., 1991; Snyder, Shorey, Cheavens et al., 2002; McDermott & Hastings, 2000).

2.6.3. Optimism

Optimism is expressed when individuals describe positive events to personal, enduring and persistent causes and explains negative events to external, temporary and situation-specific conditions (Seligman, 1998). In PsyCap optimism is flexible and realistic (Schneider, 2001) because it refers to individual capacities directed towards a given task and individuals' ability to achieve a set goal in particular situation. In essence, in PsyCap optimism is directed at the logical

conclusions and attributions as to explanations as to why events occur or not (Luthans et al., 2008). Thus, PsyCap optimism shows that a positive outlook in combination with realistic assessments as to the causes of events results in psychological strengths (Luthans, et al., 2007). It is argued that functional, flexible and realistic optimism helps individuals to cope constructively with challenges. This means that it is concerned with how individuals explain successes and defeats. Optimistic persons attribute their success to their skills, traits, or characteristics while pessimists attribute their successes to chance or the situation (Seligman, 2006). Optimism can be developed using the three steps suggested by Schineder's (2001) namely leniency for the past, appreciation for the present and opportunity-seeing for the future. Tolerating the past, cherishing the present moment and having a positive outlook for the future. Optimism plays a critical role in achievement and success (Luthans, 2007; Avoli, et al., 2006; & Seligman, 1998).

Like the other components of psychological capital, optimism can be grown and cultivated.

2.6.4. Resilience

Resiliency is defined by Luthans (2002, p. 702.) as “the ability to rebound or bounce back from hard times, conflict, and failure or even positive occasions, advancement, and enhanced responsibility”. Trunk (2007) suggested that individuals should understand that struggles are an integral part of life and therefore should develop the capacity to adjust, bounce back and make changes. Resilience, unlike the other three psychological capital components, is exceptionally sensitive in nature instead of proactive and can be developed through also through positive emotions (Tugade & Fredrickson, 2004). Resilience is rooted in a sincere evaluation of setbacks and the application of feasible coping approaches for those setbacks. Previous studies showed that individuals who are resilient are better suited to cope with stressors as they are flexible to changing demands and are emotionally hardier when confronted with difficulties than others (Tugade & Fredrickson, 2004). Jensen (2008) also noted that resilience assists individuals in stressful experiences and initial setbacks. Positive associations have been reported between resilience and performance (Luthans, Avolio, et al., 2005; 2007) and resilience and happiness (Youssef & Luthans, 2007).

Applied to the university context, resilience would empower a student to structure an experience in a manner that will enable a positive response and rebounding even to greater heights of well-

being than the initial homeostasis stage. In doing this, for example, students would use strategies to approach tasks and obstacles as contributions to their improvement, achievement and well-being. Resilience in this study occupies a central role as it seeks to understand how this psychological strength can be facilitated and developed in students because it is likely to underpin the students' ability to rise up to challenges as suggested by Luthans et al., (2008).

It can therefore be concluded that PsyCap will impact students through different ways in coping with difficulties. Hopeful students who have the agency and pathways to succeed in their study tasks will be more inspired to bounce back from adversity because of their resilience which in turn will be strengthened. Students who express high self-efficacy will have the confidence and would feel capable of overcoming the difficulties by adopting constructive strategies. A resilient student will be skilled in utilizing mechanisms necessary for realistic and flexible optimism. PsyCap self-efficacy, hope and resiliency can in turn contribute to an optimistic explanatory style through internalised perceptions of being in control.

Psychap therefore is of great importance in this study as stated early by Lazarus and Folkman (1984) that stressful experience implies an inability to cope adequately. The mere interpretation and belief of being able to cope with demanding events may change the outcome of the potentially stressful event (Lazarus & Folkman, 1984). This opens the avenue for tapping into the resources of Psychap as a psychological strength and resource to be used in coping with difficulties or stressors.

The four constructs of PsyCap may prove to be advantageous to students as Luthans et al. (2007) believed that individuals who possess all four states will prove to be better in their endeavours and be more satisfied with life. If students are able to have confidence in themselves, they will believe that they are able to cope and may be able to adapt and employ useful strategies to manage the stressful periods at university. If students are optimistic and able to persevere towards their goals and defeat obstacles blocking their goals they may experience less negative attitudes toward stressful events. PsyCap has been found to boost students' immunity to stressors and debilitating threats (Riollo et al., 2012) and so does happiness, as a positive emotion (Fredrickson, 2004).

2.7. Happiness as a positive emotion

The concept of happiness has been topical among philosophers and psychologists as it centres on a "good life" and its possible attainment (Guignon, 1999; Russell, 1945, 1930). The preoccupation

of ancient Greek philosophers and Buddhists engaging on the implications of happiness is also reported by Mc Mahon (2006). Thus, the term happiness connotes different meanings to different individuals engaging in the study. Psychologists in the recent times refined their understandings and practically examined the actions, behavioural correlates, and factors that contribute to happiness (Leslie et al., 2010).

A prominent figure in positive psychology and the author of authentic happiness, Martin Seligman (2002, p.61) describes happiness as “consisting of pleasure, engagement, and meaning. Pleasure refers to the “feel good” aspect; engagement talks about living a “good life” aspect, and meaning deals on individuals’ strengths to contribute to a greater objective”. While appraising the essential contributions of the three aspects, Seligman favours engagement and meaning as key elements to a happy life. This is though arguable.

An investigation of happiness involves considerations and interest in the individuals’ pleasant moods and emotions (Diener & Biswas-Diener, 2008). Further research into what makes individuals happy was influenced by Ryan and Deci’s (2008) definition of happiness. It was categorized into two aspects namely hedonic and eudemonic. “Happiness is a complex construct that concerns optimal experience and functioning derived from two general perspectives namely the hedonic approach and the eudaimonic approach” (Ryan & Deci, 2001, p.142). The hedonic and eudaimonic approaches to happiness have attracted some attention (Keyes, Shmotkin, & Ryff, 2002). This will be examined below.

2.7.1. Hedonic approach

Hedonic approach derives on the perception that increased pleasure and decreased pain leads to happiness. It considers well-being as a satisfactory life fulfilled with positive emotions and an absence of negative emotions (Diener, 1994; Oishi, Diener, Lucas, & Suh, 1999). It likewise incorporates the pursuit of pleasure and pain reduction as happiness factors. Hence, pleasure is the underlining factor behind individuals’ behaviours. According to Haybron (2008, p. 63) an “individual is happy by virtue of having a satisfactory favourable balance of pleasure versus un-pleasure; and unhappy by virtue of having a satisfactory unfavourable balance of pleasure versus un-pleasure”.

Some of the hedonists have been severely criticised as their view proposes a subjective satisfaction of an individual's momentary needs and pleasure. (Ryan & Deci, 2001). This is because the hedonic approach contributes only to short-term instead of long-term happiness (Veehoven 2003). Waterman, Schwartz and Conti (2008), drawing on Ryan and Deci's report, added further that hedonic psychology only focuses on the pursuit of human desires/pleasure as the end goal, and therefore individuals look after the greatest pleasure to mean happiness. (2008). This is aptly summarised by words of Peterson, Park and Seligman (2005, p.26) as "don't worry be happy."

However, this study toes the line of those who actually uphold that pleasurable and positive emotions have long term and positive effects. Fredrickson's theory (2004) comes to mind as it suggests a long lasting and enduring effect. In this light of this support then, hedonism enhances an individual's aptitude to cope with life problems by increasing an individual's capacity to make use of constructive coping style in the face of difficulties. In fact, pleasure for the moderate hedonists is congruent with lasting levels of positive emotions as well as other aspects of well-being (Schueller & Seligman, 2010). It means that pleasure can be enhanced gradually and contributes to individuals well-being (Seligman, 2005). Therefore the experience of happiness in the hedonic sense can have the ability of aiding a student to cope with the challenges of university life and even in a long term.

2.7.1. Eudaimonic approach

Eudaimonia owes its origin to Aristotle's concept of virtue. In its Greek form, it is known as *arête*, meaning excellence, doing one's best and exercising a great skill for the common good. Eudaimonic psychology sees happiness as doing what is worth doing (Ryan & Deci, 2001). Achieving happiness then is seen as a process since virtue requires cultivation. This understanding goes beyond the pleasure attainment definition of hedonistic view to incorporate "the striving for perfection that represents the realisation of one's true potentials (Ryff 1995, p. 100). Seligman et al. (2005) support this argument that Happiness is found through identification, cultivation and living a life that is in accordance with those virtues.

The proponents of eudaimonic view also argue that it is a long-term experience which comprises of something much deeper and most certainly more long lasting. The central premise of the eudaimonic philosophy is a call to develop this virtue by an individual by constantly using his or her skills and talents and especially for the good of the community (Peterson, Ruch, Beermann, Park & Seligman, 2007). Through participation in the community and accomplishment of these virtues an individual experiences authentic happiness that entails realising one's potential by continuous action, and which subsequently leads to his or her well-being. Ryan and Deci (2001) support the notion that eudaimonia come about when an individual's action harmonizes well with the believed values.

However, the heated debate between hedonic and eudaimonic approaches have not been settled because of their separate and symbiotic association. Compton (1996) in his studies reported a distinct and significant overlapping relationship between the two conceptions. Happiness, therefore, involves an inclusion of the two views of well-being. Drawing on this, Peterson, Park and Seligman (2005) therefore insist on a unified understanding of happiness that incorporates hedonic approach with its emphasis on pleasure and prevention of pain, and eudaimonic approach that focuses on a profound level of perceived well-being. The two approaches should be seen as two sides of the same coin and as closely related, and as such necessary for an individual's experience of happiness. This integration is at best highlighted in Seligman's (2005) concepts of happiness divided into three constructs namely the pleasant, engagement and meaning dimensions. These dimensions, as noted by Schueller and Seligman (2010) are viewed as distinct orientations to happiness, and that behaviours that fall under each orientation contribute to individual's happiness.

Our interest here is a simple hypothesis from the above integration of the hedonistic and eudaimonic views which sees happiness as exploration of all three orientations (pleasure, engagement and meaning) as identified by Seligman (2002). These orientations have the ability of giving individuals an increased chance of happiness and feeling good about themselves and their lives. Thus, a happy student is a better student. Study conducted by Boehm and Lyubomirsky (2008) found that happy students are more successful in school; they follow their studies more positively and ultimately enhance the success of other students. Importantly, research (Veenhoven 1999) found that happiness can buffer the experience of stress.

2.8. Theoretical Framework

2.8.1. The Broaden-and-Build Theory- (Fredrickson, 1998).

The present study adopts a positive psychological stance of positive emotion by using the Broaden and Build theory as the theoretical framework. Positive psychology aims to uncover and understand what makes life good – put simply positive psychology wants to understand wellness and happiness. Positive psychology suggests that positive emotions contribute to optimum happiness (Fredrickson, 2001).

According to Fredrickson (2001) experiences of positive emotions broaden people's momentary thought-action repertoires. This consequently makes them to form long-term personal resources physically, intellectually, socially and psychologically. Positive emotions are therefore valuable and needs nurturing as a means to an end, and in fact a way to attaining psychological development and enhanced happiness (Fredrickson, 2001). Furthermore, Fredrickson (1998) stresses although joy, interest, love, hope, optimism, contentment, pride, etc. as positive emotions as yet distinctively different, altogether they share the function of facilitating and widening people's lasting personal strengths. It follows then that experience of these positive emotions assists individuals in self-transformation, making them more resourceful, well-informed, healthy, and resilient in coping.

In coping with stress, positive emotions support the building and restoration of individual resources that have been worn-out as a consequence of stress. They contribute in adaptive recovery by expelling the harsh conditions that are caused as a result of the negative perceptions that create negative emotions. As a result, they build up individual's capability to effectively adjust to and persevere in coping with stress.

As opposed to negative emotions, positive emotions benefit individuals because they broadened capacity needed for building enduring personal resources transfer indirect and long term benefit; while negative emotions is direct, immediate and short-lived (Fredrickson, 2003). Therefore positive emotions with its effects are long-lasting. They last longer than the momentary emotional situations that led to their attainment. As a result, then, the occurrence of situations leading to positive emotion successively increases individual's resources, which is tapped on future and at during different emotional states.

Happiness as a positive emotion has been reported on by Diener and Biswas-Diener (2008) as beneficial because happy people show concern in engaging in more actively in the society and perform successfully for the common good than unhappy individuals. This is also seen in an individual's social relationship, goal expectorations and achievement and in overcoming tough times.

Therefore, the study looks at happiness as a positive emotion linked with Psycap as important resources to support coping with stress. It is premised on the profound advantages of positive emotions as already mentioned above. This is all the more essential as positive emotion equips students with the psychological resources (self-efficacy, hope, optimism, and resiliency) needed in order to better cope with university life of a student. This invariably would lead to experiences of happiness in students. This is the aim of the study- understanding of PsyCap and happiness, a positive emotion and how it broadens and builds students' strength in the face of coping with stress. Studies have found that positive emotions help equip students with the strengths they need to better cope with academic stressors (Rioli et al., 2012).

Various other studies have focused on the Broaden and Built conceptualisation in to relation psychological capital and positive emotions in well-being (Avey, Wernsing, & Luthans, 2008). Studies by Culbertson et al., (2010) found a significant positive relationship between happiness and PsyCap. It should have been noted that Psychological capital can be developed and therefore suggest possible interventions among students to improve well-being through more productive coping styles adapted in times of stress. However, not enough research among students in South Africa in this regard has been conducted.

2.9. Chapter Summary

This chapter includes a review on the past and current literature on stress, coping, PsyCap, happiness alongside the theoretical framework chosen for the study. Stress was underlined as the individual's perception of the demands of an external situation, which lies above his or her perceived ability to cope with them. While these demands are labelled stressors, a pathway towards their resolutions and/or avoidance is coping. Psycap and happiness were presented as psychological resources and support for coping. The chapter has also provided an account of the results of previous research that was conducted using PsyCap. Again, it highlighted the integrative

role of the two approaches to happiness via hedonic and eudaimonic, and finally the broaden-and-built theory is presented with the emphasis on positive emotion. The next chapter provides a discussion on the methodology that was used in the collection of the required data.

CHAPTER THREE

METHODOLOGY

3.1. Introduction

This chapter outlines the research methodology followed in the study with attention to the research design, sampling, research instruments (PCQ, OHS, and ACS), and procedures in collecting data including ethical considerations. Furthermore, it presents a description of how the data, after having been collected, was analysed and interpreted.

3.2. Research Design

This was a quantitative study that used a cross-sectional survey method. A survey is a research method involving the use of questionnaires to gather information (data) about people's emotions

and behaviour regarding a certain phenomenon that a researcher wants to explore at a point in time (Myers & Hansen, 2006). Durrheim and Painters (2006) argue that the quantitative method assists a researcher to easily deduct interpretations around a larger group of individuals based on observations of a smaller group. Therefore a cross-sectional design was used in which a substantial sample of students was used to evaluate, at a certain period, the relationship between an outcome of interest and specific variables (Myers & Hansen, 2006). This method is appropriate and in line with the objectives of the present research study namely to investigate the relationships between psychological capital, happiness, and coping, and to further determine the predictive value of PsyCap and happiness as protective factors in using constructive coping styles for stressors students face. Thus, the quantitative research design is suited to explore relationships and allows the researcher to make inferences in regard to prediction.

3.3. Sampling and sampling method

The research was carried out at the University of KwaZulu-Natal, Howard College, Durban, South Africa among first year Psychology students using a non-probability convenience sampling method... Convenience sampling defines a method of collecting data from the available individuals at a particular time. This procedure of sampling, as stated by Sekaran (2003), is fast, appropriate and less costly. This study nonetheless was carried out based on availability and also a willingness to participate. Three hundred (300) questionnaires were distributed and 207 completed copies were returned, yielding a response rate of 69%.

3.4. Research Instruments.

Four measuring instruments were used in the study. The specific questionnaires used in the study include a biographical questionnaire, the PsyCap Questionnaire, the Orientation to Happiness Scale (OHS) and Adolescent Coping Scale (ACS).

3.4.1. Demographics

The demographic inventory developed by the researcher collected demographic information of the participants aimed at identifying age, gender, race, and the type of living arrangements of the first year students (see Appendix).

3.4.2. Psychological Capital Questionnaire (PCQ)

The study used the Psychological Capital Questionnaire (PCQ) established by Luthans, Youssef and Avolio (2007). This questionnaire has 24 items and is rated on a 6-point Likert scale; from strongly agree to strongly disagree. The 24 items on the PCQ measure the 4 underlying dimensions (each dimension has 6 items) of PsyCap components. They are resilience (e.g. I can get through difficult times at school), hope (e.g. If I find myself in a jam in school, I could think of ways to get out of it), self-efficacy (e.g. I feel confident doing my class work and assignments), and optimism (e.g. I know I will succeed in my studies). The Cronbach's alpha coefficient of the PCQ in earlier research was 0.90 and the four subscales were found to be 0.85 for self-efficacy, 0.80 for hope, 0.79 for resilience and 0.72 for optimism respectively (Luthans et al . 2007). In the South Africa context, the research by Du Plessis and Barkhuizen (2012) reported the reliability coefficients of the four subscales as 0.86 for self-efficacy, 0.86 for hope, 0.77 for resilience and 0.81 for optimism. Another study by Herbert (2011) reported again a satisfactory inter-item reliability coefficient for the four PC constructs: 0.81 (hope), 0.67 (optimism), 0.83 (self-efficacy), and 0.69 (resilience). This questionnaire (PCQ) is applicable within the South African context as studies reported adequate reliability coefficients (Appolis, 2010; Herbert, 2011).

3.4.3. Orientation to Happiness Scale

The Orientation to Happiness Scale (OHS) developed by Peterson et al., (2005) was used. This questionnaire has 18 items and is rated on a 5-point Likert scale; from very much like me to unlike me. The 18 items on the OHS measures happiness across three dimensions namely pleasure (e.g. Life is too short to postpone the pleasures it can provide), meaning (e.g. I have spent a lot of time thinking about what life means and how I fit into its big picture) and engagement (e.g. In choosing what I do, I always take into account whether it will benefit other people). The psychometric reliability of the OHS has been validated in previous studies (Proyer et al. 2008; Park et al. 2008; Peterson et al. 2007; Peterson et al. 2005). In the study of Peterson et al. (2005) the Cronbach's alpha co-efficient for Pleasure was 0.82, for Meaning 0.82 and for Engagement 0.72. Consequently, the OHS is a reliable instrument as shown in South African settings conducted by Ingelhart (2006) with pleasure ($\alpha = 0.84$), meaning ($\alpha = 0.88$) and engagement ($\alpha = 0.77$).

3.4.4. Adolescent Coping Scale

The third instrument used in the research study was the shortened version of the Adolescent Coping Scale (ACS) developed by Frydenberg and Lewis (1993). It measures the coping strategies used by young people when facing challenges and or stressors. This questionnaire has only 18 items rather than the 79 items of the original instrument. The 18 items on the ACS measure three patterns of coping i.e. Productive Coping, Reference to Others, and Non-Productive Coping. The 18 items of ACS are rated on a 5-point Likert scale; from use a great deal to use very little. The authors, Frydenberg and Lewis (2000) reported acceptable Cronbach's alpha coefficients ranging from 0.54 to 0.85 in a study with different young people, and also reported a median of 0.70. Frydenberg and Lewis (1996) ranged the scale reliability between 0.67 and 0.79. The ACS was found reliable in the study of Bernd Heubeck and James (1999), and also in previous research by Jonathan Plucker (1997) with construct validity for 12 of the 18 scales. The ACS was used in South African research studies (Hutchinson et al., 2007) with a reported Cronbach's Alpha co-efficient of 0.65.

3.5. Data Collection and Procedures

In this research, the researcher adhered to all the obligatory ethical processes. Firstly the academic office of the Discipline of Psychology was contacted for a permission letter to conduct the study among the psychology students by outlining the research objectives. The permission letter from the Dean and Head of the School of Applied Human Sciences is attached as an appendix. The Ethical clearance for the study was granted by the Humanities and Social Sciences Research Ethics Committee of the University of KwaZulu-Natal (HSS/0293/014M).

The researcher informed participants about the aim of the study through the class tutors and invited students to participate in the study. Matters of confidentiality and anonymity were outlined in the informed consent letter given to each participant. Participants were informed of the voluntary nature of the study, and that they are allowed at any time to decline further participation in the study without any negative consequences. The researcher then provided the participants with the questionnaires. A box was left for the participants to return the completed questionnaires. Thus, data collection followed a survey design technique which allowed the researcher to distribute the

questionnaires among a large number of participants at one specific time. Data was gathered during the month of May 2014.

3.6. Data Analysis

Data capturing and subsequent analyses of the research study were carried out using the statistical package for social science (SPSS software, version 21, 2014). First and foremost, frequencies and percentages as well as descriptive statistics were computed principally to obtain the sample's demographic characteristics and to explore the central tendency of the data.

Exploratory factor analysis (EFA) was performed on the measures used PsyCap, OHS, and ACS with the purpose to define the factor structure of the instruments plus calculating the number of factors that best fitted the collected data (Pallant, 2011). Factor analysis is a statistical method used mostly for data reduction purposes, which is achieved by observing clusters among the inter-correlations of a set of variables (Pallant 2011). The study used Principal Component Analysis (PCA). The PCA method, according to Tabachnick and Fidell, (2001), assists in reducing a large number of variables into a smaller number of components. Eigen values (>1), which denotes total variance explained by a factor, and scree plots were examined to determine the selection of factors. Again, Kaiser-Meyer-Olkin Measure (KMO) adequacy was tested and all values above 0.6 were considered acceptable (Pallant, 2011). The Bartlett's Test of Sphericity significant at 0.05 was also considered. To assist in the process of interpretation, the factors were rotated using the varimax approach in order to report the clearest factor for easiest interpretation. This was applied because varimax rotation reduces the complication of factors (Tabachnick & Fidell, 2001). This was followed by examining the factor loadings which show the relative contribution of each item to a factor. As a rule of thumb, only factor loadings with an absolute value greater than 0.4 were considered, anything below was excluded (Pallant, 2011). However, in the event of more than one loading, items with the maximum loading were given to the factor. In addition, the Cronbach's alphas of scales (PsyCap, OHS, and ACS) were computed to ensure that there was internal consistency (reliability) of the measuring instruments. Cronbach alpha coefficients of 0.70 and higher were considered reliable (Pallant, 2011). As suggested by Briggs and Cheek (1986), consideration was given to the mean inter-item correlation for scales with less than 10 items as the Cronbach's alpha coefficients are likely to be lower than normally accepted in these instances.

Descriptive statistics were performed on the total and subscales of PCQ, OHS, and ACS used to describe the distribution of the scores. This was followed by inferential statistics used to make inferences about the population. The descriptive statistics include the mean (statistical average), standard deviation (conclusions about scores in the distribution), minimum and maximum scores, skewness and the kurtosis. Tabachnick and Fidell (2001) stated that a normal distribution for skewness and kurtosis should be less than 1.

Pearson correlation coefficients or where applicable, Spearman's correlation coefficients, were also conducted to investigate the linear relationship between PCQ, OHS, and ACS. These tests (r or r_h) show the measure of strength and direction of the relationship between a set of variables and in this case between PCQ, happiness and coping. Thus, the relationship between PCQ, Happiness, and coping styles were calculated to determine whether they were practically and/or statistically significant relationships. A correlation coefficient of 0.3 was used as for moderate satisfactory significant relationship level, and 0.5 for a strong relationship (Cohen, 1988) for and a p value of ≤ 0.05 was set for the statistical significance level (Pallant, 2011).

Also the mean differences between demographic groups were examined in term of the full and subscale measures using the Independent Sample T-test analysis. This inferential statistic investigates if there is any significant difference in mean values between two groups i.e. gender age and race. Age was recoded into two groups as most students were 25 years and younger (Group 1 (17-20yrs = 1; Group 2 = 21-30yrs) = 2; Race was recoded as most students were African with African=1 and Other race groups = 0 See table 1 below for sample characteristics. As a rule of thumb following the Levene's test, the p -value of $\leq .05$ was used as the significant level (Pallant, 2011). Therefore the age and race information in the study were examined to determine if there were any significant difference for PC, OHS and ACS, and their subscales among these groups.

Subsequently, multiple regression models were fitted to determine the predictors of productive coping (DV). The predictors were PsyCap and Happiness (Independent Variables). In the same multiple regression analysis, the R squared valued was studied to determine the amount and percent of difference of the DV (productive coping) that is accounted for by the IVs (PsyCap and happiness). Thereafter, the standardized coefficients (beta) were examined to determine the best predictors. Lastly, significant levels ($p \leq .05$) for the beta coefficients were checked to determine statistically significance.

3.7. Chapter Summary

In this chapter the research methodology applied in conducting this study was outlined. The research design, sampling, research instruments, data collection procedure, ethical considerations and data analysis procedure were deliberated upon in this chapter. The research study followed a quantitative approach using a cross-sectional survey design. Reliable and validated research instruments were used namely: the Psychological Capital Questionnaire (PCQ), Orientation to Happiness Scale (OHS), and Adolescent Coping Scale (ACS). The chapter also provided an account of how the data was analysed using statistical procedures via: descriptive and inferential statistics, exploratory factor analysis especially using Principal Component Analysis (PCA), Pearson correlation coefficients, Independent samples T-test, and standard multiple regression analysis in relation to the aims and objectives of the study.

CHAPTER FOUR

RESULTS

4.1. Introduction

The results of the statistical analysis performed on the collected data are presented in this chapter. The frequencies and descriptive statistics are presented. The factor structure and psychometric properties of the measures are discussed. The presentations of the relationships between the variables with the use of Pearson correlation coefficients are outlined and the Independent Sample t-tests to determine differences in mean scores differences between groups on the measures are discussed. Finally the chapter concludes with the standard multiple regression analysis to identify the predictors of productive and non-productive coping.

4.2. Socio-demographic characteristics of the sample

Both male and female first year psychology students participated in the study and the percentage of the participants are as follows: 47 males (22.8%) and 159 females (77.2%). The greater percentage of the students were between 17-20 years old (59.4%). 37.2% of the participants were between the ages of 21-25; 2.4% of the participants were in the 26-30 year age group category, while 1.0% of the students were above 30 years old. The racial demographic sample showed a majority of African (68.6%) and Indian (21.3%) students, followed by Coloureds (5.3%), Whites (3.9%) and other (1.0%). Of the sample 49.8% of the students are living off campus with family, 32.9% of the students are living off campus alone while 11.1% are living on campus and merely 6.3% of the students stay off campus with other students. The characteristics of the participants are illustrated in Table 1.

Table 1

Characteristics of participants

Characteristics	Frequency	N	%
Gender			
Male	48	207	23.2
Female	159	207	76.8
Age			
17-20 years	123	207	59.4
21-25 years	77	207	37.2
26-30 years	5	207	2.4
Above 30	2	207	1.0
Race			
Africa	142	207	68.5

Coloured	11	207	5.3
Indian	44	207	21.3
White	8	207	3.9
Other	2	207	1.0

Type of Residence

On campus	23	207	11.1
Off campus alone	68	207	32.8
Off with other students	13	207	6.3
Off with family.	103	207	49.8

4.3. Factor structure and psychometric properties of the measures

Psychological capital

In the first place, the results of the principal component analysis conducted on the 24 items of the PCQ showed acceptable correlation coefficients of 0.3. Data suitability for factor analysis was confirmed using the Kaiser-Meyer- Olkin (KMO) value of 0.85 and the Bartlett's Test of Sphericity value of ≤ 0.001 . Six factors from the analysis showed eigen value of above 1 but upon examination of the scree plot four factors clearly fits the data and were thus retained.

The items that loaded on factor one were related to resilience while factor two reflected Hope, factor three loaded on self-efficacy items and factor four loaded on optimism items. These four component factors best fit the data explaining 50.67 % of the total variance. The factor loading results of the PCA on the 24 items of psychological capital is shown in table 2.

The Cronbach's alpha reliability coefficient for the Psychological Capital Scale was $\alpha = 0.89$. Resilience has a Cronbach's alpha reliability coefficient of 0.84 and a mean inter-item correlation of $r = .434$, the Cronbach's alpha coefficient for Hope was 0.79 and $r = .396$, Self-Efficacy was

0.70, and $r = .368$, and Optimism revealed a Cronbach's alpha of 0.750 and $r = .441$. Briggs and Cheek (1986) suggested that consideration be given to the mean inter-item correlation when scales have less than 10 items.

Orientation to Happiness Scale

The principal component analysis regarding items of the OHS revealed a correlation co-efficient of 0.3, KMO at 0.81, and a significant Bartlett's Test of Sphericity of 0.000. Four items showed eigenvalues above 1, explaining 51.2 % of the total variance. However some of the items of meaning and engagement loaded on each other. It must be noted that this was relatively close to Seligman's (2005) design that consisted of a three factor structure namely: Pleasure, Meaning and Engagement.

Table 2

Factor loading results of Psychological Capital Questionnaire

Items	Components			
	1	2	3	4
PCAP17	.843	.076	.045	.052
PCAP16	.807	.120	.113	.015
PCAP14	.728	.334	.030	.152
PCAP15	.599	-.025	.183	.110
PCAP18	.578	.060	.167	.104
PCAP13	.571	.377	.061	.168
PCAP9	.469	.251	.329	.203
PCAP12	.173	.764	.071	.050
PCAP10	.142	.703	.291	.234
PCAP11	.231	.663	.078	.285
PCAP8	-.002	.568	.443	.118
PCAP4	.108	.544	.144	.078

PCAP19	.381	.386	.206	.151
PCAP 1	.148	.257	.698	-.081
PCAP2	.121	.273	.691	.212
PCAP6	.106	.298	.626	.041
PCAP7	.350	-.072	.537	.060
PCAP22	.205	.112	.013	.790
PCAP23	.189	.298	.008	.783
PCAP21	.190	.126	.396	.660
PCAP24	-.061	.116	.031	.624
PCAP5	.046	.192	-.029	-.038
PCAP3	.059	-.095	.416	.122
PCAP20	.089	.079	.028	-.109

Note. 1=resilience, 2=hope, 3=self- efficacy, 4=optimism

Factor one corresponded to the pleasure subscale. In both factor two and three, items related to meaning and engagement occurred. It was therefore difficult to make a distinction between these constructs as meaning and engagement seemed to be intertwined. Factor two and three were merged together and labelled “meaningful-engagement” (M-E). The factor loading results of the orientation to happiness scale is shown in table 3 below.

Table 3 *Factor loadings of the OHS*

Items	Components		
	1	2	3
OHS17	.657	.044	-.059
OHS3	.655	.186	.196
OHS8	.645	-.071	.164
OHS5	.643	.054	.384
OHS14	.528	.355	.058
OHS2	.525	.366	-.042

OHS1	.096	.739	.160
OHS16	.112	.657	.057
OHS15	.193	.629	.173
OHS13	.005	.488	.468
OHS10	.020	.486	.417
OHS7	-.016	.340	.729
OHS6	.112	.206	.657
OHS4	.135	.126	.593
OHS18	.226	-.176	.543
OHS11	.303	-.008	-.087
OHS9	.125	.070	.159
OHS12	-.018	.300	.353

Note. 1=happiness, 2 and 3= meaningful-engagement

Analysis of OHS showed an internal consistency reliability of the scale at $\alpha = 0.82$. While the Cronbach's alpha coefficient of the pleasure subscale was $\alpha = 0.72$ with a mean inter-item correlation coefficient of $r=.301$, Meaningful Engagement was $\alpha = 0.78$ and a mean inter-item correlation coefficient of $r=.278$. For all these subscales the psychometric properties were adequate (Briggs & Cheek, 1986).

Adolescent Coping Scale

The result of the exploratory factor analysis conducted on the 18 items of the Adolescent Coping Scale showed an acceptable correlation coefficient of 0.3, a significant value (<0.001) of Bartlett's Test of Sphericity and a KMO of 0.519. The factor structure extracted five items with eigenvalues over 1 and this explained 76.371% of the total variance.

Most of the items of the “focused problem solving” and “reference to others” were loaded complexly and a decision was taken to compute them together. Thus, factor one was labelled Productive coping (Prod) and factor two was named non-productive coping (NProd). The results were in contrast to the original scale that found a three factor model for ACS.

The internal consistency reliability of Non-productive coping (NProd) was $\alpha = 0.54$ and a mean inter-item correlation of $r = .227$, while Productive coping (Prod) had a Cronbach’s alpha of $\alpha = 0.71$ and a mean inter-item correlation of $r = .240$. While non-productive coping had a very low Cronbach’s alpha of $\alpha = 0.54$, the mean inter-item correlation coefficient was considered to be satisfactory as suggested by Briggs and Cheeks (1986). Table 4 displays the result obtained from the analysis.

Table 4

Factor loadings of the ACS

Items	Components	
	1	2
ACS 15	.629	.044
ACS3	.583	.186
ACS7	.570	-.071
ACS14	.558	.054
ACS6	.539	.355
ACS1	.506	.366
ACS8	.497	.739

ACS11	.112	.746
ACS13	.193	.623
ACS12	.005	.617
ACS9	.020	.593
ACS17	.553	.340
ACS5	-.550	.206
ACS10	.135	.497
ACS18	.345	-.176
ACS2	.510	-.008
ACS16	.571	.070
ACS4	-.018	.300

Note. 1=productive, 2= non-productive coping

4.4. Descriptive Statistics

The normality of the scores distribution of the items was obtained by conducting the descriptive analysis and examining the skewness and kurtosis scores. Tabachninck & Fidell (2001) argued that an acceptable normal distribution score for skewness should be less than 1. Table 6 presents the result of descriptive statistics.

However, Tabachninck and Fidell (2001) suggested that a value less than 1 shows a relatively normal distribution for skewness and kurtosis. The study research normality test showed that scores distribution for skewness and kurtosis were well below 1, and thus normal distribution is assumed.

Table 5:

The result of Descriptive Statistics analysis

Variable	N	Min/Max	Mean	S.D	Skew	Kurt.	α
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PsyCap	186	68/144	105.5	14.76	-.349	-.277	0.89
Resilience	201	9/42	29.8	6.32	-.551	.290	0.84
Hope	197	11/36	26.8	5.13	-.443	-.162	0.79
SE	207	7/24	17.06	3.49	-.515	-.050	0.70
Optimism	205	7/24	20.3	3.19	-1.070	1.18	0.75
OHS	190	25/90	58.08	12.4	-.029	-.320	0.82
Pleasure	199	8/30	20.08	5.18	-.093	-.618	0.72
M-E	196	11/45	30.05	7.14	-.312	-.380	0.78
Prod	129	14/36	27.07	4.75	-.337	-.140	0.71
NProd	61	6 /20	13.3	3.13	-.069	-.077	0.54*

**The Mean inter-item reliability coefficient $r=.227$, M-E (Meaningful-Engagement); Prod (productive coping), NProd (Non-Productive coping), SE (Self-Efficacy), OHS (Orientation to Happiness).*

But upon close examination the skewness and kurtosis scores for optimism was greater than 1 while the rest of the measures seemed fairly normally distribute as can be expected for social science data. Kolmogorov-Smirnov statistics were conducted to tests for normality and the total PsyCap, total OHS and ACS showed significant values above 0.05. This test results signified normal score distributions.

4.5. Correlations between the measures

To determine the strength and direction of the relationships between the measures Pearson correlation coefficients were calculated. However, due to the skew distribution of the optimism sub-scale of PsyCap, Spearman's correlation coefficients were calculated and integrated in the text below. The results of the analyses of the Pearson's correlation coefficients between the scales are shown in Table 6.

The relationships between the scales and respective sub-scales presented in table 6 showed the following results: There was a strong, positive correlation between resilience and hope ($r=.499$)

which was statistically significant with a shared variance of 25%. Resilience showed a moderate positive relationship with self-efficacy (SE) ($r=.451$) explaining 20.3% of shared variance. Again, a moderate positive relationship was found between resilience and optimism ($r=.391$) which explained 15.3% of shared variance.

There was also a strong positive and statistical significant relationship between hope and self-efficacy ($r=.541$). This correlation explained 29.3% of shared variance. A moderate, positive and significant correlation between hope and optimism ($r=.432$) was found which explained 20.3% of shared variance. A small positive correlation was found between self-efficacy and optimism ($r=.226$) which explained 8% of shared variance.

The correlation between the two factors of OHS, pleasure and meaningful-engagement ($r=.432$) was positively, moderate, and statistically significant. This relationship explained 18.7% of shared variance. On the other hand, a small negative correlation was found between productive coping and non-productive coping ($r=-.197$) which was not significant. This correlation explained a small, 4% of shared variance.

PsyCap and OHS are significantly associated at $r=.258$ showing a positive, statistically significant but weak correlation which explained 7% of shared variance. A medium relationship and statistically significant was found between PsyCap and productive coping ($r=.373$). This relationship explained 14% of shared variance.

Table 6

Pearson Correlations Coefficients

	1	2	3	4	5	6	7	8	9	10
1. PsyCap	1									
2. Resilience	.805 **	1								
3. Hope	.801 **	.499 **	1							
4. S.E	.740 **	.451 **	.541 **	1						

5. Optimism ⁺	.508 ⁺⁺	.318 ⁺⁺	.432 ⁺⁺	.226 ⁺⁺	1					
6. OHS Total	.258**	.145*	.174*	.084	.267**	1				
7. Pleasure	.048	.005	.055	-.087	.168*	.787**	1			
8. M-E	.344**	.213**	.226**	.167*	.293**	.861**	.432**	1		
9. Prod.	.373**	.205*	.318**	.153	.243**	.533**	.395**	.508**	1	
10.NProd.	-.199	-.339**	-.028	-.153	-.043	.111	.063	.110	-.197	1

N:B = ** Statistical significance ($p \leq 0.01$); ⁺Spearman's Correlation Coefficient. M-E (Meaningful-Engagement); Prod (productive coping), NProd (Non-Productive coping), SE (Self-Efficacy), OHS (Orientation to Happiness).

However, PsyCap demonstrated a small negative correlation with non-productive coping ($r = -.199$) and it accounted for 4% of shared variance. A strong, positive and significant correlation was found between OHS and productive coping ($r=.533$).

This correlation explained 28.4% of shared variance. Productive coping was statistically significant and positively related to resilience ($r=.205$), hope ($r=.318$), pleasure($r=.395$) and meaningful-engagement ($r=.508$). The strength of the association ranged from medium to large. Interestingly meaningful-engagement accounted for 26% of shared variance. The Spearman's correlation coefficient for optimism with productive coping was $\rho=.215$.

4.6. Differences between demographic groups on mean scores of measures

The study examined whether a difference in mean scores between different gender, age and race groups occurred on Psychological capital, happiness and their respective subscales as well as productive and non-productive coping.

It should be noted that in the age category of 21 and older, 77 students were between 21 and 25 and only 6 students were older and was thus recoded to have only two groups as indicated below. In table 7 below, the results of the analysis are depicted.

No statistical differences between the mean scores of the two age groups (Group 1:17-20 years, and Group 2: 21-30 years) were found on the measures of PC and OHS. Independent Sample t-tests for the subscales namely resilience, hope, self-efficacy, pleasure, meaningful-engagement, productive and non-productive coping scores for the two age groups 15-20 and 21-30 were also done. The t-test results showed no significant difference between the two age groups in relation to resilience, hope, self-efficacy, pleasure, meaningful-engagement, productive and non-productive coping. The p value was $>.05$.

With regards to the mean differences of Optimism among the gender, race and age groups, the Mann-Whitney U test indicated that only students of the different race groups differed significantly with African students obtaining a higher median score (African: Md=21, N=140) than (Other Race groups: Md=20, N=63), $U=3511$, $Z=-2.342$, $p \leq .019$). The effect size is however small ($r=.20$).

Table 7:

Age Group Differences on PsyCap, OHS, and ACS (N=207)

Measures	Age	Mean	S.D	T-value	df	p	Mean	95% of CI	
							diff.	LL	UL
PsyCap	15-20	104.8	14.2	-0.847	184	.398	-1.85	-6.17	2.47
	21-30	106.6	15.4						
OHS	15-20	57.0	12.3	-1.287	188	.200	-2.34	-5.93	1.24
	21-30	59.4	12.4						
Resilience	15-20	30.0	6.1	0.697	199	.486	.634	-1.16	2.43
	21-30	29.4	6.6						
Hope	15-20	26.6	5.2	-0.715	195	.476	-.530	-1.99	.93
	21-30	27.1	5.1						
SE	15-20	17.1	3.3	-0.29	205	.977	-.014	-.99	.96
	21-30	17.1	3.7						
Pleasure	15-20	19.6	5.1	-1.163	197	.246	-.869	-2.34	.61

	21-30	20.5	5.4						
M-E	15-20	29.2	7.4	-1.878	194	.062	-1.936	-.3.97	.10
	21-30	31.1	7.1						
Prod	15-20	26.3	5.1	-1.831	127	.070	-1.497	-3.12	.12
	21-30	27.8	5.1						
NProd	15-20	13.4	3.3	.344	59	.732	.299	-1.44	2.04
	21-30	13.1	3.1						

*Note. CI= confidence interval; LL= lower limit; UL= upper limit; *Significance at the 0.05 level, M-E (Meaningful-Engagement); Prod (productive coping), NProd (Non-Productive coping), SE (Self-Efficacy), OHS (Orientation to Happiness)*

Furthermore, race categories were subjected to t-test analyses in order to determine if there was a significant difference between the mean scores of Africans versus other race groups with regard to their scores on Psychological capital, happiness and productive and non-productive coping styles. The results are presented in table 8.

Table 8:

Race Group Differences on PsyCap, OHS, and ACS (N=207)

Measures	Race	Mean	S.D	T-		p	Mean diff.	95% of CI	
				value	df			LL	UL
PsyCap	Africans	105.1	14.4	-0.857	182	.393	-1.94	-6.41	2.53
	Others	106.9	14.8						
OHS	Africans	59.5	12.0	2.215	186	.028	-4.21	.460	7.96
	Others	55.3	12.6						
Resilience	Africans	29.0	6.5	-2.826	197	.005	-2.68	-4.55	-.809
	Others	31.6	5.6						
Hope	Africans	26.6	5.2	-1.109	193	.269	-.87	-2.42	.68
	Others	27.4	5.1						
SE	African	17.1	3.5	-1.376	203	.170	-.72	-1.74	.31

	Others	17.6	3.3						
Pleasure	Africans	20.3	5.1	1.152	195	.251	.90	-.64	2.45
	Others	20.1	5.2						
M-E	Africans	30.9	6.5	2.479	192	.014	2.70	.55	4.85
	Others	28.2	8.2						
Prod	Africans	26.9	4.5	-.094	126	.925	-.08	-1.87	1.70
	Others	27.0	5.0						
NProd	Africans	13.8	3.3	1.689	59	.096	1.35	-.25	2.94
	Others	12.5	3.1						

* *Significance at the 0.05 level, CI= confidence interval; LL= lower limit; UL= upper limit M-E (Meaningful-Engagement); Prod (productive coping), NProd (Non-Productive coping), SE (Self-Efficacy), OHS (Orientation to Happiness)*

The t-test results demonstrated a statistically significant difference between the measures of Africans and other race groups in terms of orientation to happiness. Africans (M = 59.5, SD = 12.0) reported a significantly higher levels of happiness than did the White and other race groups (M = 55.3, SD= 12.6); ($t = 2.15, p = 0.03 < 0.05$). See Table 8. However, there was no significant difference in the mean scores of PsyCap between Africans (M=105.1, SD= 14.4) and other race groups (M= 106.9, SD=14.8); $t = -0.857, p = 0.39 > 0.05$ (2-tailed).

Independent samples t-tests was also conducted to investigate the mean differences between race groups (African and others) on resilience, hope, self-efficacy, pleasure, meaningful-engagement, productive and non-productive coping scales. There was a statistically significant difference in mean scores of resilience between Africans (M=29.1, SD=6.5) and other race groups (M=31.6, SD=5.6); ($t = -2.83, p = 0.005 < 0.05$), with White and others. Africans showed higher scores on resilience than White and others.

A statistically significant difference in mean scores for meaningful-engagement between Africans (M=30.9, SD=6.5) and white and others (M=28.2, SD=8.2) ($t = 2.48, p = 0.01 < 0.05$) were also found with Africans showing higher scores on meaningful-engagement than Whites and others.

On the other hand, as the p-values for the subscales for hope, self-efficacy, optimism, pleasure, productive and non-productive coping do not reach significance, the race groups did not differ on these measures. See table 8 above.

Independent samples t-tests was also conducted to investigate the mean differences between gender groups (male and female) on resilience, hope, self-efficacy, pleasure, meaningful-engagement, productive and non-productive coping scales. There was a statistically significant difference in mean scores of resilience between male (M=31.7, SD=5.9) and female (M=29.2, SD=6.32); ($t= 83.54$, $p = 0.005 < 0.05$) with female showing higher mean scores on resilience than males.

Table 9:

Gender Group Differences with PsyCap, OHS, and ACS (N=207)

Measures	Gender	Mean	S.D	t-		p	Mean diff.	95% of CI	
				value	df			LL	UL
PsyCap	Male	107.9	14.7	1.292	184	.198	3.24	-1.71	8.19
	Female	104.7	14.6						
OHS	Male	59.4	10.9	.889	188	.375	1.89	-2.30	6.09
	Female	57.5	12.8						
Resilience	Male	31.7	5.9	2.479	83.54	.015	2.47	.49	4.45
	Female	29.2	6.3						
Hope	Male	26.4	5.2	-.591	195	.555	-.507	-2.20	1.19
	Female	26.9	5.1						
SE	Male	17.8	3.1	1.757	205	.080	1.00	-.12	2.13
	Female	16.8	3.6						

Pleasure	Male	20.4	5.4	.622	197	.535	.551	-1.20	2.30
	Female	19.9	5.1						
M-E	Male	30.8	7.1	.923	194	.375	1.111	-1.26	3.49
	Female	29.7	7.2						
Prod	Male	25.8	5.6	-1.572	127	.118	-1.556	-3.52	.40
	Female	27.3	4.3						
NProd	Male	13.2	3.7	.256	59	.799	.223	-1.97	1.52
	Female	13.4	2.9						

*Note. CI= confidence interval; LL= lower limit; UL= upper limit * Significance at the 0.05 level, M-E (Meaningful-Engagement); Prod (productive coping), NProd (Non-Productive coping), SE (Self-Efficacy), OHS (Orientation to Happiness)*

On the other hand, as the p- values for the subscales for hope, self-efficacy, pleasure, productive and non-productive coping do not reach significance, the gender groups did not differ on these measures. See table 9 above.

4.7. Predictors of Productive Coping

A standard multiple regression analysis was performed to investigate whether psychological capital and orientation to happiness predict productive coping. Table 10 and 11 shows the outcomes of the multiple regression models that were fitted.

Table 10

Standard multiple regression with productive coping (DV), and PsyCap and OHS (IVs)

Variables	β	t	Sig	95% CI	
				LL	UL

PsyCap	0.231	2.75	0.007*	.020	.125
OHS	0.475	5.60	0.000**	.118	.246

*N:B. ** Statistical significance ($p<0.01$); *Statistical significance ($p<0.05$); β = beta; CI= confidence interval; LL= lower limit; UL= upper limit*

The results of the standard multiple regression showed that PsyCap ($t = 2.75$, $p < .007$) and OHS ($t = 5.60$, $p < .000$) were statistically significant predictors of productive coping. The two independent variables (PsyCap and OHS) used in the regression model accounted for 35.5% of the variance in the dependent variable (productive coping). Orientation to happiness made the strongest unique predictive value of productive coping. The sum of the r-squared change was 36%

Another multiple regression was conducted with PsyCap subscales; resilience, hope, self- efficacy, and happiness subscales; pleasure and meaningful-engagement as IVs and productive coping as DV. These subscales already showed positive correlations with productive coping. See table 6 on the Pearson correlation coefficients. The results of the standard multiple regression analysis is shown in table 11.

Table 11

Standard multiple regression with productive coping (DV), with PsyCap and OH subscales (IVs).

Variables	β	t	Sig	95% of CI	
				LL	UL
Resilience	0.040	0.45	0.65	-.098	.156
Hope	0.203	2.23	0.03*	.022	.371
Pleasure	0.205	2.37	0.02*	.032	.358
M-E	0.375	4.21	0.00**	.131	.366

*N:B. ** Statistical significance ($p<0.01$); *Statistical significance ($p<0.05$); β = beta; CI= confidence interval; LL= lower limit; UL= upper limit, M-E= Meaningful-engagement.*

Standard multiple regression analysis was conducted with the subscales of PsyCap (resilience and hope) and OHS (pleasure and meaningful-engagement) in order to determine their predictive value for productive coping. Hope ($t = 2.23$, $p < .05$), pleasure ($t = 2.37$, $p < .03$) and meaningful-engagement ($t = 4.21$, $p < .001$) were found to be statistically significant. The model explained 35.3% of the total variance and the sum of the R-squared change was 0.35.

These three items made distinctive impact on productive coping and as such are predictors of productive coping. However meaningful-engagement made the strongest unique contribution to explaining productive coping. See table 11.

Table 12

Standard multiple regression with non-productive coping (DV), and PsyCap and OHS (IVs).

Variables	β	t	Sig	95% CI	
				LL	UL
PsyCap	0.173	-1.24	0.222	-.104	.025
OHS	0.164	1.18	0.245	-.027	.105

*N:B ** Statistical significance ($p < 0.01$); *Statistical significance ($p < 0.05$); β = beta; CI = confidence interval; LL = lower limit; UL = upper limit*

The results of the multiple regression to find the predictors for non-productive coping showed that PsyCap ($t = -1.24$, $p < .222$) and OHS ($t = 1.18$, $p < .245$) were not statistically significant. The two independent variables (PsyCap and OHS) used in the regression model accounted for 48% of the variance in the dependent variable (non-productive coping). The results of the multiple regression is shown in table 12.

Table 13

Standard multiple regression with non-productive coping (DV), with PsyCap and OH subscales (IVs).

Variable	β	t	Sig	95% of CI	
				LL	UL
Resilience	-0.425	-2.86	0.01*	-.339	-.059
Hope	0.182	1.20	0.23	-.082	.325
Pleasure	-0.030	-0.20	0.85	-.206	.170
M-E	0.210	1.34	0.19	-.042	.213

*N:B. ** Statistical significance ($p < 0.01$); *Statistical significance ($p < 0.05$); β = beta; CI = confidence interval; LL = lower limit; UL = upper limit; M-E = Meaningful-engagement*

Standard multiple regression was conducted on the subscales of PsyCap and OHS: resilience, hope, pleasure and meaningful-engagement in order to determine their predictive value for non-productive coping. Only resilience ($t = -2.86$, $p < .01$) was found to be statistically significant. The model explained 16.2% of the total variance.

4.8. Summary

The results of the data analysis conducted with the statistical package for social science software (SPSS version 18) were presented in chapter four. The socio-demographic characteristics of the sample were given, the results of the descriptive statistics, exploratory factor analysis, Pearson momentum correlations, independent samples t-tests for significant differences between groups and standard multiple regression analyses to determine the predictors of productive and non-productive coping.

CHAPTER FIVE

DISCUSSION

5.1. Introduction

In this chapter the results of the research study is discussed against the background of previous studies and the theoretical framework. The discussion will foreground the research questions in the presentation hereunder and adequate attention will be given to the interpretation of the findings. In this section the factor structure and psychometric properties of the measures will first be discussed followed by the association between the measures. The relationships between psychological capital, happiness and coping styles were explained followed by the mean differences between age and race groups pertaining to the measures used. The role of psychological capital and happiness in productive coping among students were investigated to better understand the protective role of these factors. Lastly, the predictors of non-productive coping are discussed

5.2. Factor structure of the measures

The research study was designed to investigate Psychological Capital and Happiness as it relates to coping strategies for stressors among first year university students. The factor structure and psychometric properties of the measures were therefore investigated as these measures were developed using Western samples. Exploratory factor analyses and reliability analyses were conducted on the items pertaining to the Psychological Capital Questionnaire (PCQ), Orientation to Happiness Scale (OHS) and the Adolescent Coping Scale (ACS) to determine the factor structure and the psychometric properties of the measures. While the factor structure of the OHS and ACS differ from the original instruments, the Cronbach's alpha reliability coefficients were 0.70 and above. The instruments were therefore found to have a high internal consistency level. PsyCap analysis found also the same original four factors namely resilience, hope, self-efficacy and optimism. OHS found only two factors, pleasure and meaningful-engagement, and ACS found productive and non-productive coping styles that best described the data.

The principal component analysis conducted on the items of the psychological capital questionnaire (PCQ) showed that students in the present study supported the original four factor constructs of the PsyCap measure - namely resilience, self-efficacy, hope and optimism. These factors explained 50.67 % of the total variance. This is also consistent with previous studies that reported a separate loading of the four factor constructs (Luthans et al., 2007; Avey et al., 2006; Larson and Luthans, 2006). However, in a previous South African study by Du Plessis and Barkhuizen (2011), the items related to hope and self-efficacy loaded complexly that lead to the retention of three factors namely hopeful-confidence, optimism and resilience. In another South African report by Pillay (2012), a two factor solution namely positive-outlook and hopeful-confidence were retained. The items of optimism and resilience were not differentiated in Pillay's (2012) studies, and were thus named positive-outlook. Serena Kesari (2012) on the other hand, reported only a one factor, higher order model named psychological capital because all the items of the constructs loaded on one factor.

The PsyCap scale had an internal consistency reliability of 0.89. This is very close to the result reported in the study of Avey, Patera and West (2006), which had a high internal consistency of 0.90 for the total PsyCap measure. It is also similar to the previous finding of Roberts (2011) who reported an alpha coefficient of 0.89, somewhat greater than that of Toor et al. (2010) who reported a Cronbach's alpha coefficient of 0.88. The Cronbach's alpha coefficients of the four subscales in

the present study are as follows: resilience = 0.84; hope = 0.79; self-efficacy = 0.70; and optimism = 0.75. Luthans (2007) reported the following internal reliability coefficients for the four subscales: 0.85 for self-efficacy, 0.80 for hope, 0.79 for resilience and 0.72 for optimism. Though this research finding was slightly different from Luthans et al., (2007), the four factors had an internal reliability coefficient of $\alpha = .70$ and above. In the South Africa context, the research by Du Plessis and Barkhuizen (2012) reported the reliability coefficients of the four subscales to be 0.86 for self-efficacy, 0.86 for hope, 0.77 for resilience and 0.81 for optimism. In an earlier study by Herbert (2011), higher inter-item reliability coefficients for the four PsyCap constructs were reported: 0.81 (hope), 0.67 (optimism), 0.83 (self-efficacy), and 0.69 (resilience). The PsyCap is applicable within the South African context as studies reported adequate reliability coefficients (Appolis, 2010; Herbert, 2011) and as supported by the current study.

With regards to the OHS, the factor analysis on items of the OHS found only two factors: pleasure and meaningful-engagement which accounted for a total variance of 51.2 %. Peterson, Park and Seligman's (2005) study found a three factor models (pleasure, meaning, and engagement) with distinctive component loadings. In this study it was interesting to note that the items pertaining to meaning and engagement loaded together and not separately and were therefore combined. This was labelled factor 2 and called meaningful-engagement, while items representing pleasure loaded on factor one.

This can be understood in terms of the possible cultural influence of the African collective culture which finds meaning in life as a result of engagement with others. It is a collective worldview characterised by interplay of values where sense of self is given meaning because of belonging to a community (i.e. engagement with others). Townsend and McWhirter (2005) reported that meaningful relationships assist well-being. The factor structure of OHS in previous South African studies found only one factor which was named happiness (Pillay, 2012). Kesari (2012) reported two factors namely pleasure and meaning (factor 1), and engagement (factor 2). This finding is though different from the present study. The evaluation of the South African findings could mean that a two factor model seems to be appropriate to accommodate the collective African worldview and experience.

The OHS in the research study showed a high internal consistency with a reliability coefficient of 0.82. This is very similar to a previous study by Dlamini (2011) where a high internal consistency

reliability coefficient of 0.80 was reported. The Cronbach's alpha coefficients of the two factors representing OHS in this present study were as follows: pleasure = 0.72 and meaningful-engagement = 0.78. This is also slightly different from the previous study of Peterson et al. (2005) which reported a Cronbach's alpha co-efficient for the total OHS to be higher than 0.77. The subscales were reported to have the following inter-item reliability coefficients: Pleasure was 0.82, for Meaning 0.82, and for Engagement 0.72. The South African study by Kesari (2012) in which only two factors were retained, namely Pleasure and Meaning, and engagement obtained a Cronbach's alpha coefficient of 0.74 and 0.72 respectively. On the other hand, Pillay (2010) found only a one factor solution named happiness, and reported high internal reliability coefficient of 0.84. It can therefore be concluded that the present study supported the OHS as reliable and useful for South Africans.

The principal component analysis of the ACS indicated that two factors best fit the data, and were labelled as productive and non-productive coping styles. These two factors accounted for 76.371% of the total variance. These results differed from Frydenberg's et al., (1993) findings, as their data yielded three factors namely: productive coping, reference to others and non-productive coping. However no previous research in a South African setting appeared to determine two factors except Holland (2001) who differentiated between internal versus external coping styles (Holland, 2001).

The inter-item reliability coefficient of Non-productive coping was $\alpha = 0.54$, relatively low and possibly due to the fact that the scale had only 6 items. However, a mean inter-item correlation coefficient of $r=.227$ was obtained. The Productive coping scale obtained a Cronbach's alpha of $\alpha = 0.71$ and a mean inter-item correlation of $r=.240$. While non-productive coping had a very low Cronbach's alpha of $\alpha = 0.54$, the mean inter-item correlation coefficient was considered to be satisfactory as suggested by Briggs & Cheeks (1986) for scales of less than 10 items.

5.3. Extent of students' PsyCap, Happiness and ways of coping

5.3.1. Descriptive

The majority of the respondents showed a very high level of Psycap reported from the mean score ($M=105.5$). The variability in the range of score ranged from 68 to 144. It was observed that among the factors of PsyCap, the self-efficacy sub-scale had a relatively lower mean of $M=17.6$ and resilience scored higher than the other subscales ($M=29.8$). This needs a further investigation in

future research. The implication for relative low self-efficacy would be that individuals would not be able to believe or employ their personal resources when faced with academic stressors. This might also affect their academic performance (Lane & Lane, 2001).

It was very interesting to discover that the mean score of 58.08 for OHS, Meaningful-engagement was also found to make a strong impact with a mean score of 30.05 over pleasure. Happiness seemed to be derived from meaningful-engagement. This also supports the views of Seligman (2005) about the progression of happiness by starting from pleasure to meaning. The mean score for the productive coping style was $M=27.07$. Participants seemed to engage in productive coping and therefore likely to cope better. Therefore, it can rightly be argued and indeed strongly, that productive coping impacts on well-being (Limbert, 2004). Hence, it is by engaging in productive coping styles that students can employ their capabilities to handle academic stressors.

5.3.2. Associations between PsyCap, OHS and Coping styles

As one of the study objectives was to determine the relationships between psychological capital, happiness and the different coping styles adopted for difficulties and stressors, the Pearson correlation coefficients found a statistically significant positive relationship between PsyCap and OHS. Therefore as the level of PsyCap increased so did the level of happiness increased. In addition also, PsyCap showed a practically and significantly positive relationship with productive coping. This implies that as the former increases the latter increases as well, leading to the overall well-being of students in relation to coping. It seems that that higher level of PsyCap among students increased on only their general levels of happiness but also the likelihood to adopt productive coping strategies for difficulties they experience. This positive relationship between PsyCap and happiness is consistent with a previous study of Culbertson, Mills and Fullagar (2010) that found relationships with the different measures of Psychological Capital and happiness. The same results were obtained in other previous studies (Kreshona, 2012; Kesari, 2012).

This corroborates previous findings of Luthans et al., (2008, and 2004); Martin, (2006), Page et al. (2004) and Larrivee (2000), which emphasised psychological capital as an important resource for positive emotions – happiness. Positive emotions on the other hand serve as markers of optimal well-being and broaden the scopes of attention, cognition, and action (Fredrickson, 2001).

As expected, there was also a moderate to strong positive, significant correlations between the four subscales of PsyCap namely resilience, hope, self-efficacy and optimism. This further supports the conceptualisation of the PsyCap measure.

A good summary of the interaction of the four constructs of Psycap would be that hopeful students that have the will-power and alternatives to cope with stress will be more optimistic and confident to bounce back from adversities, becoming more resilient while coping productively. It is also likely that this cyclic process assist in further enhancement of PsyCap and productive coping. Furthermore, students who express high self-efficacy will be capable of applying their optimism in the face of challenges and thus cope with unavoidable stressors.

There was a positive, statistically significant relationship between pleasure and meaningful-engagement. This demonstrated that when students' positive emotion of pleasure (the "feel good" part of happiness) is increased, the more likely they are to engage in productive coping strategies when confronted with stressors. This is consistent with Larrivee's (2000) argument that such positive emotion as pleasure is beneficial especially with regard to stress coping. On the other hand, meaningful-engagement is valued in academic institutions as it enhances positive experiences among students in spite of being exposed to academic stressors (Pawan, 2003; Hakanen et al., 2006; Kong, 2009). In addition, previous studies reported that positive emotions will lead to accelerated learning and the fostering of happiness in students (Martin, 2006; Diener & Biswas-Diener, 2002; Van Katwyk et al., 2000).

Productive coping demonstrated a statistically significant positive relationship with resilience. Students with higher level of resilience are likely to have higher capacities to use productive coping when faced with stressors at university. A positive correlation was found between productive coping and hope. Hope as an agentic and pathway thinking ability, is vital for overcoming obstacles. A previous study reported that "way-power" aids and inspires individuals' ability to consider alternatives in overcoming obstacles (Synder, 2002, p. 258). It is also interesting to note that a positive relationship found between productive coping and optimism. Luthans, Avoli, et al, (2006) and Seligman (1998) had earlier reported practical contribution of optimism construct among college students, as it is a functional, flexible and realistic optimism that helps individuals deal constructively with challenges. The argument thereof is that as students become more optimistic, find happiness in meaningful-engagement and experience more pleasure, they are more

likely to adopt productive coping when dealing with stressors at university. This is in line with Fredrickson's (2003) proposition on the supportive nature of positive emotions. It is the view that individuals with experience of positive emotions widen their resourcefulness and actions often needed for effective and efficient problem solving. This is in conformity with the findings of Masten et al. (2002) that students with greater resiliency, seem to do better academically, and if happiness as a positive emotion greatly influences individuals' strength, then they can exercise greater ability to cope effectively. This implies that as meaningful-engagement increases, the ability to bounce back from adversity and expect good things to happen now and in the future also increased.

Importantly resilience showed a negative, significant correlation with non-productive coping ($p \leq 0.01$) (medium effect), which indicates that as resilience increases the less likely they are to engage in non-productive activities.

There was also a practically and statistically significant correlation between hope, meaningful-engagement and productive coping. Self-efficacy demonstrated only a significant relationship with meaningful engagement. Luthans, et al (2006) has stated that confidence boasts success. This means that a sense of self and confidence derived from engagement with others, play a role in affirmation of the self (Bandura, 1997).

5.4. Age, Race and gender differences regarding PsyCap, OHS and Coping styles

To determine whether there was a mean difference among age, gender and race groups on their scores on the PsyCap and Happiness scales and subscales, and productive and non-productive coping independent sample t-tests were conducted. No significant differences between the two age groups (17-20 years, and 21-30years) were detected on the Psycap, happiness and coping scales and their respective subscales. It therefore seems that students reported similar level of psychological capital, happiness and used similar coping styles.

The findings on the t-tests for the race groups demonstrated that Africans had a higher level of resilience and meaningful-engagement than students in the other race groups across all the scale. A future study should extend our understandings regarding his finding. The level of resilience and meaningful-engagement particularly among African students could be a result of the Ubuntu spirit, and African connectedness with each other to find meaning and support. The society is already

constructed and individuals are expected to fit into it (Blackwell, 2009; Oyserman & Lee, 2008). The Africans experience of oneself in relation to others may account for this finding. In fact, connectedness possibly leads to positive psychological functioning with regard to confidence, happiness and well-being (Allen & Bowles, 2012; Crespo et al., 2013). This Ubuntu characterised by the value of collectivism places the group interest over the individual's interest (Hofstede, 1997). It is because of this fundamental connection, relationships and group membership that individuals easily find support when faced with obstacles, and therefore can employ this as a coping strategy (Blackwell, 2009; Oyserman & Lee, 2008).

There was a statistically significant difference in resilience between male and female, with females showing a relatively higher score than males. However, a study conducted by Allan, McKenna and Dominey (2013) on resilience among first year students, also found higher scores for females than males. They also value the mutuality of social connections where they can talk about their feelings and share sadness, all characteristics of relational resilience (Hartling, 2003; Jordan, 2006). Hence Allan, McKenna and Dominey (2013) recommended a pedagogical approach to boost male students' resilience.

5.5. Predictors of a productive coping style

The research findings from the first multiple regression model found that PsyCap and happiness were significant predictors of productive coping among students. Firstly, Gomez (2007) and Pajeras (2001) have concentrated on how PsyCap can be developed amongst students in educational institutions. Previous studies by Jex (1998) Luthans et al., (2008; 2004), and Page et al. (2004), considered PsyCap as an essential psychological resource which assists students to develop a lasting psychological strength in coping with university stressors. In the light of this, it is therefore clear that, the four constructs may influence the individual's ability to employ a productive coping style. This implies that hope: to plan a course of positive action to limit and contain stress; optimism: to maintain an optimistic attitude; self-efficacy: to believe that you have control or at least influence over the stress-inducing event and resilience: to have the capacity to bounce back in the presence of stressors. Hence, the development of PsyCap is indeed a crucial psychological strength in any education sector.

This can be argued that regardless of demanding situations, resilient, hopeful, confident and optimistic students would probably trust in their ability and with adequate capitals to overcome unbearable distress. This supports Bandura's (2007) observation that in as much as individuals are faced with daily stressors, an optimistic, hopeful, and resilient sense of efficacy is needed for well-being. This finding is in sync with Luthans et al (2007), and Diener and Seligman (2002) that PsyCap can indeed predict positive emotion in stressful environment. The positive strength of PsyCap also support the earlier point of Fredrickson's theory (1998) that positive emotions build individual's long term resources in diverse areas.

Nonetheless, happiness broadens individuals psychological strength which leads to subjective health (Diener and Biswas-Diener, 2008), and in this study context, academic achievement and overall well-being in coping with stress. Therefore students who maintain higher level of happiness will see the school atmosphere as being less stressful but appreciate perhaps the positive elements that contribute to their coping and general well-being.

However, of the subscales of PsyCap and orientation to happiness, hope (PsyCap construct), pleasure and meaningful-engagement (OHS factors) held a predictive value for productive coping. Students who are higher in hope devise an alternative pathway, which empowers and supports them to remain steadfast in the direction of coping. It therefore can be argued that if the pathway to handle stressors is higher, and also with higher level of pleasure (feel good part of happiness) and meaningful-engagement (contributinal strength) then the more likely students engage productively in combating stressors and become successful in their studies. This is consistent with the findings of Fredrickson (2000) that positive emotions improve psychological well-being by exploring the built-capacity in order to adapt during stressful situations. This had been reported by Lazarus and Folkman (2000, 1997, and 1980) that positive emotions during challenging times help individuals to cope. This is more important because positive emotions are long lasting (Fredrickson, 2000). It therefore seems acceptable to conclude in the same direction about pleasure and meaningful-engagement, as positive emotions that broaden students' thought process for adjusting to stressors at the university.

Having analysed the findings, it seems thus that psychological capital and happiness are protective factors for combating stress among first year students. The two can boost and broaden individual's ability to combat stressful events.

5.6. Predictors of a non-productive coping style

There was no significant result found with PsyCap and OHS as predictors of non-productive coping. However the result of the regression model with the subscales of PsyCap and OHS, showed that resilience was statistically significant. This implies that students' level of resilience plays a significant role in the coping style that they would adopt. A lower level of resilience among first year students seems to be linked to the engagement in non-productive coping styles when faced with stressors. Resilience has been shown to be very useful in coping (Evans, 2005). Jenson (2008) reported that such individuals are better equipped to deal with stressors, and exhibit emotional stability when faced with adversity (Tugade & Fredrickson, 2004). Hence if the latter is very low, then students stand the danger of engaging in non-productive activities which might result in dropping out of college. It is however of concern that males scored lower on resilience than female and would therefore need support in this regard. The lower levels of resilience reported in this study and previous other studies may account for the higher levels of substance use, alcohol use in particular among male students (Engs & Hanson, 2007). Furthermore, resilience supports the development of personal resources which ensure a positive chain reaction leading to protection from adversity and favourable outcomes (Daniel & Wassell, 2002).

5.7. Summary

The results of research data alongside the research questions were discussed and inferences were made from them. It is clear that the findings showed relationships between PsyCap, Happiness and Productive coping, and that psychological capital and happiness are also predictors of coping. The data further implies that PsyCap and happiness function as protective factors in the engagement of productive coping strategies for combating stressors among the first year students. They therefore function as support for coping.

CHAPTER SIX

CONCLUSIONS, STUDY LIMITATIONS AND RECOMMENDATIONS

6.1. Introduction

This last chapter of the research study addresses the conclusions, limitation of the study and recommendations for future research.

6.2. Conclusions

The entry into university life can bring various stressors to first year students and may impact on their health and well-being. The aim of this study was to explore the role of psychological capital and happiness in the kind of coping styles that first year students' use in challenging situations. This was done by first exploring the correlation between psychological capital, happiness and coping styles as well as determine the predictors of both productive and non-productive coping.

6.2.1. Relevance of PsyCap, OHS and Coping style measures for the South African context

The PsyCap measure yielded a similar factor structure to the original subscales developed by Luthans et al (2007) namely resilience, hope, self-efficacy and optimism. This instrument was relevant to the study as it showed a high inter-item reliability coefficient of 0.89 for the PC and acceptable Cronbach's alpha coefficient for the subscales at 0.70 and above. With regards to the orientation to happiness scale (OHS), two factors were found namely pleasure and meaningful-engagement. While the factor structure was different than that of the original scale, the factor loadings seem compatible with the South African context and the majority African student population. This was supported by the previous study of Kesari (2012) as discussed previously. Analysis of OHS show an inter-item reliability coefficient of $\alpha = 0.82$. The Cronbach's alpha coefficients were found adequate, pleasure was $\alpha = 0.72$ and meaningful-engagement was $\alpha = 0.78$.

With regards to the ACS, only two factors, productive and non-productive coping styles were found and different from the original three factors by Freedenberg (1993). While productive coping had an internal reliability coefficient of 0.70, non-productive coping showed a poor alpha $\alpha = 0.54$ possibly due to the fact that the scale had less than 10 items. It can therefore be concluded that these measures could be used successfully among South African samples

6.2.2. Mean differences for age, race and gender groups on PsyCap, OHS and ACS

It was found that there were no significant differences in the mean scores of the measures between the two age categories (15-20 years and 26-30 years). A statistically significant difference was found in the mean scores of OHS, meaningful-engagement, and resilience between African and other race groups with Africans having higher means scores. It is likely that these factors are linked and grounded in the Ubuntu spirit and African connectedness which anchors individuals through their membership to the community and through this social connectedness find greater meaning and happiness, which in turn buffer resilience. All racial groups on the other hand seemed to experience similar levels of self-efficacy and hope and made use of similar coping strategies. As pointed out, female students showed a higher level of resilience than males. This aspect will be briefly elaborated upon in the section below.

6.2.3. Association between measures and predictors of coping styles

Statistically significant associations were found between psychological capital, orientation to happiness and productive coping. This indicates that students with higher levels of PsyCap, who are happier, tend to use productive coping strategies when confronted with difficulties and stressors at university. It was argued in the literature that PsyCap and positive emotions (happiness) support productive coping, thus playing a protective role in this regard.

The results from the research study showed that psychological capital and happiness were significant predictors of productive coping. This is in support of earlier findings by Luthans (2007) regarding the role of psychological capital in coping with stress, and suggestions by other previous studies on the supportive role of positive emotions (Fredrickson, 2004). It can therefore be argued that the development of Psychological capital and the enhancement of positive emotions among students will assist them to better deal with stressors by adopting productive coping strategies and therefore will be less likely to engage in risk behaviours or use avoidance coping strategies when

facing difficulties at university. Furthermore, being better able to cope will also have positive outcomes for students' general health and well-being and in particular for their mental health which in turn will impact positively on academic progress and development.

The linkage between resilience and non-productive coping is a concern, particularly for male students as they obtained a lower mean score than females. Maintaining a positive functioning when faced by hard circumstances shows psychological resilience (Luthans, 2006). It helps individuals to adapt and function well in difficult times. Its presence indicates that students would be less likely engage in activities that could endanger their health and well-being. As males seems to be particularly at risk, it is recommended that extra counselling and support be provided to male students who might be at risk of engaging in counter-productive behaviours such as substance use as a way to cope.

In conclusion, this study reiterates that positive psychology in the recent past has witnessed an upsurge and interest among scholars, possibly because of its valuable outcomes i.e. life satisfaction, commitment and overall well-being. This study has furthered our insight into the role of positive psychological constructs such as the role of PsyCap and happiness in adapting a constructive coping style in dealing with stressors, an important finding not previously explored. There seems thus a need to cultivate psychological capital and positive emotions i.e. feelings of happiness in preventing risk behaviours and also in fostering academic progress and general well-being among students.

6.3. Limitations

Notwithstanding the insights gained from the study, some limitations are noted. The survey design used in data collection method allowed participants to give self-report answers to the questions. The respondents might have responded in a biased manner by responding in a social desirable way and therefore the responses may not reflect the true attitudes and actions. However, the findings were in accordance to the expected outcomes and generally in support of previous findings. The cross sectional nature of the study does not allow for causality and it might be worthwhile to follow the students in their second and third years to gain a better understanding of the findings over a period of time.

The convenience sampling that was used, limit the generalizability of the findings to all psychology and other university students. It is therefore suggested that future studies should consider using larger, representative samples to validate the research results. The level of stress among students should also be studied in relation to psychological capital, happiness and coping. In addition, an in-depth qualitative exploration could have been valuable to further a deeper understanding of the quantitative findings.

Although the interest of the research was directed at first year students, due to the various challenges of change and adaptation to university life, there is indeed a need to extend our understandings to students of all levels as a better understanding of positive psychological resources might provide suggestions as to better support students psychologically and thus enhance their academic development.

6.4. Recommendations

In the light of the study findings, academic excellence and progress among students may be enhanced through wellbeing interventions that focus on developing positive psychological resources among students such as psychological capital and feelings of happiness that will result in using more constructive coping strategies when faced with stressors.

Little health and wellbeing interventions are directed at students at universities and should be seen as a key priority area not only to enhance student health and well-being, but also to support academic progress. These health and wellbeing interventions should not only focus on health education but should be extended to develop psychological capital and facilitate opportunities for positive emotions to deal with university challenges and counteract the engagement in non-productive coping among students.

As observed from the study, Africans showed higher level of resilience and meaningful-engagement than all other racial groups, and this is recommended for further research. Male students seems particularly at risk as they showed lower levels of resilience linked to non-productive coping that may include the use of substances such as alcohol and drugs to deal with problems. The predominant focus on academic development should therefore be extended to include the development of these psychological resources likely to enhance existing academic development interventions.

6.5. Summary

The research study's objectives and questions were addressed and the study highlighted the protective role of psychological capital and positive emotions such as happiness in the engagement of productive coping when faced with difficulties. The need to foster these resources among students is likely to enhance not only their health and well-being, but also support their academic progress.

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APPENDIX 1

APPENDIX 4



Prof. Nhlanhla Mkhize
Dean & Head - Applied Human Sciences
The Academic Leader School of Psychology,

UKZN Howard College.

RE: Request to Conduct a Research Study in the School of Psychology.

My name is Daniel C. Okafor, I am currently doing a Masters degree program in Health Promotion and Communication at the University of KwaZulu-Natal Howard College Durban.

I am expected to carry out a research project as a partial fulfillment of the requirements for master science (MSC) degree in Health Promotion.

The title of my research is: "Psychological Capital and Happiness as protector factors in combating stress among first year students of UKZN Howard College Durban"

I kindly request permission to carry out this research study in your School among first year students. It is hoped that the results of the study would be helpful in developing health promotion interventions for students and also assist to support students' academic success.

The participation in this study will be voluntary and, the information gathered will be treated with confidentiality and the feedback of the results will be provided to stakeholders.

Looking forward to your assistance.

Thanks.

Daniel Chinedu Okafor
University of KwaZulu-Natal
Howard College
Tel: 0842571855
Email: 213572695@ukzn.ac.za

Supervisor
Prof. Anna Meyer-Weitz
University of KwaZulu-Natal
Howard College
Tel: 031-260-7618
Email: meyerweitza@ukzn.ac.za

Professor N.J. Mkhize
Dean & Head of School 41
School of Applied Human Sciences
College of Humanities
University of KwaZulu-Natal

*Ethical clearance
to be obtained independently.*

*The Registrar
University of KwaZulu-Natal
is to confirm that the
School approves of this application.
Prof. N. Mkhize*

APPENDIX 2



20 May 2014

Mr Daniel Chinedu Okafor (213572695)
School of Applied Human Sciences – Psychology
Howard College Campus

Protocol reference number: HSS/0293/014M
Project title: Psychological capital and happiness as protective factors for combating stress among first year students of University of KwaZulu-Natal Howard College Durban

Dear Mr Okafor,

Full Approval – Expedited Application

In response to your application dated 01 October 2013, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr Shenuka Singh (Chair)

/ms

Cc Supervisor: Professor Anna Meyer-Weitz
cc Academic Leader Research: Professor D McCracken
cc School Administrator: Ms Ausie Luthuli

Humanities & Social Sciences Research Ethics Committee

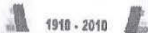
Dr Shenuka Singh (Chair)

Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X54001, Durban 4000

Telephone: +27 (0) 31 260 3587/8350/4557 Facsimile: +27 (0) 31 260 4609 Email: ximbapo@ukzn.ac.za / anymam@ukzn.ac.za / richuno@ukzn.ac.za

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APPENDIX 3

LETTER OF INFORMED CONSENT

Date:..../..../2013

Dear

Research Participant,

I am a Health Promotion and Communication Masters student and I am conducting this study for my masters' research dissertation. The purpose of this research is to study Psychological Capital as a Protective Factor for the Experience of Stress among First Year Students of the University of KwaZulu-Natal Howard College Durban. Insights gained from this study could lead to further understandings around the constituents of psychological wellbeing of students, as well as impact on, or increase students happiness with their study endeavors.

This study will require you to answer four questionnaires; coping scale, Psychological Capital scale, happiness scale. It also entails the completion of a demographic questionnaire for statistical purposes. Complete anonymity of all participants will be ensured. The questionnaires will be kept for five years in accordance with University regulations and thereafter will be disposed of using a shredder. Participation is voluntary and you are completely free to withdraw from this study at any stage and for any reason. The information is also anonymous as no names are asked.

Your participation will be highly appreciated and will not take longer than 30 minutes to complete. Please feel free to contact either myself, or my supervisor for any further clarification regarding this study.

If you wish to obtain information on your rights as a participant, please contact Ms Phumele Ximba, Research Office University of KwaZulu-Natal on 031 260 3587

Thank you

Researcher's details

Daniel Chinedu Okafor

University of KwaZulu-Natal

Howard College

Tel: 0842571855

Email: 213572695@ukzn.ac.za

Supervisor's details

Prof. Anna Meyer-Weitz

University of KwaZulu-Natal

Howard College

Tel: 031-260-7618

Email: meyerweitza@ukzn.ac.za

Declaration

I, _____ (full name) hereby confirm that I understand the contents of this document and the nature of this research and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project any time, should I so desire.

Signed at _____ on this _____ day of _____ 2014.

Signature _____

APPENDIX 4

RESEARCH QUESTIONNAIRE

TOPIC: Stress and Psychological Capital

SECTION A: Biographical Data

Please mark with an X

1. Sex

Male	1
Female	2

2. Age

15-20	1
21-25	2
26-30	3
Above 30	4

3. Race

African	1	White	4
Coloured	2	Other (please specify)	5
Asian/Indian	3		

3. Type of Residence

On campus	1	Off campus with other students	3
Off campus alone	2	Off campus with family	4

4. Program registered

Engineering	1
Psychology	2

APPENDIX 5

SECTION B: PsyCap Questionnaire

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

	SD	D	DS	AS	A	SA
1. I feel confident doing my class work and assignments	1	2	3	4	5	6
2. I feel confident in my studies	1	2	3	4	5	6
3. I feel confident contributing to discussions in class	1	2	3	4	5	6
4. I feel confident setting goals for my studies	1	2	3	4	5	6
5. I feel confident discussing problems I have with my class mates	1	2	3	4	5	6
6. I feel confident when submitting assignments	1	2	3	4	5	6
7. If I should find myself in a jam in school, I could think of many ways to get out of it	1	2	3	4	5	6
8. At the present time, I am energetically pursuing my study goals	1	2	3	4	5	6
9. There are lots of way around any problem I might face	1	2	3	4	5	6
10. Right now I see myself as being pretty successful in my studies	1	2	3	4	5	6
11. I can think of ways to meet the goals I have set	1	2	3	4	5	6
12. I am currently meeting the goals that I have set for myself.	1	2	3	4	5	6
13. I recover quickly from setbacks I have as a student	1	2	3	4	5	6
14. I usually manage difficulties at school	1	2	3	4	5	6
15. I can cope on my own at school	1	2	3	4	5	6
16. I handle the stress of being a student well	1	2	3	4	5	6
17. I can get through difficult times at school	1	2	3	4	5	6
18. I feel I can handle many things at a time at this job	1	2	3	4	5	6
19. I am optimistic when it comes to my studies	1	2	3	4	5	6
20. If something can go wrong for me study-wise, it will	1	2	3	4	5	6
21. Things will work out well regarding my studies	1	2	3	4	5	6
22. I'm optimistic about what will happen to me in future studies	1	2	3	4	5	6
23. I know I will succeed in my studies	1	2	3	4	5	6
24. As a student I believe "every cloud has a silver lining."	1	2	3	4	5	6

APPENDIX 6

SECTION C: OHS

Instructions: Please rate the extent to which the following statements are like you or unlike you by circling the appropriate number on the 1 to 5 point scale supplied.

	Very much unlike me	Much like me	Like me	More like me	Very much like me
1. My life serves a higher purpose.	1	2	3	4	5
2. Life is too short to postpone the pleasures it can provide.	1	2	3	4	5
3. Regardless of what I am doing, time passes very quickly	1	2	3	4	5
4. In choosing what I do, I always take into account whether it will benefit other people.	1	2	3	4	5
5. I go out of my way to feel excited.	1	2	3	4	5
6. I seek out situations that challenge my skills and abilities	1	2	3	4	5
7. I have a responsibility to make the world a better place.	1	2	3	4	5
8. In choosing what to do, I always take into account whether it will be pleasurable.	1	2	3	4	5
9. Whether at work or play, I am usually “in a zone” and not conscious of myself	1	2	3	4	5
10. My life has a lasting meaning.	1	2	3	4	5
11. I agree with this statement: “Life is short “eat sweet first”.	1	2	3	4	5
12. I am always absorbed in what I do.	1	2	3	4	5
13. What I do matters to the society.	1	2	3	4	5
14. I love to do things that excite my senses.	1	2	3	4	5
15. In choosing what to do, I always take into account whether I can lose myself in it.	1	2	3	4	5
16. I have spent a lot of time thinking about what life means and how I fit into its big picture	1	2	3	4	5
17. For me, the good life is pleasurable life	1	2	3	4	5
18. I am rarely distracted by what is going on around me	1	2	3	4	5

APPENDIX 7

SECTION D: ACS

Instruction: Please tick the box on how do you cope with school challenges?

ITEMS	Used very little	Used sometimes	Used often	Used a great deal	Doesn't apply
1. Talk to other people for help	1	2	3	4	5
2. Work at solving the problem to the best of my ability	1	2	3	4	5
3. Work hard	1	2	3	4	5
4. Worry about what is happening	1	2	3	4	5
5. Spend more time with boy/girl friend	1	2	3	4	5
6. Improve my relationship with others	1	2	3	4	5
7. Hope for the best	1	2	3	4	5
8. Join with other people who have the same concern	1	2	3	4	5
9. Make myself feel better by taking alcohol, cigarettes or drugs	1	2	3	4	5
10. I have no way of dealing with the situation	1	2	3	4	5
11. See myself as being at fault	1	2	3	4	5
12. Ignore the problem	1	2	3	4	5
13. Keep my feelings to myself	1	2	3	4	5
14. Pray for help and guidance	1	2	3	4	5
15. Look at the bright side of things and think of all that is good	1	2	3	4	5
16. Discuss my problem with qualified people	1	2	3	4	5
17. Relax with book, music, TV	1	2	3	4	5
18. Keep fit and healthy	1	2	3	4	5