DECLARATION:

In accordance with Rule G4.6.3,

4.6.3 A treatise/dissertation/thesis must be accompanied by a written declaration on the part of the candidate to the effect that it is his/her own work and that it has not previously been submitted for assessment to another University or for another qualification. However, material from publications by the candidate may be embodied in a treatise/dissertation/thesis.

I, Joanne Goss with student number 209091749, hereby declare that the treatise for Magister Artium in Clinical Psychology is my own work and that it has not previously been submitted for assessment to another University or for another qualification.

Signature: _________________________________________________________

Date: ____________________________________________________________
THE RELATIONSHIP BETWEEN SELF-EFFICACY AND WAYS OF COPING OF
FIRST-YEAR UNIVERSITY STUDENTS

By

Joanne Goss

Submitted in partial fulfilment of the requirements for the degree of

MAGISTER ARTIUM in CLINICAL PSYCHOLOGY

In the

Faculty of Health Sciences
at the Nelson Mandela Metropolitan University

December 2010

Supervisor: Prof. Christopher N. Hoelso
Co-Supervisor: Ms. Tracy Geyer
Dedicated to my parents,

Paddy and Judy Goss.
Acknowledgements

I would like to acknowledge the following people as a way of expressing my sincere gratitude and appreciation.

- My supervisor, Prof. Chris Hoelson, for his expert knowledge and professional guidance;
- My co-supervisor, Tracy Geyer for her valuable contributions as well as her assistance with the statistical analysis used in the study;
- The participants, without whom this study would not have been possible, for their willingness to complete the questionnaires and take part in the study;
- The first-year psychology module lecturers, who allowed me time during their lectures to collect the data;
- My colleagues and friends, Renée Small, Shelley Heusser and Christine Laidlaw, for their help with the data collection and statistical analysis, as well as their support and friendship;
- My boyfriend, Gregg Cole-Edwardes, for always being there to listen to me, and for never allowing me to doubt my ability;
- My brother, Wade Goss, for understanding and supporting me, and for his kind words of encouragement;
- My parents, Paddy and Judy Goss, for their unconditional love, support and dedication to every part of my life, but especially to this experience;
- Most importantly, to my Lord Jesus, for providing me with His unfailing strength throughout this project and always.
Table of Contents

Acknowledgements iii
List of Tables ix
Abstract x

Chapter One: Introduction 1
1.1 Chapter Overview 1
1.2 Theoretical Overview 1
  1.2.1 Health Psychology 1
  1.2.2 The Pathogenic Orientation 2
  1.2.3 The Salutogenic Orientation 3
  1.2.4 The Biopsychosocial Model of Health and Illness 4
  1.2.5 Self-Efficacy 6
  1.2.6 Coping 7
1.3 Problem Statement 7
1.4 Aims of the Research 9
1.5 Chapter Overview of the Treatise 9
1.6 Conclusion 10

Chapter Two: Self-Efficacy 12
2.1 Chapter Overview 12
2.2 The Construct and Study of Self-Efficacy 12
2.3 Coping Self-Efficacy 14
2.4 Efficacy Expectations 15
2.5 Efficacy Processes 16
  2.5.1 Cognitive Processes 16
  2.5.2 Motivational Processes 19
  2.5.3 Affective Processes 21
  2.5.4 Selective Processes 25
2.6 Sources of Self-Efficacy 27
2.7 Measuring Self-Efficacy 28
2.8 Self-Efficacy and Lifespan Development 30
2.9 Self-Efficacy and Gender 33
2.10 Conclusion 35

**Chapter Three: Coping** 36
3.1 Chapter Overview 36
3.2 The History of the Study of Coping 36
3.3 The Construct and Process of Coping 39
3.4 Coping and Stress 42
3.5 Coping Responses and Goals 44
3.6 Coping and Personality 47
3.7 Coping and Psychological Adjustment 49
3.8 Coping and Gender 51
3.9 Coping across the Lifespan 53
3.10 University Students and Coping 56
3.11 The Relationship between Self-Efficacy and Coping 57
3.12 Conclusion 60

Chapter Four: Research Design and Methodology 61

4.1 Chapter Overview 61
4.2 Aims of the Research 61
4.3 Research Design and Methodology 62
4.4 Participants and Sampling Procedure 63
4.5 Measures 64
   4.5.1 Biographical Questionnaire 64
   4.5.2 General Perceived Self-Efficacy Scale (GSE) 65
      4.5.2.1 Reliability of the GSE 66
      4.5.2.2 Validity of the GSE 66
   4.5.3 The Ways of Coping Questionnaire 67
      4.5.3.1 Reliability of the Ways of Coping Questionnaire 70
      4.5.3.2 Validity of the Ways of Coping Questionnaire 72
      4.5.3.3 Critical Input Regarding the Ways of Coping Questionnaire Psychometric Properties 73
4.6 Procedure 74
4.7 Data Analysis 75
4.8 Ethical Considerations 77
   4.8.1 Informed Consent and Anonymity 78
   4.8.2 Voluntary Participation 78
4.8.3 Beneficence and Risk of Harm

4.9 Conclusion

Chapter Five: Results and Discussion

5.1 Chapter Overview

5.2 Biographical Description of the Sample

5.2.1 Gender

5.2.2 Age

5.3 Results of the Measures

5.3.1 The General Perceived Self-Efficacy Scale (GSE)

5.3.1.1 The General Perceived Self-Efficacy Scale (GSE) of Males

5.3.1.2 The General Perceived Self-Efficacy Scale (GSE) of Females

5.3.2 The Ways of Coping Questionnaire

5.3.2.1 The Ways of Coping Questionnaire of Males

5.3.2.2 The Ways of Coping Questionnaire of Females

5.4 The Interrelationship between the GSE and the Ways of Coping Questionnaire

5.4.1 The Interrelationship between the GSE and the Ways of Coping Questionnaire of Males

5.4.2 The Interrelationship between the GSE and the Ways of Coping Questionnaire of Females

5.5 Conclusion
Chapter Six: Conclusion, Limitations and Recommendations 104

6.1 Chapter Overview 105

6.2 Aims of the Study Revisited 104

   6.2.1 Exploration and Description of the Self-Efficacy of the Sample in the Current Study 104

   6.2.2 Exploration and Description of the Ways of Coping of the Sample in the Current Study 105

   6.2.3 Exploration and Description of the Relationship between the Self-Efficacy and Ways of Coping of the Sample in the Current Study 106

   6.2.4 Exploration and Description of the Relationship between Gender and Self-Efficacy and Ways of Coping of the Sample in the Current Study 107

6.3 The Value of the Research 108

6.4 Limitations of the Research 109

6.5 Recommendations 111

6.6 Conclusion 113

References 115

Appendices
List of Tables

Table 1: The p-values and Descriptions as Suggested by Guilford (1946)  77
Table 2: Gender Distribution of the Sample (N=128)  81
Table 3: Age Distribution of the Sample (N=128)  82
Table 4: Descriptive Statistics of the Age of the Participants (N=128)  83
Table 5: Descriptive Statistics of the General Perceived Self-Efficacy Scale (N=128)  85
Table 6: Descriptive Statistics of the General Perceived Self-Efficacy Scale for Males (N=34)  86
Table 7: Descriptive Statistics of the General Perceived Self-Efficacy Scale for Females (N=94)  87
Table 8: Descriptive Statistics of the Ways of Coping Questionnaire (N=128)  89
Table 9: Descriptive Statistics of the Ways of Coping Questionnaire for Males (N=34)  91
Table 10: Descriptive Statistics of the Ways of Coping Questionnaire for Females (N=94)  92
Table 11: Correlation Matrix: The Ways of Coping Questionnaire and GSE (N=128)  94
Table 12: Correlation Matrix: The Ways of Coping Questionnaire and GSE for Males (N=34)  99
Table 13: Correlation Matrix: The Ways of Coping Questionnaire and GSE for Females (N=94)  101
Abstract

This is a quantitative, exploratory study focusing on self-efficacy and ways of coping of male and female first-year psychology students at a university in the Nelson Mandela Metropole. The study aimed to explore and describe the relationship between The General Perceived Self-Efficacy Scale and the Ways of Coping Questionnaire of first-year university psychology students. A non-probability convenience sampling technique was employed. The sample consisted of 34 males and 94 females between the ages of 18 and 21 years, who were registered for a first-year psychology module. Descriptive and inferential statistics were used to analyse the data. The results showed moderate correlations between general perceived self-efficacy and problem-focused and focusing on the positive as ways of coping. In addition, the results showed significant relationships between general perceived self-efficacy and problem-focused coping, seeking social support and focusing on the positive as ways of coping. Gender differences with regards to the constructs of coping and self-efficacy were also explored. Limitations of the present research were noted and recommendations for future research were proposed.

Key words: self-efficacy, ways of coping, stress, first-year university students
Chapter One
Introduction

1.1 Chapter Overview

The present chapter provides an overview of the theory underlying the primary variables in this research. The factors which motivated the need for this research are discussed, and based on these motivating factors, the proposed aims of the research are outlined. The present chapter also includes an outline of the subsequent chapters of the treatise.

1.2 Theoretical Overview

1.2.1 Health Psychology

According to Friedman (2002) health psychology became acknowledged as an official discipline in the American Psychological Association in 1979. The development of health psychology is attributed to professionals in different fields of study who identified the roles and influences of health and psychological factors in their fields of study and drew attention to them. These professionals included medical sociologists, medical anthropologists, public health scientists, social-personality psychologists, researchers in psychosomatic medicine, physiologists, psychophysicists, behaviourists, and clinical psychologists working with medical patients (Friedman, 2002).

General, broad definitions of health psychology include references to the use of psychology in health and disease. A more detailed definition of health psychology has been outlined by Matarazzo (1982) as
the aggregate of the specific educational, scientific, and professional contributions of the discipline of psychology to the promotion and maintenance of health, the prevention and treatment of illness, the identification of etiological and diagnostic correlates of health, illness, and related dysfunction, and to the analysis and improvement of the health care system and health policy formation (p.4).

1.2.2 The Pathogenic Orientation

The field of health psychology has undergone a general shift in focus over the years. The pathogenic orientation, which focuses on the origins and development of disease and illness, formed most of the original ideas in health psychology (Strümpfer, 1990). The biomedical model is based on the theoretical assumptions of the pathogenic orientation. This model was most commonly used during the 1950s and 1960s (Sarafino, 2006). The model is based on the assumption that disease is a problem associated with the body and is distinct from the psychological and social processes of the mind (Sarafino, 2006). The biomedical model originates from the Cartesian dualism which regards the mind and body as separate entities. The model focuses on the influence of the various biological systems such as the nervous and endocrine systems, and emphasises pharmaceutical and other medical treatment. As the relationships between cognitions, affect and behaviour, and the endocrine and nervous system became more evident, so the need to include social and psychological factors in the understanding and treatment of illness was emphasised (Sarafino, 2006).

Marks, Evans, Willig, Woodall and Sykes (2005) attribute the growth in health psychology to the awareness of the influence of behaviour on illness and mortality and the development of the idea that individual’s may hold some degree of responsibility for their own health and
development of disease. The more recent focus of health psychology is on the origins and promotions of health (Sarafino, 2006). The relatively recent establishment of this field means that it is still developing at present.

1.2.3 The Salutogenic Orientation

This recent focus of health psychology has its roots in the salutogenetic orientation as opposed to the pathogenic orientation. The salutogenic model was developed by Antonovsky (1988) as a response to the previous theoretical framework which is primarily concerned with pathology. The salutogenic paradigm explores positive subjective experiences, focuses on individual’s strengths rather than weaknesses, and investigates the maintenance and development of health and wellness (Friedman, 2002). The salutogenic paradigm encourages a focus on the promotion of health. Based on the salutogenic paradigm, different theories seek to explain and predict the relationship between human behaviours and the risk or prevention of the start of disease (Schwarzer, 1992). Strümpfer (1995) broadened the concept of salutogenesis to that of fortigenesis which generally refers to the origins of psychological strength. According to Strümpfer (1995) there are six factors which determine the strength of ability to effectively maintain and enhance health and wellness. These include sense of coherence, hardiness, potency, self-efficacy, learned resourcefulness and locus of control (Strümpfer, 1995). In addition to the focus on the origins of psychological strengths, Wissing and Van Eeden (2002) emphasize that focus should also be given to the nature, dynamics and development of psychological well-being.

In a response to the shortcomings of the biomedical model, Engel (1977) devised the biopsychosocial model. Engel (1977) criticized the biomedical model regarding its
reductionistic, dualistic, and pathogenic theoretical assumptions. According to Engel (1977), the practice of medicine needs to include a person-centered approach which does not ignore the psychological and social contexts of the individual (Marks et al., 2005).

1.2.4 The Biopsychosocial Model of Health and Illness

The biopsychosocial model assumes that health is affected by biological, psychological, and social factors. The relationship between health and these three factors is bidirectional. This means that all three factors influence and are influenced by an individual’s health (Sarafino, 2006). The model consists of three components, namely biological, psychological and social.

According to Sarafino (2006), the biological component of the model refers to the genetic factors that are inherited from parents or previous generations. The biological component also refers to physiological processes and composition. In order for optimal functioning to occur, all parts of the complex physical system need to function and interact with each other effectively.

The psychological component of the model refers to behavioural and mental processes such as cognition, emotion and motivation (Sarafino, 2006). Thought content and process plays a significant role in health and illness. For example, thinking that your health will be restored following a particular illness without medical intervention will discourage you from seeking medical intervention. Emotions whether positive or negative affect a person’s health and are also affected by a person’s health. Emotions also influence the choices people make in obtaining treatment. Various factors contribute to why people perform certain behaviours, especially in relation to their health (Sarafino, 2006).

The social factors involved in the social component of the model pertain to a person’s interactions and relationships. Included in the social component of the model are issues such as
culture, media, government and relatives. There is a bidirectional influence between these issues and a person’s health status (Sarafino, 2006).

Although the role of each component of the model is important, the model only exists through the interplay of these three components. Sarafino (2006) describes the interplay of the three components of the biopsychosocial model as being a system. According to Sarafino (2006) a system consists of various components which are always changing and interacting with each other. This means that the components involved in the system are never static, but rather continually changing and evolving, in order to maintain a state of homeostasis. The interrelatedness of the components of the system means that a change in one component will have an effect on all other components of the system. Based on systems theory, the components are linked to each other in hierarchical levels. Hence a change in one level in the hierarchy will result in a change at other levels.

According to Sarafino (2006), systems theory illustrates the interrelatedness between the biological, psychological and social components. Biological factors involve changes at an internal micro-level, and psychological and social factors involve changes at an internal or external macro-level, which illustrates the hierarchical nature of the system (Sarafino, 2006). Bronfenbrenner’s ecological systems theory (1979) identifies five systems within a person’s environment which illustrate the interacting nature of factors which influence the development of a person. The systems identified by Bronfenbrenner (1979) include the microsystem, which refers to the persons immediate surroundings for example family members; the mesosystem, which is the interactions among the different features of the immediate setting, for example, the school and home; the exosystem, which refers to other social contexts such as the wider
community; the macrosystem, which consists of the wider cultural and subcultural context; and
the chronosystem, which is the change in all these environments across time (Sarafino, 2006).

The biopsychosocial model of health and illness can be considered as an appropriate and
adequate broad theoretical framework for the constructs of self-efficacy and coping since these
constructs are linked to both health and psychology. Extensive research illustrates the
association between self-efficacy and coping in various stressful events such as suffering a stroke
(Ch’ng, 2004), experiencing surgery (Schwarzer, Boehmer, Luszczynska, Mohamed & Knoll,
2005), or having work related stress (Rothman & van Rensburg, 2002). These studies suggest a
link between the psychological constructs of self-efficacy and coping, and health related
problems. Hence all three components of the biopsychosocial model are involved in varying
degrees in self-efficacy and ways of coping.

1.2.5 Self-Efficacy

The construct of self-efficacy has its roots in the Social Cognitive Theory which was
devised by Albert Bandura. Bandura (1997) defines self-efficacy as the belief a person has in
their capability to perform a certain task successfully. The construct of self-efficacy has recently
received more attention as researchers have focused on a person’s ability to exert some degree of
responsibility over events that have an impact on their life (Schwarzer, 1992). This suggests the
salutogenic nature of the construct. Self-efficacy is most commonly defined in relation to a
specific task since it involves a person’s beliefs regarding that task (Schwarzer, 1992), however
general self-efficacy refers to a broad, overall sense of self-efficacy.
1.2.6 Coping

Over the last century, the construct of coping has received extensive attention by various researchers (Freud, 1966; Haan, 1977; Lazarus & Folkman, 1984; Menninger, 1963; Vaillant, 1977). Lazarus and Folkman (1984) define coping as cognitions and behaviour that are used by an individual to manage or decrease the effects of a demand which is either internal or external. Lazarus and Folkman’s (1984) transactional model of stress and coping describes the nature of coping as being a dynamic and interactional process. Both personal and environmental factors are involved in this process. The model highlights the notion of appraisal, which is involved in the coping process. The model also defines two purposes of coping which include problem-focused and emotion-focused coping. Previous research (Folkman & Lazarus, 1988; Forsythe & Compass, 1987; Gollwitzer, 1999) has explored the link between coping and variables such as personality, psychological adjustment, and self-efficacy.

1.3 Problem Statement

The general focus of the current research is to explore and describe the self-efficacy and ways of coping of first-year university students. The current research is of interest for several reasons which are outlined below.

Previous research of students’ experience of stress is limited because the concept cannot be measured in the way that tests measure learning content and competency (Kuh, Kinzie, Schuh & Whitt, 2005 in DiRamio & Payne, 2007). Academic ability and performance can be measured using an examination or test. However, self-efficacy and ways of coping have previously been assessed by the interpretation of concepts such as leadership development and engagement, and although these measurements may be used to supplement such an assessment, they cannot
exhaust the evaluation and prediction of self-efficacy and ways of coping (DiRamio & Payne, 2007). The current research will aid in a deeper understanding of the assessment and measurement of self-efficacy and ways of coping.

Furthermore, additional research into self-efficacy and ways of coping are needed for the development and enhancement of programmes offered by tertiary educational institutions that are designed specifically for the well-being of their students. In a study by Folger, Carter and Chase (2004), it was revealed that a university’s traditional support services were insufficient in dealing with the needs of first-generation college students as they moved into their first year at university. Research on college students in the United States of America has also indicated that there are a limited number of interventions with the main aim of increasing self-efficacy of all university students (Ramos-Sanchez & Nichols, 2007). The need for implementing programmes which help students in the first few weeks of their university career should be addressed, since the first few days at university can have a significant impact on how students experience the rest of their university years (Gardner, 1986).

The constructs of self-efficacy and coping are both dependent on numerous variables (Lazarus & Folkman, 1984; Schwarzer & Jerusalem, 1995). There are multiple causes or effects of high or low self-efficacy. In addition, there are no concrete ways of coping that are utilized by all individuals in all contexts. Thus, due to the numerous and complex variations and applications associated with these constructs, continual research and developments in these areas are necessary.

The current study aims to contribute to the research of these constructs in a South African context. The challenges, for example, unemployment and HIV/AIDS, facing South African
students are far-reaching. Research on self-efficacy and ways of coping specifically aimed at this age group may aid in the development or enhancement of interventions for such challenges.

1.4 Aims of the Research

Based on the motivation for this study, the aims of the present research were:

1. To explore and describe the self-efficacy of male and female first-year psychology students at a university in the Nelson Mandela Metropole.

2. To explore and describe the ways of coping of male and female first-year psychology students at a university in the Nelson Mandela Metropole.

3. To explore and describe the relationship between self-efficacy and ways of coping of male and female first-year psychology students at a university in the Nelson Mandela Metropole.

4. To explore and describe the relationship between gender and self-efficacy and ways of coping of male and female first-year psychology students at a university in the Nelson Mandela Metropole.

1.5 Chapter Overview of the Treatise

This chapter introduces the study. The theoretical context upon which the study is based has been outlined, and the motivation, and the primary aims of the study have also been provided in this chapter.

Chapter 2 provides an analysis of the construct of self-efficacy. Various theories pertaining to the study of self-efficacy are discussed. The chapter outlines the different processes of human functioning which influence self-efficacy and its sources. The chapter concludes with a brief discussion on self-efficacy at different stages across the life span, with particular focus on the
early adulthood years as this is the stage of development of the sample of subjects in the current research.

Chapter 3 focuses on the construct of coping. Various theories regarding coping which have developed over the years are outlined. The chapter discusses different aspects associated with coping such as stress, resources, and goals of coping. Since the current research focuses specifically on coping in first-year university students, a brief overview of coping across the specific life stage as well as the construct of coping in university students is presented.

Chapter 4 outlines the research design and methodology used in the present study. The chapter presents a detailed account of the primary aims, participants, and sampling procedures of the current study. The means used to collect data as well as the procedures followed in collecting and analyzing the data are also provided. Finally, the ethical guidelines pertaining to the current study are also discussed.

Chapter 5 discusses the results of the research. The results are presented in both tabulated and written formats. The chapter also presents a discussion of the results in relation to the constructs outlined in the literature review in Chapters 2 and 3.

Chapter 6 presents the conclusions, limitations, and recommendations of the study. The chapter discusses the limitations of the present study and offers recommendations for future research.

1.6 Conclusion

This chapter introduced the constructs employed in this research study, namely self-efficacy and ways of coping, and provided an overview of the theory underpinning the constructs. Also included in this chapter are the factors motivating the need for this research and the aims of the
current study. The chapter concluded with a brief summary of the contents in the chapters of this
treatise. The following chapter will provide a detailed discussion of self-efficacy.
Chapter Two
Self-Efficacy

2.1 Chapter Overview

The present chapter provides a concise analysis of various aspects of self-efficacy. The construct and study of self-efficacy as presented by various theorists is outlined. In order to provide a more thorough understanding of self-efficacy, the concept of efficacy expectations is described. The present chapter discusses the different processes of human functioning which self-efficacy is considered to influence, namely cognitive, motivational, affect and selection processes. The three sources of self-efficacy which include enactive self-mastery, role-modelling, and verbal persuasion and measurements of self-efficacy are also outlined in the present chapter. Since the present research focuses on self-efficacy specifically in first-year university students, a brief description of self-efficacy across the lifespan as well as gender differences in self-efficacy are also presented.

2.2 The Construct and Study of Self-Efficacy

The construct of self-efficacy stems from Bandura’s (1977) Social Learning Theory (Schwarzer, 1992). Through this theory, Bandura emphasised the influence of cognitive aspects such as observation, when learning (Shaffer, 2002). Bandura later redefined the Social Learning Theory into the Social Cognitive Theory. According to this theory, human behaviour is influenced by both personal and environmental factors. These personal (for example cognitions), and environmental factors dynamically interact with each other (Shaffer, 2002). The construct of self-efficacy involves the underlying principles of the Social Cognitive Theory.
According to Bandura (1997), self-efficacy refers to beliefs about the ability to successfully execute a behaviour required to produce a certain outcome. Self-efficacy often relates to a specific task and is considered to be a strong determining factor in how successful a person will be in completing that task. Since a specific task is involved, a person’s degree of self-efficacy may differ between tasks and thus is not constant. Although self-efficacy is mostly task-related, some researchers have provided an understanding of a more generalized sense of self-efficacy termed general self-efficacy. According to Schwarzer (1992), general self-efficacy refers to an overall, constant sense of personal belief in the ability to manage and cope with a range of stressful events and situations.

Self-confidence refers to a broad personality trait evident in a person’s behaviour and affect across most situations, and self-esteem is the degree to which a person evaluates themselves positively. Unlike self-confidence and self-esteem, self-efficacy is more precise and confined as it pertains to a specific task. Self-efficacy is also reported to be a stronger determinant of effective task completion and able to be more readily enhanced than self-confidence and self-esteem (Heslin & Klehe, 2006).

Interest in the construct of self-efficacy has increased recently as researchers have focused more on a person’s ability to exercise some degree of control over events that influence their life (Schwarzer, 1992). This has raised questions regarding the causal relationship between self-efficacy beliefs and motivation, affect and action.

When attempting to understand a person’s resultant behaviour, actions and choices when faced with a specific task, it is important to establish their sense of efficacy (Nicolaidou & Phillippou, 2003). The Collins Concise English Dictionary (2001) defines efficacious as the
production of a deliberate outcome. According to Bandura (1994), this sense of efficacy is inherent in people’s cognitions, affect and resultant behaviour in response to a specific task.

Bandura’s beliefs oppose previous theories of people being viewed as reactive agents molded by environmental factors or inner impulses (Bandura, 1986). According to Bandura (1986), human behaviour involves cognitive, vicarious, self-regulatory and self-reflective processes. In this way, humans are viewed as being self-organizing, proactive, self-regulating and self-governing.

The construct of self-efficacy is based on the social cognitive theory which upholds that a cognitive process affects a person’s behaviour and as a result influences a particular outcome (Bandura & Locke, 2003; Ramos-Sanchez & Nichols, 2007). Therefore the cognitive process of self-efficacy influences a person’s behaviour and resultant action. Coping self-efficacy is a specific subtype of the construct of self-efficacy.

2.3 Coping Self-Efficacy

Within the broad construct of self-efficacy there exist different subtypes of the construct. One of the subtypes of self-efficacy is coping self-efficacy. Based on previous research (Ch’ng, 2008), the term coping self-efficacy has been used to refer to the precise measurement of self-efficacy for the description of coping behaviours. Although the current research is concerned with the relationship between self-efficacy and coping behaviour, the measurement used to assess self-efficacy is based on a person’s general sense of self-efficacy as opposed to their self-efficacy oriented specifically to coping. The current study is also focused on the personal evaluation of self-efficacy rather than actual or independently verified evaluations of self-efficacy. In previous research, the term self-efficacy for coping has been used interchangeably
with generalised self-efficacy (Ch’ng, 2008). Therefore in the current research, the terms self-efficacy for coping, generalised self-efficacy and perceived self-efficacy will be used as opposed to coping self-efficacy since the term coping self-efficacy is more specific and restrictive in nature. In order to thoroughly understand the construct of self-efficacy, it is necessary to explore the construct of efficacy expectations (Cain, 2001).

2.4 Efficacy Expectations

According to Bandura (1997, p. 193) efficacy expectation is defined as “the conviction that one can successfully execute the behaviour required to produce the outcomes”. Efficacy expectation differs from response-outcome expectation. Response-outcome expectation is defined by Bandura (1997, p. 193) as “a person’s estimate that a given behaviour will lead to certain outcomes”. Unlike response-outcome expectation, efficacy expectation holds that specific behaviour will only produce a successful outcome if the person believes that they have the capability to produce the successful outcome (Cain, 2001). The capability to produce the successful outcome refers to the person’s feelings that they have the resources necessary to execute the required behaviour.

However, Bandura (1997) emphasizes that efficacy expectation alone cannot determine behaviour. A person may have a high degree of efficacy expectation to successfully produce an outcome but may lack the skill or ability necessary. Therefore, behaviour determinants in terms of choice of activity and the degree of effort and persistence are influenced by both adequate skills and efficacy expectancy.

According to Bandura (1997) there are three dimensions of efficacy expectations namely magnitude, generality, and strength. Efficacy varies in magnitude since individuals may believe
that they can accomplish easier tasks more successfully than difficult tasks. The generality of efficacy refers to whether the individual has a circumstantial sense of efficacy or a universal sense of efficacy. Whether individuals believe that they can only successfully complete a specific task or whether they have the ability to complete a range of similar tasks is largely dependent on the nature of the performed specific task. The strength of the efficacy expectation varies. An individual with a weak efficacy expectation will react differently to an individual with a strong efficacy expectation when faced with the same task (Cain, 2001).

2.5 Efficacy Processes

According to Bandura (1997), human functioning is regulated through self-efficacy beliefs through four primary processes. These different processes of human functioning are considered to be influenced by the concept of self-efficacy. These four efficacy-activated processes include cognitive, motivational, affective and selection processes. These processes will now briefly be defined and discussed.

2.5.1 Cognitive Processes

Thought patterns that influence performance by either enhancing or weakening it are affected by self-efficacy (Bandura, 1997). Human behaviour is influenced by the setting of goals. A relationship exists between the setting of personal goals and perceived self-efficacy. Individuals who believe that they are capable of successfully performing tasks, in other words they have a high degree of perceived self-efficacy, will set higher goals and instill greater effort into the achievement of the goals (Bandura & Wood, 1989).
Visualization of task performance and achievement is a thought process influenced by self-efficacy (Bandura, 1992). The procedure for most actions is initially modified in cognitions. A person’s self-efficacy affects their cognitive construction and practicing for a forthcoming event (Bandura, 1997). According to Bandura (1992) cognitive processes are used to predict outcomes and to discover ways to exercise control in order to manage these outcomes. This involves thought processes such as utilizing previously established knowledge to create ideas, evaluating these ideas, integrating them into expected outcomes, challenging, testing, and revising them according to the actual outcome. These processes can be challenged and judged by individual and environmental factors. Since these processes involve judgments in terms of failure or success, and situational demands, a high degree of efficacy is needed to remain goal focused.

The measurement and assessment of cognitive processes such as decision-making is challenging since it involves using static as opposed to naturalistic environments in which to conduct the research (Beach, Barnes, & Christensen-Szalanski, 1986). A study (Wood & Bandura, 1989) was conducted which explored manager’s decisions and thoughts regarding a simulated organization on a computer programme. The study involved assessing the manager’s perceived self-efficacy, the goals they set for the group to achieve, their level of performance, and their thought content and processes when setting rules to manage the group. In terms of social cognitive theory, the manager’s cognitive component involved exploring their level of perceived self-efficacy, the personal goals they set and the quality of their analytic thinking.

Personal thoughts regarding the concept of ability have been found to influence efficacy beliefs (Dweck & Leggett, 1988). The concept of ability can be viewed as either an attainable skill, or a set and rigid capacity that cannot be changed. To believe that the concept of ability is something which is attainable and acquirable involves adopting an attitude of learning,
developing, and enhancing capabilities (Bandura, 1992). Individuals with this belief tend to regard errors as opportunities for growth rather than failures. They are focused on developing their knowledge, and evaluate their performance by their degree of personal improvement rather than comparing their performance to others. In comparison, those who believe that ability is a fixed capacity, regard performance as having inherent cognitive properties rather than acquired skills. They tend to evaluate their performance according to their errors. They also place more value on the natural ability to perform rather than the effort involved. Thus the achievements of others are threatening because it implies deficits in their personally perceived inherent abilities (Bandura, 1992).

Based on the observations made in the study by Wood and Bandura (1989) on managers and their organizations, those who viewed the concept of ability as a fixed capacity, tended to doubt their ability to successfully manage their organizations, their analytic thinking became more inconsistent, their desire to achieve lessened, and the organizations performance levels decreased. In contrast, those managers who believed in the acquisitional nature of ability displayed a higher degree of self-efficacy in their managerial skills. Analytic thinking was consistently utilised, goals were achieved and further challenges set (Wood & Bandura, 1989). Thus the view of the concept of ability influences factors such as perceived self-efficacy, development of skills, and effort and persistence in tasks and goals.

In addition to the belief in the concept of ability, another factor influencing the cognitive processes in the activation of efficacy is the belief regarding the degree to which the environment can be influenced or controlled (Bandura, 1992). In the study (Wood & Bandura, 1989) on managers and their organizations, those who believed they had little or no influence over their organization doubted their decisions and lowered their performance standards. Conversely, a
stronger sense of managerial efficacy was evident in those who believed they had the ability to exercise some degree of control over their organization. In addition, more challenging goals were set, and a greater amount of effort and persistence was evident (Wood & Bandura, 1989).

2.5.2 Motivational Processes

According to Bandura (1992), cognitive processes are involved in human motivation. Self-efficacy can be used to predict the general amount of persistence and effort that a person exerts in any given task (Bandura, 1997; Heslin & Klehe, 2006). According to Bandura (1997), there is a direct relationship between self-efficacy and the degree of effort and persistence in completing a task. There are various theories of cognitive motivators. These include attribution theory, expectancy-value theory, and goal theory.

In terms of attribution theory, the analysis of causal attributions and aspects of self-efficacy illustrates a bidirectional relationship between these two factors (Bandura, 1992). Self-efficacy beliefs influence what is attributed as the cause of the outcome (Silver, Mitchell & Gist, 1989). The factor that is regarded as being the reason for a specific outcome, for example, situational factors, difficulty of the task, or effort required; will depend on the degree of perceived self-efficacy (Bandura, 1992). A person with a high degree of self-efficacy may attribute a failure to a lack of effort, however a person with a low degree of self-efficacy may attribute a failure to a lack of ability. Furthermore, the bidirectional relationship means that the attributed causal factor will further influence the degree of self-efficacy. A failure at a task which is attributed to a lack of ability will probably decrease a person’s sense of self-efficacy. Motivation, performance and reactions to outcomes are influenced by casual attributions primarily through beliefs of self-efficacy (Bandura, 1992).
A study on children’s self-efficacy and mathematical abilities was conducted by Collins (1982). In the study, the children’s mathematical ability was controlled but their perceived self-efficacy differed. Hence, children with the same mathematical ability but differing degrees of self-efficacy were given the same mathematical problems to solve. The study revealed that children with higher degrees of perceived self-efficacy correctly answered more problems, had more attempts at difficult problems, and chose to persist in finding correct solutions to previously failed attempts at problems than children with lower degrees of self-efficacy. This study revealed that performance was influenced not only by actual ability, but also by perceived self-efficacy in personal ability.

Based on expectancy theory, motivation is activated by the expectation of specific behaviour to produce a desired outcome, as well as the degree of significance of the desired outcome (Feather, 1982). The expectancy that the individual has in completing the task will increase his level of effort and persistence in the task. According to Bandura (1992), the expectation of a failed performance will invoke adverse results. Thus a person with a high degree of self-efficacy beliefs will expect a positive outcome. Hence the type of outcome is dependent in some degree on the belief in the ability to perform the task for that outcome.

The role of goal theory in the regulation of cognitive motivation involves the effect of challenging goals and evaluating and comparing performance (Bandura, 1992). Through goal setting, motivation is enhanced and sustained. Motivation through goal setting utilises the process of cognitive comparison and is self-influencing in nature (Bandura, 1992). Behaviour is directed and purposeful when it is performed with the intention of fulfilling a goal in order to achieve self-satisfaction. Behaviour which does not produce self-satisfaction effects motivates the individual to increase persistence and effort in their behaviour (Bandura, 1992).
According to Bandura (1992), motivation through the use of goals is regulated by three types of self-influences. These include personal reactions to one’s performance, perceived self-efficacy in the attainment of goals and the altering of goals based on current performances. The setting of goals, degree of effort to attain them, length of perseverance when facing undesired outcomes and resilience to aversive results, are influenced by perceived self-efficacy (Bandura, 1992). Those with limited self-efficacy will tend to abort their goals when they encounter challenging situations thus illustrating the influence of self-efficacy on degree of effort and persistence (Bandura, 1992).

2.5.3 Affective Processes

Individuals often show signs of depression and anxiety when they think they are incapable of managing a given task or aversive incident. Thus, a relationship exists between the degree of self-efficacy and the self-regulation of affective states (Bandura, 1997). According to Bandura (1997), the nature and severity of emotional incidents are affected by self-efficacy beliefs in three primary ways. Firstly, self-efficacy beliefs influence the way aspects of an experience are viewed. Thus the cognitive representation of a specific event differs between people and is influenced by self-efficacy. Secondly, the regulation of control that a person feels capable of, regarding disturbing thought patterns is influenced by self-efficacy beliefs. Thirdly, self-efficacy beliefs influence the environment which in turn affects the person’s emotional state (Bandura, 1992).

The belief in the ability to exercise control over a pending threat or stressful event results in either positive or negative cognitions, and thus influences the degree of anxiety that is experienced (Beck, Emery & Greenberg, 1985). A person with a high degree of self-efficacy
will assume a high level of belief in the ability to exert some amount of control over the pending stressful event. Arousal of anxiety is increased when a person does not believe that he/she is capable of managing a potentially threatening situation (Bandura, 1992). The social cognitive theory conceptualizes this notion. A person’s ability to manage a potentially threatening situation and the influence of self-efficacy beliefs during the management process brings to attention the concept of coping efficacy. Those who believe that they have the ability to cope with an aversive event do not develop anxious thoughts and are thus not influenced by them.

According to Bandura (1992), apprehensive and distressing cognitions impair functioning abilities because they cause a person to focus solely on their ineffective ways of coping, making aspects of the threat seem unrealistically more distressing, increasing negative predictions of the outcomes and enhancing dichotomous ways of thinking. A person who has limited belief in their ability to successfully cope with a given demand, in other words a person who has a low coping efficacy, will face increased stress levels, increased heat rate, blood pressure and catecholamine secretion (Bandura, 1997). This illustrates that coping efficacy has an effect on the neurobiological features of emotional states. Neurobiological aspects are linked to the immune system which provides evidence for the influence of coping efficacy on the immune system. Numerous studies have been conducted globally investigating the impact of a person’s self-efficacy and their health behaviour. Research by Bandura (1992) and Lazarus and Folkman (1987), shows that various health factors which self-efficacy influences include, coping with stress, affected immune function, high pain tolerance and affected blood pressure, heart rate and other cardiovascular functions. Further research also illustrates how developing a stronger sense of self-efficacy can result in the enhancement of aspects of the immune system (Bandura, 1992).
Generally, the abovementioned theoretical research and assumptions illustrate that self-efficacy primarily influences affective states through cognitively-generated arousal.

In addition to the relationship between anxiety and perceived self-efficacy, an association also exists between self-efficacy and avoidance behaviour in situations that may be perceived as risky. Bandura (1992) reported that the choice to engage in a stressful encounter or activity is influenced more by people’s beliefs in their ability to successfully cope with the stressful encounter or task rather than their anticipated anxiety regarding the encounter or task.

Self-protective action is more often influenced by perceived self-efficacy rather than anxiety. According to Bandura (1988), a sense of perceived coping self-efficacy influences a person’s choice to engage in more daring activity. Research (Williams, Kinney, & Falbo, 1989 in Bandura, 1992) explored the relationships between perceived self-efficacy, expected anxiety and phobic or coping behaviour. According to the results, when anticipated anxiety was controlled for, a relationship was evident between perceived self-efficacy and phobic behaviour, however when perceived self-efficacy was controlled for, no significant association was evident between anticipated anxiety and phobic or coping behaviour. Generally, arousal of anxiety and avoidant behaviour are effects rather than causes of a low degree of perceived self-efficacy (Bandura, 1992).

Bandura (1992) suggests that an association is also evident between the exercise of control through perceived self-efficacy and feelings of despondency. Even if the task is capable of being completed, the perception of ability which means the degree of self-efficacy, will determine the degree of helplessness or hopelessness regarding the successful completion of the task. This sense of helplessness and hopelessness affects performance as well as emotional well being. A sense of self-worth can be caused my numerous factors but is related to features of self-efficacy.
Continual inability to believe in the capabilities to successfully manage adersive situations or perform tasks and activities results in a low self-esteem and self-worth and can contribute to the onset of depressive episodes (Bandura, 1992).

In a study conducted by Kavanagh and Wilson (1989) explorations were made based on the link between dejecting thought patterns and depression. The belief in the ability to successfully control these thoughts influenced the incidence, extent and reoccurrence of depressive episodes. Based on the results of the study (Kavanagh & Wilson, 1989), a direct relationship is evident between a low perceived self-efficacy in the ability to change negative thoughts and the occurrence of depression. Similarly, a weaker sense of perceived self-efficacy in the use of treatment, the more prolonged and declining the depression and the greater the risk for relapse. In a South African study (Rothmann & van Rensburg, 2002) results suggested that low levels of general perceived self-efficacy were associated with a higher incidence of suicidal ideation among police members.

The direct relationship between perceived self-efficacy and depression may be seen as contradictory to the positive association between perceived self-efficacy and motivation (Bandura, 1992). The association between perceived self-efficacy and motivation illustrates how belief in the achievement of goals can encourage the setting of higher standards and challenges for achievement. On the contrary, as previously mentioned, continual belief in the inability to perform tasks or reach goals can lead to despondency and even apathy. According to social cognitive theory (Bandura & Abrams, 1986), the result of either feelings of motivation or depression is dependent on both perceived self-efficacy as well as setting goals at a realistically attainable level. A person who has a low sense of self-efficacy but who continues to demand
unrealistic attainment of their goals will develop feelings of despondency (Bandura & Abrams, 1986).

It is important to note that the relationship between emotional states and self-efficacy is bidirectional. According to Kavanagh and Bower (1985), a negative emotional state decreases perceived self-efficacy levels. A sense of helplessness and hopelessness which are symptoms of a depressive mood state will result in a lower sense of self-efficacy since it will decrease the ability to feel capable of coping with adversive events or challenging tasks. In comparison, a positive mood will illicit positive thought patterns, increasing the level of perceived self-efficacy which will enhance motivation and thus increase chances of accomplishments which in turn will continue the positive mood state (Bandura, 1992). In addition to the relationship between self-efficacy and affective processes, self-efficacy is also activated though selection processes.

2.5.4 Selection Processes

In addition to the direct relationship between self-efficacy, effort and persistence, a relationship between self-efficacy and the choice of activity or task participation is also evident. Self-efficacy is usually related to a specific task, because it is the belief in the capability to successfully perform a certain task (Heslin & Klehe, 2006). Therefore, the degree of a person’s self-efficacy may differ between tasks.

The belief in the ability to successfully complete the task at hand will influence the choice to participate in that task in the first place (Bandura, 1992). Selection processes are viewed as distinctive from the previously mentioned efficacy-activated processes because unless the individual chooses to engage in an activity, the cognitive, motivational and affective processes are nonexistent (Bandura, 1992).
Research by Lent, Brown and Hackett (2002) conducted on career choice and development illustrates the relationship between self-efficacy and selection processes. According to the research results, the higher the degree of self-efficacy; the more career options were explored, the greater the level of interest in careers, and the more likely the person was to enhance their academic skills required for various careers. This research illustrated that self-efficacy not only influenced the specific choice of activity, but it also affected the selection process in terms of the exploration of options.

Societal influences in environments also have an effect on self-efficacy (Hackett & Betz, 1981). For example, stereotypical gender roles, in terms of males being more capable in certain occupations than females, will influence a female’s self-efficacy about engaging in such occupation or career path (Hackett & Betz, 1981). Hence, career choice and development can be influenced more by perceived self-efficacy rather than actual ability. Thus a bidirectional relationship is evident between self-efficacy and social development, specifically in occupational choice. Social norms have an influence on a person’s self-belief in their capabilities to successfully perform a given task. Thus the person will choose not to engage in the task thereby confirming and strengthening stereotypical societal norms. As stated by Bandura (1997), self-efficacy influences the decision to engage in specific tasks, and the performance of these tasks will affect a person’s beliefs in their personal capabilities. This concept is pertinent to the current study since the first-year at university provides a range of activities that have yet to be engaged in. The student’s choice of activities; be they social events or academic modules, will be affected by their self-efficacy. To gain a more thorough understanding of the concept of self-efficacy, it is necessary to investigate the sources of self-efficacy.
2.6 Sources of Self-Efficacy

Heslin and Klehe (2006) describe three sources of self-efficacy, namely, enactive self-mastery, role-modelling, and verbal persuasion. Enactive self-mastery occurs when a person is able to successfully complete at least a small portion of a task. This provides the person with enough belief that he/she can complete the task fully, as well as having the capability to complete similar tasks. Self-mastery involves the notion of progressive mastery which is the breaking down of a difficult task into smaller, more attainable tasks which are easier to accomplish rather than the initial overall task. Enactive self-mastery requires consistent rewards for the attainment of tasks which increase in difficulty, rather than initial and repeated failure. Emphasis is placed on the celebration of success in minor tasks in order to increase a person’s self-confidence to engage in more difficult tasks (Heslin & Klehe, 2006).

Role-modelling is the source of self-efficacy in persons when they observe others performing a task successfully and thus attempt to adopt the same or similar manner to successfully perform the task too (Heslin & Klehe, 2006). Similarly, if the observed person did not perform the task successfully, then the observer will learn from the mistakes and less effective ways of completing the task. An effective role model also demonstrates the ability to learn from difficult tasks rather than becoming despondent and disillusioned. Tasks that are not successfully completed are seen as opportunities to develop abilities and to instill persistence and determination. The process of role-modelling as a source of self-efficacy involve the role-model’s ability to both effectively demonstrate and mentor successful ways of completing tasks. According to Heslin and Klehe (2006), the characteristics of the role-model being observed significantly influence the process of role-modelling as being a source of self-efficacy for the observer. Similar attributes such as gender and age of the observer and the role-model, as well
as the observer’s personal positive regard for the role-model influence the degree of self-efficacy that the observer will develop as a result of the role-modelling process.

According to Heslin and Klehe (2006), verbal persuasion as a source of self-efficacy occurs when a person is praised for their achievement of a task and encouraged to enhance their effectiveness in the successful completion of a task. The verbal persuasion must be perceived as plausible, and must focus more on the effort required by the individual to successfully perform a task rather than the inherent, natural ability of the individual. In order for verbal persuasion to be an effective source of self-efficacy, it must be paired with actions that involve the individual successfully completing a task. These successfully completed tasks act as experiences which affirm one’s efficacy and thus provide credibility for the verbal persuasion. Positive self talk is regarded as a form of verbal persuasion, hence a determining factor in self-efficacy (Heslin & Klehe, 2006). When looking at self-efficacy and related concepts, it is necessary to consider the manner in which self-efficacy is assessed and evaluated.

2.7 Measuring Self-Efficacy

According to Heslin and Klehe (2006), there is no one, standardized measurement for assessing self-efficacy because self-efficacy is often related to a specific task. Developments in the measurement of self-efficacy are necessary to establish measurements for both outcome self-efficacy and process self-efficacy with regards to a task or activity.

The General Perceived Self-Efficacy Scale is a measure used to assess a person’s general self-efficacy from their perspective (Heslin & Klehe, 2006). In a study by Luszczynska, Scholz and Schwarzer (2005) using the General Perceived Self-Efficacy Scale (GSE), the sample of students with a mean age of 21 years for males and a mean age of 20 years for female, revealed a
mean GSE score of 30.35 which is considered relatively high. The males in the sample had a mean GSE of 31 and the females showed a lower level of self-efficacy as their mean GSE score was 29.68. The GSE in the above study was also completed by a sample of participants who were swimmers. For these participants, the average age for males was 18 years and the average age for females was 17 years. The results from the GSE completed by both genders revealed a mean GSE score of 30.45. The male participants obtained a GSE mean score of 30.82 while the female participants obtained a GSE mean score of 29.71. Schwarzer, Mueller and Greenglass (1999) also administered the GSE to a sample of Canadian university students. The average age for the students was 22.6 years with the majority of students between the ages of 20 to 23 years. The results indicated that the female participants had a mean GSE score of 29.87, with a standard deviation of 4.98. The male participants mean GSE score was 31.64, with a standard deviation of 4.47. The results suggested that male Canadian university students had a higher self-efficacy than female Canadian university students.

A South African study (Rothmann & van Rensburg, 2002) explored the constructs of locus of control, general perceived self-efficacy, coping and suicidal ideation in a sample that consisted of uniformed police personnel in the North West Province. The mean score for the GSE completed by the participants was 32.83, with a standard deviation of 4.93. The results of the study also suggested that Afrikaans-speaking police members had significantly higher levels of general perceived self-efficacy than Tswana-speaking police members. The results also indicated that police members who had been diagnosed with a medical condition had lower levels of general perceived self-efficacy than police members who had not been diagnosed with a medical condition. Results from various measures of self-efficacy indicate a need to explore the
stage of development that the person is currently experiencing since this may have implications for their degree of self-efficacy.

2.8 Self-efficacy and Lifespan Development

The need for certain competencies in order to master specific tasks or demands differs according to stages of the lifespan. People vary in their degree of efficacy, however there are also characteristic efficacy factors at specific stages in the lifespan.

According to Bandura (1994), a sense of efficacy develops as the infant learns that behaviour will cause effects. Thus the newborn is not born with a sense of efficacy, but rather it develops. Since research shows the association between the belief in the ability to control aspects of one’s environment and perceived self-efficacy, the infant who starts to notice that he/she can act in ways that influence events in their environment tends to learn new and more efficacious ways of responding. However, for the infant to develop a sense of efficacy, he/she not only needs to become aware of the cause-effect relationship, but also needs to perceive his/her actions as being part of himself/herself. As the infant starts to be treated as a person distinct from others, they start to realize their ability to produce effects through their actions (Shaffer, 2002).

According to Shaffer (2002), during the toddler years, early exploration of surroundings and engaging in play activities provide chances to develop basic competencies and a sense of efficacy. The development of sensorimotor abilities enhances a child’s sense of awareness of their environment and their ability to act in it (Shaffer, 2002). During this stage of development, the child’s caregiver, parents, and siblings are instrumental in providing the means for the child to increase their sense of efficacy through social and cognitive development.
Bandura (1994) states that as children start to develop peer relationships, their sense of efficacy is influenced. Peer relationships influence self-efficacy as the child’s self-knowledge of their capabilities is widened, extensive social learning is occurring, comparisons are being made through judging and verifying own actions according to those of the peers, and selection processes occur as the child engages in activities also chosen by their peers. These factors have both an enhancing and aversive effect on self-efficacy (Bandura, 1994). According to Erickson’s Theory of Psychosocial Development, the stage between the ages of six to twelve years is defined as industry versus inferiority. At this stage, the child compares himself or herself with others. Through comparisons, the child may feel either valuable or inferior, which will affect his/her self-efficacy (Shaffer, 2002).

According to Bandura (1994), during the school going years, sources of self-efficacy are plentiful and amplified. An increase in cognitive abilities, such as the development of new skills and knowledge has an effect on self-efficacy and self-esteem (Shaffer, 2002). Modeling as a source of self-efficacy occurs frequently (Heslin & Klehe, 2006). Self-efficacy is greatly influenced by academic aspirations, interests and achievements (Bandura, 1994). During this developmental stage, subtypes of efficacy such as intellectual efficacy and teacher instructional efficacy are influenced and influential.

The challenges experienced during the adolescent stage of development influence the degree of self-efficacy. Bandura (1994) notes the influence of coping efficacy during this stage of development. The increase in independence during this stage of development poses further challenges that the adolescent must manage. A bidirectional relationship is evident between the adolescent’s coping self-efficacy and manageability of tasks or adversive events. According to Bandura (1994), perceived self-efficacy influences how the adolescent deals with factors
involved in the transition from childhood to adulthood, particularly the new demands apparent in adulthood. According to Erickson’s Theory of Psychosocial Development, a person between the ages of 12 to 20 years falls within the stage termed identity versus role confusion. The development of social and occupational identity is influenced by the degree to which the individual believes he/she has the capabilities to perform certain tasks (Shaffer, 2002).

Bandura (1994) and Shaffer (2002) state that factors such as relationships, careers, occupations and parenthood are evident in the developmental stage of adulthood, and greatly influence the construct of self-efficacy. As previously mentioned, the relationship between self-efficacy and motivation, cognitive, affective and selective processes will greatly influence the choice of career and attainment of career goals which will be evident in this stage of development.

First-year university students fall within the stage of early adulthood. Research by Chemers, Hu and Garcia (2001) in the United States focused on aspects of self-efficacy in first-year university students. Although the study primarily focused on the constructs of self-efficacy and academic performance, it provided information regarding aspects of self-efficacy in young adulthood. Of interest is the existence of a relationship between self-efficacy and performance in the year when the student will be faced with the most challenges associated with transition (Ramos-Sanchez & Nichols, 2007). The existence of this relationship at a difficult transitional stage of the person’s life has numerous implications for the person’s eventual completion of his/her university degree which will only occur in the following years (Ramos-Sanchez & Nichols, 2007).

According to Bandura (1994), during the middle years of adulthood, a person’s sense of self-efficacy generally stabilises as he/she settles into established routines in his/her life.
However, change is inevitable and middle aged adults find themselves once again readjusting their self-appraisals of capabilities according to technical and social changes. For example, competition from younger members in the work place may cause people to reassess their capabilities and will therefore affect their sense of self-efficacy.

The final years of life propose further bidirectional influences involving self-efficacy. Biological factors responsible for declining abilities, for example memory functions, will result in the need to readjust perceived capabilities. Bandura (1994) highlights factors involved in this life stage which affect one’s perceived-self-efficacy such as relocating, retirement, and dealing with the deaths of friends and spouses. Similar to the early adulthood years, the person’s ability to cope with these events will be affected by his/her sense of self-efficacy. The effect of perceived social efficacy will influence the reliance and use of social support to cope with these adverse events. The affective process involved in the regulation of efficacy will be influenced as symptoms of depression may result in this life stage (Bandura, 1994).

2.9 Self-Efficacy and Gender

Numerous studies (e.g., Lent, Brown & Hackett, 2005; Pajares & Miller, 1994) have been conducted which investigated the interaction of self-efficacy and gender with regards to a specific task or challenge. In a study by Kumar and Lal (2006) on the role of self-efficacy and gender difference among adolescents’ intelligence quotient, no significant relationship or interaction was evident between self-efficacy and gender. In studies regarding the influence of self-efficacy on chosen career paths, factors such as gender, culture and race were found to influence the concept of self-efficacy with regard to career (Lent et al., 2005). According to Pajares and Miller (1994) gender differences with regard to self-efficacy are evident in academic
achievement in science, technology and mathematics. In the study (Pajares & Miller, 1994), males were found to have a higher self-efficacy than females with regard to academic achievement in the specific subjects. However in a study conducted by Lent et al. (2005) on self-efficacy in engineering students, no significant gender differences were found. Studies (Whiteley, 1997; Johnson & Wardlaw, 2004) conducted on self-efficacy and computer related tasks had contradictory results on the influence of gender on self-efficacy. According to Whiteley (1997), males had a higher degree of computer self-efficacy than females. Contrastingly, researchers Johnson and Wardlaw (2004) found no significant difference in gender with regards to computer self-efficacy. Thus there is limited conclusive evidence regarding the interaction between gender and self-efficacy, and whether gender affects self-efficacy.

In terms of general perceived self-efficacy, a study by Zarafshani, Knobloch and Aghahi (2008) revealed that males are more efficacious than females. The significant difference between the genders was small yet definite in the study. A study on the assessment of general perceived self-efficacy on the internet was conducted by Schwarzer et al. (1999) using the General Perceived Self-Efficacy Scale. Results from this study indicated that males had slightly higher levels of general perceived self-efficacy than females. A possible explanation for the difference in self-efficacy between genders is the societal norm involving the perception of females as being more dependent and interdependent than males who are perceived as being more independent and autonomous. This sense of autonomy may result from the perceived sense of control over the ability to manage stressful situations and to achieve positive outcomes which is associated with the concept of self-efficacy. Changes in this societal norm may result in less significant differences in self-efficacy between genders (Schwarzer et al., 1999).
As illustrated by the various research results, there is inconsistency regarding gender differences in self-efficacy. Results which suggest gender differences in self-efficacy with regard to a specific task or action, or a sense of general perceived self-efficacy are not universal and therefore conclusive evidence on gender difference in self-efficacy is limited.

2.10 Conclusion

Factors regarding the construct and study of self-efficacy have been discussed in the present chapter. In order to gain a thorough understanding of the constructs of self-efficacy, it was necessary to discuss the factors of efficacy expectations, processes, self-efficacy sources, and the measurement of self-efficacy. The four different processes of human functioning which self-efficacy is considered to influence were outlined as well as the various efficacy sources and dimensions.

The present research focused specifically on self-efficacy in first-year university students therefore it is important to consider the relationship between lifespan development and self-efficacy with attention to self-efficacy at the developmental age of university students. Furthermore, the present research also explored the relationship between gender differences and self-efficacy, hence a brief discussion on gender and self-efficacy has been provided. Since the present research aims to explore and describe both the constructs of self-efficacy and coping, the following chapter will focus primarily on the construct of coping.
Chapter Three

Coping

3.1 Chapter Overview

This chapter discusses the study and construct of coping. Various theoretical views on the construct of coping, which have developed over time, are outlined. The chapter also focuses on widely used models that illustrate the process of coping. Since stress is a phenomenon which is related to the process of coping, the relationship between stress and coping is discussed briefly. The responses and goals associated with the construct of coping are introduced in this chapter. Variables such as gender and age in the context of coping are also discussed. The chapter concludes with a brief description of research on coping in first-year university students.

3.2 The History of the Study of Coping

The construct of coping has been of interest to many researchers over the last century. Two different theoretical view points; one based on animal experimentation, and the other based on a psychoanalytic view point have been the underlying approaches to the extensive literature on the concept of coping (Lazarus & Folkman, 1984).

In terms of the animal theoretical view point, coping is acting in a way that reduces the aversive environmental events in order to decrease negative psychophysiological affects (Lazarus & Folkman, 1984). This theory involves the concepts of learned behavioural responses and positive reinforcement (Lazarus & Folkman, 1984). However, this theoretical view point cannot provide a meaningful understanding of the construct of coping of humans since it does not take into account the more complex nature of humans as opposed to animals.
From a psychoanalytic viewpoint, coping involves the use of cognitions and actions when faced with a problem or stressful event (Lazarus & Folkman, 1984). Psychoanalytic theory of coping introduces the concept of defense mechanisms and adaptive processes. Defense mechanisms are created by the ego in order to prevent anxiety, by controlling one’s immediate and impulsive behaviours, affects, and instincts when faced with a stressful encounter (Freud, 1966). Defense mechanisms can be healthy and adaptive, or maladaptive (Aldwin, 2007). One criterion that defense mechanisms are maladaptive is if they distort reality over a long period of time (Lazarus & Folkman, 1984).

According to Vaillant (1977), there are four types of defense mechanisms, which exist in a hierarchical order, ranging from least adaptive to most adaptive (or least reality distorting). On the lowest level, the type of defense mechanism is projective which includes denial, distortion and delusional projection. The second level involves fantasy, projection, hypochondriasis, passive-aggressive behaviour and acting out which are termed immature mechanisms. Neurotic mechanisms are the third level of defensive mechanisms and these involve intellectualization, repression, reaction formation, displacement and dissociation. The final level and the most adaptive behaviour of all the other levels, consists of the mature mechanisms which include sublimation, altruism, suppression, anticipation and humour (Vaillant, 1977).

Vaillant (1977) stated that a person progresses from level one to level four through the developmental lifespan. The acquisition of more mature and adaptive defense mechanisms takes place as a person develops through the lifespan. There are various reasons for the development of more adaptive defense mechanisms. These include; the approach that adaptive defense mechanisms are developed due to the neuronal maturation developmental processes, the viewpoint that more adaptive defense mechanisms are developed through learning processes and
social support, as well as the development of the ability to identify and integrate both positive and negative aspects of one’s social support (Aldwin, 2007). Vaillant (1977), like Freud (1966) also emphasized and maintained that defense mechanisms are unconscious processes.

Haan (1977) also adopted a psychoanalytic approach to understand the construct of coping. However she differed from Vaillant (1977) by maintaining that defense mechanisms are inherently pathological and are either unconscious or conscious processes. Haan (1977) categorized ten generic, ego processes into three modes. The first mode is made up of coping processes that are conscious, flexible and purposive. The second mode consists of defense processes that are rigid, defensive and not employed out of choice, and the third mode which involves fragmentary processes that are automatic, ritual-like, and irrational. The third mode is the most reality distorting. Development in coping will occur as a person advances from defensive modes to coping modes. However, Haan’s theory has been criticized because of its extreme categorical nature and that it is culturally bound.

Menninger (1963) differed in his view of coping by integrating the concepts of defenses and coping rather than treating them as separate as other theorists had done. According to Menninger (1963) coping involves tension-reduction and problem-solving. The coping process involves the ego’s ability to use many techniques both inherent in the individual or from external sources to reduce tension and restore homeostasis. Menninger (1963) also highlighted the developmental nature of coping. A person’s coping style leads to a personality with a characteristic adaptation style.

The abovementioned psychoanalytic theories of coping have contributed to the ego psychology theory of coping which essentially regards coping as an aspect of personality. More recent studies (Parker & Endler, 1996) involve coping defined as conscious attempts at managing
stressful situations. The early understanding of coping largely involved person-based definitions of coping (Menninger, 1963). These theories have progressed to an understanding of coping based on situational determinants. The current study focuses on the more recent understanding of the constructs of coping which involve the influence of situational determinants.

Through the widely available research on the construct of coping, several different theoretical models have been proposed to explain the process of coping. A model of the coping process proposed by Lazarus and Folkman (1984) is based on the understanding of coping as being influenced by situational and evolving factors. This model will be discussed in the subsequent sections of the present chapter.

### 3.3 The Construct and Process of Coping

Lazarus and Folkman (1984) define the construct of coping as cognitions and behaviour that are employed by an individual to manage or decrease the effects of an internal or external demand. According to Lazarus and Folkman (1984) the process of coping is a dynamic one because it involves continual transactions between the person and the environment. Based on this premise, Lazarus and Folkman (1984) developed the widely used model of the coping process known as the transactional theory of stress and coping. In this model, coping is viewed as being both specific to a situation (contextual), and dynamically evolving (changing) (Lazarus & Folkman, 1984). Based on this model, coping is described as a dynamic process which is continually changing and interacting with all factors involved in the process (Lazarus & Folkman, 1984). According to Aldwin (2007), an individual’s cognitive evaluation or appraisal of a specific encounter with the environment results in psychological stress. The degree of psychological stress is determined by the individual’s appraisal of both personal and situational
factors (Ch’ng, 2008). Lazarus and Folkman (1984), describe two stages of appraisal, primary and secondary, which make up the transactional model of stress and coping.

In the primary appraisal stage of the model, the degree to which the stressor is viewed as being threatening is identified. If the stressor is insignificant and therefore does not pose any demand, the coping process is over. However, if the stressor is perceived as threatening, then the coping process continues and moves into the stage of secondary appraisal (Ch’ng, 2008). Secondary appraisal involves the assessment of the available resources for managing the stress. These resources include drawing on similar previous experiences, beliefs about the self and the environment, personal factors such as problem solving skills, and environmental factors such as social support. Secondary appraisal involves assessing available options that can be used to cope, and the effectiveness in the nature and application of these options (Ch’ng, 2008). The use of cognitive appraisals in the coping process thus implies that coping involves a conscious evaluation of what the stressful event means to the individual (Aldwin, 2007).

The model’s description of coping as being an ongoing, dynamic process results from the notion of “continuous appraisals and reappraisals of the shifting person-environment relationships” (Lazarus & Folkman, 1984, p. 142). These shifts occur when the individual attempts to change factors in the environment in which the stressful situation has occurred, or when the individual tries to change personal factors that are contributing to the experience of stress, or the shift may occur when change happens in the environment which is independent of the individual and the way of coping which was employed. Once shifts occur, the processes of primary and secondary appraisal begin again, as the individual reassesses the stressor, its effect on the individual, and the individual’s available means to manage it. Thus, each reappraisal procedure influences future attempts at coping.
Three distinct features of coping are evident in Lazarus and Folkman’s (1984) definition of coping. Firstly, a certain degree of planning and effort by the individual is involved in the process of coping. Secondly, not all coping responses adopted by the individual produce the individual’s desired outcome, and thirdly, coping is a process which occurs over time (Kleinke, 1991).

Lazarus and Folkman’s (1984) transactional model also proposes two major functions (purposes) of coping; problem-focused coping and emotion-focused coping. According to Aldwin (2007), problem-focused coping involves trying to comprehend the stressful event and consciously working out possible solutions in order to manage or reduce the stress. Hence the individual attempts to deal with the event itself. Emotion-focused coping refers to dealing with the emotions that are experienced as a result of the stressful encounter. This involves managing the emotional distress which usually includes feelings of guilt, anger or fear as the individual reacts to the stressful experience. According to Folkman and Lazarus (1984) the degree of control that the individual perceives regarding managing the stressful event is related to the coping function that is usually employed by the individual. The more the individual feels the situation is manageable, the greater the use of problem-focused rather than emotion-focused coping (Kleinke, 1991).

Lazarus and Folkman’s (1984) transactional model focuses more on coping being a contextually influenced process as opposed to a constant dispositional style (Ch’ng, 2008). A dispositional style involved in the coping response refers to a consistent or routine pattern of coping which an individual has developed over time (Ch’ng, 2008). Recent research (Moos & Schaefer, 1993) however, incorporates both situational determinants and individual
(dispositional style) factors in coping responses. A theoretical framework used to illustrate the interaction of both these approaches is Moos and Schaefer’s (1993) coping model.

According to Moos and Schaefer’s (1993) model, both personal and environmental factors have an effect on the life crises and transitions experienced by individuals. These life crises and transitions basically consist of stressful experiences that must be managed. Once the stress is experienced, the coping process, in terms of cognitive appraisals begins, which influences the outcome and general wellness of the individual (Ch’ng, 2008). The environmental and personal factors not only influence the life crises and transitions experienced, but there is interrelatedness between all components of this model. Thus the cognitive appraisals and resultant wellbeing of the individual are also influenced by the environment and personal factors of the individual.

### 3.4 Coping and Stress

The process of coping is only engaged in if the individual faces a stressful encounter. The definition of stress has been extensively debated for many years. According to Aldwin (2007), stress refers to an encounter which results in distress that is either physiologically or psychologically experienced. This encounter is created through a person-environment transaction (Aldwin, 2007). This definition of stress differs from Mason’s (1975) view that stress can either; be felt internally by the individual in terms of physiological or emotional reactions, or be experienced externally which refers to the individual’s experience of a specific event such as the death of a loved one, or it can be an experience that results from an interaction between the person and the environment.

Aldwin’s view of stress as being a transaction between the person and the environment is closely related to Mason’s third definition of stress (stated above) as well as Folkman and
Lazarus’s point of view that the concept of stress does not occur in isolation; rather it is dependent on environmental and personal factors. The actual event, as well as the person’s reaction and response to the event constitute the stress process (Schuster, Hammitt & Moore, 2003). Based on this definition, the concept of psychological stress is a relational one because ways of coping and general well-being are dependent on variables in the environment and vice versa. When the individual has limited or no means of coping with various factors occurring in the environment, psychological stress will be experienced (Schuster et al. 2003). By defining stress as being a transaction between the environmental and the person, the concept of cognitive appraisal is identified. In order for emotional or physiological reactions to occur, the experience of a state of threat or challenge must be identified which means that the individual is engaging in primary and secondary appraisal processes (Aldwin, 2007). The need to include the influence of personal factors in the stress process is vital since two people do not always view the same event as being stressful. The individual’s appraisal of stress is influenced by the degree of the threat from the environment as well as the availability of resources that the individual has to cope with that threat (Aldwin, 2007). This is recognised in the transactional model of coping’s reference to primary and secondary appraisal stages. The individual experiences stress when there is discrepancy between the environmental demand and the personal factors that the individual has to cope.

In a study by Parkes (1986) the relationships between three factors namely personality, environment and situational variables and three ways of coping namely general coping, direct coping and suppression was investigated. Personality differences included the presence of extraversion and neuroticism. Environmental factors included social support and work demands. The type of stressful encounter and the identified value or degree of threat to the participant
constituted the situational factors. The study revealed that a significant relationship existed between personality, environmental and situational factors, and ways of coping. Direct coping was used with the combination of extraversion, social support and an important stressful encounter. The study indicated significant relationships between work demand and important stressful encounters, and suppression. The interaction between work demand and neuroticism resulted in significant differences between direct coping and suppression.

3.5 Coping Responses and Goals

Based on Lazarus and Folkman’s (1984) construct of coping being either emotion-focused or problem-focused, coping responses have been understood by categorizing them into either behavioural or cognitive types of responses. Coping is understood as a response when it is categorized into classes based on its behavioural or cognitive nature (Taylor, 1997).

In a community survey conducted on coping responses, it was found that coping responses can be defined as being active-cognitive, active-behavioural or avoidant (Kleinke, 1991). The research also revealed a direct relationship between active-cognitive and active-behavioural coping and low levels of neuroticism in individuals (Kleinke, 1991). This result was confirmed by Kleinke (1991) on research into coping responses of married couples. Individuals who generally experienced high amounts of emotional distress were more likely to use coping responses of denial, avoidance and helplessness (Kleinke, 1991).

McCrae and Costa (1986) researched coping responses during experiences of losses, threats and challenges. According to this study, the coping responses which were considered to be most effective included “seeking help, communicating feelings, taking rational action, drawing strength from adversity, using humour, and maintaining faith, self-confidence, and feelings of
control” (Kleinke, 1991, p. 5). Furthermore, Folkman and Lazarus (1988) used a measure known as the Ways of Coping Questionnaire to research individual’s coping responses to a recently experienced stressful event. The study revealed eight coping responses. These included, confrontive coping, distancing, self-control, seeking social support, accepting responsibility, escape-avoidance, planful problem solving, and positive appraisal. Planful problem solving was identified as being the most valuable coping response, and confrontive coping and distancing the least effective.

Although the abovementioned studies on coping responses differ in their identification of various coping responses, the research generally shows that coping responses are related to personal dispositional styles (this will be further discussed in the sections on coping and personality; and, coping and psychological adjustment). In understanding the coping process, it is necessary to distinguish between coping responses and coping goals. Coping responses are defined by their method; which is either cognitive or behavioural. However, an individual’s method of coping may differ from their coping intentions. Coping goals refer to intention rather than method (Taylor, 1996).

According to the transactional model of coping, coping is viewed as an intention, since the individual must actively engage in the conscious process of appraisal. The individual experiences stress and intends to manage the affect of it, by using either behavioural or cognitive responses. Lazarus and Folkman (1984) emphasise the notion of coping as being effortful, since intention is involved in the process. Although the function of The Ways of Coping Questionnaire by Folkman and Lazarus (1985) is to investigate coping responses, it also includes coping intentions in some of the items. This is evident in item two of the scale which states, “I tried to analyze the problem in order to understand it better”. The first part of the statement, “I
tried to analyze the problem…” refers to a type of coping response while the latter part of the statement, “…in order to understand it better”, refers to an intention or coping goal (Taylor, 1996). According to Taylor (1996), the coping goal is embedded within the coping response. Hence, the specific coping response provides an understanding of the coping goal.

Laux and Weber’s (1991) theoretical assumptions on coping goals differ from that of Folkman and Lazarus (1985). According to Laux and Weber (1991) a specific coping response can be used to attain a variety of coping goals. In addition, an individual can have many different goals and use many different responses to cope with a specific stressful encounter. Contrary to Folkman and Lazarus’s (1985) definition, it is therefore necessary to view coping responses and goals as separate concepts. Laux and Weber (1991) state however that coping goals refer to what individuals desire to attain through their coping. Although coping intentions are affected by the stressful encounter, the intentions must be viewed as separate from the stressor since it is possible for two individuals facing the same stressor to differ in their coping intentions (Taylor, 1996). According to Laux and Weber (1991), coping goals can be classified into four basic groups. These include 1) problem solving; 2) regulating emotional distress; 3) protecting self-esteem; and 4) managing and shaping social interactions (Taylor, 1996). The goal of shaping social interactions can be seen as related to the two coping functions; emotion-focused and problem-focused coping.

In a South African study (Rothmann & van Rensburg, 2002), various coping responses were explored using the COPE Questionnaire, in a sample of police members. The results of the study suggested that the most utilized coping responses by police members was religion and planning. The least relied upon coping responses were denial, which was defined as experiencing stressful
events as unreal, and behavioural disengagement, which was defined as pretending that the stressor does not exist (Rothmann & van Rensburg, 2002).

Although theories may differ in their definitions of the concepts of coping responses and goals, research (Kleinke, 1991) generally shows that there is a need for a deeper understanding of these constructs. Since the present research is concerned with the relationship between coping and self-efficacy, it is of interest to consider the link between personality and coping, since personality has an effect on self-efficacy.

### 3.6 Coping and Personality

Common coping responses are found in individuals with personal factors such as optimism, self confidence, self esteem and low neuroticism, and these coping responses differ from those of individuals with converse personal factors (Kleinke, 1991). In addition to the correlation between coping responses and personal factors, research (Kleinke, 1991) also suggests that low neuroticism and high optimism, self confidence and self esteem are generally related to more positive coping responses such as active and planful coping, and adapting and accepting change and challenges (Kleinke, 1991). The contrary is also true, less adaptive and less flexible and high neurotic temperaments are associated with more negative coping responses such as avoidance, denial or impulsivity. Kleinke’s (1991) research into coping responses substantiates the need to understand both environmental and personal dispositional style in the coping process, as proposed by Moos and Schaefer’s (1993) model of coping.

According to a study by Parkes (1984), ways of coping differ between people with internal and external loci of control. Parkes (1984) employed a sample of female nursing students to investigate the relationship between three ways of coping (general coping, direct coping, and
suppression) and locus of control. Results from the study indicated a relationship between locus of control, and coping appraisal. Persons with an internal locus of control used less coping resources than persons with an external locus of control. Persons with an internal locus of control relied more frequently on direct coping rather than suppression as a way of coping, and persons with an external locus of control relied more frequently on suppression rather than direct coping.

In a South African study (Rothmann & van Rensburg, 2002), the relationship between coping strategies and psychological strengths was explored in a sample of police force members in the North West Province. The study used the COPE Questionnaire and the Work Locus of Control Scale to explore this relationship. The results suggested that there were no significant relationships between locus of control and coping strategies.

The relationship between coping and Type A personality was investigated by Vingerhoets and Flohr (1984). The Jenkins Activity Schedule and the Ways of Coping Checklist were administered to 300 males. The results of the study suggested that persons classified as having a Type A personality relied significantly more on problem-focused coping and self-blame when faced with a stressful event, than persons who where not classified as having a Type A personality. In addition, persons classified with a Type A personality scored lower on the coping mechanism of acceptance than other participants.

Personality type and coping was researched by Kirmeyer and Diamond (1985) in a study which focused on police officers. The results of the study suggested that persons classified as having a Type B personality were more likely than persons classified as having a Type A personality, to adjust their use of problem-focused coping than depending on whether the stressful event was perceived as being changeable or unchangeable. When persons from both
personality categories perceived a stressful encounter as being unchangeable, problem-focused coping was used more by Type A personality individuals than Type B.

The relationship between personality traits of neuroticism, extraversion, and openness to experience and ways of coping were explored by McCrae and Costa (1986). A relationship was evident between high levels of neuroticism and ways of coping associated with avoidance, denial and defensiveness. According to Folkman and Lazarus (1988), the ways of coping associated with high levels of neuroticism included reacting negatively, denial, blaming oneself, inability to make decisions, limited commitment and motivation to change or adapt, and keeping to oneself. The results of Folkman and Lazarus’s (1988) study indicated that persons with high levels of extraversion responded to stressful encounters with positive cognitions, thinking and behaving rationally, self-discipline, and finding active ways of coping (Folkman and Lazarus, 1988).

According to Folkman and Lazarus (1988), humour as a way of coping with a stressful encounter was frequently adopted by individuals who scored high on openness to experience and reliance on faith was associated with low levels of openness. In addition to the relationship between coping and personality, a relationship between coping and psychological adjustment was also evident.

3.7 Coping and Psychological Adjustment

Various research studies (Collins, Baum & Singer, 1983; Folkman & Lazarus, 1988; Forsythe & Compas, 1987) suggest that there is a relationship between ways of coping and psychological adjustment. The results of several studies (Collins et al., 1983; Folkman & Lazarus, 1988; Forsythe & Compas, 1987) consistently suggest that persons diagnosed with depression, were less reliant on problem-focused ways of coping such as assessing options and
planning the most effective strategy. Furthermore, a relationship was evident between persons suffering from depression and the frequent use of wishful thinking as a means of coping with adverse encounters. Folkman and Lazarus (1988) assessed a sample of couples residing in a community in which the wives were between the ages of 35 to 44 years using the Ways of Coping Questionnaire. According to the results of the study, participants who displayed a high number of depressive symptoms more readily accepted responsibility than those with fewer symptoms of depression. Specific way of coping used by those high in symptoms of depression, as stipulated by the Ways of Coping Questionnaire, included confrontive coping, self-control, and escape avoidance (Folkman and Lazarus, 1988). The study on these couples also suggested a link between fewer psychological symptoms and planful problem solving.

Although it is evident from several studies that a relationship between coping and psychological adjustment and symptoms exists, there is still uncertainty regarding the nature of the relationship. The actual role of psychological symptoms in the process of coping is unclear.

The two coping functions mentioned above, namely problem-focused and emotion-focused coping have also been found to be linked to a person’s psychological adjustment. As discussed previously, the use of problem-focused or emotion-focused coping is dependent on whether the stressful encounter is perceived as changeable or controllable. Hence problem-focused coping should be more frequently adopted when the situation is perceived as capable of being changed and in contrast, when situations are perceived as being unchangeable, emotion-orientated strategies such as positive reappraisal and distancing should be used (Folkman & Lazarus, 1988). According to a study by Collins et al (1983), participants who reported using problem-focused ways of coping reported higher levels of psychological symptoms and emotional distress than participants who relied less on problem-focused strategies. In contrast, participants who relied
more on emotion-focused coping reported to have fewer psychological symptoms and emotional distress. On further analysis of the participants who reported to rely primarily on emotion-focused coping, a positive association was found between heightened stress levels and use of denial in coping, and lower stress levels and the use of reappraisal and management of emotions in coping.

In a study by Forsythe and Compas (1987), the concepts of stress, coping processes and psychological adaptability in students were explored. The results of this study support the abovementioned association between problem-focused and emotion-focused coping, the perceived changeability of the stressful situation, and the person’s adaptability to the outcome. Student’s who perceived situations as changeable or controllable, used problem-focused coping to adapt. Student’s who perceived situations as unchangeable or uncontrollable, relied more on emotion-focused strategies to cope. This study is relevant to the current research since it involves an exploration of coping and psychological adjustment particularly in a student population. Furthermore, findings on the relationship between ways of coping and psychological adjustment are pertinent to the current study since psychological adjustment has strong associations with self-efficacy (discussed in detail in the previous chapter).

When understanding the constructs of coping and psychological adjustment, it is also necessary to consider the impact of variables such as gender and lifespan development in the process of coping.

3.8 Coping and Gender

There is extensive evidence suggesting that males and females differ in psychological distress levels. Various theories, each with little conclusive evidence have been used to explain
this phenomenon (Thoits, 1991). These include the theory that society has conditioned women to show their emotions hence they display more emotional symptoms than men; women generally experience a higher number and more severe and persistent stressors than men; and women do not have the means for coping with stressors that men do, for example, women have lower self-esteem than men (Thoits, 1991). However, in a study by Thoits (1991) in Indiana, all three abovementioned theories were partially disconfirmed. Thoits (1991) emphasised that the degree of effort an individual places on positive coping is dependent on whether the individual believes he/she has the ability to control negative events. According to Thoits (1991), this did not differ between genders. Interestingly, the results showed that more coping strategies were used by females than males when dealing with a stressful event. This result may be linked to the theory that emotional distress is generally higher in females than in males; however this research could not fully demonstrate this. The study revealed limited conclusive evidence on gender differences in coping strategies due to the high number of exceptions in the study.

Similarly, little conclusive evidence on gender differences related to coping was established in a study by Folkman and Lazarus (1980). Gender differences were noted in the stressful encounters that the community residents aged between 45 and 64 years experienced. The study showed that females reported mostly health related factors to be stressful encounters, whereas males reported mostly work related factors to be stressful encounters. Research (Folkman & Lazarus, 1980) suggests that people rely on emotion-focused coping when faced with stressful health related encounters, and problem-focused coping when faced with stressful work related encounters. When both genders were faced with the same stressful encounter, there appeared to be no significant difference in their ways of coping. Hence gender differences are evident more in what event is viewed as a stressful encounter rather than the type of coping employed.
Furthermore, in a study by Folkman, Lazarus, Gruen and DeLongis, (1986) eight different kinds of coping were analysed, and no significant gender differences were evident. Suggested gender differences were noted in the use of positive appraisal and self-control as ways of coping. According to Folkman and Lazarus (1988), females tended to use the positive appraisal way of coping more than males, and self-control as a coping mechanism was used more frequently by males than females. Gender differences in coping were also reported by Vitaliano, Russo, Carr, Maiuro and Becker (1985). These differences showed that problem-focused ways of coping, wishful thinking, social support, avoidance and self-blame were ways of coping adopted more by females than males. However, due to the research design and methodology of the study by Vitaliano et al. (1985), the reliability and validity of the results is questionable.

Generally, the abovementioned research provides little conclusive evidence on the gender differences in ways of coping and suggests that there is no significant difference in gender and ways of coping. Since the present study selected participants according to a specific age criterion, it is necessary to briefly explore the relationship between lifespan development and coping.

3.9 Coping across the Lifespan

Since recent research suggests that the process of coping involves both individual dispositional styles as well as environmental factors, it is necessary to consider the role of lifespan development in the coping process. The particular stage of lifespan development which the individual is currently in provides a greater understanding of the personal factor which influences the coping process. According to Aldwin (1992), further research needs to be
conducted in order to provide a greater understanding of the relationship between the developmental and coping processes, since stressful events vary across the lifespan.

Through the process of coping with a stressful event, the individual also gains new skills and competencies (Aldwin, 1992). Therefore previous experiences of coping will influence future ones, which further substantiates the need to incorporate the developmental context in the understanding of the individual’s coping process. In addition, the understanding of the coping process involving cognitive appraisals highlights the need to consider cognitive developmental theories in the process of coping. Many changes occur through the process of development, which influence the coping process. Some of these developmental adjustments include changes in physical and psychological capabilities, changes in personal interests, and changes to a person’s view of others and self (Taylor, 1997).

According to Taylor (1997), theories on lifespan development emphasise that individuals do not only cope differently when they are older because of previous life experiences or because the stressful events are different but the appraisal process also changes through development. Coping differs among adults of various ages because of the way development influences the organization and interpretation of experiences (Taylor, 1997). Through development, the individual acquires past experiences which act as new resources for coping (Taylor, 1997). Past experiences influence the appraisal stages of the transactional model as well as the processes of emotion-focused and problem-focused coping. Although Aldwin (1992) suggests that more research into the relationship between the developmental context and coping process is needed, it is evident that these factors are related, and thus the coping process of individuals cannot be considered separate from the stage of development currently being experienced.
In research by McCrae (1982), the Ways of Coping Checklist, which is an earlier version of the Ways of Coping Questionnaire developed by members of the Berkeley Stress and Coping Project during the years 1976 and 1977, was used in collaboration with an additional 50 items to investigate the effect of age differences in the utilization of coping mechanisms in a community sample of males and females. A total of 28 coping mechanisms were examined. According to the results of the study, when all participants of various ages were presented with the same stressful event, they generally coped in the same way suggesting that age differences had little effect on coping mechanisms. The results of the study suggested that age differences influence the type of encounter viewed as stressful as opposed to the coping mechanism used to deal with the stressful encounter. This is consistent with results from the study by Folkman and Lazarus (1980). Folkman and Lazarus (1980) investigated the impact of age in the use of problem-focused and emotion-focused coping in a sample of people aged 45 to 64. The study revealed that age differences influenced the encounter deemed as stressful. For example, older participants more frequently described health-related events as stressful than younger participants did. However with regards to health-related stressful encounters, no significant differences were found in the coping mechanisms used by younger and older participants.

In a study by Folkman, Lazarus, Pimley & Novacek (1987) the influence of age on coping mechanisms was investigated in the wives of a community sample of married couples aged 35 to 44 and a sample of community residing males and females aged 65 to 74. Active, interpersonal problem-focused ways of coping were used more by the younger participants. The specific ways of coping used more by the younger participants included confrontive coping, seeking social support, and planful problem solving. The older participants in the study relied on ways of coping which were more passive, intrapersonal emotion-focused coping, for example distancing,
acceptance of responsibility, and positive appraisal. However, the results of the study are similar to the results of previously mentioned studies, in that the differences in ways of coping between ages were less evident when the specific type of stressful encounter was controlled.

3.10 University Students and Coping

University students, especially first year students, are particularly vulnerable to stress (Bojuwoye, 2002; Negga, Applewhite & Livingston, 2007; Ross, Neibling & Heckert, 1999). The first-year at a tertiary educational institution is a new and different environment for most students. Hence, the adjustments and adaptations that the individual must make in this transition can result in stressful conditions both physically and mentally (Vollrath, 2000). Greenberg (1981) mentions that there is a dramatic increase in student’s responsibilities (e.g. new financial independency). Negga et al. (2007) identified health factors such as substance abuse, sexual activities, poor diet, and lack of sleep as high sources of stress in students.

According to Lazarus and Folkman’s (1984) definition of psychological stress (mentioned above), a first-year student at a tertiary institution will experience stress if the means of coping with situations that are experienced by a new student are lacking. Lazarus & Folkman (1984) suggests that what is viewed as a stressful event for one person is not necessarily a stressful event for another person, it is important to consider personal variables of the students when investigating their coping responses. For example, gender may play a significant role in the perception of a stressful event and the resources used in coping with it (Bojuwoye, 2002).

As mentioned above, correlations between the construct of coping and personality factors have been illustrated in previous research (Kirmeyer & Diamond, 1985; McCrae & Costa, 1986; Parkes, 1984; Parkes, 1986; Vingerhoets & Flohr, 1984;). In a study by Scheier, Weintrab, and
Carver (1986), undergraduate students were used to explore the relationship between dispositional optimism and ways of coping. The results revealed a relationship between high levels of optimism and the increased use of problem-focused coping, ability to deal with stressors, and seeking of social support (Folkman & Lazarus, 1988). Students with low levels of optimism generally relied on emotion-focused coping, denial and avoidance as ways of coping with stressful events (Folkman & Lazarus, 1988). Although the current study does not assess optimism levels of the student participants, this finding further illustrates the influence of aspects of personality on ways of coping.

3.11 The Relationship between Self-efficacy and Coping

Various factors, such as the link between self-efficacy and cognitions, motivation and affect, suggest a relationship between self-efficacy and coping. According to Bandura (1997), the degree of self-efficacy illustrates the amount of confidence in the ability to utilize the skills necessary to deal with stressful encounters. An association has been shown between self-efficacy and the amount of effort or persistence with tasks or activities (Bandura, 1997). This association is also evident with regards to the amount of effort or persistence in coping with stressful encounters (Bandura, 1997). Based on the theory that persons with high self-efficacy exert more effort or persistence when coping with stressful encounters, persons with high self-efficacy tend to use more problem-focused ways of coping as opposed to persons with low self-efficacy who tend to rely more on passive ways of coping (Bandura, 1997). According to Gollwitzer (1999) the relationship between high levels of self-efficacy and problem-focused ways of coping is rooted in the concept termed implementation intentions or action plans. Implementation intentions refer to the transformation of goals or intentions to desired actions as
well as to the situational determinants of the action (Gollwitzer, 1999). Problem-focused coping is therefore linked to self-efficacy because persons with high levels of self-efficacy create possible successful outcomes for their actions and are more committed to planning because they focus on their future.

In addition to the association between persons with high self-efficacy and problem-focused ways of coping, a relationship has also been found between persons with high self-efficacy and the way of coping which involves focusing on opportunities and positive outcomes rather than negative emotions or consequences (Luszczynska, Scholz & Schwarzer, 2005). This relationship is inherent in the concept of the coping goal termed outcome expectancies. Outcome expectancies describe the consequences of a specific action, which are either positive or negative. Based on social cognitive theory, persons with high degrees of self-efficacy tend to perceive more positive consequences to actions rather than negative ones. Based on this theory, a relationship exists between a high degree of self-efficacy and focusing on positivity when coping with stressful encounters, or challenging tasks (Luszczynska et al., 2005).

In a study by Luszczynska at al. (2005) using the General Perceived Self-Efficacy Scale (GSE), several significant relationships between self-efficacy and coping were evident. Among participants coping with pain from gastrointestinal disease, participants with high levels of general perceived self-efficacy relied more frequently on active than passive ways of coping. Among participants coping with cancer, the participants with high levels of general perceived self-efficacy utilized active strategies such as planning as well as determination, humour, focusing on the positive, and seeking more information than participants with low levels of general perceived self-efficacy. Among the sample of participants coping with cancer, those with low levels of general perceived self-efficacy relied on self-blame or behavioural
disengagement as ways of coping. Research by Endler, Kocovsky and Macrodimitri (2001),
investigated ways of coping adopted by people with chronic and acute diseases. The study
showed persons with low levels of general perceived self-efficacy relied on distraction as a ways
of coping or on emotion-focused strategies. According to a study by Brown and Nicassio
(1987), which also focused on persons with chronic pain, lower levels of general perceived self-
efficacy were associated with passive ways of coping.

The relationship between self-efficacy and four different ways of coping including 1) planning; 2) humour; 3) acceptance; and 4) accommodation was investigated in a study by
Schwarzer, Boehmer, Luszcznska, Mohamed and Knoll (2005). The participants in the study
consisted of males and females who had undergone tumour surgery. The General Self-Efficacy
Scale by Schwarzer and Jerusalem (1995) as well as measures used to assess the four types of
coping were completed by the participants at one, six and twelve months post-surgery. Results
from the study indicated that self-efficacy affected all four ways of coping. Results indicated
that persons with low levels of self-efficacy were less likely to rely on acceptance and humour as
ways of coping. The results from the analysis across time suggested that ways of coping
changed over time, and that persons with low self-efficacy levels tended to become more passive
in their ways of coping and more focused on negative ways of coping than persons with high
levels of self-efficacy (Schwarzer et al., 2005).

The previous studies (Gollwitzer, 1999; Luszczynska et al., 2005; Schwarzer et al., 2005)
that investigated the relationship between self-efficacy and coping consistently revealed that a
high sense of self-efficacy was linked to ways of coping which are active, problem-focused, and
predictive of positive outcomes.
3.12 Conclusion

Extensive research has been conducted into the construct of coping. As a result, there are different theories, definitions and understandings of coping. Research by Lazarus and Folkman (1984) suggests the need to incorporate both personal and environmental factors when understanding the processes of both coping and stress. The coping responses which include emotion-focused and problem-focused coping as well as various coping goals have been discussed in the present chapter. These coping responses have been found to be linked with specific personality characteristics and traits. Various studies (Vitaliano et al., 1985) suggested that there is relationship between ways of coping and psychological adjustment.

The current research is aimed at proving further understanding of coping. It is of interest to establish whether the coping resources of individuals currently at the lifespan development of early adulthood are associated with some or all of the above mentioned coping resources which previous theorists developed. The current research is also interested in the relationship between gender and ways of coping. The following chapter outlines the research design and methodology used in the present study.
Chapter Four

Research Design and Methodology

4.1 Chapter Overview

The present chapter includes a description of the research design and methodology used in the current study. The primary aims of the current study are stated, as well as information regarding the research participants and sampling procedures. Included in this chapter is a description of the three measures used in the study namely, the biographical questionnaire, The General Perceived Self-Efficacy Scale (GSE) and the Ways of Coping Questionnaire. Details regarding the procedure of the study, the analysis of the data collected, as well as ethical considerations are also provided.

4.2 Aims of the Research

The aims of the present study were:

1. To explore and describe the self-efficacy of male and female first-year psychology students at a university in the Nelson Mandela Metropole.

2. To explore and describe the ways of coping of male and female first-year psychology students at a university in the Nelson Mandela Metropole.

3. To explore and describe the relationship between self-efficacy and ways of coping of male and female first-year psychology students at a university in the Nelson Mandela Metropole.

4. To explore and describe the relationship between gender and self-efficacy and ways of coping of male and female first-year psychology students at a university in the Nelson Mandela Metropole.
4.3  Research Design and Methodology

A quantitative, exploratory descriptive study was used in an attempt to achieve the aims of the current research. In exploratory design, natural observations are made and no variables are manipulated (De Vos, 2000). Exploratory research enables a researcher to develop more specific questions for future research (Neuman, 1997), since its purpose is to gain familiarity with the research topic (De Vos, 2000). Exploratory research is useful because it allows the researcher to investigate all sources of information. However, this design infrequently yields definite answers and it is often difficult to conduct because there are few set procedures to follow (Neuman, 1997).

The current study was also descriptive in nature as its aims were to provide information on a specific group (Neuman, 1997). According to Neuman (1997), descriptive studies investigate questions of the type; “how” and “who”, as opposed to “why”. Several types of descriptive methods can be used, namely field observation, systematic observation, case studies, survey research and archival research (Cozby, 1993). The current research used the survey method. In survey research, the participant answers questions posed by the researcher. In the present study, research data were gathered through questionnaires (The General Perceived Self-Efficacy Scale and the Ways of Coping Questionnaire) which consist of interval scales to measure the responses. Limitations of survey techniques include nonresponse bias, which occurs when the views of the people who participate differ from those who choose not to participate in the study, and social desirability bias, which exists when participants respond in a manner that they feel they are expected to respond (Goodwin, 2002). The researcher addressed the social desirability issue by stating that there was no “correct” response and encouraged the participants to answer the items as honestly as possible. Participants are sometimes compelled to make a “forced
response” because they are required to choose from a given set of options which may not include their desired response. However, the above-mentioned design was cost and time effective (Kerlinger, 1986; Neuman, 1997) and it avoids interviewer bias as the questionnaires are identically worded (Dane, 1990; Neuman, 1997).

4.4 Participants and Sampling Procedure

A non-probability convenience sampling technique was used. A non-probability method was employed because the goal of the research was to explore and describe the relationship between specific variables (Goodwin, 2002). A convenience sampling technique is used when the researcher seeks participants from a group of people who specifically meet the aims of the study (Goodwin, 2002). A disadvantage of this technique is that the generalisability of the results may be questionable.

The sample for the current research consisted of 128 participants. Inclusion criteria in the current research were that all participants had to be in their first year of study at a university in the Nelson Mandela Metropole. The participants had also to be between the ages of 18 and 21 years, and they had to be registered for a psychology module. The individual’s participation in the research was voluntary. Any voluntary student who met the inclusion criteria, and was present when the data were being collected participated in the study. All correctly completed questionnaires were included in the study while incomplete questionnaires were destroyed.

A total of 128 participants met the inclusion criteria for the study and correctly completed the questionnaires. According to Grinnell and Williams (1990), in order to conduct basic statistical procedures, a minimum of 30 participants is required, however other researchers (Strydom & De Vos, 1998) have stipulated a minimum of 100 participants. The sample size for
this research satisfies both values proposed by researchers and can thus be considered appropriate for statistical analysis. The demographic description of the participant sample in the current study is discussed in Chapter 5.

4.5 Measures

Three measures, namely a biographical questionnaire (see Appendix C), the General Perceived Self Efficacy Scale (GSE) and the Ways of Coping Questionnaire was used in the study. All three measures were administered in English because the students are taught in English at the selected university.

4.5.1 Biographical Questionnaire

A brief biographical questionnaire was constructed to obtain identification data from the participants. The questionnaire requested information about the participant’s age and gender. The data collected from this questionnaire was analysed using descriptive statistics and it aided in providing a more meaningful understanding of the sample. The researcher was especially interested in the gender of the participants since this was needed for the purpose of the fourth aim (the exploration and description of the relationship between gender and self-efficacy and ways of coping of first-year psychology students at a university in the Nelson Mandela Metropole). Obtaining the age of the participants was also necessary since it was one of the inclusion criteria for the current study and it provided further description of the sample for future researchers to aid in generalization and comparison.
4.5.2 General Perceived Self-Efficacy Scale (GSE)

The General Perceived Self-Efficacy Scale (GSE) was originally developed in German by Matthias Jerusalem and Ralf Schwarzer in 1979 (Scholz, Gutierrez-Dona, Sud & Schwarzer, 2002). It has since been revised and is currently available in 27 different languages (Scholz et al., 2002). The current study used the English version revised by Schwazer and Jerusalem in 1993. The purpose of the scale is to evaluate a general sense of perceived self-efficacy (Scholz et al., 2002). The GSE is designed for people above the age of 12 years, and it is most commonly used on adults (Scholz et al., 2002). The scale consists of ten items and a four point Likert Scale on which to rate the response to each item. The participant indicates on the Likert Scale whether the statement is “not at all true”, “hardly true”, “moderately true” or “exactly true”. The sum of the item response for each scale constitutes the scale score. Thus the total score ranges between ten and 40. A score that is close to 40 means that the individual has a high degree or optimistic sense of self-efficacy, or is considered to be self-efficacious (Scholz et al., 2002).

An optimistic self-efficacy occurs when the individual believes that he/she is capable of accomplishing a new or difficult task, or successfully dealing with a stressful or adverse event (Schwarzer & Jerusalem, 1995). An individual’s perceived self-efficacy determines their degree of goal directed behaviour, effort with a task, and coping with adversity (Schwarzer & Jerusalem, 1995). The GSE focuses on these factors. Each item implies an optimistic self-efficacy, hence a successful expectation of ways of coping. The participant is therefore rating the degree of his/her perceived self-efficacy.

An advantage of this scale is that it can be applied to a wide range of situations. It can be used to predict an individual’s adaptation to significant life events, and it can be used as a
measurement of quality of life at a specific stage in life (Schwarzer & Jerusalem, 1995). However, a disadvantage of the scale is that it does not investigate actual changes in behaviour (Schwarzer & Jerusalem, 1995).

4.5.2.1 Reliability of the GSE

The reliability of the scale was assessed in numerous research studies (Scholz et al., 2002). Cronbach’s alpha ranged from .75 to .91 with most occurring in the high .80s (Scholz et al., 2002). In a study conducted by Schwarzer and Jerusalem (1994, in Schwarzer et al., 1999), a test-retest reliability of the scale revealed a reliability of $r = 0.55$. In a study (Hurter, 2008) using a South African population, the Cronbach Alpha of .86 indicated an acceptable reliability of the measure. The GSE is unidimensional, which means that the various statements involved in the measure assess one underlying construct namely self-efficacy, and the total score reflects the general degree of self-efficacy (Scholz et al., 2002).

4.5.2.2 Validity of the GSE

The scale was found to have a high criterion-related validity (Schwarzer & Jerusalem, 1995). According to Kumar and Lal (2006), internal consistency has been evident with various studies using the GSE. Both convergent and discriminate validity are evident with the measure. Positive correlations were evident with positive and favourable behaviour and emotions, and similarly negative correlations appeared with adverse conditions such as anxiety and depression (Schwarzer & Jerusalem, 1995).
4.5.3 The Ways of Coping Questionnaire

According to Folkman and Lazarus (1988), the Ways of Coping Questionnaire has been used mainly in research on the coping process. Researchers conducting studies on the components and determinants of coping have included the questionnaire as a research instrument. The questionnaire identifies the cognitions and behaviours utilized by an individual who is faced with a stressful experience.

The Ways of Coping Questionnaire originates from an earlier research instrument termed the Ways of Coping Checklist. The Ways of Coping Checklist was developed during 1976 and 1977 by members of the Berkeley Stress and Coping Project. The checklist consisted of 67 coping strategies. The strategies were made up of coping strategies such as problem-solving and defensive or avoidant ways of coping. The Checklist required the participants to respond by indicating “yes” or “no” as to whether they had used the given way of coping in dealing with the event which they described as stressful. The Ways of Coping Checklist has since been revised through the discarding or rewording of unclear and unnecessary items as well as the inclusion of suggested ways of coping, into a 66-item version known as the Ways of Coping Questionnaire. In addition, the manner of responding to each item in the Checklist was changed to a Likert scale format. The Likert scale format allows the respondent to specify the frequency of use of each coping strategy.

The Ways of Coping Questionnaire requires the participant to respond to items according to their behaviours and emotions that they have felt in relation to a stressful situation that they have experienced (Folkman & Lazarus, 1980 in Schuster et al., 2003). The coping strategies are either behavioural or cognitive ways of dealing with the stressful event (Schuster et al., 2003). The
participant indicates on the Likert Scale whether the behaviour or cognition stated is “not used”, “used somewhat”, “used quite a bit” or “used a great deal”.

According to Folkman and Lazarus (1988) the stressful encounter may either be selected by the respondent or the administrator may describe it. This will depend on the purpose of the results of the completed measure. As stipulated in the administrative manual, the definition of the stressful encounter should include specific details regarding the context of the encounter. The individual should be encouraged to identify all aspects of the stressful encounter, as well as the available coping options at the time. The purpose of this is to elicit the primary and secondary appraisal factors regarding the stressful encounter. The primary appraisal of the stressful encounter will be elicited by the individual’s identification of what made the situation stressful. The secondary appraisal of the stressful encounter will be elicited by the individual’s identification of their options for coping (Folkman & Lazarus, 1988). The time frame between the stressful encounter and completion of the questionnaire is also a factor that must be taken into account when interpreting the results of the questionnaire (Folkman & Lazarus, 1988).

According to the administrative guidelines, the respondent should complete the questionnaire based on a stressful encounter which occurred during the previous week, however this time frame is not fixed, and researchers are able to vary the time frame according to the purpose of their investigation. In the current study, the administrator defined the stressful encounter as “the experience of starting at a tertiary education institution and the demands that were associated with this new experience”.

The Ways of Coping Questionnaire was not designed as a measure of evaluating different coping strategies or traits (Folkman & Lazarus, 1985). The scale is rather intended to be a process measure since it focuses on the processes used in a certain stressful event (Folkman &
Folkman and Lazarus (1985) conducted a study on undergraduate college students using the Ways of Coping Questionnaire and devised a set of subscales specific to a student sample. The current study used these subscales to analyse the data captured. Participants were asked to rate each item bearing in mind the stressful experience that they may have endured in the previous four months in adjusting to university. The data were analysed according to the subscales developed by Folkman and Lazarus (1985) from a study of the ways students coped with a college examination. These subscales are appropriate to the current study as it also concerns students at a university. From the previous study, eight different subscales were established (Folkman & Lazarus, 1985). These subscales consist of one problem-focused subscale, six emotion focused subscales, and the final subscale made up of both problem and emotion focused items (Folkman & Lazarus, 1985). The 66 items where divided up according to the eight subscales. The sum of all the items in each subscale constitutes the score for the subscale.

The first five subscales are all empirically constructed subscales. Subscale one, termed Problem-Focused Coping, consists of 11 items which focus on a deliberate action or behaviour which the participant does following a stressful event (e.g. Draw on past experiences, Try to see things from the other person’s point of view, Go over in my mind what I will say or do). The second subscale is known as Wishful Thinking and it includes five items which refer to a sense of hopefulness following a crisis (e.g. Hope a miracle will happen, Wish that I can change what is happening or how I feel). Detachment is the name of the third subscale and it is made up of six items which tap into the construct of distancing oneself from a situation. Examples of these statements are “Try to forget the whole thing happened” and “Go on as if nothing is happening”.

Lazarus, 1985). The scale consists of 66 statements and a four point Likert Scale on which to rate the response to each statement.
The fourth subscale consists of seven items which all refer to the act of Seeking Social Support (e.g. I pray, I let my feelings out somehow, Ask a relative or friend I respect for advice) as a ways of coping. The final subscale that was empirically constructed is called Focusing on the Positive. There are four items in this subscale; examples include “I am aspired to do something creative” and “Rediscover what is important in life” (Folkman & Lazarus, 1985).

The final three subscales were rationally created scales. The sixth subscale is the Self Blame subscale. It consists of three items which involve negatively focusing on oneself as a means of coping with stress. An example of one of these items is “I criticized or lectured myself”. Tension Reduction is the term used for the seventh subscale. This subscale involves three statements where an action is used to deal with stress (e.g. I jog or exercise). The eighth subscale is termed Keep to Self and it includes three items which tap into the construct of self isolation for example “I try to keep my feelings to myself” and “Avoid being with people in general” (Folkman & Lazarus, 1985).

4.5.3.1 Reliability of the Ways of Coping Questionnaire

Since coping processes are changeable, an estimate of the reliability of the scale cannot be determined using a test-retest method. Cronbach’s coefficient alpha was therefore used as an approximate measurement to determine the internal consistency of the coping measures. According to Folkman and Lazarus (1988), the reliability of the eight subscales is higher than other measures of coping processes. According to Govender and Killian (2001), research studies using the Ways of Coping Checklist conducted in South Africa have found that the measure has an internal consistency of between 0.59 and 0.83, which shows a generally satisfactory reliability.
Rexrode, Petersen and O'Toole (2008) conducted research into the reliability of the Ways of Coping Questionnaire by assessing all the articles from five different databases which used the Ways of Coping Questionnaire. This study used the general subscales of the Ways of Coping Questionnaire which are most commonly employed when the measure is used. Although the current research used the student specific subscales from the study by Folkman and Lazarus (1985), it is beneficial to consider the reliability of each subscale as determined in the study by Rexrode et al. (2008) since the various subscales consists roughly of the same items and therefore correspond to each other.

Results from their study indicated that reliability differed across the subscales, with the range of the reliability being between .60 to .75 (Rexrode et al., 2008). The primary factors which determined the difference in the reliability between the Positive Reappraisal subscale which scored the lowest reliability, and the Self-Controlling subscale which scored the highest reliability, were age of the participants and the administration format of the measurement (Rexrode et al., 2008). The reliability of the Escape Avoidance subscale which relates to the Wishful Thinking subscale from the student sample study was particularly reliant on the way the measurement was administered. It is evident from the study that a higher reliability for this subscale occurred when the participant provided a self-report rather than when participating in an interview. The reliability of the Seeking Social Support subscale was influenced by the target stressor, because social support is not always used in all stressful encounters (Rexrode et al., 2008).

Age was the primary determinant in the reliability of the Positive Appraisal Subscale, which relates to the Focusing on the Positive subscale from the student sample study, with the result that studies with adult participants had greater reliability than studies with younger participants.
This is most likely due to this subscale largely requiring a level of personal growth and development which changes with age. It may also be due to the spiritual dimension of the subscale, which research shows is a dimension which is more evident in adults than children (Rexrode et al., 2008). The Accepting Responsibility subscale which corresponds with the Self Blame subscale from the student sample study revealed differences in reliability according to the time period between the target stressor and participation in the study. It was evident that the greater the time period since the target stressor, the greater the reliability (Rexrode et al., 2008). The Self-Controlling subscale which corresponds to both the Problem-Focused Coping and the Keep to Self subscales from the student sample study revealed that reliability was also dependent on age. Like the Accepting Responsibility subscale, the older the person, the greater the reliability. The gender of the participant also showed a reliability variance, however most studies included both genders without investigating independent reliabilities of each gender (Rexrode et al., 2008). Limited variance in reliability between different populations or administrative formats was evident in the rest of the scales namely the Confrontive Coping, Distancing and Planful Problem Solving subscales. The study by Rexrode et al. (2008) revealed that the reliability of each subscale of the Ways of Coping Questionnaire is not fixed, since different factors for example age and administrative formats influence the reliability, but it seems to be acceptable.

4.5.3.2 Validity of the Ways of Coping Questionnaire

According to Folkman and Lazarus (1988), face validity, which is whether the scale appears authentic to the participants in measuring what they have been told it measures, exists for the items of scale. Construct validity is also evident since results from previous studies (Folkman &
Lazarus, 1988) are consistent with theoretical assumptions. These primarily refer to the notions of coping consisting of both problem-focused and emotion-focused strategies, and coping being viewed as a process. The Ways of Coping Questionnaire consists of a variety of problem-focused and emotion-focused coping strategies thereby satisfying theoretical assumptions. The Ways of Coping Questionnaire also allows for the inclusion of both primary and secondary appraisals in coping because the questionnaire does not specify the stressful encounter (Folkman & Lazarus, 1988). Primary appraisal refers to the nature of the threat in the stressful encounter, and secondary appraisal refers to the possible ways of coping (Folkman & Lazarus, 1988). As stated in the literature review, the process of coping involves both personal and environmental factors. The Ways of Coping Questionnaire allows for these factors which illustrates its consistency with theoretical findings and therefore a satisfactory degree of construct validity (Folkman & Lazarus, 1988).

4.5.3.3 Critical Input Regarding the Ways of Coping Questionnaire Psychometric Properties

One of the advantages of the measure is that it is flexible because the stressful event which the participant is asked to base his/her response on can be any stressful event either chosen by the participant or specified by the researcher (Rexrode et al., 2008). Although the measure was originally designed for the participant to think of a stressful event that he/she has experienced in the past week, researches have adjusted this to stressful events encountered in various time frames (Rexrode et al., 2008). This flexibility of the measure contributes to the advantages of using it in research. However, the flexibility of the measure may be a disadvantage as it may decrease the reliability of the scores especially because the target stressor (stressful event which
the participant is basing his/her response to the statements on) is not scored and its impact may differ between different participants (Rexrode et al., 2008).

4.6 Procedure

Once the researcher had obtained permission for the research study to be conducted from the Faculty Research, Technology and Innovation Committee, as well as the Research Ethics Committee (Human) at the Nelson Mandela Metropolitan University, the data collection stage of the research could take place. The researcher contacted the first-year psychology lecturers at the university where the study was conducted and obtained permission to speak to the first-year psychology students at the end of the lecture.

Following this, the researcher informed all the students present at the lecture about the nature of the study and its participation requirements. Students wishing to voluntarily participate in the study were asked to remain behind after the lecture.

These students were handed a covering letter (see Appendix A) providing information about the research and a consent form (see Appendix B). The nature and procedure of the research was explained to the participants and the requirements of participation were conveyed to the students again. The participants were also informed that their participation was voluntary, and that they would remain anonymous during all stages of the research. The participants were also informed that they were free to withdraw from the research at any stage without penalty, and that all the information provided would be treated as highly confidential. The participants were asked to give their written informed consent for their voluntary participation in this study by completing the consent form (signing, dating and stating their initials against each section) as an indication that they both understood and agreed to the conditions of the study. Following this, the students
who wanted to participate were provided with and asked to complete the biographical questionnaire, the General Perceived Self Efficacy Scale (GSE) and the Ways of Coping Questionnaire (Refer to Appendices). The participants completed the questionnaires in the lecture room whilst the researcher was present. The questionnaires took approximately 30 minutes to complete.

The researcher was available to assist the participants in any way whilst they were completing the questionnaires. There was no risk of harm to the participants by their involvement in the study. The participants possibly benefited from their participation by gaining more insight into the construct of self-efficacy and ways of coping with stressful life events, and the experience of research in psychology. The participants were informed that a report of the study would be made available at the Nelson Mandela Metropolitan University’s main library which would be available should they wish to receive feedback on the results of the study.

4.7 Data Analysis

Descriptive statistics were used to address all the aims of the study. Descriptive statistics were used to describe the quantitative data (Neuman, 1997) provided by the participants in the biographical questionnaire, the General Perceived Self-Efficacy Scale (GSE), and the Ways of Coping Questionnaire. According to Goodwin (2002), descriptive statistics show an outline of the primary features of a set of data obtained from a participant sample. Descriptive statistics are useful because they organise and interpret the recorded data into a concise summary (Myers, 1989) which can be visually presented (Goodwin, 2002). Descriptive statistics illustrate the measures of central tendency, variability and association (Goodwin, 2002). To analyse the measures of central tendency; the mean and standard deviation of the scores for each
questionnaire were calculated. Frequency distribution tables were used to display the results.

Data related to the aims one and two, which are to explore and describe the self-efficacy of male and female first-year psychology students at a university in the Nelson Mandela Metropole, and to explore and describe the ways of coping of first-year psychology students at a university in the Nelson Mandela Metropole, were both analysed according to descriptive statistics.

In terms of the third aim (the exploration and description of the relationship between self-efficacy and ways of coping of male and female first-year psychology students at a university in the Nelson Mandela Metropole), the measures of association of the data were analysed. A correlation is evident whenever there is an association or relation in two variables in some way (Goodwin, 2002). In terms of the correlation that was examined in order to meet the requirements of the third aim, the mean of the total GSE scores was compared with the means of the eight subscales of the Ways of Coping Questionnaire. Pearson’s $r$ is the coefficient of correlation which was used to measure the strength of the correlation between the General Perceived Self Efficacy Scale (GSE) and the Ways of Coping Questionnaire.

With regards to the fourth aim (the exploration and description of the relationship between gender and self-efficacy and ways of coping of first-year psychology students at a university in the Nelson Mandela Metropole), the data were further analysed with the use of inferential statistics. Inferential statistics allow the researcher to assess whether the results from the sample can be applied to the wider population (Goodwin, 2002). Inferential statistics are valuable because they determine whether the results are an outcome of chance factors or actual relationships (Goodwin, 2002). A dependent samples $t$-test was used to compare the mean scores of the male and female samples. From the $t$-test it is evident to what degree or significance the distribution of the male scores and the distribution of the female scores overlap.
(Tredoux & Durrheim, 2002). According to Harris (1998) a \( p \)-value of .05 is the standard significance value for correlation coefficients. For meaningful interpretation of correlation coefficients the guidelines suggested by Guilford (1946) were used. According to Harris (1998) a \( p \)-value of .01 indicates a greater significance value, and a \( p \)-value of .001 suggests an even greater significance value of the correlation coefficients. The Guilford (1946) guidelines are outlined in Table 1 below.

### Table 1:

*The Correlations and Descriptions as suggested by Guilford (1946)*

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than .20</td>
<td>Slight, almost negligible relationship</td>
</tr>
<tr>
<td>.20 - .40</td>
<td>Low correlation; definite but small relationship</td>
</tr>
<tr>
<td>.40 - .70</td>
<td>Moderate correlation; substantial relationship</td>
</tr>
<tr>
<td>.70 - .90</td>
<td>High correlation; marked relationship</td>
</tr>
<tr>
<td>.90 – 1.00</td>
<td>Very high correlation; very dependable relationship</td>
</tr>
</tbody>
</table>

### 4.8 Ethical Considerations

Ethical considerations must be adhered to when undertaking research. According to Neuman (1997) the development of new knowledge through research should not be at the expense of the ethical treatment of all involved in the research. Ethical factors such as anonymity, voluntary participation, beneficence and risk of harm must be considered when undertaking research.
4.8.1 Informed Consent and Anonymity

Anonymity refers to the protection of the participant’s identity by the participant remaining nameless (Neuman, 1997). In order to comply with the ethical obligation of informing the participants about the research, the researcher distributed a detailed letter (Appendix A) explaining and describing all aspects of the study to each participant. Both the risks and the benefits of participating in the study were outlined in the letter. All information regarding the research study that was outlined in the letter was also verbally conveyed to the participants by the researcher at the same venue and time when the participants completed the questionnaires. Once the participants acknowledged that they fully understood all the terms of the study, they were asked to sign an informed consent form (Appendix B). Once the participants completed the questionnaires, the informed consent form was detached from the completed questionnaires in order to maintain anonymity. Confidentiality was also ensured in the study by the researcher undertaking not to reveal identification information of the participants in the treatise (Neuman, 1997).

4.8.2 Voluntary Participation

All participants were informed that their participation in the study was voluntary. This ethical principle ensured that no participant was coerced to participate in the study. Coercion means a person is forced or pressurized to participate in the study by the researcher or any person who has a sense of authority or influence over the person (Neuman, 1997; Salkind, 1997). In order to meet this ethical requirement fully, participants were informed both in writing and verbally that participation in the study was voluntary, and that they were also free to withdraw from the study during any stage of the study.
4.8.3 Beneficence and Risk of Harm

It is also necessary to inform a participant of both the risks and benefits of participating in the study (Neuman, 1997). In terms of risks, the researcher considered the possibilities of physical and emotional harm, and legal jeopardy towards the participants since these factors are discussed by Neuman (1997) as ethical considerations in research studies. The researcher could not identify any way in which the present research would inflict any form of harm or legal jeopardy on the participants. Ethical guidelines in research also emphasise the importance of the participant benefiting from participating in the study (Neuman, 1997). Participants could benefit from participating in this study by enhancing their knowledge through the availability of feedback from the study. The details regarding feedback on the study were conveyed to the participants at the same venue and time that the questionnaires were completed by the participants.

4.9 Conclusion

The aims of the current study determined the research methodology and design chosen for the study. A quantitative, exploratory, descriptive design was used to meet the aims of the study. A non-probability, convenience sample of first-year psychology students at a university in the Nelson Mandela Metropole was used as the sample (n=128) in the study. Three questionnaires, namely a biographical questionnaire, The General Perceived Self-Efficacy Scale and the Ways of Coping Questionnaire were used to gather the data. Ethical guidelines such as anonymity, confidentiality, voluntary participation, beneficence and risk of harm were considered throughout the research process. The data were analysed using descriptive and inferential statistics. The results from the statistical analysis are reported and discussed in the subsequent chapter.
Chapter Five
Results and Discussion

5.1 Chapter Overview

The results obtained from the data collection and analysis are presented and discussed in the present chapter. The biographical details in terms of age and gender of the sample are presented first. Following the biographical details is a description of the results obtained from the two measures namely the Ways of Coping Questionnaire and the General Perceived Self-Efficacy Scale. The purpose of this description is to meet the first and second aims of the study which were to explore and describe the self-efficacy and ways of coping of male and female first-year psychology students at a university in the Nelson Mandela Metropole respectively.

The present chapter concludes with a description of the relationship between the results of the measures as well as a description of the relationship between gender and the General Perceived Self-Efficacy Scale and the Ways of Coping Questionnaire. The final examination and discussion of results are to meet the third and forth aims of the study which were to explore and describe the relationship between self-efficacy and ways of coping of the sample and to explore and describe the relationship between gender and self-efficacy and ways of coping of the same sample.

5.2 Biographical Description of the Sample

The biographical questionnaire which was completed by the participants was used to provide the biographical variables which are discussed in this section. These variables included
gender and age. The importance of presenting the biographical information is to contextualise
the findings in relation to the sample and the two measures used.

5.2.1 Gender

It is important to present the gender distribution of the participants in the study since the
fourth aim of the study was to explore and describe the relationship between gender and self-
efficacy and ways of coping of the participants. The gender distribution of the sample is
indicated in Table 2.

Table 2

*Gender Distribution of the Sample (N=128)*

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>128</td>
<td>100</td>
</tr>
<tr>
<td>Male</td>
<td>34</td>
<td>27</td>
</tr>
<tr>
<td>Female</td>
<td>94</td>
<td>73</td>
</tr>
</tbody>
</table>

*Note.* Percentages were rounded off.

The sample used in the current study consisted of 128 participants of which 27 percent were
male and 73 percent were female.

The exploration and description of the relationship between gender and self-efficacy and
ways of coping will be discussed in the current chapter under the subsections of the specific
measures used to investigate this relationship.
5.2.2 Age

In order to meet the inclusion criteria for participation in the study, the participants had to be between the ages of 18 and 21 years of age. In accordance with Havighurst’s (1972) classification of life stage based on age, the sample for the current research is categorized as being in early adulthood. Havighurst (1972) classifies the life stage of early adulthood as being between the ages of 18 and 35 years. According to Erickson (1963), the life stage between the ages of 20 to 24 is known as young adulthood. Based on these theories, the current sample falls within the life stage of development known as young or early adulthood. The age distribution of the sample is presented in Table 3.

Table 3

*Age Distribution of the Sample (N=128)*

<table>
<thead>
<tr>
<th>Age in Years</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>128</td>
<td>100</td>
</tr>
<tr>
<td>18</td>
<td>68</td>
<td>53</td>
</tr>
<tr>
<td>19</td>
<td>35</td>
<td>27</td>
</tr>
<tr>
<td>20</td>
<td>20</td>
<td>16</td>
</tr>
<tr>
<td>21</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

*Note.* Percentages were rounded off.

The majority of the participants (53%) in the current study were 18 years of age. As the age of the participants increased in years, the number the participants of that age decreased.
Although the current study does not investigate the influence of age, since the participants all fall within the same life stage of development only a brief discussion on the influence of age on self-efficacy and ways of coping is provided.

Although self-efficacy differs between persons, there are characteristic efficacy factors evident at specific stages in the lifespan. According to Bandura (1994) factors such as relationships, careers, occupations and parenthood are evident in the developmental stage of adulthood and have a strong influence on self-efficacy. In accordance with the literature (Bandura, 1994; Chemers et al., 2001; Ramos-Sanchez & Nichols, 2007) factors associated with the life stage development known as early or young adulthood have a bidirectional relationship to self-efficacy.

Taylor (1997) describes how previous experience with similar stressful encounters will influence the ways of coping with a specific, current encounter. Previous experience is directly related to age. According to Folkman and Lazarus (1980) and McCrae (1982) age influences the type of encounter viewed as stressful rather than the ways of coping used to deal with a stressful encounter.

Table 4

*Descriptive Statistics of the Age of the Participants (N=128)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Minimum-Maximum Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sample</td>
<td>128</td>
<td>18.70</td>
<td>.87</td>
<td>18-21</td>
</tr>
<tr>
<td>Male</td>
<td>34</td>
<td>18.82</td>
<td>1.03</td>
<td>18-21</td>
</tr>
<tr>
<td>Female</td>
<td>94</td>
<td>18.66</td>
<td>.81</td>
<td>18-21</td>
</tr>
</tbody>
</table>
The means, standard deviations and minimum and maximum scores for the age distribution of the participants are displayed in Table 4. The mean age score for the total sample of participants was 18.70 years, with a standard deviation of .87 years. The mean age score for the male participants in the sample was 18.82 years, with a standard deviation of 1.03 years. In the female sample, the mean age was 18.66 years, with a standard deviation of .81 years. The ages of the sample ranged from 18 to 21 years.

5.3 Results of the Measures

The results of the measures used to meet the aims of the current study, which were to explore and describe the self-efficacy and ways of coping of first-year psychology students at a university in the Nelson Mandela Metropole, will be presented and discussed in the following subsections.

5.3.1 The General Perceived Self-Efficacy Scale (GSE)

The descriptive statistics for the sample attained on the GSE are displayed in Table 5. The descriptive statistics include the mean, standard deviation and minimum and maximum scores for the total scale. These are presented to address the first aim of the study which was to explore and describe the self-efficacy of first-year psychology students at a university in the Nelson Mandela Metropole.
Table 5

Descriptive Statistics of the General Perceived Self-Efficacy Scale (N = 128)

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Minimum-Maximum Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Scale</td>
<td>31.62</td>
<td>3.67</td>
<td>22-39</td>
</tr>
</tbody>
</table>

The standard mean score was used to facilitate the exploration of general perceived self-efficacy of the participants. The sum of the item responses for each scale constitutes the total scale score. The standard scores had a mean of 31.62 and a standard deviation of 3.67. The range of standard scores was 22 to 39. These results indicate that the majority of the participants perceived themselves as having high or optimistic levels of self-efficacy (Schwarzer & Jerusalem, 1995).

The mean GSE score for the current sample was one point higher than the mean GSE score reported in a study by Luszczynska et al. (2005). The mean GSE score for the current sample corresponds to the mean GSE score for male participants on the measure completed by Canadian university students with a mean age of 22.6 years (Schwarzer, Mueller & Greenglass, 1999). Generally, the mean GSE score for the current sample is consistent with previous research using the GSE with students between the ages of 18 to 21 years. This suggests that students between these ages tend to have a higher degree or optimistic sense of self-efficacy.

5.3.1.1 The General Perceived Self-Efficacy Scale (GSE) of Males

Presented in Table 6 are the descriptive statistics which include the mean, standard deviation and minimum and maximum scores for the GSE completed by the male participants in the sample.
Table 6

*Descriptive Statistics of the General Perceived Self-Efficacy Scale for Males (N = 34)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Minimum-Maximum Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Scale</td>
<td>31.62</td>
<td>3.74</td>
<td>23-38</td>
</tr>
</tbody>
</table>

The standard scores for male participants are similar to the standard scores for the total sample. The mean score for the male participants was 31.62, with a standard deviation of 3.74. A range of 15 points was evident, with the lowest standard score for the male participants being 23, and the highest being 38. The results obtained from the sample in this study indicate that the male participants perceived themselves as having high or optimistic levels of self-efficacy which is a similar result to that of the total sample.

The mean GSE score for males for the current study is consistent with the mean GSE score for the same measure which was completed by Canadian university male students in a study by Schwarzer et al. (1999). The mean GSE score for males for the current study is also consistent with the mean GSE score for the same measure which was completed by male students with an average age of 21 years in a study by Luszczynska et al. (2005). In the same study (Luszczynska et al., 2005), male students with an average age of 18 years who were swimmers obtained a mean GSE score of 30.82, which is slightly lower than the mean GSE score (31.62) for the male only participants in this study, where the average age was also 18 years. The results of the mean GSE score which represents the level of self-efficacy of the participants in the current study is consistent with the results from research by Schwarzer et al. (1999) and slightly higher than results from research by Luszczynska et al. (2005). The results of the mean GSE scores from the
current and previous studies (Luszczynska et al., 2005; Schwarzer et al., 1999) indicate high levels of self-efficacy for male students.

5.3.1.2 The General Perceived Self-Efficacy Scale (GSE) of Females

Following the presentation of the descriptive statistics of the male participants in the sample in Table 6 above, it is necessary to display the descriptive statistics of the female participants in the sample in order to further address the first aim of the study which was to explore and describe the self-efficacy of the sample. The mean, standard deviation and minimum and maximum scores for the GSE completed by the female participants in the sample is shown in Table 7.

Table 7

*Descriptive Statistics of the General Perceived Self-Efficacy Scale for Females (N = 94)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Minimum and Maximum Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Scale</td>
<td>31.62</td>
<td>3.66</td>
<td>22-39</td>
</tr>
</tbody>
</table>

In terms of the female participants in the study, the results indicate that the sample obtained a mean of 31.62 and a standard deviation of 3.66. A range of 17 points was evident. The mean score for female participants is similar to the mean score of male participants on the GSE measure. Similar to the results of the overall sample of participants and the results of the male participants, the results of the sample indicate that the female participants also had a high or optimistic self-efficacy.
The mean GSE score for females in the current study is slightly higher than the mean GSE score for female students with a mean age of 20 years who completed the GSE in a study by Luszczynska et al. (2005) where the resultant mean GSE score was 29.68. The mean GSE score for females in the current study is also slightly higher than the mean GSE score for female Canadian university students with a mean age of 22.6 years who completed the GSE in a study by Schwarzer et al. (1999) where the mean GSE score was 29.87. The mean level (31.62) of self-efficacy for females in the current sample is higher (1.75) than the mean level of self-efficacy obtained in the research by Schwarzer et al. (1999) on self-efficacy in females which was 29.87. The mean level (31.62) of self-efficacy for females in the current sample is also higher (1.94) than the mean level of self-efficacy obtained in the research by Luszczynska et al. (2005) on self-efficacy in females which was 29.68.

The male and female mean GSE scores for the current sample suggests that self-efficacy is not related to gender. This result is consistent with results of previous research by Johnson and Wardlaw (2004), Kumar and Lal (2006) and Lent et al. (2005) which found no difference in self-efficacy between males and females. However, this result in inconsistent with other research (Lent et al., 2002; Pajares & Miller, 1994; Schwarzer et al., 1999; Whiteley, 1997; Zarafshani et al., 2008) which found that gender differences do exist in self-efficacy.

5.3.2 The Ways of Coping Questionnaire

The descriptive statistics which include the means, standard deviations and minimum and maximum scores obtained on The Ways of Coping Questionnaire are presented in Table 8. The descriptive statistics for the Ways of Coping Questionnaire are presented to address the second aim of the current study which was to explore and describe the ways of coping of the sample.
Table 8

*Scores in this column are relative scores.

The relative scores for the subscales are displayed in Table 8. The relative score was derived by calculating the raw score, which was the sum of all the item scores on the subscale, and dividing the raw score by the average number of items in the subscale. The purpose of presenting the relative scores is to illustrate the choice of use that the participant’s expressed for each way of coping. The relative score portrays the frequency of choice for each coping subscale relative to each of the other subscales and to the subscales combined (Folkman & Lazarus, 1988). The percentage scores were calculated in order to compare the relative scores through the use of a common denominator. The percentage scores were determined by dividing the raw scores by the number of items in the subscale, and multiplying this number by 100.
The results obtained from this sample indicate that the participants relied on Focusing on the Positive more than other ways of coping. A mean of 12.84 (80%) was evident for Focusing on the Positive way of coping with a standard deviation of 2.45. This result suggests that first-year university students who were registered for a first-year module in psychology at a university in the Nelson Mandela Metropole, relied mainly on Focusing on the Positive as a way of coping when faced with the stressor of being first-year students at the university, and the various stressful encounters which are associated with being in the first-year at university. The Focusing on the Positive subscale is an emotion-focused way of coping which refers to the way of coping that involves efforts to create positive meaning out of the stressful encounter by giving attention to the personal growth that can occur as a possible result of the stressful encounter (Folkman & Lazarus, 1988).

The Problem-Focused Coping, Wishful Thinking, Seeking Social Support and Self Blame subscales were reported as having similar degrees of strength of use by the participants. A mean of 32.46 (74%) with a standard deviation of 4.58 is evident for the Problem-Focused Coping subscale. The Wishful Thinking subscale has a mean of 14.66 (73%) with a standard deviation of 3.86. The Seeking Social subscale has a mean of 20.49 (73%) with a standard deviation of 4.28. A mean of 8.35 (70%) with a standard deviation of 1.95 is evident for the Self Blame subscale.

The least relied upon way of coping was indicated by the subscale termed Tension Reduction. The Tension Reduction scale is used to describe coping behaviour which involves using an action to deal with stress (e.g. going for a jog or run). The mean score for this subscale is 6.27 which is indicative of a 52 percent frequency of choice for this subscale. A standard deviation of 2.05 is evident for this subscale.
5.3.2.1 The Ways of Coping Questionnaire of Males

Displayed in Table 9 below are the descriptive statistics in terms of the means, standard deviations and minimum and maximum scores for the subscales of the Ways of Coping Questionnaire for the male participants.

Table 9

*Descriptive Statistics of the Ways of Coping Questionnaire for Males (N = 34)*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>M*</th>
<th>Percentage</th>
<th>SD</th>
<th>Minimum-Maximum Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem-Focused Coping</td>
<td>32.24</td>
<td>73</td>
<td>4.52</td>
<td>22-39</td>
</tr>
<tr>
<td>Wishful Thinking</td>
<td>13.62</td>
<td>68</td>
<td>4.15</td>
<td>5-20</td>
</tr>
<tr>
<td>Detachment</td>
<td>14.85</td>
<td>62</td>
<td>3.99</td>
<td>6-22</td>
</tr>
<tr>
<td>Seeking Social Support</td>
<td>20.06</td>
<td>72</td>
<td>4.94</td>
<td>12-28</td>
</tr>
<tr>
<td>Focusing on the Positive</td>
<td>12.59</td>
<td>79</td>
<td>2.38</td>
<td>6-16</td>
</tr>
<tr>
<td>Self Blame</td>
<td>8.12</td>
<td>68</td>
<td>1.89</td>
<td>4-12</td>
</tr>
<tr>
<td>Tension Reduction</td>
<td>6.15</td>
<td>51</td>
<td>2.23</td>
<td>3-11</td>
</tr>
<tr>
<td>Keep to Self</td>
<td>7.12</td>
<td>59</td>
<td>2.17</td>
<td>3-12</td>
</tr>
</tbody>
</table>

*Scores in this column are relative scores.*

The relative mean score for the Focusing on the Positive subscale was 12.59 and the standard deviation of 2.38. The score of 12.59 indicates that this subscale has a 79 percent frequency of choice as a way of coping by the male participants when faced with the stressors associated with being in their first-year at university.
5.3.2.2 The Ways of Coping Questionnaire of Females

The descriptive statistics which include the means, standard deviations and minimum and maximum scores for the subscales in the Ways of Coping Questionnaire completed by female participants are presented in Table 10.

Table 10

Descriptive Statistics of the Ways of Coping Questionnaire for Females (N = 94)

<table>
<thead>
<tr>
<th>Subscale</th>
<th>M*</th>
<th>Percentage</th>
<th>SD</th>
<th>Minimum-Maximum Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem-Focused Coping</td>
<td>32.54</td>
<td>74</td>
<td>4.63</td>
<td>22-43</td>
</tr>
<tr>
<td>Wishful Thinking</td>
<td>15.03</td>
<td>75</td>
<td>3.71</td>
<td>7-20</td>
</tr>
<tr>
<td>Detachment</td>
<td>15.14</td>
<td>63</td>
<td>3.75</td>
<td>8-23</td>
</tr>
<tr>
<td>Seeking Social Support</td>
<td>20.65</td>
<td>74</td>
<td>4.04</td>
<td>11-28</td>
</tr>
<tr>
<td>Focusing on the Positive</td>
<td>12.94</td>
<td>81</td>
<td>2.48</td>
<td>6-16</td>
</tr>
<tr>
<td>Self Blame</td>
<td>8.44</td>
<td>70</td>
<td>1.98</td>
<td>4-12</td>
</tr>
<tr>
<td>Tension Reduction</td>
<td>6.31</td>
<td>53</td>
<td>1.99</td>
<td>3-12</td>
</tr>
<tr>
<td>Keep to Self</td>
<td>7.49</td>
<td>62</td>
<td>2.12</td>
<td>4-12</td>
</tr>
</tbody>
</table>

*Scores in this column are relative scores.

It is evident from the figures displayed in Table 9 and Table 10 that there was no significant difference between males and females in the results from the Ways of Coping Questionnaire. Both males and females mostly utilized Focusing on the Positive (79 percent for males and 81 percent for females) as a way of coping and relied least on Tension Reduction (51 percent for
males and 53 percent for females) as ways of coping with stressors faced as first-year university students. The results of the current study were therefore congruent with previous research by Folkman and Lazarus (1988) which suggested that there is no significant difference in ways of coping between females and males.

One particular study by Vitaliano et al. (1985) that reported gender difference in ways of coping indicated that females adopted more problem-focused ways of coping, wishful thinking, social support, avoidance and self blame than males. However, the reliability and validity of the study by Vitaliano et al. (1985) was regarded as limited. The results from Vitaliano et al.’s (1985) study that reported gender differences in ways of coping are consistent with the current study which indicates that the mean relative score for the Wishful thinking subscale for females is 15.03 (75%) which is slightly higher than the mean relative score for the Wishful thinking subscale for males which is 13.62 (68%). The difference however is not significant.

5.3 The Interrelationship between the GSE and The Ways of Coping Questionnaire

In order to achieve the third aim of the study, which was to explore and describe the relationship between self-efficacy and ways of coping of male and female first-year psychology students at a university in the Nelson Mandela Metropole, the results from the interrelationship between the Ways of Coping Questionnaire and the GSE are presented. The GSE total score was correlated with the scores from the subscales of the Ways of Coping Questionnaire, because the subscales of the Ways of Coping Questionnaire cannot be combined into a total score. The interrelationships between the two measures are presented in Table 11.
Table 11

*Correlation Matrix: The Ways of Coping Questionnaire and GSE (N=128)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Ways of Coping Questionnaire Subscales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S1</td>
</tr>
<tr>
<td>GSE Total</td>
<td>.58***</td>
</tr>
<tr>
<td></td>
<td>p=0.000</td>
</tr>
<tr>
<td>S1: Problem-Focused Coping</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>S2: Wishful Thinking</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>S3: Detachment</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>S4: Seeking Social Support</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>S5: Focusing on the Positive</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>S6: Self Blame</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>S7: Tension Reduction</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>S8: Keep to Self</td>
<td></td>
</tr>
</tbody>
</table>

*p ≤ .05; **p ≤ .01; ***p ≤ .001
The Pearson product-moment correlation coefficient or Pearson $r$ was used to investigate the interrelationships between the two measures, namely the GSE and the Ways of Coping Questionnaire. Mentioned in Chapter 4 are the Guilford (1946) guidelines for the interpretation of the correlations. These guidelines suggest that correlations between .40 and .70 are considered to indicate moderate correlation. The significance of the correlation coefficients was assessed by examining the $p$ values. As outlined in Chapter 4, a $p$ value of $\leq .05$ is considered to indicate significance, and $p$ values of $\leq .01$ and $\leq .001$ are considered to indicate greater significance (Harris, 1998).

From the results of the inferential statistics, it is evident that moderate correlations exist between the GSE total scale score and the Problem-Focused Coping subscale (S1) (correlation of .58) and the GSE total scale score and the Focusing on the Positive subscale (S5) (correlation of .48). In addition, a significant relationship exists between the GSE total scale score and many of the ways of coping subscales, although not all of the ways of coping subscales. It is evident from the results in Table 11 that significant relationships exist between the GSE total scale score and the Problem-Focused Coping (S1) ($p< .001$), Seeking Social Support (S4) ($p< .001$) and Focusing on the Positive (S5) ($p< .001$) subscales from the ways of coping questionnaire respectively. These results suggest that participants with a high self-efficacy cope with a stressful encounter by using deliberate action or behaviour, looking for support from others, and/or making an effort to focus attention on positive aspects or personal growth.

In accordance with the guidelines for the existence of a significant relationship, it is apparent that there was no significant statistical correlation between the GSE total scale score and the Wishful Thinking (S2), Detachment (S3), Self-blame (S6), Tension Reduction (S7) and Keep to Self (S8) subscales of the Ways of Coping questionnaire.
The relationship between a high level of self-efficacy and the use of problem-focused ways of coping as suggested by the results of the current study is consistent with the results of previous research (Bandura, 1997; Brown & Nicassio, 1987; Endler et al., 2001; Gollwitzer, 1999) which investigated the relationship between self-efficacy and ways of coping. The results from the current study are consistent with previous research which suggested that persons with high self-efficacy adopt active, problem-focused ways of coping and that persons with low self-efficacy relied on passive, emotion-focused ways of coping (Bandura, 1997; Brown & Nicassio, 1987; Endler et al., 2001; Gollwitzer, 1999).

Furthermore, the results from the current study show a relationship between high levels of self-efficacy and greater reliance on the way of coping as defined by the Focusing on the Positive (S5) subscale. This result is also consistent with previous research by Luszczynska et al. (2005). The results of both these studies suggest that persons with high levels of self-efficacy tend to treat challenges as opportunities and have a higher degree of expectation of a positive outcome of their actions.

The results from a study by Luszczynska et al. (2005) on a sample of patients coping with cancer revealed that persons low in self-efficacy tend to utilize self-blame as one of their ways of coping. In the current study, no significant relationship was found between high levels of self-efficacy and the way of coping defined by the subscale Self Blame (S6). This result indicates that students with high levels of self-efficacy do not use self blame as a way of coping with stressful encounters, which is consistent with previous research.

Furthermore, a consistency with the results of the current study and previous research is evident in the significant relationship found between high levels of self-efficacy and the reliance on ways of coping as defined by the Seeking Social Support (S4) subscale. The Seeking Social
Support (S4) subscale includes the action of gaining support in terms of information regarding the encountered stressor and surrounding aspects. The positive association between this subscale and high levels of self-efficacy as suggested by the results of the current study are consistent with the results from a previous study by Luszczynska et al. (2005) which showed that patients coping with cancer who had high levels of self-efficacy relied more on gaining further information than patients with low levels of self-efficacy.

According to a study by Folkman and Lazarus (1988) there is a link between the presence of fewer psychological symptoms and the reliance on problem-focused ways of coping when faced with stressful encounters. From the discussion in Chapter 2, it is evident that a high sense of self-efficacy is linked to low levels of depression and despondency. Generally then, a high sense of self-efficacy can be related to low levels of depression and thus a high level of reliance on problem-focused coping. This research is consistent with the results of the current study which showed that a high sense of self-efficacy is linked to planful problem solving when coping with stressors.

In a study by Collins et al. (1983), participants who reported using problem-focused ways of coping reported lower levels of psychological symptoms and emotional distress than participants who relied less on problem-focused strategies. In contrast, participants who relied more on emotion-focused coping reported to have more psychological symptoms and emotional distress. According to Bandura (1992) persons with a high degree of self-efficacy have lowered levels of emotional distress since a relationship is evident between self-efficacy and affect. These findings suggest that the results from the current research are consistent with the results from previous research because a relationship is evident between high levels or general perceived self-efficacy and the use of problem-focused ways of coping.
It is important to state that the correlation results only indicate that a significant relationship exists between the GSE total scale score and the Problem-focused Coping (S1), Seeking Social Support (S4) and Focusing on the Positive (S5) subscales of the Ways of Coping Questionnaire. Although it was evident that a significant relationship or association exists, it cannot be concluded that a causal or explanatory relationship exists. It is only evident that relationships exist between self-efficacy and certain ways of coping.

5.4.1 The Interrelationship between the GSE and the Ways of Coping Questionnaire of Males

The correlation matrix of the Ways of Coping Questionnaire and GSE for the male participants in the study is presented in Table 12 in an attempt to address the fourth aim of the study which was to explore and describe the relationship between gender and self-efficacy and ways of coping of the sample.
Table 12

*Correlation Matrix: The Ways of Coping Questionnaire and GSE for Males (N=34)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>S1</th>
<th>S2</th>
<th>S3</th>
<th>S4</th>
<th>S5</th>
<th>S6</th>
<th>S7</th>
<th>S8</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSE Total</td>
<td>.42*</td>
<td>-.28</td>
<td>-.19</td>
<td>.21</td>
<td>.39*</td>
<td>-.04</td>
<td>-.04</td>
<td>-.18</td>
</tr>
<tr>
<td>S1: Problem-Focused Coping</td>
<td>.12</td>
<td>.30</td>
<td>.63***</td>
<td>.74***</td>
<td>.12</td>
<td>-.00</td>
<td>-.13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>p=.500</td>
<td>p=.080</td>
<td>p=.000</td>
<td>p=.000</td>
<td>p=.508</td>
<td>p=.998</td>
<td>p=.465</td>
<td></td>
</tr>
<tr>
<td>S2: Wishful Thinking</td>
<td>.46**</td>
<td>.47**</td>
<td>-.07</td>
<td>.47**</td>
<td>.42*</td>
<td>.19</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>p=.006</td>
<td>p=.005</td>
<td>p=.687</td>
<td>p=.005</td>
<td>p=.015</td>
<td>p=.281</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S3: Detachment</td>
<td>.30</td>
<td>.13</td>
<td>.29</td>
<td>.16</td>
<td>.25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S4: Seeking Social Support</td>
<td>.46**</td>
<td>.19</td>
<td>.27</td>
<td>.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>p=.006</td>
<td>p=.271</td>
<td>p=.129</td>
<td>p=.718</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S5: Focusing on the Positive</td>
<td>.19</td>
<td>-.17</td>
<td>-.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>p=.290</td>
<td>p=.350</td>
<td>p=.364</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S6: Self Blame</td>
<td>.39*</td>
<td>.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>p=.022</td>
<td>p=.325</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S7: Tension Reduction</td>
<td>.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>p=.250</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S8: Keep to Self</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p ≤ .05; **p ≤ .01; ***p ≤ .001
From the correlation results of the males in the sample, as displayed in Table 12, it is evident that a moderate correlation (.42) was evident between the GSE total scale score and the Problem-Focused Coping (S1) subscale. A significant relationship exists between the GSE total scale score and the Problem-Focused Coping (S1) and Focusing on the Positive (S5) subscales of the Ways of Coping Questionnaire. For both these relationships, a significance level of < .05 was obtained.

The relationships (moderate correlation between the GSE total scale score and the Problem-Focused Coping (S1) subscale, and a significant relationship between the GSE total scale score and the Problem-Focused Coping (S1) and Focusing on the Positive (S5) subscales of the Ways of Coping Questionnaire) evident in the male participants were the same as the relationships apparent for the total sample except for one subscale namely the Seeking Social Support (S4) subscale which had no significant relationship to general perceived self-efficacy in the male sample. When exploring the relationships for the males, no significant relationships were evident between the GSE total scale score and the Wishful Thinking (S2), Detachment (S3), Seeking Social Support (S4), Self Blame (S6), Tension Reduction (S7) and Keep to Self (S8) subscales of the Ways of Coping Questionnaire. A comparison between the relationships evident for the male and female participants is outlined at the end of the following section.

5.4.2 The Interrelationship between the GSE and the Ways of Coping Questionnaire of Females

The fourth aim of the study was to explore and describe the relationship between gender and self-efficacy and ways of coping of the sample. The correlation matrix of The Ways of Coping Questionnaire and GSE for female participants is provided in Table 13.
Table 13

Correlation Matrix: The Ways of Coping Questionnaire and GSE for Females (N=94)

<table>
<thead>
<tr>
<th>Variable</th>
<th>S1</th>
<th>S2</th>
<th>S3</th>
<th>S4</th>
<th>S5</th>
<th>S6</th>
<th>S7</th>
<th>S8</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSE Total</td>
<td>.63***</td>
<td>-.13</td>
<td>.10</td>
<td>.36***</td>
<td>.51***</td>
<td>.03</td>
<td>.18</td>
<td>-.15</td>
</tr>
<tr>
<td>p=.000</td>
<td>p=.229</td>
<td>p=.317</td>
<td>p=.000</td>
<td>p=.000</td>
<td>p=.779</td>
<td>p=.079</td>
<td>p=.149</td>
<td></td>
</tr>
<tr>
<td>S1: Problem-Focused Coping</td>
<td></td>
<td>.15</td>
<td>.15</td>
<td>.43***</td>
<td>.65***</td>
<td>.33**</td>
<td>.17</td>
<td>-.06</td>
</tr>
<tr>
<td>p=.141</td>
<td>p=.161</td>
<td>p=.000</td>
<td>p=.000</td>
<td>p=.001</td>
<td>p=.102</td>
<td>p=.537</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S2: Wishful Thinking</td>
<td></td>
<td>.44***</td>
<td>.08</td>
<td>-.15</td>
<td>.41***</td>
<td>.12</td>
<td>.47***</td>
<td></td>
</tr>
<tr>
<td>p=.000</td>
<td>p=.437</td>
<td>p=.145</td>
<td>p=.000</td>
<td>p=.257</td>
<td>p=.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S3: Detachment</td>
<td></td>
<td></td>
<td>.01</td>
<td>.01</td>
<td>.21*</td>
<td>.10</td>
<td>.42***</td>
<td></td>
</tr>
<tr>
<td>p=.905</td>
<td>p=.922</td>
<td>p=.040</td>
<td>p=.333</td>
<td>p=.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S4: Seeking Social Support</td>
<td></td>
<td>.53***</td>
<td>.07</td>
<td>.19</td>
<td>-.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.000</td>
<td>p=.482</td>
<td>p=.072</td>
<td>p=.896</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S5: Focusing on the Positive</td>
<td></td>
<td>.17</td>
<td>.13</td>
<td>-.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.106</td>
<td>p=.219</td>
<td>p=.210</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S6: Self Blame</td>
<td></td>
<td></td>
<td></td>
<td>.12</td>
<td>.33*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.244</td>
<td>p=.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S7: Tension Reduction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.748</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S8: Keep to Self</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Moderate correlations are evident between the GSE total score and the Problem-Focused Coping subscale (S1) (correlation of .63) and between the GSE total score and the Focusing on the Positive subscale (S5) (correlation of .51). Furthermore, significant relationships were evident between the GSE total scale score and the subscales of the Ways of Coping Questionnaire termed Problem-Focused Coping (S1) \((p < .001)\), Seeking Social Support (S4) \((p < .001)\), and Focusing on the Positive (S5) \((p < .001)\) respectively as displayed in Table 13. There was no significant relationship between the GSE total scale score and the Wishful Thinking (S2), Detachment (S3), Self Blame (S6), Tension Reduction (S7), and Keep to Self (S8) subscales of the Ways Coping Questionnaire.

The significant relationships evident for the female participants corresponded with the relationships found in the total sample. These relationships were similar to the relationships that existed for the male participants with the exception of the Seeking Social Support (S4) subscale which was not significant in the male sample. As mentioned above the explanatory or causal nature of these relationships cannot be determined in the current study. The research design and methodology used in the current study only allowed for the description of these relationships.

As mentioned above and in Chapter 3, there was no conclusive evidence regarding a difference between the ways of coping for females and males. The results from the current research indicate that the relationship between self-efficacy and ways of coping for males was generally the same as the relationship for females.

5.4 Conclusion

The purpose of this chapter was to discuss the results of the study in relation to the aims of the research. The results attained from the three measures have been presented, as well as the
interrelatedness of results on these measures. The results of all three measures have been presented for the total sample as well as the male and female participants separately. Where possible, the results of the current research have been discussed in relation to studies and literature mentioned in the literature review chapters. The subsequent chapter includes the conclusions based on the results of the current study, noteworthy limitations, as well as recommendations for future research.
Chapter Six

Conclusions, Limitations, and Recommendations

6.1 Chapter Overview

The present, final chapter concludes the study. The present chapter evaluates whether the aims of the study have been met by providing a summary of the findings of the study regarding each aim. The various limitations and contributions of this study are presented and recommendations for future research are also provided.

6.2 Aims of the Study Revisited

In order to conclude the study, a brief discussion regarding the aims of the study follows below.

6.2.1 Exploration and Description of the Self-Efficacy of the Sample in the Current Study

The first aim of the study was to explore and describe the self-efficacy of first-year psychology students at a university in the Nelson Mandela Metropole. In order to meet the requirements of this aim, the participants in the current study completed the General Perceived Self-Efficacy Scale. The results of the measure indicated that the participants had a high degree or optimistic sense of general perceived self-efficacy. There was no significant difference between the scores on the GSE for male and female participants.

The mean GSE score for the current sample was generally consistent with previous research on samples of students between the ages of 18 and 21 years by Luszczynska et al. (2005) and
Schwarzer et al. (1999). The results from the current study as well as previous studies indicate that students between these ages have a high degree of general perceived self-efficacy.

The mean GSE score for the male participants in the current study were either consistent or slightly higher than the levels of self-efficacy of males in previous research (Luszczynska et al., 2005; Schwarzer et al., 1999). Previous research concerning the GSE of females reported mean GSE scores which were slightly lower than the mean GSE score for the female participants in the current study. Based on the results of the male and female mean GSE scores in the current study, there was no significant relationship between gender and self-efficacy. This is consistent with results of previous research (Johnson & Wardlaw, 2004; Kumar & Lal, 2006; Lent et al., 2005) which found no relationship between gender and self-efficacy. However, it is inconsistent with the previous research (Lent et al., 2002; Pajares & Miller, 1994; Schwarzer et al., 1999; Whiteley, 1997; Zarafshani et al., 2008) which found a relationship between gender and self-efficacy.

6.2.2 Exploration and Description of the Ways of Coping of the Sample in the Current Study

The second aim of the study was to explore and describe the ways of coping of first-year psychology students at a university in the Nelson Mandela Metropole. Participants in the current study completed the Ways of Coping Questionnaire which was used as a measure to meet this aim.

The results of the measure indicated that the primary way of coping used by the participants was focusing on the positive. The least relied upon way of coping for the current participants was tension reduction.
Both males and females reportedly relied most on focusing on the positive and relied least on tension reduction as ways of coping. The order of the ways of coping utilized from the most used to the least used was the same for both males and females. The results of the current study therefore concur with previous research by Folkman & Lazarus (1988) which suggested that there is no significant difference in ways of coping between females and males.

6.2.3 Exploration and Description of the Relationship between the Self-Efficacy and Ways of Coping of the Sample in the Current Study

The third aim of the study was to explore and describe the relationship between self-efficacy and ways of coping of first-year psychology students at a university in the Nelson Mandela Metropole. In order to meet this aim, correlations between the total scale score for the GSE and the various subscales of the Ways of Coping Questionnaire completed by the participants were investigated. Although several significant relationships were evident, not all the subscales of the Ways of Coping Questionnaire showed a significant relationship to the total score of the GSE.

Moderate correlations are also evident between the GSE total scale score and the Problem-Focused subscale and between the GSE total scale score and the Focusing on the Positive subscale. From the results, it is evident that significant relationships ($p<.001$) exist between the GSE total scale score and the Problem-Focused Coping, Seeking Social Support and Focusing on the Positive subscales from the ways of coping questionnaire. No significant relationships were evident between the total scale score of the GSE and the five other ways of coping subscales. This result shows that persons with a high degree or optimistic self-efficacy cope with stressful encounters by using deliberate action or behaviour, looking for support from others, and/or making an effort to focus attention on positive aspects or personal growth. Although the results
indicated the presence of a positive relationship, the current research did not and could not seek to establish whether a causal or explanatory relationship exists.

The results from the current study were consistent with previous research (Bandura, 1997; Brown & Nicassio, 1987; Endler et al., 2001; Gollwitzer, 1999) which indicated that persons with high self-efficacy adopted active, problem-focused ways of coping, and that persons with low self-efficacy relied on passive, emotion-focused ways of coping. In addition, the significant relationship between self-efficacy and the way of coping as indicated by the Focusing on the Positive subscale as suggested by the results of the current study were consistent with previous research by Luszczynska et al. (2005) which also showed evidence for a similar relationship.

6.2.4 Exploration and Description of the Relationship between Gender and Self-Efficacy and Ways of Coping of the Sample in the Current Study

Correlations between the GSE total scale score and the subscales of the Ways of Coping Questionnaire were conducted for the male and female participants separately. The purpose was to meet the fourth aim of the study which was to explore and describe the relationship between gender and self-efficacy and ways of coping of first-year psychology students at a university in the Nelson Mandela Metropole.

Positive correlations between the total scale score of the GSE and the subscales of the Ways of Coping Questionnaire were evident for both genders in the current study. For the males, a moderate correlation (.42) was evident between the GSE total scale score and the Problem-Focused Coping subscale. A significant relationship ($p<.05$) existed between the GSE total scale score and the Problem-Focused Coping and Focusing on the Positive subscales of the Ways of Coping Questionnaire for the males.
Moderate correlations are evident between the GSE total scale score and the Problem-Focused Coping subscale (correlation of .63) and between the GSE total scale score and the Focusing on the Positive subscale (correlation of .51) in the female sample. In addition, the significant relationships evident in the male sample are the same as the relationships evident in the total sample as well as the female only population with the exception of the Seeking Social Support subscale which was not significant in the male sample. In the female sample significant relationships ($p<.001$) were evident between the GSE total scale score and the Problem-Focused Coping, Seeking Social Support, and Focusing on the Positive subscales of the Ways of Coping Questionnaire. The positive relationships evident in the female sample corresponded to the positive relationships evident for the total sample. Due to the specific research design and methodology used in the current study, a causal explanation for the gender similarities is unknown.

6.3 The Value of the Research

The current research contributes to the field of health psychology because the study provides empirical data for the relationship between self-efficacy and ways of coping in the South African context. The study demonstrated that a sample of first-year university psychology students at a South African university have a high degree of self-efficacy and rely strongly on the way of coping which involves focusing on the positive aspects of stressful encounters.

Current research concerning gender differences in self-efficacy and ways of coping are inconsistent. However, the current study provides additional findings regarding the relationship between gender and self-efficacy and ways and coping in a sample of South African university students.
The exploration and description of self-efficacy and ways of coping of students as provided in this study may aid in the development of programmes at the university in order to enhance the ways of coping of students. If universities become more aware of the ways of coping that are employed by students, then programmes can be designed to focus on and develop these specific ways of coping, or enhance other positive ways of coping. Since a relationship was found between high levels of self-efficacy and the ways of coping indicated by the subscales of Problem-Focused Coping, Seeking Social Support and Focusing on the Positive, encouraging these ways of coping may result in increased self-efficacy levels in South African university students.

6.4 Limitations of the Research

Limitations of the current study are evident in its research methodology. It is important to consider these limitations when making inferences based on the results of this study.

The non-probability, convenience sampling method used in the selection of the sample means that the sample was not randomly selected. Since the participants were not randomly selected, the results of the current study cannot be generalized to the wider population of university students. The results of the study thus do not represent the views of the general population of first-year university psychology students.

The sample used in the study consisted of 128 participants. The greater the sample size generally, the more valid and reliable the results (Strydom & De Vos, 1998). Although this sample size was adequate to produce significant statistical results, the number of participants was limited and thus the reliability and validity of the results is questionable.
A further limitation of the study relates to the Ways of Coping Questionnaire. Although the researcher instructed the participants to respond to stressful events occurring in their first-year at university, this may be considered to have been vague as it does not stipulate the details of the stressful events that the participants faced and it takes into account an infinite number of stressful events. This lack of specificity means that the researcher was unable to establish relationships between first-year university student’s ways of coping when faced with specific stressors during their first-year at university.

The subscales of the Ways of Coping Questionnaire were developed by Folkman and Lazarus (1985) following research conducted using the Ways of Coping Questionnaire on a student only sample. The subscales are slightly different to the original subscales of the Ways of Coping Questionnaire. Although the subscales from the student sample correspond to the subscales from the original questionnaire, the reliability on the subscales has only been established for the original questionnaire. This is an additional limitation to the measure used in the current study.

Both the Ways of Coping Questionnaire and the General Perceived Self-Efficacy Scale were not developed specifically for the South African context. Thus the scoring and interpretation methods may not necessarily be equally valid and reliable in the South African context. Research into the use of the Ways of Coping Questionnaire and the General Perceived Self-Efficacy Scale in a South African context is also very limited which further illustrates the limitations regarding their use in a South African context and the need for current validation studies of these measures.

Furthermore, the two measures (the GSE and Ways of Coping Questionnaire) used to gather the data are reliant on self-report. This manner of data collection allows for the questioning of
the validity of the results. Since no independent verification measures were used, there is limited
certainty regarding the validity of the results. Although the validity of the measures may be
limited because they rely on self-report, the triangulation of the two measures together increases
their validity more than if they were used on their own.

Since the current study was exploratory and descriptive in nature, the results do not allow
for the determination of causal relationships. Although the study has indicated the presence of
relationships, the results cannot provide causal explanations as to why these relationships exist.

6.5 Recommendations

Due to the limitation of the small sample size and unequal samples of male and female
participants, it is recommended that additional studies be conducted with larger, more
representative samples which can be generalisable to the wider population of first-year
psychology students at universities in South Africa.

Based on the results of the third aim of the current study, which was to explore and describe
the relationship between self-efficacy and ways of coping of the sample, it is evident that a
significant relationship exists between the total score of the GSE and three subscales of the Ways
of Coping Questionnaire. Although the result suggests the presence of a significant relationship,
it is unknown whether this relationship is causal in nature. Hence, it cannot be established
whether a high degree or optimistic sense of general perceived self-efficacy results causes the
ways of coping indicated by the subscales of Problem-Focused Coping, Seeking Social Support,
and Focusing on the Positive or, whether the ways of coping as indicated by these scales results
in a high degree or optimistic sense of general perceived self-efficacy. It is therefore
recommended that future explanatory and experimental research investigates the relationship further in order to establish whether a causal relationship exists.

The results of the study indicate that a relationship exists between a high degree or optimistic sense of general perceived self-efficacy and specific ways of coping. These results only indicate a relationship between high levels of general perceived self-efficacy and specific ways of coping as opposed to low levels of general perceived self-efficacy and specific ways of coping. It is therefore recommended that future research investigate the relationship between persons with a low degree or negative general perceived self-efficacy and ways of coping. This will be useful in research into the exploration of various degrees of self-efficacy and corresponding ways of coping.

Due to the limitation associated with the general nature of the stressful encounter used in the Ways of Coping Questionnaire, it is recommended that the current study be replicated in the future in order to reduce the effects of this limitation. Since the stressful encounter was not clearly and explicated outlined, the exploration and description of the results of the Ways of Coping Questionnaire is limited since the details regarding the response to which the participants were rating their ways of coping is unclear. This factor also limited the relationships which could have been explored and discussed regarding ways of coping and specific encounters appraised as stressful. Therefore it is recommended that future research aims to make more explicit the stressful encounter to which the participant is responding when completing the Ways of Coping Questionnaire. Future research may also be used to explore and describe the encounters appraised as stressful by first-year psychology students at university. According to Negga et al. (2007) health factors such as substance abuse, sexual activities, poor diet and lack of sleep are high sources of stress in students. It is recommended that future research explores and
describes in more detail the encounter or experiences deemed as stressful by university students at different levels or years of study and in different academic and residential contexts.

Furthermore, the subscales used for the Ways of Coping Questionnaire are the subscales from a study by Folkman and Lazarus (1985) on a student sample. These subscales differ slightly from the original subscales of the Ways of Coping Questionnaire. Although the subscales of the student sample correspond in nature and description to the subscales of the original subscales, the specific reliability of the subscales for the student sample has not yet been established. It is recommended that the reliability of the subscales used for the student sample be determined in future research.

Due to the influence of life span development on both self-efficacy and ways of coping, it is recommended that future research incorporates a longitudinal research design in order to investigate self-efficacy and ways of coping over time. According to Lazarus (2000), the value of longitudinal research is inherent in its ability to allow for the identification of changes in these concepts over time and across diverse situations. In addition, the exploration and description of self-efficacy and ways of coping over the different years at university as well as across the life span will provide interesting, valuable, and comparative research.

6.6 Conclusion

The current study was an attempt to explore and describe the self-efficacy and ways of coping of first-year psychology students at a university in the Nelson Mandela Metropole. Self-efficacy and ways of coping, the relationship between these constructs, and the relationship with gender and these constructs amongst students was explored and described. Although the current
study had various limitations, the results provide local quantitative data regarding self-efficacy and ways of coping in a student sample.
References


women and students at historically black university. *Journal of Counseling Psychology*, 52, 84-92.


APPENDICES
APPENDIX A

COVERING LETTER
Dear Student,

I am currently completing a study regarding the self-efficacy and ways of coping of first-year university students. I have obtained the required permission from the relevant faculties for this research to be conducted. I would like to enlist your help in this study.

You should note that you are only eligible to participate in this study if you are a first-year university entrant, between the ages of 18 to 21 years, and registered for a first semester psychology module.

The information in this study will be gathered in the form of three questionnaires. All three questionnaires will take you approximately 20 minutes to complete and they are made available in English only. The first questionnaire gathers biographical information. The General Perceived Self-Efficacy Scale (GSE) is used to evaluate how a person views his/her general sense of self-efficacy. The Ways of Coping Scale (WAYS) looks at what behavioural and cognitive strategies a person uses when faced with a stressful event.

Please be aware that your participation in this study is entirely voluntary. You are not obliged to participate. Should you wish to participate, you will remain completely anonymous at all times. Your identity will not be disclosed under any circumstances. Your responses to the questionnaires will be kept confidential. Should you wish to withdraw from the study whilst completing the questionnaires, you are entirely free to do so, in which case you will not be used as a participant.

12 February 2009
Should you wish to participate in the study, you will be asked to provide your written consent by signing and dating an informed consent form and placing your initials against each section to indicate that you understand and agree to the conditions of this research study.

Feedback to this study will be provided in the form of a written report which will be available at your request at the Nelson Mandela Metropolitan University’s main library. Please note that no individual feedback will be given regarding the results.

Your assistance will be greatly appreciated. Should you require any more information regarding the study, please do not hesitate to contact me at (041) 504 2303.

Thanking you in advance.
Yours Sincerely

Ms. Joanne Goss        Prof. C.N. Hoelson
Researcher               Supervisor

Ms. T. Geyer            Prof. M.B.
Watson                  Head of
Co-Supervisor           Department
# NELSON MANDELA METROPOLITAN UNIVERSITY

## INFORMATION AND INFORMED CONSENT FORM

<table>
<thead>
<tr>
<th>Title of the research project</th>
<th>The Relationship Between Self-Efficacy and Ways of Coping of First-Year University Students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference number</td>
<td>H09-HEA-PSY-004</td>
</tr>
<tr>
<td>Principal investigator</td>
<td>Joanne Goss</td>
</tr>
<tr>
<td>Address</td>
<td>PO Box 77000 Nelson Mandela Metropolitan University Port Elizabeth 6031</td>
</tr>
<tr>
<td>Contact telephone number</td>
<td>041 5042330</td>
</tr>
</tbody>
</table>

## A. DECLARATION BY OR ON BEHALF OF PARTICIPANT

(Person legally competent to give consent on behalf of the participant)

<table>
<thead>
<tr>
<th>Initial</th>
</tr>
</thead>
</table>

I, the participant and the undersigned
I.D. number
OR
I, in my capacity as
of the participant
I.D. number
Address (of participant)

## A.1 I HEREBY CONFIRM AS FOLLOWS:

1. I, the participant, was invited to participate in the above-mentioned research project that is being undertaken by Joanne Goss of the Department of Psychology in the Faculty of Human Social Sciences of the Nelson Mandela Metropolitan University.

2. The following aspects have been explained to me, the participant:

   2.1 **Aim:** The investigators are studying: The Self-efficacy and Ways of Coping of First-Year University Students. The information will be used in: The partial fulfillment of the requirements for the degree MA (Clinical Psychology) in the Faculty of Health Sciences at the Nelson Mandela Metropolitan University.
2.2 Procedures: I understand that
I will be required to complete the provided Biographical Questionnaire, the General Perceived Self-Efficacy Scale (GSE) and the Ways of Coping Scale (WAYS).

2.3 Risks:
There are no potential harmful risks associated with participating in the current study.

2.4 Possible benefits: There are no direct benefits from participating in this study. However, as a result of my participation in this study I will be exposed to the concepts of self-efficacy, ways of coping and psychological research which may increase my understanding and knowledge of the field of Health Psychology.

2.5 Confidentiality: My identity will not be revealed in any discussion, description or scientific publications by the investigators.

2.6 Access to findings: Any new information/or benefit that develops during the course of the study will be shared as follows:
1. A written report of the study will be available at the Nelson Mandela Metropolitan University's Main Library.
2. An article of the study will be published in a relevant scientific journal.
3. Should the opportunity arise, a presentation of the research will be made at a conference.

2.7 Voluntary participation/refusal/discontinuation:
My participation is voluntary [ ] YES [ ] NO
My decision whether or not to participate will in no way affect my present or future care/employment/lifestyle [ ] TRUE [ ] FALSE

3. The information above was explained to me/the participant by
   Joanne Goss (Researcher)
   in [ ] Afrikaans [ ] English [ ] Xhosa [ ] Other
   and I am in command of this language.
   I was given the opportunity to ask questions and all these questions were answered satisfactorily.

4. No pressure was exerted on me to consent to participation and I understand that I may withdraw at any stage without penalisation.

5. Participation in this study will not result in any additional cost to myself.

A.2 I HEREBY VOLUNTARILY CONSENT TO PARTICIPATE IN THE ABOVE-MENTIONED PROJECT

Signed/confirmed at [ ] on [ ] 20

Signature of witness

Signature or right thumb print of participant

Full name of witness
**B. STATEMENT BY OR ON BEHALF OF INVESTIGATOR(S)**

I, ........................................... Joanne Goss ................................................................. declare that

- I have explained the information given in this document to  
  (name of participant)

- he/she was encouraged and given ample time to ask me any questions;

- this conversation was conducted in Afrikaans  English  Xhosa  Other
  and no translator was used

- I have detached Section D and handed it to the participant  YES  NO

Signed/confirmed at  on  20

<table>
<thead>
<tr>
<th>Signature of interviewer</th>
<th>Signature of witness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full name of witness</td>
</tr>
</tbody>
</table>

(name of participant)
D. IMPORTANT MESSAGE TO PATIENT/REPRESENTATIVE OF PARTICIPANT

Dear participant

Thank you for your participation in this study. Should, at any time during the study:

- an emergency arise as a result of the research, or
- you require any further information with regard to the study, or
- the following occur

(indicate any circumstances which should be reported to the investigator)

Kindly contact Joanne Goss at telephone number 041 5042354

(it must be a number where help will be available on a 24 hour basis, if the research project warrants it)
APPENDIX C

BIOGRAPHICAL QUESTIONNAIRE
BIOGRAPHICAL QUESTIONNAIRE

Please answer the following questions or place an X in the correct choice:

1. AGE:

2. GENDER: FEMALE ☐ MALE ☐