

**A MODEL FOR MANAGING PSYCHOLOGICAL DISTRESS IN
UNDERGRADUATE NURSING STUDENTS IN SOUTH AFRICA**

Nolundi (Jevu) Radana (21449559)

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University of Technology

Promoter : Dr. P.M. Basson

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Declaration

I declare that this is entirely my own work and not that of any other person, unless clearly stated and acknowledged (including citation of published and unpublished sources). The work has not been previously submitted in any form to the Durban University of Technology or to any other institution for assessment or any other purpose.

Signature of student

Date

Approved for final submission

Dr. P.M. Basson

Date

RN, RM, PhD

Abstract

This study has its origins in the researcher's own observations and experiences as a lecturer in mental health nursing. Specifically, it concerns the challenges associated with providing support and enabling environment for students presenting with psychological distress whilst on training. There is a dearth of literature in the Sub-Saharan Africa region regarding the prevalence of psychological distress amongst undergraduate nursing students, and there are no clear measures in place regarding how to deal with the situation, due to the lack of empirical evidence, leading to delayed referrals of students presenting with psychological distress, further compounds the psychiatric morbidity and ultimately the burden of disease in the country including institutions of higher education, which led to the formulation of the research rationale. The aim of this research study was to develop a model for management of psychological distress in undergraduate nursing students. A quantitative, descriptive, contextual and theory-generating research design was used. A 120-item questionnaire, consisting of four scales, was utilised to collect data from 848 undergraduate nursing students in the sampled universities in three provinces. SPSS-23 was employed in data analysis and descriptive, inferential statistics were generated using regression analysis, exploratory and confirmatory factor analysis-tests, analysis of variance (ANOVA) and Pearson's correlation tests.

Results showed significant evidence of psychological distress mainly related to social dysfunction and anxiety. Some of the identified factors contributing to more stress whilst on training were financial and time constraints ($M=3.2432$, $SD=.97390$); and level of education ($M=3.2230$, $SD=.82644$). Female students

seemed to be experiencing more stress ($M = 2.8199$, $SD = .99374$) related to interpersonal conflict than do males ($M = 2.6131$, $SD = .90309$), $t(833) = 2.617$, $p = .009$). Analysis showed that older age is associated with more stress due to interpersonal conflict ($r = .096$, $p = .005$), while younger students experienced more stress from education ($r = -.104$, $p = .003$). Results showed a significant positive relationship based on personality traits, with neurotic personality traits contributing to all four areas of psychological distress, as well as an emotion-based coping styles. An intervention guideline in the form of a model for Managing Psychological Distress was developed.

Key terms: Nursing students, psychological distress, coping, model

Dedication

I dedicate this study to my late father, Vusumzi Alphabet Jevu. If it weren't for you, dad, I wouldn't be where I am. Your unwavering belief in my ability to attain any goal I set out to achieve was a foundation for it all. When you passed on in the middle of this research project, I felt I couldn't continue, but the thoughts of you, of how proud you would have been kept me going.

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But those who wait on the Lord, shall renew their strength.

They shall mount up with wings like eagles,

they shall run and not be weary,

they shall walk and not faint.

- Isaiah 40:31

Jehovah God, Almighty, I give you praise always.

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LIST OF ACRONYMS

ACRONYM	Full word /Sentence
AIDS	Acquired Immune Deficiency Syndrome
ANOVA	Analysis of Variance
BAI	Bell's Adjustment Inventory
CHE	Council of Higher Education
CSE	Coping Self Efficacy
DENOSA	Democratic Nursing Organisation of South Africa
DHET	Department of Higher Education and Training
DoE	Department of Education
DoH	Department of Health
DUT	Durban University of Technology
DSM	Diagnostic Statistical Manual
DV	Dependent Variable
UFH	University of Fort Hare
EC	Eastern Cape
EPQR	Eysenck Personality Questionnaire
FS	Free State
FUNDISA	Federation of University Deans in South Africa
GHQ	General Health Questionnaire
GP	Gauteng Province
HBU	Historically Black University
HEACT	Higher Education Act
HEQC	Higher Education Quality Council
HIV	Human Immunodeficiency Virus
HOD	Head of Department
HWU	Historically White University

IREC	Institutional Research Committee
IV	Independent Variable
JOE	Journal of Extension
KZN	KwaZulu-Natal
L	Limpopo
M	Mpumalanga
MEDUNSA	Medical University of South Africa
NC	Northern Cape
NHI	National Health Insurance
NQF	National Qualification Framework
NSFAS	National Student Financial Aid Scheme
NW	North West
SA	South Africa
SADAG	South African Depression and Anxiety Group
SANC	South African Nursing Council
SAQA	South African Qualifications Authority
SARUA	South African Regional Universities Association
SASCO	South African Students' Congress
SDGs	Sustainable Development Goals
SMHSU	Sefako Makgatho Health Sciences University
SES	Socio Economic Status
SINS	Stress in Nursing Students
SPSS	Statistical Package for the Social Sciences
TB	Tuberculosis
UoT	University of Technology
WC	Western Cape
WHO	World Health Organisation
WITS	Wits University
WPC	Whole Person Caring
WSU	Walter Sisulu University

Chapter 1

OVERVIEW OF THE STUDY

1.1 INTRODUCTION

This chapter gives an overview of the study, which includes the background and justification, problem statement, purpose, objectives, research questions, metatheoretical and theoretical assumptions, significance of the research, as well as definition of terms.

1.2 BACKGROUND

The concept of psychological distress has been widely used in the empirical world, and as such, there has been diverse description and conceptualisation of the term. Variations and meanings of the concept have been identified in literature in different contexts. Often, psychological distress has been confused with such concepts as strain, stress, and distress. In a concept analysis of psychological distress, Ridner (2004) defined it as a unique, discomforting emotional state, experienced by an individual in response to a specific stressor or demand, which may be harmful to the individual either temporarily or permanently. Another definition is given by Lazarus and Folkman (1984), as a relationship between the environment and the individual, which the individual appraises to be significant for his or her wellbeing, and in which the demands are taxing, or exceed coping resources to which the individual has recourse. Broader description of the concept is given in Chapter 3 which describes the conceptual framework for this study.

Psychological distress is a major contributor to psychological morbidity, leading to a wide range of mental disabilities, in turn increasing the burden of disease, as well as impacting on the economy, where occupational functioning is often affected leading to decreased workforce. Without proper management and support, psychological distress can contribute to conditions such as depression and other mood disorders, anxiety disorders, and maladaptive coping strategies, as seen through alcohol and drug abuse, as well as increased suicide risk. According to Statistics South Africa (2012:30), results from the general household survey indicate that, “95,000 out of 4 822412 people who took part in the survey reported that they suffered from depression or some form of mental illness.” This constitutes 2% of the research population survey. These findings are in line with Schlebusch (2005) and Tomlison et al. (2009), who note that mental disorders are a major contributor to the burden of diseases worldwide, including South Africa.

The World Health Organisation (WHO) reported suicide to be one of the top three causes of death for those aged 15 to 44, and the second leading cause of suicide amongst university students (WHO, 2012). A follow-up report (WHO, 2014) reasserted that globally, suicide has become extensive phenomena. The report further states that about 800,000 people die each year due to suicide, without taking into consideration those that actually have attempted suicide (parasuicide), or are thinking about suicide (suicidal ideation). Based on this report, suicide was declared to be the second leading cause of death in the 15 to 29-year age group,

with 75% occurring in low to middle-income countries (WHO, 2012; SADAG, 2016). As a result of the rapid increase of suicide and parasuicide, the WHO highlighted a dire need for preventive measures to be instituted, and based on this need, suicide prevention was added to the proposed Sustainable Development Goals (SDGs) strategic planning for years 2016-2020 (WHO, 2016). Young adults in the 19 to 24-year age group have been identified to be the most at risk group for depression, leading to thoughts about suicide (suicidal ideations) and self-harm, as well as actual instances of suicide. The suicide statistics for South Africa as supplied by the South African Depression and Anxiety Group (SADAG, 2016) were as follows: each month there were 670 deaths by suicide being committed, with 154 each week, translating to 22 each day, or one every hour.

Some of the factors identified as contributing to high levels of suicidal thoughts and depression were academic challenges, high levels of stress, and socio-economic challenges. This seems to match with the current literature reviewing the relationship between psychological distress, depression, and suicidal tendencies amongst young people internationally (Stallman, 2008; Herera and Rivera, 2011).

Previous studies have identified a substantive number of healthcare students in such areas as nursing, dentistry, medicine and pharmacy as having an increased burden of psychological morbidity (Watson et al., 2008; Christensson et al., 2010; Herera and Rivera, 2011; Kavalidou, 2013). However, as much as there is available literature on Sub-Saharan Africa addressing various concerns regarding nursing students in general, there is limited literature focusing

specifically on undergraduate nursing students in relation to psychological distress, coping mechanisms, self-efficacy and management guidelines. This is all the more crucial as nursing students constitute a greater proportion of the at risk group in terms of age, as well as the nature of the profession into which they are venturing (Mason, 2014).

Nursing is considered to be one of the most stressful professions, with high levels of burnout, as well as psychological and moral distress (Corley et al., 2005; Zuzelo, 2007; McCarthy and Deady, 2008; Fone et al., 2014; Khamisa et al., 2015). Several factors have been identified as contributing to high levels of burnout, and moral or psychological distress of the nursing profession, according to the aforementioned authors. Amongst these are the lack of autonomy, physical and psychological demands, rigid organisational rules, being answerable to other professions, as well as the hierarchical structure. Therefore, nursing students, being further down in the hierarchical structure of the profession may experience more lack of autonomy, more psychological demands than the other categories of nurses (Tully, 2004; Radana, 2012), this may result in feelings of disempowerment and vulnerability, contributing to psychological distress, and other psychological and physical manifestations and behaviours (Melo, Williams and Ross, 2010; Edwards et al., 2010).

Stressors in both clinical and theoretical environments, coupled with the challenges of the profession itself, become an issue of further concern for nursing students, who most of the time – though not always – are in the 19 to 25-year-old group, and therefore, according to Erikson's psychosocial theory of development,

are struggling with developmental tasks in terms of personal development and establishing self-identity (Mason, 2014; Erikson, 1968).

Currently, as mentioned above, South Africa has been identified as one of the leading countries in the number of committed and attempted suicide, with suicide on its own rated as number three cause of death in the 15 to 44-year age group (WHO, 2016; SADAG, 2016). This is the age bracket most nursing students fall into when they start training.

The nature of the profession, the effects of the burden of diseases such as HIV/AIDS and TB, and other infectious diseases puts nursing students at increased risk of psychological distress. Socio-economic issues such as poverty, crime, and violence may have a direct or an indirect impact on the psychological wellbeing of nursing students, as they tend to come into contact with people or patients affected by these same psychosocial challenges whilst on clinical placement (Muehlenkamp et al., 2012; Ramahlafi, 2015).

Psychological distress on the part of the students may manifest in various ways, where these include high attrition rate, being rude, maladjustment, and self-destructive behaviours, as seen through: alcohol and other substance abuse; absenteeism from both theoretical and clinical learnings areas; conduct disorders; depressive mood; and clinical depression, leading to increased risk of suicide (Wright and Maree, 2007; Karaman and Durukan, 2013). The challenges of psychological distress and its manifestations have enormous implications, including an increased economic burden on the nation and the healthcare system at large.

The prevalence of psychological distress has been explored extensively in the international context (Stallman, 2010; Ellawenka and Fonseka, 2011; Herera and Rivera, 2011; Nerdrum and Geirdal, 2014). Most at-risk populations have been identified to be in the medical and allied medical fields, such as medicine and nursing. However, there is a shortage of literature focusing on the South African context regarding psychological distress in undergraduate nursing students. The studies done mainly in the international context cannot be generalised to the South African context, due to the issues that can only be understood to have an impact in South Africa as a developing country.

The sections below will give justification for the necessity of a study focusing on the South African undergraduate nursing student with regard to psychological distress.

1.2.1 Nursing education context and reforms

The South African education system in general has undergone major changes since 1994, and this has had an impact in nursing education in particular (DoH, 2008; 2012; Klopper, 2009). For a long time, the training of nurses in South Africa has been, and is still, regulated by the South African Nursing Council (SANC), under the Nursing Act (Act 33 of 2005); which incorporates various categories of nurses being trained in various institutions such as nursing colleges, universities, universities of technology, private nursing schools, and public nursing schools, whose training is often Department of Health regulated for the clinical component. While educational reforms have been put in place for quite some time, nursing education is still somewhat 'in-between' in terms of where it is located (Bruce,

Klopper and Mellish, 2011; FUNDISA, 2012; Simelane, 2013). One of the main causes of this is the fact that nursing education offered by nursing colleges falls under the auspices of the Department of Health (DoH), whereas those offered by university nursing schools fall under the auspices of the Department of Education (DoE). This often brings challenges and tensions in terms of uniformity and a unified nursing education system.

Anecdotal evidence suggests that there are often negative perceptions and labelling directed at various qualifications, as these differ from degrees, diplomas and certificates. The South African Nursing Council as the regulating body for nurses and nurse training prescribes minimum hours for both academic and clinical tuition, including the hours for clinical work in order to be able to register as a nurse, as well as to cover the scope of practice for all nursing categories. On the other hand, the issue of dual status pertains, since while in the clinical areas, nursing students are expected to contribute to the workforce in the wards or units, mainly due to staff shortages. Traditionally, most of the nurse training in South Africa used to fall under the auspices of the Department of Health (DoH). Consequently, students were perceived to be both students and employees, by virtue of the fact that they earned a salary or training allowance, constituting a dual status (Siela, Twibell and Keller, 2009; Lubbe and Roets, 2013). Although there has been a move away from paying the students a salary or training allowance, there has not been any change in the perception by other personnel including trained nurses already in the workforce that students are duty-bound to provide full clinical services. This often leads to situations of conflict (DENOSA, 2014; Simelane, 2013). This is often compounded by the shortage of staff, which sees students depended upon as a workforce in the wards, and at times,

expected to work through their lunch hours (DENOSA, 2014; Simelane, 2013; Ramahlafi, 2015).

South Africa, like any developing country, has for a long time been experiencing a phenomena monikered the “brain-drain”, where qualified professionals go abroad in search of better working conditions. This places more strain on the already overworked staff that remains, and this contributes to students being perceived more as an auxiliary workforce than in terms of their role as students involved in work-integrated learning (Mkhize, 2006; Simelane, 2013; Ramahlafi, 2015; Geyer, 2015).

The abolition of the apartheid system and the subsequent reformations that gave rise to the democratisation of South Africa brought about reforms in different avenues and departments (Flisher, De Beer, and Bokhorst, 2002; Coetzee, 2010; Young and Campbell, 2014). One of these reforms was the changes in the higher education landscape in the form of mergers of higher education institutions (see Chapter 3). These mergers of the higher education institutions may have inadvertently played a role in giving rise to challenges experienced by students, as there has been an increase in diversity based on race, ethnicity, socio-cultural factors and language (Flisher, De Beer and Bokhorst, 2002; Coetzee, 2010; Young and Campbell, 2014).

1.3 HEALTHCARE SYSTEM CHALLENGES IN SOUTH AFRICA

The healthcare system has for a long time been experiencing various challenges that have had a direct impact on operations such as:

- Shortage of nurses leading to an overburdened system and a further call by the Minister of Health for nursing education institutions to increase enrolment numbers (Nursing Strategy, 2008/2009; 2012), as well as the establishment of the National Health Insurance (NHI), which is currently being piloted in certain districts in selected provinces (Mkhize, 2006; Geyer, 2015). In most cases, nurses take up positions of employment in such countries as the United Kingdom, Saudi Arabia and United States to mention but a few.
- The increasing burden of disease linked mostly to socio-economic factors like poverty and unemployment (Dageid, Akintola and Saeberg, 2016; Tsai et al., 2016). This varies from communicable diseases to non-communicable diseases.
- Psycho-social challenges, such as escalating crime rates; which may have affected students in situations where they may have been exposed to the circumstances of patients who were the victims of crime – or much worse – may even have been victims of crime themselves. The media has highlighted incidences where nurses have been victims of crime whilst in the work environment, and these anecdotes may have a negative impact on the students (Magidson et al., 2016; Khamisa et al., 2015; Nzaumuila, Govender and Kramer, 2015).

Against this background, there are nursing students training to be professional nurses, who have to deal with their own personal challenges at an age where they are still trying to develop their self-concept and cope with the challenges of studying. Whilst such developmental challenges are not unique to nursing

students, it does pose more of a challenge for them when juxtaposed with the challenges inherent to the nursing environment. Differences in the ways students cope with stressful situations both in the classroom and clinical environment emerge largely from the way in which they perceive the situation (Gorostidi et al., 2007), which could explain why some are more affected in terms of general well-being and coping mechanisms (Reeve et al., 2013; Ramkumar et al., 2011).

Available literature has collected evidence of poor coping strategies by students, as seen through the use of negative coping mechanisms such as: abusing drugs and alcohol; overeating; high attrition rate; aggressive and rude behaviour; as well as self-isolation (Melo, Williams and Ross, 2010; Reeve et al., 2013; Orgun and Karaoz, 2014). Nursing students are expected to adopt a dual role. This entails being responsible and accountable for acts and omissions of workers on one side, as well as fulfilling academic responsibilities on the other hand. This may give rise to a certain emotional burden as they struggle to find common ground between these two roles (Robson et al., 2012), further contributing to the students' psychological distress. It is clear that there is a need for an intervention to alleviate or manage psychological distress in nursing students. Secondly, several studies have merely identified actual stressors and the manifestations or signs and symptoms, where little is known regarding how these can be managed in the form of clear models or guidelines in undergraduate nursing students (Papazisis, 2008).

Not dealing with psychological distress amongst nursing students may have an effect on their roles as professionals, and can lead to low productivity, as well as contribute to challenges, as identified in this section, leading to a vicious cycle.

1.4 PROBLEM STATEMENT

The literature has indicated that the stressors of higher education, which can be regarded to include: a new environment for a newly-registered student; the foreign culture of professional nursing for the undergraduate nursing student; clinical exposure through clinical placement for clinical learning; severe socio-economic pressure and distress; and the burden of disease; collectively contribute to high levels of psychological distress in nursing students in South Africa. There is a scarcity of literature in the Sub-Saharan Africa region regarding the prevalence of psychological distress amongst undergraduate nursing students, and there are no clear measures in place as to how to deal with the situation, due to the lack of extant empirical research.

No intervention guidelines or strategies could be found in the literature, contributing to delayed referrals of students presenting with psychological distress, which further compounds psychiatric morbidity, and ultimately the burden of disease in the country, including institutions of higher education. Undergraduate nursing students, by virtue of their age and chosen profession, are one of the most at risk groups for developing: psychological distress; self-harm; suicidal ideation leading to suicide; poor coping; and poor self-efficacy, which may aggravate the negative feelings.

1.5 RESEARCH QUESTIONS

The following research questions pertain to this research with regard to undergraduate nursing students:

- What is the prevalence of psychological distress amongst undergraduate nursing students?
- What are the factors contributing to psychological distress in the theoretical learning areas of undergraduate nursing students?
- What are the factors contributing to psychological distress in the clinical learning areas of undergraduate nursing students?
- What are the measures and strategies identified by students in dealing with psychological distress?
- How could students experiencing psychological distress be supported?

1.6 PURPOSE

The purpose of this quantitative, descriptive, contextual theory-generating study was to develop a model for management of psychological distress in undergraduate nursing students.

1.7 OBJECTIVES

The objectives of this research were to describe:

- prevalence of psychological distress amongst undergraduate nursing students;

- factors contributing to psychological distress in the theoretical learning areas;
- factors contributing to psychological distress in the clinical learning areas;
- measures and strategies identified by students in dealing with psychological distress; and
- develop a model for managing psychological distress.

1.8 PARADIGMATIC PERSPECTIVE

There are various definitions of a paradigm in literature that tend to agree. Brink, Van der Walt and Van Rensburg (2014: 25) describe paradigm as an “overarching philosophical framework of the way in which scientific knowledge is produced”. Some authors describe a paradigm as a set of assumptions that are interrelated, and provide philosophical and conceptual basis for a study (Burns and Grove, 2011; Mulaudzi, 2013). The term paradigm was coined by Kuhn (1970), and can generally be described as a school of thought based on the following central premises, as described by Meleis (2012: 428):

- paradigms refer not only on the theories, methodologies and application of these theories but to the beliefs, values, laws and principles under which they operate;
- there is a level of theoretical assumptions adherent to the paradigm based on the subject matter of the discipline concerned;
- there are no clear-cut ways in paradigms, only questionable areas in that particular field which may lead to puzzling situations. These puzzling

situations can then act as examples for helping the broader scientific community members solve encountered problems;

- when a discipline has its own paradigm, then fact finding becomes more stable and consistent as opposed to being haphazard and variable.

Commonly, a paradigm consists of different components (Botma et al., 2010; Mulaudzi, 2013; Parahoo, 2006). These components are ontology, epistemology, methodology, and methods. Ontology refers to the study of being, the way of looking at the experience and existence of being, in other words, what is the nature reality or realism? Epistemology is concerned with the nature and forms of knowledge. The main concern is 'the how' of knowledge creation (Mulaudzi, 2013; Parahoo, 2006; Wellington et al., 2005). Methodology concerns 'the how' of obtaining knowledge (Brink, Van der Walt and Van Rensburg, 2014).

1.8.1 Metatheoretical assumptions

Metatheoretical assumptions refer to the researcher's assumptions about the nature of theory and the processes for its development (Chinn and Kramer, 2011). Metatheoretical assumptions provide guidance in research decision making and are based on the fundamental beliefs the researcher has about the person, the environment, and society (Chinn and Kramer, 2015; Downing and Poggenpoel, 2012). This includes the relational propositions or theoretical statements that describe how concepts are linked or related to each other (Chinn and Kramer, 2011; Bruce, Klopper and Mellish, 2011; Downing and Poggenpoel, 2012). These help to direct the structure of a theory. The theoretical statements and relational propositions presented below for the context of this study.

- Nursing students are spiritual beings, who function in an integrated bio-psychosocial manner to achieve their quest for wholeness and are therefore in need of mental health intervention to help them attain the state of wholeness.
- Nursing students interact with their internal/external environment in a holistic manner, which requires therapeutic partnering with the environment.
- As spiritual, mental, physical, social, and emotional beings, it is in the fulfilment of the personal wholeness that nurses are able to seek to contribute to the wholeness of others, namely their clients and or patients, resulting in rendering effective holistic nursing care.
- The interaction between the students' levels of self-awareness and level of motivation, may contribute to and or cause some level of psychological distress where the principles of self-compassion, self-care and self-healing are not observed.
- As the students' journey of personal and professional growth continues, there is an impact on the health of the individuals within the community, which gives rise to a transformational kind of healthcare leadership.
- The restoration, promotion and maintenance of the students' sense of well-being requires effective mobilisation of all resources within the theoretical (classroom) and clinical (work integrated learning) environment. This contributes to the attainment of optimal wellness.

By virtue of their age, the nursing students seek self-awareness and self-development and the realisation of self as a sacred, infinite being helps in

broadening self-awareness and self-acceptance, which comes with practicing self-compassion as well. Below is the explanation of definitions used give a perspective on context of this research study.

1.8.1.1 Person

Person refers to a general nature of a human being which encompasses the notion of wholeness ot totality of a human being (Chinn and Kramer, 2015; Alligood, 2014; Bruce, Klopper and Mellish, 2011). While Chinn and Kramer (2015) agree that the concept of a person or human being may be difficult to describe fully without lessening it in some way, in its most encompassing form it does refer to the whole as greater than the sum of its parts. While some nursing theories are generally rooted in the definition of a person as a biological, psychological and sociological being, the researcher in this study chose to add the element of spirituality, which, while it does not describe wholism in its true sense, gives an all-encompassing view of who a person is (Thornton, 2005). This view relates more to the theories of Rogers (1970, 1992), Newman (1979), Travelbee (1966), and Levine (1967), who view a person as being different and greater than the sum of their parts.

While some critics may view some of the above theories as not entirely focused on wholism in its truest form, they all display strong evidence and commitment to the notion that all facets of a human being ought to be considered holistically (Alligood, 2014; Chinn and Kramer, 2015). Rodgers (1992) defines a human being as a dynamic, constantly evolving energy field who is irreducible, indivisible, a whole person with creativity.

The implication therefore is that while a person has different functional facets, these are interwoven and intertwined, and as such, cannot be considered separate entities. For the purpose of this study, a person is a nursing student, a multi-dimensional family member and community member, who is in constant interaction with both the internal and external environment. The multidimensional facet refers to the body, mind and spirit being, who, in his/her quest for wholeness, functions in a bio-psychosocial coordinated and integrated manner (Poggenpoel, 1991; Shifiona and Poggenpoel, 2014). The researcher recognises that while a person can be viewed as a unique individual, they are an essential part of a broader society in the form of family, groups and the community, where it is within this broad perspective that they function and attain fulfilment. The potential to interact positively and successfully with the internal and external environment as part of a group, family and community contributes to a state of positive mental health.

1.8.1.2 Environment

Alligood (2014: 247) defines the environment as being an 'irreducible, pandimensional energy field', identifiable by patterns. These patterns are further defined as recognisable features of an energy field that can be understood as a single ripple, or phenomena. The environment as a field integrates with the person. Pandimensionality of the environment is further defined as a domain that is non-linear, with no spatial or temporal attributes (Alligood, 2014; Bruce, Klopper and Mellish, 2011). The person and the environment are in a mutual process. Giddens (2011), while

alluding to the environment as referring to the planet earth in the broadest sense, nevertheless recognises that it is more of a non-human natural world in which humanity exists. This could, in a way, be interpreted to mean the different environment within which nursing students are in interaction (Bruce, Klopper and Mellish, 2011).

1.8.1.3 Mental Health

Uys and Middleton (2014) describe mental health as a state of being whereby an individual possesses the ability to successfully and simultaneously cope with demands related to work, a loving environment, as well as being able to resolve conflicts that manifest as a result of stressors experienced due to everyday living challenges. Uys and Middleton (2014) further emphasise that this does not mean the person or individual has no problems, but that they can cope with these describe the state of mental health. This definition seems to echo the World Health Organization (WHO; 2014; Huber et al., 2011) definition that mental health is a state of well-being, whereby a person is able to realise his or her full potential, and is able to cope with the everyday normal stresses of life, while being able to work productively and fruitfully, making a contribution to his or her community. The World Health Organization (WHO, 2001; 2004; 2014; Huber et al., 2011) further points out that there is a complex and interdependent relationship between mental health, physical health and the social functioning of a person; in other words, social and individual factors play a role in defining mental health. One of the most all-encompassing, worthwhile dimensions of mental health is found in the

definition of health as a state of complete physical, mental and social well-being, not merely the absence of disease or infirmity (WHO, 2014; Huber et al., 2011). This means that the state of mental health encompasses much more than the ability to interact successfully with the environment, where it denotes a state of complete physical, social, spiritual, mental wholeness. It is this state of wholesomeness that contributes to a person's ability to interact well in the personal, cognitive, affective, behavioural and social dimensions, both intrapersonally and interpersonally within their environment (Poggenpoel, 1991; Shiffiona and Poggenpoel, 2014; Mbatha, 2016; Souze-Talarico et al., 2016). For this study, the focus was on the mental health of the nursing students, helping them cope with psychological distress.

1.8.1.4 Psychiatric Nursing

Psychiatric Nursing refers to a branch of nursing speciality aimed at mental health promotion, prevention, early diagnosis and treatment of mental disorders, as well as rehabilitation efforts and follow up plans that lessen the impact of the mental disturbances on a long term basis (Uys and Middleton, 2014; WHO, 2012; Shiffiona and Poggenpoel, 2014). Psychiatric nursing is not concerned with the person/individual alone, but considers the environment upon which the processes of health promotion, prevention and rehabilitation operate. It involves the knowledge and skills required in dealing with the multidimensional nature of a person, including offering support. This makes psychiatric nursing a highly intense interpersonal human process.

1.8.2 Theoretical assumptions

Theoretical assumptions are statements that are assumed to be true and are taken at face value without detailed scientific testing (Grove, Gray and Burns, 2015; Botma et al., 2010). These include theories, models and definition of concepts under study. The general assumption is that research does not occur in isolation, therefore whether a research study is conducted individually it takes place within the context of a particular theoretical framework (Grove, Gray and Burns, 2015; Burns and Grove, 2011; Bruce, Klopper and Mellish, 2011; Botma et al., 2010).

Theoretical assumptions are often embedded within the philosophical framework of the research process, and serve as a guiding force throughout the research process (Burns and Grove, 2011; Botma et al., 2010). This study was guided by the Whole-Person Caring (WPC) model, as described by Thornton (2005), Bandura's social cognitive and self-efficacy theory (1977), as well as Lazarus and Folkman's theory of stress and coping (1984). The constructs identified, viz. coping, self-efficacy and psychological distress, are not exclusively unique to nursing (Polit and Beck, 2012). The theoretical framework guiding this study is fully described in Chapter 2.

1.9 METHODOLOGICAL ASSUMPTIONS

Methodological assumptions describe the plan of action, tackling the why, when, how, what, and where of data collection and analysis (Botma et al., 2010; Mulaudzi, 2013; Parahoo, 2006; Risjord, 2010). The methodology is a blueprint that gives direction to the researcher, based on the aims, objectives of the phenomena of interest. Methodological assumptions give an indication of

appropriateness and suitability of the chosen research design (Parahoo, 2006), including data collection and analysis techniques used. Research methodology is discussed in Chapter 4.

1.9.1 Functional approach

A functional approach, or functionalism, refers to the objectivistic lens of observing how the world functions, where the basic premise is to examine relationships that may lead to generalisation. Such concerns, when examined, form a basis for theory generation (Gioia and Pitre, 1990) has been described in the psychological and sociological fields as an approach that examines how individuals function within their existing and/or changing environment and the general adaptation that is brought about through this functioning (Buckler and Castle, 2014; Nath, 2013). Functionalism, as a theoretical perspective, views society as a system that is complex, with various parts, and can be better understood by the recognition that these parts are in a relationship (Giddens, 2011). According to the classic description given by Wallace and Wolf (1999), society can be understood as a “system of interrelated parts in which no part can be understood separately, in isolation from the whole”. The authors further expand on this definition, arguing that, were there to be a change in any given part, a state of imbalance and disequilibrium would be brought to the whole organisation or environment. The researcher decided to use this approach as a guiding lens in understanding the concept of psychological distress in nursing students, and the factors that may have an impact in the understanding of the concept. As per the description given by the authors cited above, the researcher sought to highlight and analyse the interrelatedness and the interdependence of

the parts of an individual or person, so as to be able to function as a whole. Furthermore, this research foregrounds that, while the state of wholism is not an absolute, a state of equilibrium or normalcy exists when the parts are re-organised which contributes to the mental health of the individuals, in this case, nursing students.

1.9.2. Positivistic philosophy of science

Positivistic philosophy of science is based on the works of French philosopher August Comte (1798-1857), who observed that social reality can be explored through observation, reasoning and experiment. The positivist paradigm is based on the assumption that in engaging with reality, the researcher is an independent inquirer using deductive processes to obtain objective and quantifiable evidence (Polit and Beck, 2017). Positivists believe that the scientific methods of knowledge enquiry used in natural sciences research should be and are suitable in studying social phenomena as is the case in this study (Parahoo, 2006; Meleis, 2012). This is referred to as the unity of science. Some of the characteristics of the positivistic philosophy of science are: reductionism, empiricism, and determinism. Reductionism refers to the approach and process of understanding complex human and social phenomena (Parahoo, 2006; Meleis, 2012, Blackburn, 2016). It is a philosophical positioning that the phenomena under study can be separated (reduced) and understood through generalisation (Chinn and Kramer, 2011). Empiricism, on the other hand, denotes the fundamental ways of knowing and beliefs based on experience; in other words, that which is observable and can be referred to empirically (Evans and Rooney, 2014; Chinn and Kramer, 2011; Parahoo, 2006). Positivists subscribe to the idea or belief that

occurrences have natural causes, also known as cause and effect (Evans and Rooney, 2014; Parahoo, 2006).

At the level of ontology, positivism makes the assumption that reality or realism is measurable and objective, in other words, that knowledge can be quantified (Botma et al., 2010; Chinn and Kramer, 2015).

1.10. Validity and Reliability

1.10.1 Validity

Validity is the ability of the instrument to measure what it is intended to measure (Burns and Grove, 2007). The authors further identify different components of validity, such as face validity, content validity, construct validity, and criterion related validity. The instruments were chosen on the basis of each being able to measure the constructs as set out in the study. The piloting of the tool ensured that the instrument measures and addresses what it is supposed to measure. Clarity of complex words and questions was addressed from the feedback given when piloting, making it possible to avoid misinterpretations in that way improving validity.

1.10.2. Reliability

Reliability is described as the consistency with which the instrument measures the concept under study and has three attributes, these are: stability, internal consistency, and equivalency (Polit and Beck, 2012). All the scales chosen have a Chronbach's alpha range between an internal consistency and co-efficiency range of 0.87 to 0.91 (see Chapter 4, section D).

1.11. Logic and justification

While the researcher's personal philosophical beliefs lean more on the social constructivism paradigm, she opted to use the detached, objective stance of the positivism so as to minimise and possibly eliminate bias, which would have been associated with the fact that the researcher is a lecturer with special interest in mental health. Secondly, as a lecturer, since the researcher is loosely regarded as being an expert, there is the possibility of power affecting the dynamic with student participants. Thirdly, in any psychological research, there is always a risk of psychological harm, however minimal. A positivistic and functional approach through a quantitative design would have contributed more on lessening the risk of psychological harm and the uncomfortable feelings, which would have been evoked through the use of other approaches in undertaking this study.

1.12 APPROACHES TO RESEARCH

There are two major approaches used in the research process, based on different paradigmatic world views and knowledge construction. These are quantitative and qualitative research approaches. For the purpose of this study, a quantitative approach was used. Quantitative research is described as a formal, objective, systematic process by which numerical data are used to obtain information about the world (Burns and Grove, 2013; Bless, Higson-Smith and Sithole, 2013).

1.13. SIGNIFICANCE OF THE STUDY

1.13.1. International

The intended findings and the development of the model could help in contributing to better coping mechanisms for both lecturers and students involved in dealing

with challenges experienced, whilst also contributing to extant knowledge. It could further offer guidance to higher education institutions and clinical sites on strategies regarding psychological and emotional support, thereby enhancing the image and social positioning of the nursing profession through the promotion of a caring ethos.

1.13.2. National

This study will seek to make a contribution in the field of mental health education by developing an intervention model that will lead to decrease in the economic burden on the nation and the healthcare system at large, in terms of dealing with the manifestations, impact, and complications of psychological distress in a racially and ethnically diverse nation like South Africa. It may assist nursing students to acquire the necessary positive skills and competencies required to be able to cope with the clinical and academic environment which has been known to create psychological distress and anxiety.

1.13.3. Local

The study will contribute in bridging the gap in the existing body of knowledge in mental health nursing research, as there are limited studies on psychological distress amongst undergraduate nursing students in South Africa, as well as guiding interventions, not only for nursing students, but likewise for tertiary students. It may help in improving nursing education programmes with regards to enabling them to cope with academic, clinical, personal demands and challenges. This will in turn enhance their experiences of training, decreasing high attrition rates, and contributing to the recruitment efforts of the Ministry of Health.

1.14. DEFINITIONS OF CONCEPTS/TERMS

The following section gives definitions of key concepts applicable to this study

- **Psychological distress:** refers to the ‘relationship between the environment and the individual which the individual appraises as significant for his or her wellbeing which exceeds available coping resources (Lazarus and Folkman, 1984: 63). For the purpose of this study, psychological distress will refer to uncomfortable feelings and emotions that may impact on the social and occupational functioning of the student including impact on activities of daily living.
- **Coping:** is defined as “constantly changing cognitive and behavioural efforts to manage specific external and or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus and Folkman, 1984).
- **Nursing students:** according to the Nursing Act (33 of 2005), a nursing student is a person following a programme of study in a nursing education institution. In this study, this refers to a person registered for a four-year undergraduate nursing degree in the selected universities. The terms ‘nursing student’ and ‘student nurse’ will be used interchangeably.
- **Model:** a model refers to a symbolic representation of empirical evidence as shown through words, diagrammes, pictures and graphs (Chinn and Kramer, 2011).
- **Nursing education institution:** refers to any nursing education institution accredited by the Nursing Council in terms of Act 33 of 2005. This includes public nursing colleges, nursing schools, academic universities,

comprehensive universities, private nursing colleges and universities of technology. For the purposes of this study, nursing education institution will refer to the selected universities.

1.15 CHAPTER OUTLINE

Below is a table giving an overview of the chapters of this thesis.

TABLE 1.1. CHAPTER OUTLINE

Chapter 1: Overview	<ul style="list-style-type: none"> • Overall orientation of the study including background of the research problem, purpose, research objectives, research questions, paradigmatic perspectives and significance of the study.
Chapter 2: Theoretical Framework	<ul style="list-style-type: none"> • Selection and discussion of the theoretical framework that was used to guide the study.
Chapter 3: Literature Review	Review of literature related to the topic being investigated so as to give the researcher a broader perspective of what has been published and discussed.
Chapter 4: Research Methodology	<ul style="list-style-type: none"> • Overall research process and procedure used to address the research questions and ethical considerations.
Chapter 5: Presentation and Discussion of results: Objective 1	<ul style="list-style-type: none"> • Presentation, interpretation and discussion of research findings. • Demographic details • Objective 1
Chapter 6: Presentation and Discussion of results: Objectives 2 & 3	<ul style="list-style-type: none"> • Presentation, interpretation and discussion of research findings. • Objective 2 & 3

Chapter 7: Presentation and Discussion of results: Objective 4	<ul style="list-style-type: none"> • Presentation, interpretation and discussion of research findings. • Objectives 4
Chapter 8: Model development	<ul style="list-style-type: none"> • Development and description of the model for management of psychological distress. •
Chapter 9 Evaluation of the study	<ul style="list-style-type: none"> • Limitations and recommendations

1.16. SUMMARY

This chapter outlined the background and justification of the study, including the aim, objectives, significance and definition of key terms. Chapter 2 reviews the theoretical framework underpinning the study.

Chapter 2

THEORETICAL FRAMEWORK UNDERPINNING THE STUDY

2.1 INTRODUCTION

Chapter 1 presented a brief explanation of the theoretical assumptions adopted, and the role played by these in the research process. This chapter discusses the theoretical framework underpinning this study and the rationale behind the choice of frameworks used. Theoretical framework refers to an abstract, rational, and analytical structure that not only direct the development of a research study but support, describe and explain the theory adopted by a research study (Burns and Grove, 2011; Brink, Van Der Walt and Van Rensburg, 2014).

As alluded to in Chapter 1, section 1.8.2 on theoretical assumptions, this study was guided by the Whole-Person Caring (WPC) model, as described by Thornton (2005), Bandura's social cognitive and self-efficacy theory (1977), as well as Lazarus and Folkman's theory of stress and coping (1984). The constructs identified, viz. coping, self-efficacy, and psychological distress, are not exclusively unique to nursing (Polit and Beck, 2012). The study lends itself well within the frameworks chosen, helping to address the purpose and objectives of the study.

2.2 WHOLE PERSON CARING MODEL

This is an interdisciplinary, inter-professional framework for healing and wellness devised by Lucia Thornton (2005) that can be used in different disciplines and

cultural background. The focus is on the human being as a whole. The concept of culture in this model is not linear, in other words, it does not focus on one's origins as determined by race and ethnicity per se, but could mean the culture of the profession, organisation, or institutions of higher learning. The model is relevant to this study because all the components or descriptions of culture are acknowledged, owing to the diversity of the South African context (Solum, Maluwa and Severinsson, 2012; White Paper, 2013). It gives a description of a human beings from a broader perspective, that is, not only as biological or physical entities, but as unique, wholesome, spiritual beings. It is therefore this description that elicited the researcher's interest in the model, as it facilitates transformation within the person, which can occur across religious, social, economic, racial, and ethnic differences currently describing the nursing student in South Africa. The transformation facilitated by this model makes it possible to understand who the student is in the confines of transformation and diversity (Janse van Rensburg, Poggenpoel and Myburgh, 2012; Van Staden, 2014). This helps in viewing the nursing students as crucial to the "inherent unity of life" (Thornton, 2013), regardless of their background. The model is heavily influenced by the works of well-known nursing theorists such as Martha Rogers, Florence Nightingale, and Jean Watson, particularly in defining the operational concepts of this study. In the following paragraphs, a description of the central concepts of this model shall be discussed.

2.2.1. Infinite and sacred nature of being

Using the metaphor of a diamond, the author starts by redefining a human begin as a spiritual being, who, as a primary focus of the model, is a sacred begin with

an infinite nature. The author goes on to differentiate between spirituality and religion. While religion refers to an organised set of beliefs by a group of people or organisation which may or may not incorporate spirituality, spirituality refers to a deeper personal concept which may be subjective, based on an individual's own personal experiences and mode of expression. It is a unified force that integrates the physical, mental, emotional and social/relational aspects of being (Thornton, 2013). In other words, it forms the core, the essence of self, and transcends the self.

2.2.2. Self-compassion, Self-care and Self-healing

These concepts are viewed as the foundation of the Whole Person Caring (WPC) model. Self-compassion describes the feeling for and showing empathy to the self. The model further explains that when a person has self-compassion, it translates to having compassion for others as well. This can only occur when one has learnt to respect one's own needs, and developed the ability to set limits and boundaries. It is in learning to be self-compassionate that one can learn to deal with and manage fatigue and burnout inherent in healthcare settings. The ability to be self-compassionate leads to greater psychological being and emotional resilience, and less psychological morbidity in the form of anxiety, depression, and other struggles. Self-compassion leads to an improvement of positive coping skills (Janse van Rensburg, Poggenpoel and Myburgh, 2012; Takagishi, Sakata and Kitamura, 2013).

Self-care and self-healing refer to taking care of and nurturing the self in totality, not only the biophysical sphere. The premise of self-care and self-healing helps in improving the ability to recognise stressors within (intrinsic) or in one's

environment (extrinsic); in that way helping a person to identify activities that are aimed at promoting, restoring health, and preventing mental diseases. Much as there is some kind of interrelatedness between these two concepts (self-care and self-healing), self-healing primarily involves a broader spirituality, rather than just serving a curative function (Janse van Rensburg, Poggenpoel and Myburgh, 2012).

2.2.3 Optimal wellness

The essence of who a human being is spiritually, provides the foundation for optimal wellness according to this model. It encompasses all the facets of a human and as these facets are integrated through spirituality patterns of well-being are evident, and these may be reflected through empathy directed towards self and others, as well as being supportive and greater acceptance of self, others and nature (Thornton, 2005; Cramer, 2011; WHO, 2014).

2.2.4 Therapeutic partnering

Therapeutic partnering is described as the establishment of relationships between and amongst colleagues and clients for health promotion and healing. One of the characteristics of therapeutic partnering is that the relationship is mutual, and non-hierarchical. This mutual understanding and support result in free-flow of communication between the individuals /staff in that particular organisation.

2.2.5 Transformational Health Care Leadership

Transformational leadership, according to the Whole Person Model, creates a strong sense of vision and purpose (Thornton, 2013), as the social/relational

aspects reflect a participative leadership style, with values that contribute to the transformation. Transformational leadership refers to a leadership style where the leader, along with employees, work together through inspiration, empowerment and empathy, to fulfil the vision of the organisation. This would translate to the core function of student-centeredness in the context of higher education in South Africa (White Paper, 2013; DUT Strategic Plan, 2015). It is a flexible style that encourages participation, which further create a strong sense of purpose (Thornton, 2013; Akin et al., 2014).

2.2.6 Caring as a sacred practice

The sacred practice of caring involves a shift from the rigid and often dehumanising way of caring for others (Thornton, 2013), resulting in a fulfilling and enriching relationship between the carer and the recipient of care. This is the kind of a relationship which, in the context of this study, will improve the way the student as a qualified nurse impart care to their patients. The nursing profession has been dogged with negative perceptions regarding the practice of care; this is complicated by the use of social media, which has seen a rising of lack of accountability on the part of the nurses, and displays unethical use of social media, often leading to violation of the rights to privacy and confidentiality of the patients (Nyangeni, Du Rand and Van Rooyen, 2015).

For individuals to be able to obtain a state of wholesomeness, leading to optimal health and self-care, they ought to be able to actively respond and interact with their environment. This interaction does not take place with the individuals' external and internal environments, but is influenced by cognitive, behavioural, and personal factors within that environment. The interaction often gives rise to

determination and motivation, and is influenced by socialisation. The theory below discusses the social cognitive theory by Bandura to explain this phenomenon.

2.3. BANDURA - SOCIAL COGNITIVE THEORY (1977, 1989)

Social cognitive theory was developed by the sociologist Albert Bandura, first as social learning theory in 1977, with self-efficacy as a constitutive element. Social cognitive theory proposes that individuals actively respond to, seek out and interpret information from the environmental influences surrounding them. It places emphasis on the constant interaction between the cognitive, behavioural, personal and environmental factors, which in turn act as a determinant of motivation and behaviour (Wood and Bandura, 1989). The theory consists of four components, which are self-observation, self-evaluation, self-reaction, and self-efficacy (Bandura, 1977; Wood and Bandura, 1989; Lunenburg, 2011). While these components are interrelated, the focus of this study is more on the component of self-efficacy.

Social cognitive theory postulates that personal achievement is dependent on interaction between one's personal circumstances, such as thoughts and beliefs, the environment, as well as some behaviours (Bandura, 1977; Wood and Bandura, 1989). The theory further explains human behaviour using the construct of self-efficacy with regard to expectation and outcome. Self-efficacy is the judgment and belief of an individual concerning his or her own capabilities in executing behaviour successfully (Bandura et al., 1999). The authors further assert that individuals with high efficacy generally exhibit high energy and motivation to carry out tasks; and when faced with a challenge, it is easy for them

to regroup and review their plans. Based on the above description therefore, self-efficacy and self-sufficiency can be a measure of one's capabilities to manage stress (Orgun and Karaoz, 2014). An individual whose levels of perception are high regarding self-efficacy and self-sufficiency may be able to control environmental influences, obstacles and challenges that may otherwise impact on his or her level of psychological distress.

Bandura's social cognitive theory identifies four factors that influence the cognitive appraisal of self-efficacy. These factors are: mastery of experience, verbal persuasion, vicarious experiences, and physiological and affective cues. In an overview of Bandura's social cognitive and self-efficacy theories, Pajares (2002) describes the theory as based upon the interactive reciprocal relationship between the self (the person), the environment, and behaviour (Meleis, 2012; Orgun and Karaoz, 2014). The theory further views a person as a proactive, self-regulating, self-reflecting individual, who is in constant interplay with the environment. This shapes how the person adapts and changes with respect to environment they are in, including the way they cope. This reciprocal interaction of human functioning forms a social basis for therapeutic interventions directed at the personal, environmental and behavioural challenges and stressors.

Most human functioning theories place more emphasis on environmental factors as shaping the behaviour and action of the individual (Meleis, 2012). Bandura's theory differs somewhat, where it focuses more on intrapersonal factors as having more influence on how an individual reacts to their environment, which in turn affects the individual's functioning (Kneisl and Trigoboff, 2009; Meleis, 2012). Embedded within the social cognitive theory is the belief that as a proactive, self-

regulating, and self-reflective being, an individual is able to act as an agent who possesses capabilities to plan alternative strategies in dealing with situations in their environment. This comes about through the self-regulating mechanisms that provide opportunities for self-directed changes in behaviour. The self-regulating mechanisms are in turn greatly influenced by the individual's evaluation of self, as observed through their sense of self-worth, self-concept, self-esteem, personal values, and self-efficacy (Watson et al., 2008; Takagishi, Sakata and Kitamura, 2013; Saias et al., 2014). The self-regulating mechanism is characterised mainly by self-reflection. Through self-reflection, the individual is able to change their thought patterns and perception and engage in activities that would bring about change. Furthermore, they are able to explore their sense of self-worth and self-belief in making sense of their experiences. At the centre of social cognitive theory are self-efficacy beliefs (Bandura, 1986). Self-efficacy beliefs refer to a person's belief in their capabilities to succeed in specific situations related to task accomplishment (Watson et al., 2008; Takagishi, Sakata and Kitamura, 2013; Saias et al., 2014). Self-efficacy beliefs provide the basis for motivation, as well as a sense of personal accomplishment and wellbeing. People with low self-efficacy tend to have low motivation. The concept of self-efficacy will be discussed in Chapter 3.

While the role of self-efficacy has been extensively studied in different circles in healthcare, for the purpose of this study, it will be studied in relation to psychological distress and coping amongst nursing students. Social cognition and self-efficacy described in this theory determines how individuals appraise stress and stressors in their environment, and how they react to such stressors.

The section below discusses the appraisal of stress and coping displayed by individuals based on their self-efficacy beliefs.

2.4. LAZARUS AND FOLKMAN'S THEORY ON STRESS AND COPING (1984)

This theory, developed by psychologists Richard Lazarus and Suzan Folkman (1984) investigates the relationship between cognitive appraisal of stress and coping processes used by individuals. It explains the methods employed by people in dealing with stress and or stressors in their environment, which may be overwhelming, and consequently, may threaten a person's ability to cope. The authors of this theory concluded that there is a relationship between people's perceptions of their mental health and their appraisal of coping. Coping strategies are viewed as learned, deliberate responses used to adapt or change stressors (Lazarus and Folkman, 1984; Folkman et al., 1986; Hulbert et al., 2013). Chapter 4 provides a discussion on coping and coping mechanisms or strategies mainly used in dealing with stress. This theory was selected for this study because it focuses on the processes of stress and coping, and allows for the development of a framework for supportive strategies therefore meets the objectives of this study. Below is a diagramme or model on stress and coping appraisal by Lazarus and Folkman, followed by a discussion of two constructs central to the theory.

2.4.1. Transactional Model of Stress and Coping Appraisal

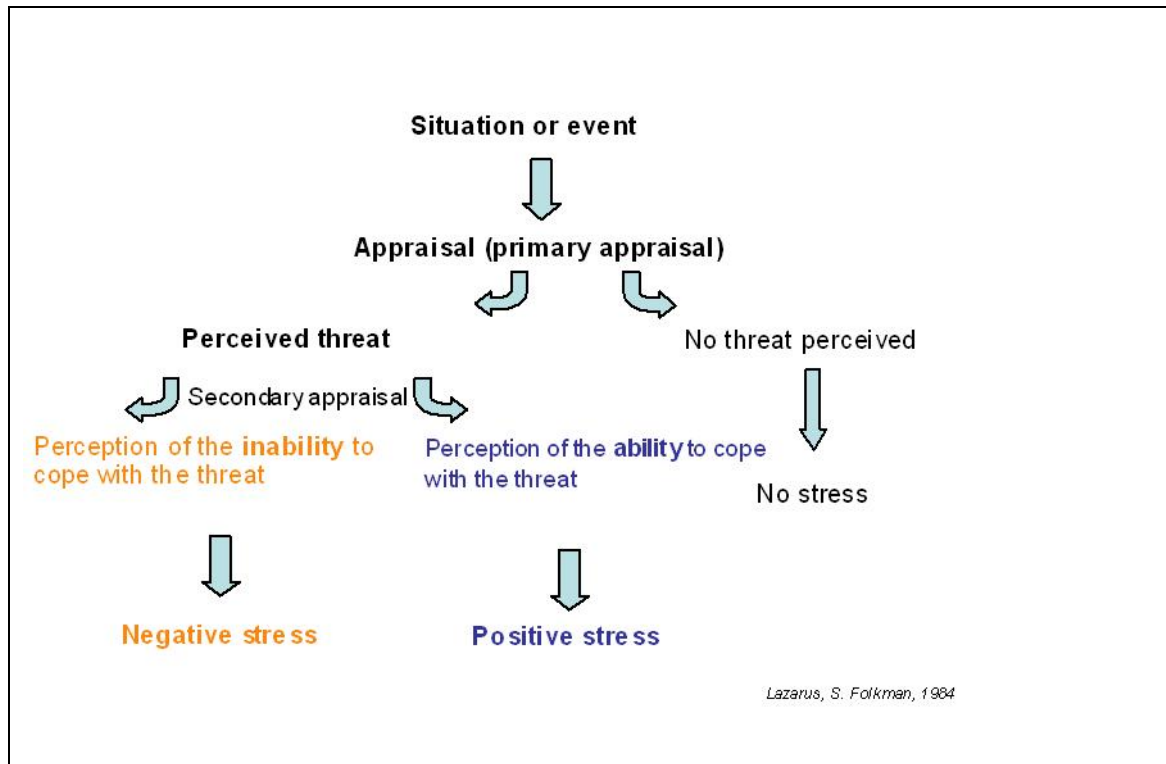


Figure. 2.1: Transactional Model of stress and coping appraisal (Lazarus and Folkman, 1984)

2.4.1.1. Description of the Transactional model of stress and coping appraisal

Lazarus and Folkman (1984) describe two valuable constructs as being central to this theory. These are cognitive appraisal and coping. Cognitive appraisal is further defined as the ability of the human species to constantly evaluate what is taking place around them, and what effect can this have on their well-being. This mainly refers to perceived threat. Perceived threat is a situation or an event that a person views as threatening, and as such, exceeds her coping resources, and may as a result endanger his or her well-being. Cognitive appraisal is further divided into primary and secondary appraisal. In primary appraisal, the person

assesses the situation or event for potential harm, loss, threat, challenge and even benefits. If there is no perceived threat, then there will not be stress manifestation. If there is some degree of perceived threat, then secondary appraisal will occur (Lazarus and Folkman, 1987; Kneisl and Trigoboff, 2009; Hulbert et al., 2013).

Secondary appraisal refers to the person's action of evaluating his or her coping mechanisms, resources and options in the situation (Lazarus and Folkman, 1987; Kneisl and Trigoboff, 2009). If people perceive an event as non-threatening in view of the coping resources at hand, they will apply coping resources or options. This is termed 'coping' (Kneisl and Trigoboff, 2009; Hulbert et al., 2013), and the end result will be positive stress, whereby mainly positive coping resources are utilised. If the individual's coping resources are perceived as being inadequate, negative stress ensues, and the person will engage in ongoing interpretation of the situation until new information and new coping resources are obtained. According to Lazarus and Folkman (1987), cognitive appraisal and coping styles are influenced by the person's culture, external conditions, and physical and psychological vulnerabilities.

2.5 Summary

This chapter described the theoretical framework underpinning this study including justification of the chosen frameworks. In linking the above frameworks, the researcher gives a brief description of how these fit together. The Whole Person Caring (WPC) model views culture as a broader concept that takes into consideration, amongst other things, one's origins; in this case, the nursing student. In conjunction with this description of culture, the framework gives a

broader definition of human beings as not only biological, but psychological, emotional, social, relational, and spiritual beings. It is within these realms that human beings then develop their own personal achievements, and consequently, self-efficacy (Bandura et al., 1999). Social cognitive theory postulates that people with higher self-efficacy are able to deal with challenges and possess the ability to regroup, rethink, and plan, in their quest for self-sufficiency and self-awareness. Self-efficacy, as described in section 2.4, is mainly based on one's self-perception, which in turn denotes one's capabilities to manage stress, which results in the ability to cope (Lazarus and Folkman, 1984). Coping strategies are learned through the process of socialisation, which in turn, are brought about by the individuals' interaction with their environment (Bandura, 1986; Meleis, 2012; Saias et al., 2014). For this researcher to be able to understand the concept of psychological distress and consequently plan for intervention strategies, it is necessary to identify the processes and manifestation of stress and coping by the nursing students. Identifying the process of stress and coping further leads to an understanding of the intrapersonal, interpersonal and social contextual factors upon which the relationship between self, the environment and manifested behaviours are based. It is when these processes are viewed that the nursing student is able to obtain optimal wellness, thus facilitating transition across a broader spectrum of being. Chapter Three gives the literature review, framing the study, including giving the context of the study.

CHAPTER 3

LITERATURE REVIEW

3.1 INTRODUCTION

This chapter presents a review of literature framing this study on psychological distress in nursing students and the related concepts. Firstly, a brief history on the demographics of the higher education in South Africa is addressed, followed by the definition of related concepts. This is done to put the study into context. The chapter provides the framework of reference for the questionnaires used in data collection as well through literature triangulation.

A literature search was conducted using various search engines such as Science Direct, Nexus database system, ProQuest, academic search complete, Springerlink, CINAHL, Medline, Ebscohost, Sabinet Online, Pubmed and the worldwide web, Google Scholar, e-books, theses and dissertations. Different search words were used including psychological distress, stress, distress, nursing students, students, student nurses, coping, and clinical environment.

3.2 HIGHER EDUCATION CONTEXT

This section provides a brief overview of the higher education reforms in South Africa, including nursing education.

3.2.1 Brief overview on the demographics of the higher education in South Africa

Following the abolition of the apartheid system in South Africa, there came a period of transformation which impacted on higher education in the form of the mergers of higher education institutions. Prior to 1994, there were 36 public higher education universities which were mainly identified by the apartheid-designated race of the institution, viz. historically black universities (HBU) or historically white universities (HWU) (Coetzee, 2010). After the merger process, three categories of universities made up of 23 institutions emerged. These are: universities, comprehensive universities, and universities of technology (CHE, 2009). Academic universities are mainly career-orientated, with professional and research programmes. Universities of Technology (UoT) mainly focus on vocational education. Comprehensive universities are more like a mixture of university and university of technology in terms of programmes on offer.

The medium of instruction in these universities is mainly English, with some offering dual medium instruction (Munene, 2012; Joseph and Ramani, 2012), but overall there are variations in terms of language dominances in the particular universities, based on the province in which the institution is located, and the ethnic groups it serves. The student body denotes the multi-diversity nature that is characteristic of the demographics of the South African population, based on factors such as race, culture, ethnicity, and social standing (Sasco, 2009; Joseph and Ramani, 2012; Mbatha, 2016).

As stated, in this post-apartheid era, higher education in South Africa has, for the past 20 years, been shaped by challenges strongly influenced by political views

(Bawa, 2012; Wangenge-Ouma, 2010; Cloete, 2014), amongst which is the current funding higher education debate, which has resulted in the “must fall” movement gaining momentum. The issue of funding in higher education in South Africa has been an ongoing, robust debate (Wangenge-Ouma, 2012; DHET, 2010). Amongst the questions emerging in the debate are whether the ideal of free education is indeed possible in South Africa; the issue of equity and access; why there is a demand for free higher education when there is an existing model of funding, the National Student Financial Aid Scheme (NSFAS); and whether there any barriers in the current funding model (Bawa, 2012; Wangenge-Ouma, 2010, 2012; Cloete, 2014; Nzimande, 2016). Relevant here is that this is the same landscape in which undergraduate nursing education takes place in universities.

3.2.2 Nursing education landscape

Nursing education, like general higher education in South Africa, is linked with the development and the history of the country, including the political landscape, which in turn is closely linked to transformation (Bruce, Klopper and Mellish, 2011). Nursing education and training, while largely regulated by the South African Nursing Council (SANC), is linked with higher education or general education through legislative frameworks such as the the Higher Education Amendment Act 39 of 2008, and the National Qualification Framework (NQF) Act no. 67 of 2008 as amended (Cloete, 2014; Bruce, Klopper and Mellish, 2011; HEQC, 2008). Before the introduction of the comprehensive degree/diploma course in nursing (R425), universities mainly offered post-basic degrees, advanced diplomas and postgraduate degrees such as honours, master’s and

doctoral degrees (FUNDISA, 2012; Bruce, Klopper and Mellish, 2011; Simelane, 2013). When the R425 comprehensive course was introduced by the South African Nursing Council (SANC, 1984), the proviso was that the schools offering the course ought to be approved universities with a department of nursing or nursing colleges.

The course of study or the curriculum needed to be approved by the South African Nursing Council, and a qualified registered nurse ought to act as the Head of Department (HOD) (FUNDISA, 2012; Bruce, Klopper and Mellish, 2011). The accreditation by SANC extends from university schools or colleges to the institutions where the clinical education and training component is undertaken (Klopper, 2009; FUNDISA, 2012; Ramahlafi, 2015). Nursing departments and schools in universities are obliged to get SANC accreditation as well as the Higher Education Quality Council (HEQC) permission, according to the processes of that particular university. As the schools are demographically located in universities, they generally enjoy the same privileges and rights, such as academic freedom and autonomy, as prescribed by the institutions' policies and precepts (Klopper, 2009; FUNDISA, 2012; Ramahlafi, 2015). These tend to be in line with the vision, mission and goals of the university (Klopper and Bruce, 2011; Bruce, 2009).

On the other hand, the nursing colleges offering the R425 comprehensive course at diploma level as well as other post basic diplomas are required to be in a legal agreement with a particular university and the particular provincial department of health. This has been another basis for the dual status described in Chapter 1, where students were expected to work as employees of that particular provincial Department of Health, as well as being able to juggle the relevant training needs.

While the practice of paying the student a salary or training allowance has been replaced by the stipend or bursary, the perceptions have not shifted, which poses greater challenges for the student and introduces additional stressors (Ramahlafi, 2015; Simelane, 2013). A discussion specific to the nursing education context regarding personal and professional variables in this study is highlighted in Chapter 1.

Below is a map showing the Universities in South Africa and the location of their campuses. This map does not necessarily reflect the universities sampled to be included in this study, but a general and broader view of the higher education landscape, giving clarity to the reader in explaining the demarcation of provinces. Two of the provinces do not offer undergraduate nursing degrees, as the institutions there are relatively new, there having been no universities previously.

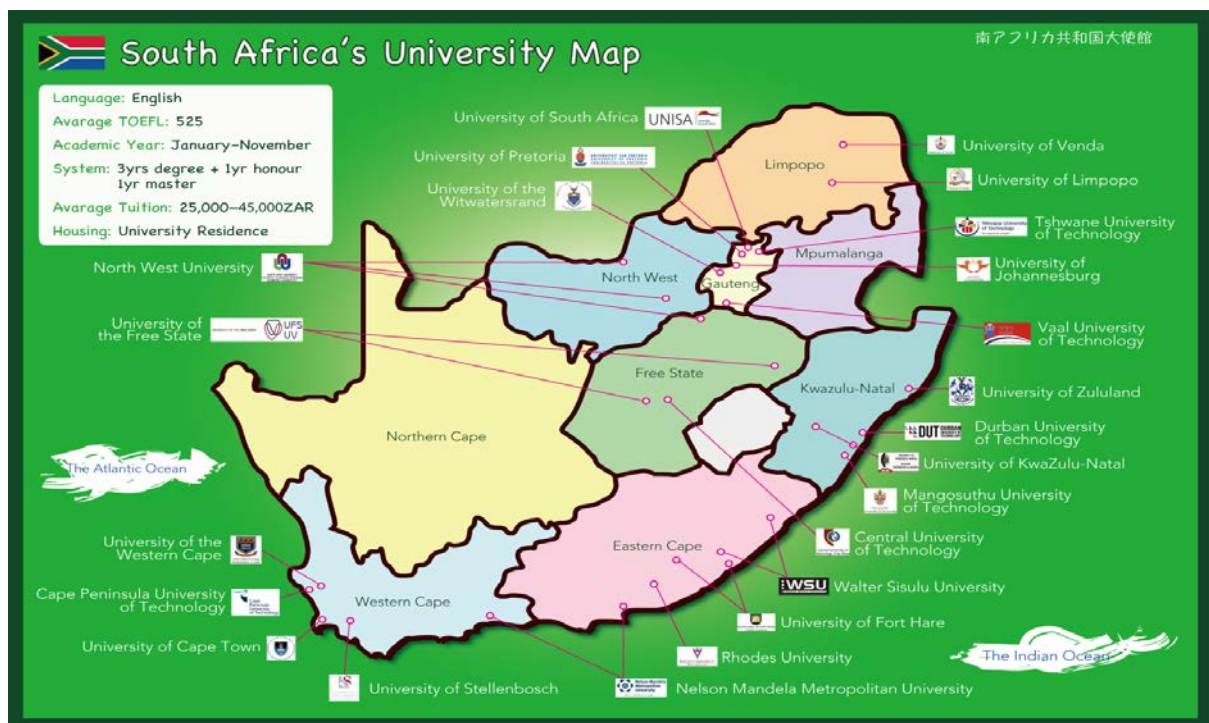


Figure 3.1: South African Universities (USAF, 2015)

3.3 PSYCHOLOGICAL DISTRESS: THE CONCEPT

As stated in Chapter 1, the concept of psychological distress has been widely defined in literature and various definitions have been used without any consensus being reached. In most cases, it has been confused with such concepts as strain, stress and distress. Different variations and meanings have been identified in literature in different contexts (Sugiura and Sugiura, 2016; Oshio and Kan, 2016; Saias et al., 2014; Souza-Talarico et al., 2016). In a concept analysis of psychological distress, Ridner (2004: 539) defined psychological distress as a unique, discomforting emotional state experienced by an individual in response to a specific stressor or demand that may be harmful to the individual, either temporarily or permanently. Ridner (2004) further identifies five defining attributes which are:

- Perceived inability to cope effectively with stressors, giving rise to the belief that there is no solution to the stress;
- Change in emotional status, which can be seen through changes in emotional tones such as irritability, anxiety, demotivation and depression;
- Discomfort, mainly subjective, where an individual may report sense of being miserable, suffering, and anguish;
- Communication of discomfort, including the emotional and physical changes associated with distress;
- Harm, which has been identified to be the defining attribute of psychological distress, and which may include altered social relations and decreased self-esteem.

Below is a diagramme of antecedents, attributes and consequences of the concept of psychological distress by Ridner (2004).

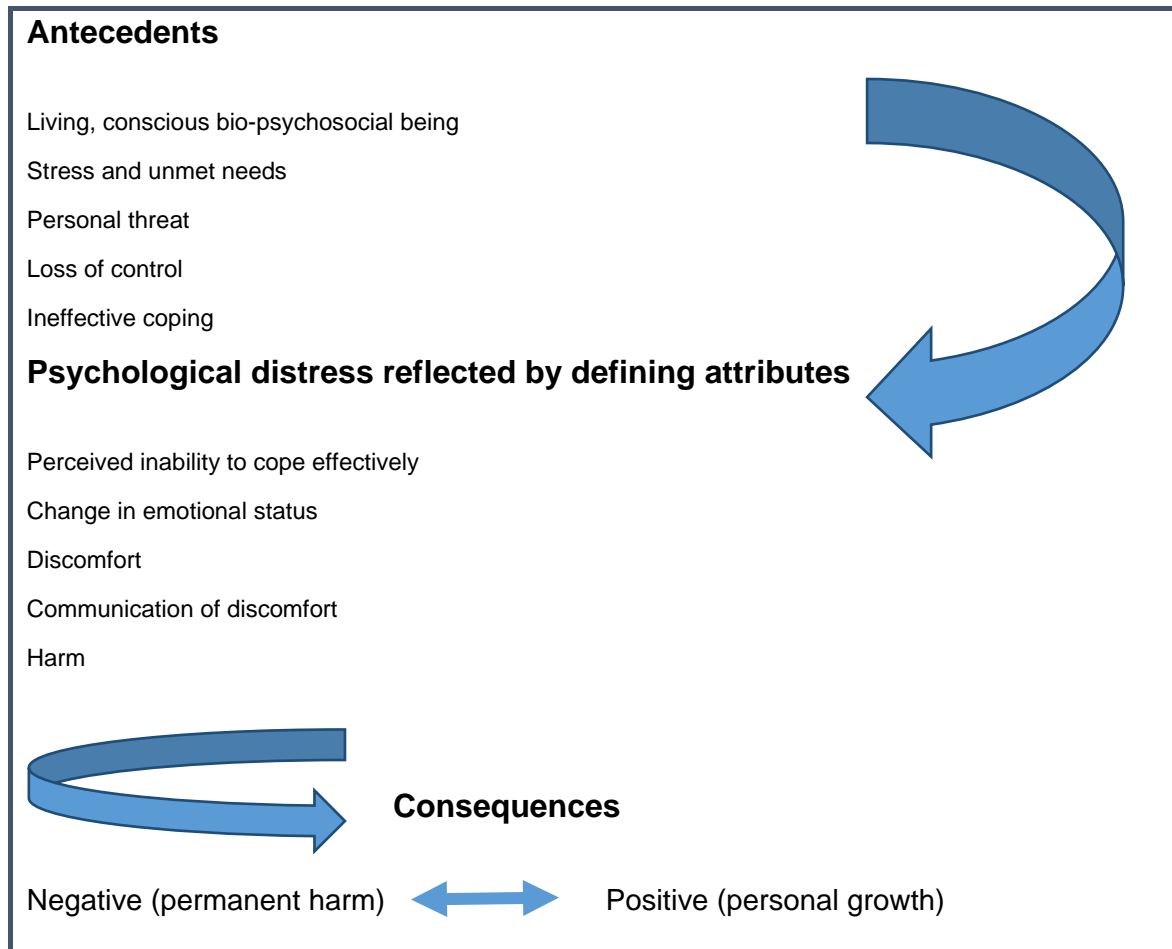


Figure 3.2: Antecedents, attributes and consequences of the concept of psychological distress (Ridner, 2004).

3.3.1 Description of the above diagram

Ridner (2004), gives the explanation that for a concept to occur, there must be identifiable conditions known as antecedents, which must be in existence before

the concept, and out of these conditions or antecedents there must be defining attributes regarding the concept under study, which are then followed by consequences, brought about as a result of the concept having taken place (Walker and Avant, 2011; Chinn and Kramer, 2015). Considering the diagramme, the concept of psychological distress arises where a person (living, conscious bio-psychosocial being), and a stressor or conflict situation as a result of unmet needs, which the person has to perceive as a threat; which then gives rise to the fight or flight response and loss of control, leading to ineffective coping.

The defining attributes of psychological distress would be the inability to cope with stressors and challenges, which may be evident through feelings of hopelessness and avoidance, followed by a change in emotional states, such as withdrawal, tearfulness, anxiety, and change in emotional tone, which may bring about some level of discomfort in the form of physical aches, anger and hostility; and lastly consequences which, when viewed on a continuum, can be described as negative or positive. Negative consequences might be a sense of impending harm, which may take the form of suicidal ideation or actual suicide; and positive consequences might be the attainment of personal growth and personal values (Uys and Middleton, 2014; Ridner, 2004).

While psychological distress on its own is not a reflection of a clinical diagnosis and may not require therapeutic interventions, it is important in primary prevention, as it could lead to a range of maladaptive behaviours, such as: substance abuse, suicidal ideation, depression, and anxiety disorders, if not properly managed (Saias et al., 2014).

3.4 INTERRELATEDNESS OF STRESS AND PSYCHOLOGICAL DISTRESS

Stress has had various definitions according to different researchers, psychologists, and sociologists. The concept of stress on its own is multifaceted, and its definition is mainly contextual. As stress does not constitute the main variable under study in this research project, the researcher decided to use the following definition. Stress refers to a non-specific biological response to a demand or stressor, which may not necessarily be harmful to the individual (Ridner, 2004: 539). While stress can be viewed as a normal reaction to stressors or demands in the individual's environment (Smith and Fawcett, 2006; Fowler, 2010), it can have negative outcomes, such as emotional exhaustion, use of maladaptive coping strategies, and consequently psychological distress. Watson et al. (2008) describe stress as a process that can be explained more clearly by the use of longitudinal studies, whereupon outcomes of the process of stress can be assessed. While there is no universally accepted definition of stress, most theorists and researchers have adopted an interactional view of stress. Kneisl and Trigoboff (2009) and Souza-Talarico (2016) describe various factors involved in understanding stress, which based solely on the impact of stress in different facets of human experience. These factors, as identified by Kneisl and Trigoboff (2009) and Souza-Talarico (2016) include:

- personality factors, include how the person handles emotions such as anger, fear and anxiety;
- cognitive factors, are factors that look at the person's perception of the situation whether it's seen as a challenge or a threat;
- physical factors refer to the body response to stress;

- cultural factors refer to the person's beliefs and values regarding religion, family and health and how these are interpreted in relation to stress;
- environmental factors describe the impact of environmental influences on the person with regard to stress and coping; and
- coping strategies are measures and strategies used by the person to manage stress.

Various factors have been identified as antecedents to stress according to the transactional model of work related stress by Deary et al. (1996), Kneisl and Trigoboff (2009), and Bougie et al. (2016). These includes factors such as personality traits, demographics, and environmental life events. This seems to agree with the stress vulnerability perspective. While this does not examine psychological distress per se, at the onset of mental illness episode, it could very well explain the interrelatedness of factors, that is, not only on stress and psychological distress, but with regard to the relation between stress, psychological distress and coping.

According to the Stress Vulnerability Model as described in Uys and Middleton (2014: 196), the onset of an illness is as a result of an interaction amongst four attributes or factors, which are: the basic vulnerabilities (intrinsic); environmental stress; personal and environmental protectors; as well as underlying neurological/psychological vulnerability. The authors further explain that when the environmental stressors are overwhelming or exceed the personal and environmental protectors and support, vulnerability is triggered. In a longitudinal study of burnout and attrition in nursing students, Deary et al. (2003) and Watson

et al. (2008) concluded that there is a relationship between stress and psychological distress in nurses and nursing students.

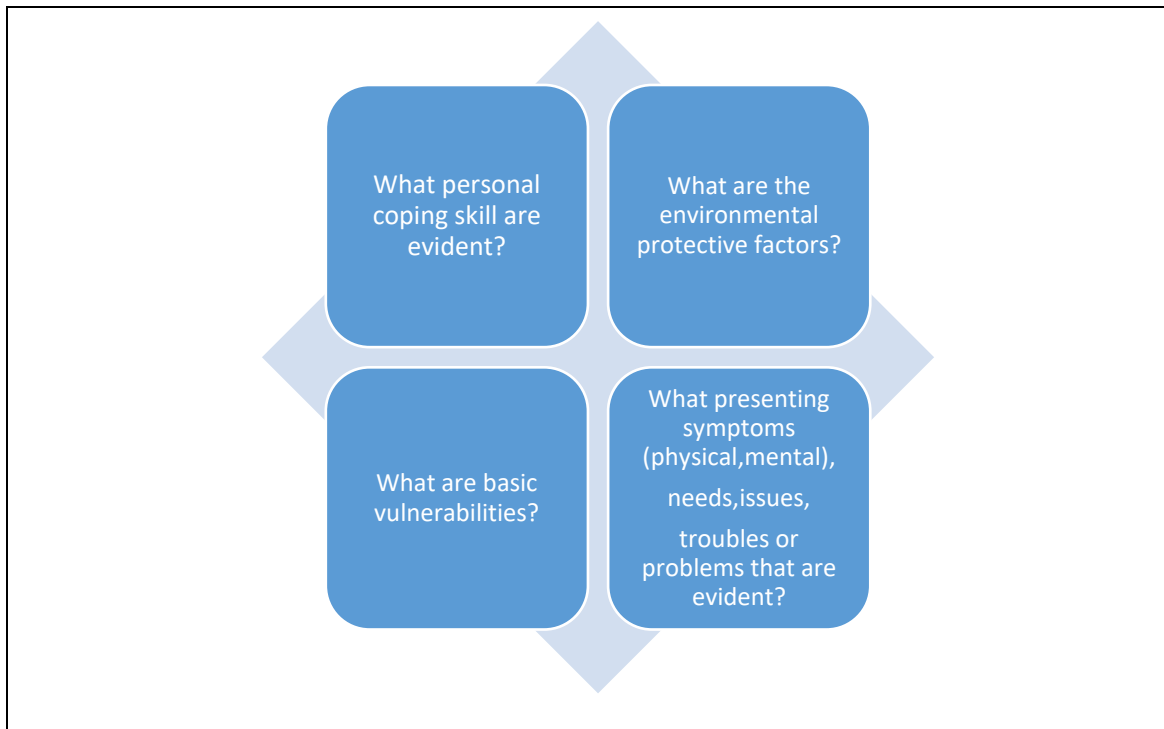


Figure. 3.3 Linked dimensions of the stress vulnerability model (Uys and Middleton, 2014).

3.5 COPING

This is a process of striving to master environmental stressors and/or challenges (Uys and Middleton, 2014:196). The authors further assert that people have to draw from their inner personal coping mechanisms, behaviours and resources in the environment when striving to cope. Furthermore, the concept of coping includes defence mechanisms used, the sense of self, cognitive appraisals, and coping strategies. This seems to agree with Lazarus and Folkman's view in their stress, appraisal and coping theory (1984). According to this theory, coping is defined as those behavioural and cognitive measures used by a person aimed at

handling undesirable or stressful situations. This theory further postulates that coping strategies and resources used can have a mediating effect on the way a person – in this case, a nursing student – deals with stress, which, when not handled correctly, may have a negative health outcome in the student, contributing to psychological distress.

Various taxonomies have been used to describe coping and coping responses. These include avoidance, or being emotion-focused, problem focuseed, or task-oriented (Prymachuk and Richard, 2007, Watson et al., 2008; Tully, 2004), with avoidance being the strongest predictor of psychological distress (Gibbons, Dempster and Moutray, 2010). While some literature has shown significant mediating effect of coping on stress and psychological distress, a study by Klanin-Yobas et al. (2013) seemed to have less impact, which was attributed to such factors as operating on different mechanisms with regard to psychological health, as well as multiple mediators such as personality, self-efficacy, and socio-cultural factors.

3.6 SELF-EFFICACY

Self-efficacy is the judgment and belief of an individual concerning his or her own capabilities in executing behaviour successfully (Bandura et al., 1999). The authors further assert that individuals with high efficacy generally exhibit high energy and motivation to carry out tasks and when faced with a challenge, where it is easy for them to regroup and review their plans. Based on the above description, self-efficacy and self-sufficiency can be a measure of one's capabilities to manage stress (Orgun and Karaoz, 2014). An individual whose levels of perception are high regarding self-efficacy and self-sufficiency may be

able to control environmental influences, obstacles and challenges that may otherwise impact on his or her level of psychological distress.

3.7 PREVALENCE OF PSYCHOLOGICAL DISTRESS AMONGST NURSING STUDENTS

Available literature has concluded that psychological distress is a significant problem for nursing students (Nerdrum and Geirdal 2014; Herera and Rivera, 2011; Watson et al., 2008; Christensson et al., 2010; Pitt et al., 2012). This often impacts negatively on several areas of the students' life, such as academic performance, high attrition rate, as well as heightened risk of psychiatric morbidity, including negative coping strategies such as substance abuse. This may, in the long run, prove costly not only for the institutions of higher learning, but also by extension for the government. Below is the description of literature reviewed to qualify the stated assertion.

3.7.1 The international context

A series of studies, mainly from the international literature (Nerdrum, 2009; Chunping, 2012, Watson et al., 2008, Christensson et al., 2010), Sri Lanka (Ellawella and Fonseka, 2011), Chile (Herera and Rivera, 2011), Norway (Nerdrum and Geirdal 2014), and Greek (Papazisis et al., 2008), explored the concept of psychological distress and its prevalence amongst nursing students. In general, there seems to be a high prevalence of psychological distress, as evidenced by higher scores obtained in anxiety, worry, and depression, which contribute to increased levels of psychological distress (Watson et al., 2008,

Christensson et al., 2010), consequently increasing psychiatric morbidity. Various predictors of psychological distress have been identified, ranging from: the quality of student's personal life; availability of support system; personality traits; self-esteem; and coping abilities (Nerdrum, 2009; Chunping, 2012); to the clinical placement factors of dissatisfaction about the training environment; boredom at work; fear of failure in examinations; conflict with colleagues; unavailability of professional counselling services; and being away from home (Ellawella and Fonseka, 2011; Dusseldorp, Van Meijel and Derksen, 2010). Some studies have identified the prevalence rate of psychological distress to be related to non-work or training factors such as family and social challenges as well as gender and age differences with females and those below the age of 24 seem to be more greatly affected (Herera and Rivera, 2011; Watson et al., 2008; Christensson et al., 2010). Some studies noted that the pattern seemed to differ, whereas the years of training progressed, the higher the level of study towards completion, the higher the levels of psychological distress (Watson et al., 2008; Christensson et al., 2010), with the latter authors noting that age, gender and prior learning have an impact as well.

While most literature reviewed seem to be quantitative in nature, with varying sample sizes from very low about around 62 respondents (La Brague, 2013), to large samples of over 1200 respondents (Akin et al., 2014; Fone et al., 2014; Khamisa et al., 2015), the findings seemed to agree with qualitative reports (Junious et al., 2010; Kaewprom, 2011); more so with regards to the factors contributing to psychological distress, such as lack of support, and economic and social factors. However, much as there are variations in term of sample sizes, places where studies were conducted and the variables that were included in the

samples findings are remarkably similar. A descriptive correlational study aimed at measuring the prevalence of psychological distress in nursing students and their relationships to the socio-demographic, family and academic variables in using the General Health Questionnaire, found a 36% prevalence of psychological distress (Herera and Rivera, 2011). These results point to a pervasive pattern of psychological morbidity as the scores are generally high. A similar study conducted in North Africa (Mostafa et al., 2011) yielded more or less the same high scores, with 40.2% reporting very high stress levels. This is much higher than the reports of studies reviewed in both developed and developing countries (Watson et al., 2008; Pitt et al., 2012). While this could be attributed to different measurement tools used as well, the authors interpreted the higher prevalence of stress, amongst other things, to the educational policies in that country, reforms in nursing education, financial challenges, as well as the poor image and reputation of the nursing profession. The most frequent symptoms noted in most of these studies were a depressed mood, stress, lack of concentration, decreased ability to enjoy life (Papazisis et al., 2008; Mostafa et al., 2011; Watson et al., 2008; Pitt et al., 2012). The researchers noted a significant association between psychological distress and less time spent on recreation, economic concerns, extended study hours, perceived socio-economic status, and poor family support. The socio-demographic factors identified included younger age and lower socio-economic status, while academic factors included study overload, assessments, and examinations (La Bague, 2013; Chernomas and Shapiro, 2013). The implication is that there should be a plan in place to ensure the welfare of the students without prejudice to their mental health.

Nursing students had significantly higher levels of psychological distress compared to physiotherapy and occupational therapy students (Watson et al., 2008), however, these levels were significantly lower after graduation compared to that of other young health professionals, who presented with increased psychological distress (Nerdrum, 2009; Pines et al., 2011). There seemed to be a close relationship between increased levels of psychological distress and being a nursing student, and not a young professional nurse.

In determining the prevalence of psychological distress, anxiety and depression amongst nursing students by Papazisis et al. (2008), there seemed to be greater increase in depressive and anxiety symptoms amongst female students compared to males at a trend level of $P = 0,07$ in a sample of 34 males and 136 females. While this seems to agree with Ellawella and Fonseka (2011), as noted above, the representativeness in terms of gender could be a contributing factor towards the score recorded by this study. Overall, in the same study, a majority of students obtained relatively high scores, suggesting increased psychiatric morbidity, with a total of 52,4%, ranging from mild to severe depressive symptoms. A strong positive correlation between psychological distress and the identified depressive symptoms was identified ($R_{\text{Pearson}} = 0,727$; $P < 0,001$), while there was not much significance or differences noted in terms of levels of training or study years. Mild stress was observed in 42.4% of students as a personality trait, while higher percentages of students without stress personality traits were observed in the first and fourth year of study. The study was conducted in four-year undergraduate degree students. Overall Papazisis et al. (2008) reported a rate of 71.8% of perceived stress by Greek nursing students, varying from mild levels (31.8%) to very high levels (12.4%).

3.7.2 The African Context

As mentioned in Chapter 1, there seems to be a shortage of literature mainly aimed at psychological distress and nursing students on the African continent, nevertheless, there does not seem to be a difference from the results obtained from the international context in terms of prevalence. However, there is a lack of empirical data when it comes to the impact of socio-economic factors, the burden of disease, and the unavailability of clear measures as to how to deal with psychological distress.

This section considered some of the studies conducted in this continent. For the purpose of providing a mental image of the distribution, the countries from which the studies reviewed originate are mentioned, along with the research design, so as to provide an indication of whether the study would have been generalised in a broader context. Studies conducted in Ghana (Asante and Andoh-Arthur, 2015), Nigeria (Esan et al., 2014), Egypt (Mostafa et al., 2011), South Africa (Martin and Daniels, 2014; Page and West, 2011) agree that there is a high prevalence of psychiatric morbidity amongst the youth. There seems to be no difference in the findings compared to the international literature regarding prevalence and predictors. In a quantitative study conducted in Ghana, using the centre for epidemiological studies short depression scale (CES-D10), there seemed to be higher rate of depressive symptoms in university students, with 39,2% of respondents presenting with mild to severe forms of depression (Asante and Andoh-Arthur, 2015). Some of the identified predictors were a lack of personal and social support, poverty, as well as traumatic experiences (Hardcastle et al., 2016; Spires et al., 2016; WHO, 2016). Throughout the

literature reviewed, psychological distress has been identified as being one of the contributing factors in depression. These findings are similar to the studies conducted in Nigeria, where high prevalence of psychological distress was identified in a study conducted amongst resident student doctors. Almost half of the respondents, which translated to 48%, met the criteria of psychological distress (Esan et al., 2014). This study identified a positive correlation between psychological distress and workload. While this may not be a study focusing on nursing students as such, the literature has identified high levels of psychology distress amongst healthcare students, such as nursing, medicine, pharmacy and dentistry students (Kavalidou, 2013).

While a new environment on its own can be threatening for any individual, it becomes more challenging for students who are faced with developmental and adjustment issues of personal growth, development and maturation, as well as a foreign environment and psycho-social challenges (Yako, 2007; Tesfaye, 2009; Jackson et al., 2010). Coupled with these challenges, there is an increasing pressure of the chosen profession, in this case nursing, which encourages therapeutic use of self as a tool in caring for patients (Martin and Daniels, 2014).

As stated in the background literature (see Chapter 1), nursing is one of the most stressful professions, with high levels of burnout and moral distress. Some studies have sought to determine the association between psychosocial distress, race, and suicidal ideation in the Sub-Saharan African context (Page and West, 2011; Jackson et al., 2010; Young and Campbell, 2014), it was discovered that students who presented with positive psychosocial distress indicators showed high likelihood of suicidal ideation and suicide plans, as evidenced by their

responses; while all black nurses (African, Indian and coloured) reported higher non-specific psychological distress levels, with anger and hostility, when compared to reports from white nurses. When comparing urban and rural dwellers on this aspect, anger and hostility manifested more in urban dwellers. Both these were full scale cross-sectional surveys involving large samples. Generally, literature reports high levels of psychological distress in students, which has a considerably high risk of suicides and suicidal ideation, and as identified through the literature in the background of the study, there is a direct link between suicidality and psychological distress.

Further to the findings above, Page and West (2011) observed variations between students from different countries to be intriguing and difficult to interpret. This could be attributed perhaps to the social, cultural and political factors prevalent in a given country, considering their study was conducted across seven countries in total.

While the researchers (Jackson et al., 2010) agree that the mental health of the racial groups in South Africa appear to reflect the historical and current day circumstances of resource allocation and challenges of everyday life, the study has not taken into consideration differences within each racial and ethnic group, e.g. class, including such variables as religion, language and demographic factors.

In a comparison study of students' well-being in post-apartheid South Africa with a British university sample by Young and Campbell (2014), the levels of psychological distress reported by South African white undergraduate students was similar to that of British undergraduate students, whereas South African

black undergraduate students reported higher levels of psychological distress compared to their white counterparts. Moreover, with the South African sample, undergraduate profiles were higher in psychological distress compared to postgraduate profiles. These results may be attributable to the impact of historical oppression, as well as such factors as race, culture, socio-economic status (Jackson, et al., 2010). The researcher in this study would like to add that the setting of this particular study is one of the historically white universities (See section 4.2). It must be mentioned that the aim of this research project is not to in any way highlight the disparities between black and white students, but to assess the prevalence of psychological distress in nursing students, and potential contributing factors, with the overall aim of seeking a solution in a form of a model to manage psychological distress.

The findings above support results (Flisher, De Beer and Bokhorst, 2002; Rolich, Ilieva and Walunywa, 2015) that race, being an undergraduate student, gender, being a 1st year student, age, socio-economic status, and being non-English speakers (Smith and Somhlaba, 2015; Rolich, Ilieva and Walunywa, 2015) were respectively more likely to contribute to psychological distress, and consequently the need for support. It is further noted that there is a relationship between stress appraisal by the individual and personal coping mechanisms as well as the number and strength of one's support systems (Young and Campbell, 2014; Jackson et al., 2012). However, the studies lack clear explanations for the results, where further research may determine the causes and patterns of negative behaviour in order to provide an empirical basis. This is supported by Martin and Daniels (2014), who recommend that a quantitative study to measure student stress, anxiety and depression among students specifically in nursing, as well as

other student populations, ought to be conducted. Some of the challenges that have been a source of conflict and confusion in nursing students during clinical placement in Sub-Saharan Africa has been the interplay between cultural, moral and ethical values and beliefs. In the clinical environment, students are expected to act according to a westernised way of doing things, in terms of norms and values, and this is not always appropriate in traditional communities, where cultural beliefs, norms and values play a huge role and a sense of communitarianism prevails (Solum, Maluwa and Severinsson, 2012; Rotich, Ilieva and Walunywa, 2015). Some African children are socialised to respect and not challenge authority or the elderly, this results in passivity. This can be a source of stress and conflict for the student, between moral/ethical awareness and course of action (Nduna and Jewkes, 2012). An example would be a situation where relatives and/or extended family members expect to be told confidential information about the patient or make a decision on behalf of the patient regarding treatment, the uncertainty for the student would be to advocate for the patient and assert his/her authority in terms of maintaining patient rights and confidentiality, compared to acknowledging and respecting culture (Solum, Maluwa and Severinsson, 2012; Rotich, Ilieva and Walunywa, 2015). This can lead to psychological distress on the part of the student.

3.8 FACTORS CONTRIBUTING TO PSYCHOLOGICAL DISTRESS

3.8.1 Psycho-social factors

Some of the psycho-social factors that present as a challenge to young people are poverty, unemployment, and loss of parental support, which may be through death or abandonment, abuse, witnessing crime, to mention quite a few (Nduna

and Jewkes, 2012; Smith and Somhlaba, 2015; Rotich, Ilieva and Walunywa, 2015). In a phenomenological study of disempowerment and psychological distress in young people in the Eastern Cape Province, one of the poorest regions where there are inadequate resources of South Africa, the researchers' findings suggest there is an interconnectedness between the psychosocial and environmental factors described above, negative home dynamics, and negative self-worth (Nduna and Jewkes, 2012).

In a study by De Villiers and Giese (2008), as cited in Nduna and Jewkes (2012), in this particular region, orphanhood is at 25%, compared to the national average of 16 percent. This explains negative home dynamics, lack of emotional support and the prevalence of poverty, where the older siblings have to take care of the younger ones, contributing to an increase in child-headed households. While the findings of this study cannot be generalised to the general youth population, it has nevertheless given insight to the dominant narratives of youngest people in South Africa. These observed developmental and adjustment and social issues may further impact more on the student when entering a higher education institution (Page and West, 2011; Young and Campbell, 2014). Amongst factors that might contribute to more psychological pressure on the student include leaving home and having to make new friends (Bojuwoye, 2002), where it was further revealed that the university environment can be a source of stress, which on its own is experienced differently by different groups of students based on age, gender and institution of affiliation (Page and West, 2011; Jackson et al., 2010; Young and Campbell, 2014).

The factors identified above may be easily generalised in other contexts but looking at the South African perspective, this differs somewhat. South Africa, though a developing country, has a rich history of diversity in terms of race, culture, socio-economic status, to mention but a few. This rich history of diversity, while on the whole having helped the country to move forward, has on the other hand yielded challenges or glaring mental health disparities, of which the student of the present day university comes from this background (Rotich, Ilieva and Walunywa, 2015; Benatar, 2013).

3.8.2 Socio-economic status (SES) and psychological distress

Socio-economic status refers to the interaction between the social and economic factors, and the effect of this interaction in the lives of individuals and or groups of people (Giddens, 2011). This interaction results in the positioning of the individual or group within the social structure hierarchy based on different variables, such as income, level of education, occupation, wealth, and area of residence e.g. rural/urban (Dictionary.com, 2016; Moshabela, Zuma and Gaede, 2016; Giddens, 2011). The World Health Organisation reported that mental disorders affect everyone, regardless of background, gender, and age, but that the risk seems to be higher amongst the poor, illiterate/semi-literate, unemployed and homeless (WHO, 2003; WHO, 2015).

Various studies have identified socio-economic status as having an effect on the mental health of individuals (Akin et al., 2014; Lemstra et al., 2008; Pappin et al., 2015; Zivin, Paczkowski and Galea, 2011; and Asante and Andoh-Arthur, 2015). In a study of the effect of socio-economic status on the physical and mental health of the individual, Akin et al. (2014) found a close relationship between low socio-

economic status and distress. Students who were from low-income housing areas and whose parents were in the low-income bracket displayed negative mental health behaviours, whereas those who were from middle-income and upperclass households displayed more resilience. Amongst the factors contributing to the negative mental health was the educational background, with students whose parents were illiterate or semi-illiterate displaying more negative mental health, compared to students whose parents were more literate (Akin et al., 2014; Asante and Andoh-Arthur, 2015). These findings seem to agree with those of Lemstra et al. (2008), whose systematic review concluded that socio-economic status (SES) does indeed play a role as an indicator for negative mental health. What these studies highlight is the relationship between socio-economic status negative mental health behaviours and literacy levels, however, the impact or the role of this relationship and resiliency in the individual is not extensively explored. Their findings, based on nine studies reviewed, were that the prevalence rate of depressed mood and anxiety was 2.49 higher in students and youth from a low socio-economic status when compared with those with higher socio-economic status. The implications of these findings are that students as young adults may experience challenges in terms of occupational and academic achievements (Asante and Andoh-Arthur, 2015; Esan et al., 2014). There could be a higher likelihood of depressed moods and anxiety amongst students and young people from the lower socio-economic status (Nduna and Jewkes, 2012; Smith and Somhlaba, 2015, Pappin et al., 2015). Additionally, the specific conditions identified carry the high likelihood of behavioural problems, poor social relations, substance abuse, conflict situations and subsequently increased risk of suicide (Akin et al., 2014; Giddens, 2011; Lemstra et al., 2008).

Pappin et al. (2015) discovered food security and access to medical services contributed to better emotional well-being than to those who did not have food security and access to medical services. This is a South African study, which aimed to investigate the relationship between socio-economic status and emotional well-being in orphans. Incidentally, this study provides a reflection of the demographics in South Africa. Zivin, Paczkowski and Galea (2011) bring a new perspective on the effect of socio-economic status on mental health. The researchers, while agreeing on the whole that low socio-economic status contributes to mental ill-health, nevertheless point out that this includes a delay in seeking help for mental health problems amongst the people of low socio-economic status. What is not clear is the cause of this delay in seeking help. This researcher's observation is that several factors can play a role in help-seeking, including perhaps lack of knowledge of where to seek help, cultural belief systems, the costs involved in help-seeking, as well as the fear of mental illness stigma (Moshabela, Zuma and Gaede, 2016; Schneider et al., 2016).

3.8.3. Neighbourhood environment and mental health

Research has shown that there is a relationship between the neighbourhood environment and the respondents' mental health, noting that people who live in poor socio-economic neighbourhoods present with negative mental health compared to people in recognised well-to-do neighbourhoods (Tunstall et al. 2015; Das-Munshi et al., 2016; Gray and Vawda, 2016). Tunstall et al. (2015) observed that difficult life events that contribute to migrating to low socio-economic neighbourhood contributed to negative mental health. While it could be the case that the contributory factor to negative mental health is the challenge or

change in life events or the migration itself, not necessarily the type of neighbourhood, some researchers are of the view that there is an association between the type of neighbourhood one lives in and negative mental health (WHO, 2015; 2016; Spires et al., 2016; Moshabela, Zuma and Gaede, 2016). Where a pervasive sense of lack and deprivation was noted, an increased negative mental health was observed, whereas in areas termed “good” neighbourhoods, positive and stable mental health was observed (Fone et al., 2014; Nelson et al., 2011). It was further observed that for the most part, the participants presented with the common mental disorders such as depression and anxiety, and it is these common mental disorders that are brought about and are common forms of distress in the wider population. The recommendation in these studies is the inclusion of the social context when considering interventions.

3.8.4. The academic environment factors

One of the challenges facing nursing education is the high attrition rate amongst nursing students (O'Donnell, 2009; Griswold, 2014; Watson et al., 2008). While there is no accurate estimation in terms of numbers and percentages, anecdotal evidence through observation in various institutions suggests that high attrition is a challenge. This may in turn have a negative impact for all stakeholders involved in health sciences, and more specifically in nursing education, in terms of throughput as required by the Ministry of Health in the South African context (Bruce, Klopper and Mellish, 2011; FUNDISA, 2012). A variety of factors have been identified as contributing to high attrition rate, such as demoralisation due to clinical and academic challenges, low levels of self-efficacy, perceived lack of support by the faculty, and bullying (O'Donnell, 2009; Griswold, 2014; Watson et

al., 2008), lack of coping, general feeling of failure, and the fear of the unknown challenges as training progressed (Chernomas and Shapiro, 2013). The considerable emotional distress experienced by nursing students could have a direct link with the issues of low self-confidence, low self-esteem and low self-efficacy (Moridi, Khaledi and Valiee, 2014; Nduna and Jewkes, 2012; Griswold, 2014). It would seem that there is a range of complex challenges faced by nursing students, with intrapersonal factors playing a role to a large extent as well. However, what is lacking are interventions aimed at helping nursing students, aimed at facilitating management of psychological distress and the effects thereof. Klainin-Yobas et al. (2013) suggest also looking at the socio-cultural background in planning an intervention.

Adding to the issue of lowered self-confidence and psychological distress, it was observed that nursing students lack the ability to deal with verbal violence from personnel both the clinical placement and theoretical fields (Unal, Hisar and Gorgulu, 2012; Griswold, 2014; Roos, 2014). Students were observed to be lacking assertiveness, and those assertive enough to respond to the violence were identified and thereafter subjected to more verbal violence. This contributed to increased psychological distress, which was more pronounced in the clinical placement areas. The researchers further identified lack of support by both lecturers and trained nurses through inadequate theoretical knowledge and being subjected to maltreatment by healthcare staff. Based on these findings, the researchers recommended assertiveness and communication skills training. The encouragement of learning strategies to help students deal with challenges in the clinical environment was recommended as well. This is echoed by Bernhardsdottir, Champion and Skarsater (2014), who hold the view that

intervention measures aimed at managing psychological distress are necessary, so as to prevent complications and escalation of the problem, which may manifest as the academic studies progress. The researchers further assert that nurses and nurse educators working in universities are in an ideal position to develop and facilitate interventions. This is crucial, as stress, and consequently psychological distress, may be unavoidable for nursing students; therefore, developing proper coping abilities is necessary (Al Zayyat and Al-Gamal, 2014).

3.8.5. The clinical environment factors

Some of causes or factors contributing to psychological distress among nursing students were identified in clinical environment. One of these is identified by Moridi, Khaledi and Valiee (2014) as being subjected to humiliating experiences. Subjection to humiliating experiences was mainly in the context of communication between preceptors, sisters, and staff in the ward, contributing to feelings of low esteem (Roos, 2014; Griswold, 2014; Unal, Hisar and Gorgulu; 2012). Unpleasant emotions and feelings such as anger, frustration, and anxiety were also experienced in relation to the clinical learning environment. These were as a result of being unsure of what is expected, the fear of being infected with contagious diseases, as well as not getting enough support from the clinical instructors and preceptors. These contributed to unpleasant interpersonal relationship and environmental workplace between the nursing staff and the students.

The helplessness experienced as a result of not knowing what is expected is compounded by the social pathologies facing society, which vary from less harmful to more serious ones, such as the increasing of suicide and suicidality

(Schneider et al., 2016; WHO, 2016; Spires et al., 2016). This is one of the occurrences that can cause great levels of distress. In a study of student nurses' professional experiences in nursing suicidal patients, results revealed highly charged emotional experiences (Heyman, Webster and Tee, 2015). Suicide is a global issue that transcends cultural, social, and economic status, and as such, has more impact on how students view and relate to it based on their belief status as well (WHO, 2015, 2016; Schneider et al., 2016). This necessitates some form of students' empowerment in dealing with such sensitive issues (Bernhardsdottir, Champion and Skarsater, 2014).

3.9 COPING AND NURSING STUDENTS

Various studies have sought to identify the concept of coping in relation to psychological distress (Warbah et al, 2007; Gibbons, 2010; Gibbons et al., 2010; Ramkumar, 2011; Reeve et al., 2013; Kato, 2014). Some of the factors identified as having an impact on coping were personality traits like introversion and neuroticism (Warbah et al., 2007). Neuroticism is described as a personality trait characterised by a tendency to focus on the negative aspects of situation (Ormel et al., 2013). People with high scores of neuroticism display above average negative feelings and emotions, such as anxiety, fear, moodiness, worry, anger, frustration, and guilt. They cannot cope well with stressors and may be prone to interpreting otherwise ordinary situations as threatening (Ormel et al., 2013; Thompson, 2008). The personality trait described above may result in high levels of psychological distress, poor adjustment and coping further impacting on the academic performance, increased psychiatric morbidity, and high attrition rate. At the same time, people who displayed low scores when it came to neuroticism,

although not necessary displaying high positive emotions, are more likely to be stable emotionally, and less reactive to stress. This phenomenon is termed extraversion (Passer and Smith, 2009; Lesse, 2014). In a study by Reeve et al. (2013), maladaptive coping strategies were identified in 42,1% of respondents, including reported feelings of depression, alcohol use, and self-isolation. These findings seem to support the qualitative component of findings, whereby respondents reported feelings of self-doubt and inadequacy, as well as a sense of rejection coming from different sources, such as staff members and colleagues, as well as patients.

Some problematic behaviours exhibited by students may stem from the inability to cope effectively, using maladaptive coping mechanisms, and psychological distress. There seems to be a prevalence of unsatisfactory overall coping ability amongst medical and nursing students (Ramkumar et al., 2011; Kavalidou, 2013), which may influence how they respond to stress and psychological distress, as coping ability is an inherent quality. In Ramkumar et al. (2011), the Bell's adjustment inventory (BAI) was used and the respondents were classified as good or poor adjusters, depending on their scale. The results were as follows: emotional coping ability unsatisfactory in 76.5% of nursing students, compared to 61.9% of medical students. Social coping ability was average, with 64.7% for nursing students, and 42.9% for medical students. Overall, BAI scores were unsatisfactory in both students with nursing at 61.8% and medicine at 59.5 percent. While the results as reflected conclude or show pervasive unsatisfactory coping, it could be argued that the small sample size (42 medical and 34 nursing students) may have had an impact. A larger sample size, perhaps using more institutions or follow up studies could have helped to generalise the findings. The

other variation that emerged from the literature review is that there seems to be a correlation between positive coping styles and high levels of self-esteem, self-efficacy, and good interpersonal relationships (Chunping et al., 2012, Griswold, 2014, Watson et al., 2010; Ross et al., 2014), while negative coping style was associated with relationships with parents, romantic relationships, worrying about examinations, and clinical placement after graduation. These findings, although mainly based in studies comprising mostly female nursing students, investigated the relationship between coping strategies and self-esteem. More positive coping strategies were found to be utilised more frequently, which was attributed to higher quality of interpersonal relationships. These findings agree with those of Luo and Wang (2009), who noted a positive correlation between availability of social support and positive coping styles.

This literature review highlighted that nursing students do experience different levels of stress, which has a direct impact on the higher levels of psychological distress being experienced. This provides greater understanding and clarity regarding the phenomena under study. It further highlights the need to understand challenges and difficulties that are facing the students, based on their individual differences, which will make it possible to plan individualised supportive strategies. Whilst it is clear there is a large body of literature addressing psychological distress in nursing students, there is still a dearth of studies addressing the South African context as well as intervention strategies that seek to actively manage psychological distress and the accompanying psychiatric morbidity. It may be useful to have a health promotion and disease prevention model that would include advice about taking symptoms seriously, and seeking professional help early, rather than relying on negative coping mechanisms.

3.10 RISK FACTORS ASSOCIATED WITH PSYCHOLOGICAL DISTRESS

The literature suggests various risk factors associated with psychological distress, and consequently mental disorders such as depression and anxiety in university students (Papazisis et al., 2008; Mostafa et al., 2011; Pitt et al., 2012; Herera and Rivera, 2011). Students who were facing financial difficulties and stress due to insufficient funds to cover tuition and to take care of the students' needs were more at risk of developing psychological distress (Eisenberg et al., 2007; Ibrahim, Kelly, and Glazebrook, 2011; Herera and Rivera, 2011). Those that had adequate financial support did not show high co-relation of psychological distress compared with those experiencing financial stress. Another risk factor that seems to be more common is age. There was a very high correlation of psychological distress in the 18-34 age group (Eisenberg et al., 2007; Christensson, 2010), mainly amongst females (Stallman, 2010; Vazquez, Torres, Otero, and Diaz, 2011; Chunping et al., 2012).

Females had significantly higher levels of psychological distress, as manifested through high levels of depression, eating disorders and anxiety, where being in the healthcare profession seemed to be a contributing factor (Eisenberg et al., 2007; White et al., 2011; Said, Kypri, and Bowman, 2013; Chunping et al., 2012). Being an undergraduate fulltime student was considered a risk factor as well, compared to postgraduate students who are part-time (Said, Kypri, and Bowman, 2013; Ruberman, 2014). Harmful drinking was observed to be higher in males compared to females, as well as in the 17-24 age group (Torvik, Rognmo, Tambs, 2012; Hallet et al., 2012), with sexual orientation playing a major role in contributing to psychological distress amongst homosexual and bisexual

students (Oswalt and Wyatt, 2011). While the implications of these findings and risk factors are manifold, and can be interpreted differently in different contexts, what is to be noted is that these tend to affect each area of being in the life of nursing students. This necessitates an intervention that will encompass the various facets of being.

There seems to be a variation based on gender in relation to psychological distress, in a study of university students (Dachew, Bisetegn and Gebremariam, 2015), where 40% of the respondents were reported to have psychological distress, with females presenting with higher levels compared to males. The issue of gender has been identified in other studies as well (Eisenberg et al., 2007; White et al., 2011; Said, Kypri, and Bowman, 2013). Amongst the identified causes or relayed factors were: financial stress; lack of time management; poor social support; indulging in substance abuse; conflicts with roommates; as well as academic factors. While these findings once more add to the already available literature on the prevalence of psychological distress, the influence of gender and psycho-social factors, one aspect that was identified in this study was not attending religious programmes or spirituality, and the role of spirituality in managing stress and distress on the part of nursing students. Furthermore, it is not clear as to whether the reference to the not attending religious programmes results from the respondents' spiritual belief system; the kind of support provided; or whether this should be provided by the university. Whilst there are slight variations in terms of prevalence percentages, most studies reviewed seem to generally agree that the overall incidence of mental and psychological distress among university students is very high. The variations in the prevalence percentage is attributed to a number of factors such as the socio-cultural and

environmental factors including infrastructure, (Stallman, 2010; Moshabela, Zuma and Gaede, 2016; Hardcastle et al., 2016; Schneider et al., 2016).

3.11 IMPACT OF PSYCHOLOGICAL DISTRESS ON PHYSIOLOGICAL PROCESSES

While psychological distress may be primarily viewed as an emotional or psychological problem, studies have indicated it does impact on the physiological functioning of the individuals. In a study of psychological distress and multi-morbidity, Donovan, Doody and Lyons (2013) identified a close relationship between psychological distress and some chronic conditions such as arthritis, asthma, hypertension, and generalised body pain. These findings seem to agree with the diagnostic criteria (DSM-V) used in the psychiatric nursing to describe somatic complaints. These are the kind of somatic symptoms that may lead to sickness absence and incapacity leave (Naidoo, Naidoo and Haripesard, 2016; Roos, 2014). Furthermore, Donovan, Doody and Lyons (2013), in their study of stress and distress, agree that while stress on its own is not necessarily harmful, and may actually act as a motivator, prolonged periods of stress may lead to distress. Donovan, Doody and Lyons (2013) identified the effects of stress on the individual's health as being physiological and psychological. The physiological components range from severe to mild reactions such as cardiovascular diseases, chest pains, and palpitations in severe cases; and indigestion, headaches and frequent respiratory tract infections for the milder forms (Garcia, 2010; Donovan, Doody and, 2013). This phenomenon is referred to as psychosomatic complaints in psychiatry (Giddens, 2011; Uys and Middleton, 2014).

3.12 STRATEGIES FOR DEALING WITH PSYCHOLOGICAL DISTRESS

In a phenomenological study exploring the lived experiences of caring for the people left homeless due to acts of nature (Barry, Blum and Purnell, 2007), the researchers' conclusion was that students needed an outlet to express the negative feelings experienced as a result of being exposed to the victims through caring for them. While the experiences shared were mostly positive in the context of nursing a person as a whole, in turn leading to a deeper understanding of the caring function in nursing, it brought about feelings of guilt and disbelief. The need for an outlet is more in line with the debriefing procedures commonly instituted in mental health services. In the case of this particular study, the feelings of guilt and disbelief brought about the realisation that a form of support is necessary to help the students understand suffering and its implications. These can be further interpreted as a manifestation of some internal conflict, and consequently, some form of distress.

Some studies have identified emotional intelligence as a moderator in stress and psychological distress. Respondents with high emotional intelligence were more likely to report low levels of work stress and burnout (Gorgens-Ekermans and Brand, 2012). Other researchers have proposed an addition of emotional intelligence, training and development in nursing students (Donovan, Doody and Lyons, 2013; Vinkers et al., 2014). In conclusion, high emotional intelligence levels seem to contribute to better management of negative emotions, as well as being able to deal better with challenges in both clinical and theoretical environments. This may lead to more positive outcomes in terms of interpersonal

relationships and positive emotional and psychological coping strategies (Vinkers et al., 2014; Fornes-Vives et al., 2012).

3.13 SUMMARY

This chapter focused on the literature framing this study of psychological distress in nursing students, and the related concepts. First a brief history on the demographics of the higher education sphere framing the study was given. Chapter 4 will reflect on the research methodology used.

Chapter 4

RESEARCH METHODOLOGY

4.1 INTRODUCTION

Chapter 3 provided the literature review of this study. This was to give a broader view of what has been published. This chapter gives a detailed description of the methodology used to achieve the set purpose and objectives of the study.

4.2 THE PHILOSOPHICAL UNDERPINNING OF THE STUDY

The philosophical underpinning of the study refers to the world view. This constitutes a set of assumptions held by a person or a group of people regarding their beliefs and values which determines their thinking, perception, and knowing of reality or what constitutes reality. It is the 'lens' used by the researcher to view the world and the nature of social reality (Mulaudzi, 2013; Brink, Van der Walt and Van Rensburg, 2014). A functional approach was used to inform this study. This is a sociological perspective that views society as a system consisting of interconnected parts that influence each other (Mooney, Knox and Schacht, 2007). Functionalism is discussed in Chapter 1.

4.3. RESEARCH PURPOSE AND OBJECTIVES

The purpose of this quantitative, descriptive, contextual theory-generating study was to develop a model for management of psychological distress in undergraduate nursing students.

The objectives of this research were to:

- describe the prevalence of psychological distress amongst undergraduate nursing students;
- describe factors contributing to psychological distress in the theoretical learning areas;
- describe factors contributing to psychological distress in the clinical learning areas;
- describe measures and strategies identified by students in dealing with psychological distress; and
- develop a model for managing psychological distress.

4.4 RESEARCH DESIGN

A quantitative, descriptive, contextual, theory generating design was utilised for this study. This consisted of data collection using a five section questionnaire (described in section 4.15 on data collection), which addressed the first four objectives of the study using the quantitative, descriptive and contextual approach. Theory generating design guided by Walker and Avant (2011), as well as Chinn and Kramer (2011), was used in model development (see Table 4.1 for visual presentation).

4.4.1. Quantitative design

Quantitative research design is described as a formal, objective, systematic process in which numerical data are used to obtain information about the world

(Burns and Grove, 2013; Bless, Higson-Smith and Sithole, 2013). It is used to describe the variables being studied, including the testing of relationships amongst variables. In this study, a questionnaire consisting of five sections was used to identify the prevalence of psychological distress, including factors influencing psychological distress, such as coping and personality traits.

4.4.2 Descriptive design

Descriptive design is explained as an approach that seeks to generate new knowledge regarding the topic or concept about which limited research has been conducted (Burns and Grove, 2009). While data collected through the descriptive design may lead to the emergence of patterns and links between the variables under study, the overall emphasis is on describing the phenomena of interest (Parahoo, 2006; Evans and Rooney, 2014). The authors cited further state that a descriptive design may be used to develop theory (Parahoo, 2006; Evans and Rooney, 2014).

In this study, the descriptive design was used for the purpose of generating new knowledge on the topic of psychological distress in nursing students, as there is limited research in the South African context in this regard.

4.4.3 Contextual design

Contextual design is a design that focuses on specific events with the intention of understanding and describing the phenomenon being studied within a specific context (Babbie and Mouton, 2009; Downing and Poggenpoel, 2012). The study was contextual in nature, because the focus was mainly on university students enrolled for the undergraduate nursing degree, and it excluded students enrolled

in public (government) and private nursing colleges, where the construct being investigated was focused on nursing students. As stated in Chapter 3 in the section on brief overview of the higher education institutions in South Africa (section 3.10), following a merger of South African higher education institutions, there emerged three broad categories of universities, which are: universities, comprehensive universities, and universities of technology. In this study, all three of the categories mentioned were represented. Furthermore, as explained earlier in the background (section 1.2.1), nursing education is not only confined to the universities, but include public nursing colleges, private nursing colleges, and nursing schools, therefore it was necessary to describe the context of the study.

4.4.4 Theory generating design

Chinn and Kramer (2015) define theory generating design as a design that describes and gives clarity regarding relationships without imposing pre-conceived ideas. The authors further state that theory generation provides explanations as to how concepts are connected. This was addressed through conceptualisation and triangulation, as the researcher reviewed previous work in the literature pertinent to the concept under study, and the literature reviewed provided a basis for refining and delineating the central concepts identified and relationships between them (Chinn and Kramer, 2011).

When multiple sources are utilised in relation to some phenomena under study, so as to be able to articulate inferences, this is known as triangulation, and this can be attained through the use of different methods (Brink, Van der Walt, and Van Rensburg, 2014; Polit and Beck, 2017). In this study, theory triangulation, literature and analysis triangulation were used. Theory triangulation refers to the

use of different theories or frameworks regarding the concept being studied (Chinn and Kramer, 2011; Brink, Van der Walt, and Van Rensburg, 2014). The theories that form basis for this study are highlighted in Chapter 2. Literature triangulation refers to the review of empirical work in literature that pertains and impact to the constructs and concepts being researched, such as in this study (Polit and Beck, 2017; Chinn and Kramer, 2011). Brink, Van der Walt and Van Rensburg (2014) define analysis triangulation as using two or more techniques in data analysis. In this study, descriptive, exploratory and confirmatory factor analyses, as well as inferential and regression analyses were used, including analysis of variance (ANOVA) and Pearson's correlation. Chinn and Kramer further identify steps necessary in concept development.

TABLE 4.1 VISUAL PRESENTATION OF THE RESEARCH PROCESS TO ACHIEVE SET OBJECTIVES

Objective	Research question	Research Approach	Data collection method and tool
Describe the prevalence of psychological distress amongst undergraduate nursing students.	<ul style="list-style-type: none"> What is the prevalence of psychological distress amongst undergraduate nursing students? 	Quantitative, descriptive	Survey questionnaire The General Health Questionnaire (GHQ-28)
Describe factors contributing to psychological distress in the theoretical learning areas.	<ul style="list-style-type: none"> What are the factors contributing to psychological distress in the theoretical learning areas of undergraduate nursing students? 	Quantitative, descriptive	Survey Questionnaire The Stress in Nursing Students Scale (SINS-42)

Describe factors contributing to psychological distress in the clinical learning areas.	<ul style="list-style-type: none"> What are the factors contributing to psychological distress in the clinical learning areas of undergraduate nursing students? 	Quantitative, descriptive	Survey Questionnaire The Stress in Nursing Students Scale (SINS-42)
Describe measures and strategies identified by students in dealing with psychological distress.	<ul style="list-style-type: none"> What are the measures and strategies identified by students in dealing with psychological distress? 	Quantitative, descriptive	Coping Self Efficacy Scale (CSE-25) Eysenck Personality Questionnaire (EPQR-24)
Develop a model for managing psychological distress.	<p>Theory- generating design.</p> <p>Based on the findings above.</p>		

4.5 REASONING STRATEGIES

Reasoning strategies refer to the logical reasoning found in research, and are aimed at finding solutions to problems (Brink, Van der Walt and Van Rensburg, 2014). There are two broad types of reasoning techniques, viz. deductive and inductive techniques, as well as analysis and synthesis. All these techniques are viewed as useful means of understanding and structuring phenomena (Brink, Van der Walt, and Van Rensburg, 2014; Chinn and Kramer, 2011).

4.5.1 Deductive reasoning

Deductive reasoning is a form of reasoning that moves from general to the specific. It is a process whereby observations are developed from general premise to a particular conclusion (Brink, Van der Walt and Van Rensburg, 2014; Chinn and Kramer, 2011). The premise that is usually utilised in deductive reasoning encompasses two variables that can be categorised as broad or specific, in relation to one another (Chinn and Kramer, 2011). Various theories and models were studied in the literature control of this study, and the deductive reasoning strategy was utilised to draw out data that supports the theoretical and conceptual framework. This data was then used in the formulation of the model for managing psychological distress in undergraduate nursing students.

4.5.2. Analysis

(Brink, Van der Walt and Van Rensburg, 2014) define analysis as a systematic examination and evaluation of data or information, by breaking it into its component parts to uncover their interrelationships. In analysis, the researcher scrutinises the data, the concepts, and literature relational statements until a common understanding is achieved (Chinn and Kramer, 2015). Therefore, analysis is aimed at refining and sharpening these constructs; should there be errors and discrepancies, analysis is used to clarify these (Langley, 1993; Brink, Van der Walt, and Van Rensburg, 2014; Chinn and Kramer, 2015). Concepts, theories, propositional statements and models were analysed and reformulated within the context of this study.

4.5.3 Synthesis

Synthesis refers to a systematic combination of otherwise different elements to form a coherent whole (Business Dictionary, 2016). In other words, synthesis is the direct opposite of analysis. Synthesis is viewed as an important part of theory building as is analysis (Meleis, 2012). In this study, various models, theories, concepts and statements were combined, reformulated and utilised in the construction of the model for managing psychological distress in nursing students.

4.5.4 Inductive reasoning

This is a reasoning process that proceeds from specific to the general. The researcher begins the research journey without a conceptual framework, more from general vague ideas (Langley, 1993; Brink, Van der Walt, and Van

Rensburg, 2014; Chinn and Kramer, 2011). From the data generated, the researcher is able to construct statements and structure through analysis and interpretation. Inductive inferences may be drawn from the researcher's own experiences, which is the reason why induction is used in this study.

4.5.5 Hypothetico-deductive reasoning

Hypothetico-deductive reasoning refers to the reasoning strategy whereby theories and hypothesis are tested by the deductive processes during research (Parahoo, 2006). Sometimes referred to as the mainstay of scientific research, the deductive aspect is often applied at the level of the theoretical and empirical. Crossman (2014) describes hypothetico-deductive reasoning as a research approach that begins with a theory of how things work, with a testable hypothesis, where the point of departure are general statements, ideas, and assumptions, which are then refined to more particular statements and observations of how the phenomena works. In this study, the theories described in the theoretical assumptions section serve as a framework for hypothetico-deductive reasoning strategy.

THE HYPOTHETICO-DEDUCTIVE METHOD

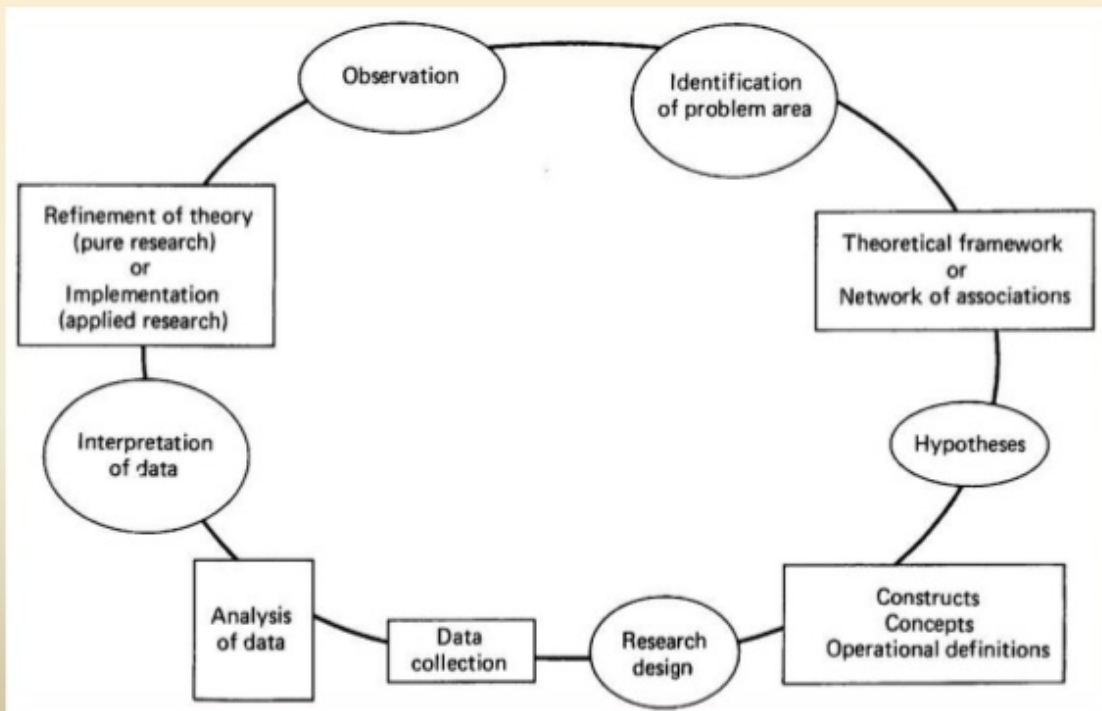


Figure 4.1 The Hypothetico-deductive method (Nature of Science reflection accessed: 15.4.2016)

4.6 RESEARCH METHOD

This section describes the four step approach to model development by Chinn and Kramer (2011).

These are:

4.6.1: Step 1 - Concept analysis (identification, definition and clarification)

This step consisted of two phases. In Phase One the central concept was identified. In phase two the central concept was defined and classified.

4.6.1.1 Concept identification

Various definitions have been widely used in literature to explain and describe concepts. Walker and Avant (2011) describe concepts as mental images, constructs, and ideas about a particular phenomenon. These act as basic building blocks towards theory formulation (Risjord, 2010; Walker and Avant, 2011). Chinn and Kramer (2011: 246) describe concepts as “complex mental formulation of experience, concepts are major component of theory and convey the abstract ideas within theory. Rodgers (2000) on the other hand notes that concepts can be individual and or private in their nature and as such, the process of analysis, abstraction and association may be influenced by one’s socialisation and the sphere of public interaction. The author further states that concepts are formulated through identifying common features of a phenomenon.

Concept analysis therefore refers to the process involved in making the content of a concept clear and explicit, it is a blueprint for developing concepts, with the assumption that those concepts have been identified, clarified and introduced in literature (Risjord, 2010; Meleis, 2012). The intention of a concept analysis is to clarify for use in research and in clinical practice, contributing to the development of the tool to be used (Meleis, 2012). In this study, concept analysis was undertaken through literature triangulation in the conceptual framework. Rodgers advises a methodical

and logical sampling of literature as verification of concept analysis. Chinn and Kramer (2015) describe approaches used in concept analysis as identification and definition of concepts, as well as clarification of context. Identifying and definition of the concepts used in this study was mainly from literature, from clinical and life experiences, and in theories and models from the fields of mental health, nursing, social sciences and psychology. Concept identification and definition include giving a clear and concise theoretical meaning and the basic theoretical assumptions upon which the theoretical reasoning proceeds (Chinn and Kramer, 2015; Meleis, 2012; Risjord, 2010). Identification of the central concepts in this study was done by means of fieldwork, utilising the survey. In this context, fieldwork means the data collection period, whereby fieldworkers administered the survey questionnaire. The central concepts are described in Chapter 8, and are reflected in the sections on population, study setting, data collection, and in data analysis, including clarification of context.

4.6.1.2 Defining and classifying the central concept

A thorough perusal of both dictionary and subject literature definitions of the central concept was utilised in identifying its essential attributes guided by Walker and Avant (2011). While the dictionary definitions gave a commonly used and understood view, the subject literature provided a broader theoretical meaning. Essential attributes relating to the central concept of psychological distress were then identified, analysed and

synthesised (Janse Van Rensburg, Poggenpoel and Myburgh, 2015). In defining, analysing and synthesising of the central concepts the guidelines below were taken into consideration (Walker and Avant, 2011; Chinn and Kramer, 2015):

- clear, concise, unambiguous language is to be used
- negative definitions must be avoided when they can be positive
- essential attributes ought to be stated
- circularity ought to be avoided

Clarification is required of concepts within which theoretical relationships are formulated depending on empirical relevance, and reference to contextual placement must be made, thus refining the concepts to clarify boundaries and reduce obscurity (Meleis, 2012). This describes the circumstances under which the theory is expected to operate. The contextual nature of this study was discussed in this chapter, and in the section on metatheoretical assumptions (Chapter 1, section 1.8.1), and operational definitions were explained.

Classification of the central concept was done using the survey list of Dickoff, James and Wiedenbach (1968). The following questions were answered and further explanation and application is given in Chapter 8:

- Who is the agent?
- Who is the recipient?
- What is the procedure?
- What is the dynamics?

- What is the context?
- What is the outcome?

A. GEOGRAPHICAL SETTING

The study was conducted in four universities, offering the four-year undergraduate degree in nursing according to the SANC regulation 425 of 22 February 1985. These universities were sampled from three provinces in South Africa, which are the Eastern Cape, Gauteng and KwaZulu-Natal. The demographic characteristics of the sampled universities is given in the sections below.

I. Gaining entry to research settings

The Institution's Faculty of Health Sciences Higher Degrees Committee, after reviewing the research proposal, gave approval for it to be forwarded to the Institutional Research Committee (IREC). A provisional approval was granted by the IREC subject to the researcher meeting the following stipulations:

- piloting of the data collection tool (this is discussed further in section 4.11.1); and
- obtaining and submitting the necessary gatekeeper permission/s to the committee.

B. POPULATION AND SAMPLING

Sampling refers to the process of selecting a sample for the study from the target population as identified by the researcher (Creswell, 2012). Four universities were sampled in three provinces.

The researcher opted for purposive sampling for the reasons highlighted in the following paragraphs:

The multiplicity of variables being measured and the heterogeneity of the sample in terms age, gender, ethnicity, language, marital status, religion, urban, rural, level of training, to mention but a few, where a higher sample yielded more advantage. In explaining the sample size for a quantitative theory generating research, Polit and Beck (2017) are of the view that the ultimate criterion for an adequate sample size is that the sample has to be representative of the population under study. The choice of all-inclusive sampling was used to address the issue of representativeness as the researcher sought respondents from all levels of study.

Secondly, while convenience sampling may be viewed as a 'weak' method or strategy, and is commonly used in qualitative research (Burns and Grove, 2011), for the purpose of this study it was ideal as it is relatively cheap compared to other modes of data collection in terms of resources and accessibility, and is less time-consuming, in view of the fact that the study was conducted in different provinces, which are geographically widespread (these had to meet the set time for submission). In addition, nursing students are not always on block or on campus, as they have to undergo clinical placement, therefore those students who were on block during data collection phase were included. The issue of the sampling frame not being readily available, as well as a lower response rate on the instrument being used, would have contributed to a smaller sample if inclusivity was not applied. A larger sample size would lend the study to adequate power

analysis. This is described as “the capacity of the study to detect differences or relationships that actually exist in the population” (Burns and Grove, 2011: 308).

i. Demographic characteristics of the sampled universities

University Number 1

This is one of the largest and oldest institutions in the country, both in terms of academic and research output as well as national and international accredited programmes and ranking (Habib, 2015). It is situated in the metropolitan city, viewed as the most economical dynamic region in the continent of Africa, and is the only globally ranked institution in that city (Habib, 2015). Previously viewed as a traditionally white institution in terms of racial grouping (Ministry of Education, 2002; Chetty, 2010), according to the demographics report, the demographics have since changed, with 57% black African, white 24%, Indian, 14%, coloured, 04%; with females making up 55% and males 45% (Habib, 2015; White Paper, 2013). This is viewed to be more of a reflection of the population demographics of South Africa at large. The university has always been a traditional university, and as such was not affected by the mergers of the higher education institutions after 1994 (HEAct, 1997). Currently there are 150 undergraduate nursing students in this university.

University Number 2

While provincially the university is in the same province as the one described above, geographically it is situated in one of the oldest

townships in the Northwest, on the border of the Northwest Province neighbouring Limpopo Province, a region that used to be a homeland before the provincial demarcation (Municipal Demarcation Board, 2009). The township where the institution is situated caters mainly for black Africans about 99, 2% with the other races making up 0,8 percent. Previously, the university used to be a campus of the University of Limpopo, with the latter having come about as a result of the merger of two higher education institutions, namely the Medical University of South Africa (MEDUNSA) and the University of the North. As published in the South African Government Gazette No. 37378 of 16 May 2014, a new university was to be established. Among the reasons for this was the need to address scarce skills in the area of medicine and medicine related aligned professions (SAQA, 2014). The campus, as it was then known, was commissioned, and its doors were opened in January 2015 as a stand-alone university. It must be explained that the conceptualisation of this study started in 2013, and therefore, while the plan was to sample each province, the researcher decided to continue with the study in this university specifically, as the study itself is not comparative. There was no other reason for choosing a single university other than the containment of the study. Secondly, there may be different policies, procedures and processes in the way the institutions operate. The total number of students was 220.

University Number 3

Situated in the eastern part of the Eastern Cape Province, which is one of the poorest, underdeveloped provinces in South Africa, the university is mainly served by rural communities. The university was established in 2005 as a comprehensive university under the Higher Education Act 101 of 1997, as amended, and it resulted from a merger of three institutions (Border Technikon, University of Transkei, and the Eastern Cape Technikon). Comprehensive universities are those universities that offer both academic programmes from traditional universities, as well as qualifications that are technology focused (Government Gazette, 2011; Van Staden, 2014). One of its main areas of focus is the provision of affordable and appropriate programmes that address rural development aimed at rural upliftment and urban renewal (Van Staden, 2014). The university prides itself on being a developmental university, with the sole purpose of making a significant contribution to regional, national and continental development, as well as the provision of access to knowledge to diverse learners from mainly poor, rural and disadvantaged communities. There are 260 nursing students in this university.

University Number 4

Located in the coastal province of KwaZulu-Natal, this university is a multi-campus institution situated in two major cities (DUT Strategic Plan, 2015). The university came about as a result of a merger of the then Natal Technikon and M.L. Sultan Technikon in 2002, and was later changed from being an institute of technology to being a university of technology, in

keeping with the national and international trends late in 2007 (Higher Education Act, 1997; National plan for higher education, 2001; SARUA page, accessed 03.03.2016). Operating within the premise of the higher education of the Republic of South Africa, the university's mandate is that of transformation and diversity. Previously, the university catered mainly to the Indian community, but within the context of change and transformation, this has changed (SARUA, 2016; DUT strategic plan, 2015). As a university, the institution mainly strives to develop students who will address the human resources in terms of the labour market needs and skills shortages in the country (DUT Strategic Plan, 2015). There are 400 students in the undergraduate programme.

ii. POPULATION

Population is defined as a total number of units or people from which data can be collected, who possess the same characteristics the researcher is interested in (Parahoo, 2006; Brink, 2010; Creswell, 2012). In this study, population refers to all nursing students enrolled for undergraduate training, as nurses according to the regulation (R425), as set out by the South African Nursing Council (SANC).

iii. Target population

Target population refers to all units or elements that may be included in a study (Botma et al., 2010). Some authors refer to the target population as the study population or sampling frame that meet the inclusion criteria set out by the

researcher (Parahoo, 2006; Creswell, 2012). For the purpose of this study, target population consisted of 1119 undergraduate nursing students from the sampled universities, from the 1st year level to the 4th year level. The students must have been exposed to both theoretical and clinical learning environment as determined in the inclusion criteria. The target population consisted of both males and females between the ages of 18 to 45 years, from different backgrounds in terms of race, ethnicity, and other social factors.

iv. Accessible population

Accessible population refers to the selected portion of the entire target population, whereby the study sample will be selected (Burns and Grove, 2011). The accessible population was the students identified in the sampled universities as the target population, who gave consent and took part in answering the questionnaire. For further clarity on accessibility in this study, see the table below:

Table 4.2. Summary of the number of returned questionnaires and percentages

University no.	Number of students	Number of returned questionnaires	Percentage
Institution--1	150	139	92%
Institution--2	220	141	64%
Institution--3	260	232	89%
Institution--4	400	357	89%
TOTAL	1030	869	84%
Total number of usable questionnaires = 848			
Discarded = 21			

v. Inclusion criteria

The inclusion criteria were based on the points mentioned below, that respondents must:

- have been a student for at least a period of eight months and more;
- have been exposed to clinical placement or work integrated learning during that period;
- be 18 years and older; and
- have the ability to read and write English.

vi. Exclusion criteria

Students who are registered for a period of less than six months as they may not have been exposed to work integrated learning.

C. DATA COLLECTION

Data collection was conducted via a survey, through a questionnaire. The questionnaire used consisted of four scales, aimed at addressing the first four objectives of the study. The study was divided into two phases, with the first phase addressing the first four objectives and the second aimed at model development. The questionnaire was divided into four sections as follows:

i Section A

This section included questions on demographic and various personal and professional background variables such as race, gender, age, marital status, home language, province, religion and year of study (see Annexure 3).

ii. Section B

This section addressed objective number one, which was to describe the prevalence of psychological distress amongst nursing students.

The General Health Questionnaire-28 (GHQ-28) was used. This is a standardised self-report questionnaire used to screen for psychological distress and common mental disorders. It has been widely used in primary healthcare and its main focus is the psychological component of illness. The GHQ has been extensively studied with regard to methodological aspect, reliability, validity, and cross cultural differences. This is a validated scale, which has been used extensively to measure psychological distress, as it deals more with the quality of life comprising of several dimensions such as physical, social, psychosocial as well as somatic dimensions. In a study by Wissing et al. (1999), the suitability of the GHQ-28 for the South African context was reported by a Cronbach's Alpha score of 0,91, with a subsequent study by Van Wyk (2010) reporting 0,89.

iii. Section C

This section addressed objectives number two and three, which are to describe the factors contributing to psychological distress both in the theoretical and clinical placement areas.

The Stressors in Nursing Students Scale (SINS) was used. This is a 42-item scale, developed by Deary et al. (2003) that identifies factors in the academic, clinical, social and financial spheres contributing to increased stress levels in nursing students.

iv. Section D

This section addressed objective number four which, was to identify measures or strategies employed by students in dealing with psychological distress.

The Coping Self-Efficacy Scale by Chesney et al. (2006) was utilised. This is a 25-item scale that looks at the student's ability to deal with stressors. Coping self-efficacy refers to one's beliefs about the ability to cope with external stressors (Bandura, 1997). The coping self-efficacy scale has manifested a good reliability and validity report for use in the multi-cultural South African context (Van Wyk, 2010), with a 0, 87 reliability and validity co-efficiency on the Cronbach Alpha scale.

The second scale used was the Eysenck Personality Questionnaire (EPQR) brief version. This is a 24-item scale adapted from the revised Eysenck Personality Questionnaire by Eysenck & Eysenck (1992). It has been subjected to repeat testing in various contexts for consistency, reliability and validity, yielding good measurements in all three spheres (Sato, 2005). This tool does not only address the first objective; therefore, even whilst it has been described under Objective One, it serves as a link of all the objectives as personality type can play a role in the way students cope with challenges or stressors, as well as the level of self-efficacy.

v. Piloting of the data collection instrument

Pilot testing refers to the procedure of instituting changes in a questionnaire based on feedback given by a small number of people representing the sample who have completed and evaluated the instrument prior to the full scale study being conducted (Cresswell, 2012). The data collection instrument was piloted as recommended by the IREC. This took place from the 11th to the 22nd May 2015. One of the universities that gave permission for data collection to be used for piloting of the tool, and did not make part of the main study. A total of 20

respondents took part in the pilot study, five from each level of study. No changes were made to the content of the tool itself, except in terms of improvement on technical presentation and making the instructions clear, as suggested by the respondents in the pilot study. The feedback regarding the pilot testing results were submitted to the Institutional Research Committee (IREC).

vi. Data collection phase

Data collection was conducted through survey questionnaire comprising of four sections. Data collection commenced in the last week of November 2015 after examinations were finished up to the second week of February 2016. There was no data collection during the universities' December break. Questionnaires were not given within three weeks of examination period, and were administered in the classrooms with the guidance of research assistants in one university, where the researcher was directly involved in lecturing the students. In those universities where the researcher could not visit, questionnaires were sent by courier to a representative to administer. This constituted the first round of data collection, and owing to the poor response rate, it was decided that a second round of data collection be undertaken as advised by the faculty research committee. The second round of data collection commenced on the 9th of March 2016, with the last appointment scheduled for the 29th of April 2016. Fieldworkers were recruited (see section below) to help during this round and this yielded an acceptable number of responses. The questionnaire package included participation information sheet, and the questionnaires were handed over to the respondents

with prior arrangement made with the Head of Departments and level coordinators so as not to disrupt the programmes.

vii. Use of fieldworkers

The researcher opted to use fieldworkers as assistants in data collection so as to avoid possibly bias and the issue of power relations being tipped against the respondents, who are nursing students. The criteria used was that the fieldworkers must not be working or qualified in the medical and psychology fields. Secondly, they were to be fluent in English, and have at least an understanding of one other vernacular language most common in that particular province. In Institution 1, the requirements were fluency in English and Sotho or Sepedi. In Institution 2 requirements were fluency in English, Setswana, Tshivenda and or Xitsonga. In Institution 3 the requirements were fluency in English and isiXhosa. In Institution 4 the requirements were fluency in English and isiZulu. The assumption was that English is the language of instruction in all these institutions, and that it is a universal language most used in the South African context, including the fact that this study is conducted in this language as well. The understanding of one vernacular language was necessary in cases where the respondents sought explanation on a particular question, as there was possibility for different understandings. General orientation to the questionnaires in terms of administering and ethical issues involved were explained to the fieldworkers.

D. DATA ANALYSIS

Burns and Grove (2011) describe data analysis as a process of reducing, organising, and giving meaning to data. The process of data analysis was undertaken according to the steps as described by Burns and Grove (2011), which are: data preparation, description of the sample, testing for reliability, and conducting exploratory and confirmatory factor analysis.

Data preparation involved capturing of data in MS excel spreadsheet. Thereafter, data was cleaned, where this involved checking for inaccuracies, discrepancies and incomplete questionnaires. Where there were major changes or inaccuracies, such as too much missing information, these questionnaires were removed. There were 21 questionnaires discarded, as they were not suitable for use.

Quantitative data analysis was undertaken in consultation with the statistician through current SPSS descriptive statistics package (version 23). Tests used in the data analysis of this study included reliability testing and the following:

i. Descriptive statistics

Descriptive statistics as a starting point for data analysis (Burns and Grove, 2011) was used and the demographic data was presented and reported through calculation of frequencies, means, and standard deviations. These are presented in Chapter 5 in tables and graphs. Descriptive statistics were used mainly in Section A, which detailed the demographic profile of the respondents. Exploratory and confirmatory factor analysis were conducted to

determine validity and to familiarise the researcher with the data (Burns and Grove, 2011).

ii. Regression analysis

Linear Regression, which estimates the coefficients of the linear equation involving one or more independent variables that best predict the value of the dependent variable, was used. The aim of utilising linear regression was to ascertain whether such factors as coping mechanisms and personality traits were significant predictors of psychological distress in the respondents.

iii. Analysis of variance (ANOVA)

This is a test for several independent samples that compare two or more groups of cases in one variable (Burns and Grove, 2011). ANOVA was used to compare inbetween groups and within groups, based on the level of study from 1st to 4th year in each variable being measured.

iv. Pearson's correlation

This test measures how variables or rank orders are related. The primary goal of Pearson's correlation tests is to measure relationships amongst variables (Burns and Grove, 2011). Pearson's correlation coefficient was used to measure linear associations between the measured variables and demographic profiles and within subscales in each scale or instrument used.

v. One sample and independent sample t-tests

One sample t-test was used to determine whether a mean score is significantly different from a scalar value (Burns and Grove, 2011). One sample t-test was used to measure differences across different demographics. Independent samples t-tests on the other hand compare two independent groups of cases. In the context of this study, this test was conducted between male and female respondents.

E. ETHICAL CONSIDERATIONS

The study commenced after the research proposal was approved by the Durban University of Technology, Faculty of Health Sciences Research and ethical clearance was obtained from the institutional Research Committee. Permission for data collection was obtained from participating universities as well as from the respondents. An information sheet addressing the ethical issues was given to the respondents, and they were further reassured about maintaining confidentiality, noting that participation was voluntary.

i. Gatekeeper permission

The initial plan was to sample one university in each province which would make a total of seven (7) universities out of nine (9) provinces, as two (2) provinces currently do not offer nursing. The universities in these two provinces are

relatively new, having both been commissioned in 2014. After the provisional approval was obtained from the research committee, the researcher applied for permission for data collection, as per the initial plan. It proved to be challenging obtaining permission after repeated follow up. This was due to bureaucracy in some institutions. After much deliberation, due to the unforeseen circumstances and processes involved in obtaining gatekeeper permission, and the fact that the research study was solely for academic qualification with set time frames, an application was lodged with the institutional research committee (IREC) for permission to use the universities whose permission was already obtained. Full approval was granted and data collection commenced.

ii. Informed consent

Informed consent refers to the researcher's responsibility to provide clear, comprehensive, understandable and concise information regarding the study to the respondents, whether in written, verbal and or taped form (Brink et al., 2014). In this study, all information pertaining to the study was included in the respondents' information sheet, which was read and explained to the respondents on commencement of data collection. Participation in the study denoted consent.

iii. Confidentiality

Confidentiality refers to the undertaking by the researcher that respondents' information will not be reported in such a way that it is possible to identify them, including the fact that the information will not be accessible to other people without their authorisation (Polit and Beck, 2012). In this study, any identifying information will be kept in locked files, only accessible to the researcher for a

period of five years. The questionnaire did not contain participants' names and or universities, or any information that would make it easy to identify them. Any data obtained with regard to the study respondents and institution is kept in a secure filing cabinet under lock and key as well as a personal computer with a password access, only known by the researcher.

iv. Privacy

Privacy refers to the freedom respondents have to “determine the time, extent, and general circumstances under which private information will be shared with or withheld from others” (Burns and Grove, 2007:550). The researcher ensured the privacy of the respondents by abiding to the ethical issues of informed consent, confidentiality, right to participate or withdraw from the study. All documents pertaining to the study are being stored in a private, safely locked cabinet for a period of five years, as per DUT policy, after which they will be destroyed, since only the researcher has access to the cabinet.

v. Anonymity

Polit and Beck (2012), describe anonymity as a secure means of maintaining confidentiality of the respondents, such that even the researcher is unable to link the respondents to the responses. The returning questionnaires were mixed together in such a way that they could not be traced to a particular institution, even by the researcher. All information was treated with strict confidentiality.

vi. Beneficence

This principle refers to the researcher's duty to promote good and not harm the respondents (Polit and Beck, 2012). This study did not pose the risk of harm to

the respondents. Its aim was to promote health, as it looked at a model that would facilitate support of the undergraduate nursing students in dealing with psychological distress.

vii. Non-Maleficence

Non-maleficence refers to one's duty not to inflict harm. The respondents were not subjected to any harm and their identity was protected by maintaining anonymity, confidentiality and privacy. The choice of the data collection instrument was aimed at minimising harm. If there were any emotional discomfort that might arise out of this study, the researcher had arranged debriefing sessions after data collection, undertaken by the researcher in her capacity as a mental health specialist, as well as student health services. The research assistants were experienced counsellors as well.

viii. Right to self-determination

The principles of self-determination mean that the respondents have a right to make their own decisions regarding participation and/or non-participation in the research study, without being coerced in any way by the researcher. This includes being free to withdraw from the study without fear of being punished or mistreated (Burns and Grove, 2011). The respondents were informed of their rights during the data collection process and through the participant information sheet, and their choices were respected.

F. ACADEMIC RIGOUR

The researcher needs to exercise a high degree of excellence, which can be attained through the use of ethical, disciplined adherence and strict accuracy to

detail in data collection process. This is termed academic rigour (Burns and Grove, 2011). In this study, academic rigour was addressed through validity and reliability.

i. Validity

Validity is the ability of the instrument to measure what it is intended to measure (Burns and Grove, 2011; Polit and Beck, 2012). Burns and Grove (2011) further identify different components of validity such as face validity, content validity, construct validity, and criterion related validity. The instruments were chosen on the basis of each being able to measure the constructs as set out in the study. The piloting of the tool ensured that the instrument measures and addresses what it is supposed to measure. Clarity of complex words and questions was addressed from the feedback given when piloting, making it possible to avoid misinterpretations, and in that way, improving validity.

ii. Reliability

Reliability is described as the consistency with which the instrument measures the concept under study and has three attributes, these are: stability, internal consistency, and equivalency (Polit and Beck, 2012). All the scales chosen have a Chronbach's alpha range between an internal consistency and co-efficiency range between 0,87 to 0,91 (refer to section on data collection instruments).

Validity and reliability scores as measured in this study are presented in Chapter 5.

4.6.2: Step 2 - Constructing relationship statements

Relationship statements are propositional, tentative statements where the relationships and explanations about the concepts are provided. These explanations provide links between antecedents, co-incidents, consequences and assumptions (Chinn and Kramer, 2011; Chinn and Kramer, 2015; Meleis, 2012). These statements provide structural interrelationship, conclusions about the concepts, causal relations between concepts, and in turn provide an indication regarding the purpose of the theory being developed (Meleis, 2012; Chinn and Kramer, 2011). The relationship statements in this study are stated in Chapter 8 (model development and description).

4.6.3 Step 3- Description of the model

Description of the model refers to those elements that can form and describe the purpose of the model. The purpose of theory description is to create a basis for critical reflection (Chinn and Kramer, 2011). A detailed, clear description of the model for facilitating management of psychological distress in undergraduate nursing students in South Africa is given in Chapter 8. The model will serve as a framework of reference in the management of psychological distress in nursing students, thus promoting the mental health of the students in their working/living environment. The following descriptive components were taken into account:

4.6.3.1. Purpose of the model

The purpose of the model, while it may not be stated explicitly should be identifiable (Chinn and Kramer, 2015) and has to specify the context and the position of usefulness of the theory. The rationale for the development of this model was to manage psychological distress in undergraduate university nursing students when on clinical and theoretical practice.

4.6.3.2. Concepts of the model

The central, relational and related concepts of the model are described (see Chapter 8). In describing the concepts in a model, Chinn and Kramer (2011) state that these are identified by searching out words that represent objects, properties and events.

4.6.3.3. Definition of concepts

Definition of concepts gives clear meaning of concepts identified in the model, clarifying the nature of the concepts which can be done in a list or narrative form (Chinn and Kramer 2015; Risjord, 2010). In this study the meaning of concepts is included and described.

4.6.3.4. Nature of relationships

Nature of the relationships refer to the linkages identified and uncovered between concepts. In looking at the aforementioned nature of relationships, the researcher needs to ask him/herself, the character, the meaning and the nature of the association (Chinn and Kramer, 2011). In

this study, the nature of the relationship, and the linkages are identified and described to add structure to the model.

4.6.3.5 Structure of the relationship

The structure of the relationship addresses the overall form of the model, which then becomes identifiable (Chinn and Kramer, 2011). The structure of the conceptual relationships leading to the overall form of the model is described in clear steps in Chapter 8 to allow some form of reasoning.

4.6.3.6. Assumptions of the model

Assumptions are the basic and accepted truths considered fundamental in any theoretical reasoning (Chinn and Kramer, 2011; Polit and Beck, 2017). The assumptions framing this model are based on the theoretical assumptions described in section 1.8.2. A process of critical reflection is necessary to determine whether the assumptions are factual and whether they are value-laden. The model was evaluated utilising the following criteria by Chinn and Kramer (2011), clarity, simplicity, generality, accessibility and importance.

4.6.4 Step 4- Guidelines to implement the model

The guidelines for implementation of the Model for Management of Psychological Distress are described in detail in Chapter 8. These follow the phases as described by Dickoff, James and Wiedenbach (1968), which are pre-workout or orientation phase, working phase, and termination phase.

4.7 SUMMARY

This chapter explored the research approach, design and data collection process, including data analysis and ethical considerations framing this study. Chapter 5 will address data presentation, interpretation and discussion.

CHAPTER 5

PRESENTATION AND DISCUSSION OF RESULTS

5.1 INTRODUCTION

Chapter 4 gave an overview of the research methodology utilised in this study. Chapters 5 presents the findings obtained in this research study, the demographic description and representation, reliability, validity, the relationship amongst variables and regression modelling. In this particular chapter, a demographic description of the sample and the presentation of results for the first objective is given. The quantitative data analysis responds to the first objective of the study, which was to describe prevalence of psychological distress amongst undergraduate nursing students.

The report addresses the objective and appropriate tables and graphs are used in presentation. A 5-point Likert scale was used to measure each item in the questionnaire with the scoring ranging from 1 'None of the time', to 2 'A little of the time', 3 'Some of the time', 4 'Most of the time', and 5 'All of the time'.

5.2 SAMPLE REALIZATION

The study target was nursing students studying towards an undergraduate nursing degree (R425) in South African universities. As stated in section of Chapter 4, the initial aim was to sample one institution in each province, followed by an all-inclusive convenience type of sampling in that particular institution. This would have contributed to seven institutions in seven provinces, however, as a result of unforeseen circumstances, this could not be realised (see Chapter 4).

Four institutions were sampled and out of 1030 questionnaires distributed, 869 were returned. Out of the 869 returned questionnaires, a total of 21 had more than 50% responses missing, where the decision was taken not to use these for data analysis. This resulted in 848 questionnaires.

5.3 DEMOGRAPHIC PROFILE OF RESPONDENTS

The following sections give the demographic profiles of the respondents in this study. The respondent profile included students from four universities in three provinces in South Africa. A total of 848 questionnaires were completed by the respondents, and where there were questions not answered or blank in the questionnaires, these were indicated as missing variables in the spreadsheet and on data analysis. A total of 21 questionnaires with major gaps were not used.

5.3.1 Gender distribution of respondents

The sample consisted of 199 (23.5%) males and 636 (75.0%) females, with 13 (1.5%) respondents not completing the question. This gender distribution projection indicate that the majority of respondents were female. This is not in any way a new or strange phenomena, as historically the nursing profession was and remains female dominated (Naranjee, 2012). While there is a change from this perception resulting in some improvement, the change nevertheless is happening at a slow pace. Various reasons have been cited as contributing to the challenge of representativeness, resulting in a gendered stereotype attached to the profession (Geyer, 2015; Naranjee, 2012). Gender stereotyping results from the cultural beliefs prevalent in the country. While overall trends show a global increase in the number of males entering the nursing profession, the percentage remains low. In South Africa, as in other countries, the phenomena

of gender representability remain the same, with statistics of only 8,5% men compared to 91.5% women, according to the SANC report (2012). The pace of the increase in males within the nursing profession is very slow, with Naidoo (2015) describing it as 91,413 registered female nurses compared to 5,302 registered male nurses. South Africa is patriarchal in nature, and tends to view the profession of nursing as low-status for men, who prefer to enter medicine (Zondi, 2016). Statistics estimate that there are more females (51%) than males (49%) in South Africa (StatsSA, 2016).

5.3.2 Race distribution

The sample consisted of 797 (94.0%) black participants, 15 (1.8%) coloured participants, 11 (1.3%) Indian participants, and 19 (2.2.0%) white participants, with three (.4%) classified as “other”, and another three (.4%) respondents not completing the question. The results reflect the highest percentage of respondents as being black, in line with the racial representation in South Africa. In the mid-year population estimate for the year 2016, the following statistics in respect of racial distribution were given: 80.7% black people; 8.8% coloured people; 8.4% white people; and 2.5% Indian people (StatsSA, 2016). While the distribution in this study is similar to that of the South African Statistics Department, interpretation should be made with caution, as the distribution is mainly influenced by the provinces sampled. There is poor representation for the other race groups, and it could therefore be deduced that this is due to the province sampled, where the majority of nursing students enrolled in these universities are black African students. The impact of racial segregation (Act No.

41 of 1950) is still evident, as particular races tend to dominate particular provinces, and particular areas of human settlement.

5.3.3 Marital status of respondents

The summary of the results regarding marital status indicate that the largest proportion of respondents were single, at 816 (96.2%), followed by 17 (2.0%) married, one (0.1) widowed, and 13 (1.5) living together. One (0.1) respondent did not answer the question. The results are to be expected taking into consideration that these are undergraduate nursing students, and most of them had just completed Grade 12. Age group distribution is discussed in section 5.3.10. The focus of the study was undergraduate nursing students. These are the students who mostly commence with nursing training after matriculation. The graph below illustrates the gender, race and marital status distribution.

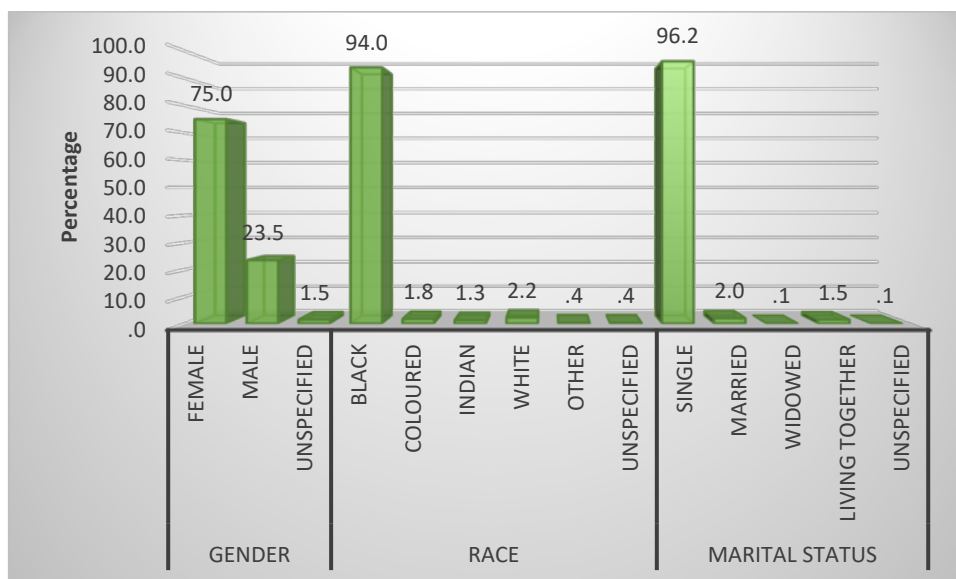


Figure 5.1 Demographic details: Gender, Race and Marital Status

5.3. 4 Province where respondents are studying

The majority, consisting of 333 respondents (39.3%), were from KwaZulu-Natal (KZN) Province. The Province is the second largest in terms of population, with 19.8% according to the mid-year estimate by StatsSA (2016). This was followed by Gauteng Province (GP), at 290 (34.2%). Gauteng is the largest and most densely populated province in South Africa, estimated at 24.1 percent. The Eastern Cape (EC) province is the third largest province in terms of population, with 218 (25.7%) respondents, which is in proportion with the overall estimate by the Stats SA report at 12.6 percent. There were eight respondents (0.8%) who did not answer the question.

5.3.5 Level of training

First year students yielded most responses at 266 (31.4%), followed by 170 (20, 9%) second year respondents. There were 231 (27.2%) third year level respondents and 172 (20.3%) fourth year level respondents. Two (0.2%) were classified as missing, as there were no responses. While there was less response from the second and fourth year students compared to the first and third year students, this researcher does not view this as being negatively significant, and as such the results were accepted. In the universities sampled, there were less fourth and second year students compared to the number of first and third year students. The reasons behind this phenomenon could be that some students failed some modules, and as such, were required to repeat and remain in that particular level of study. Secondly, some may be in clinical placement. The graph below represents the statistics on the province and level of study.

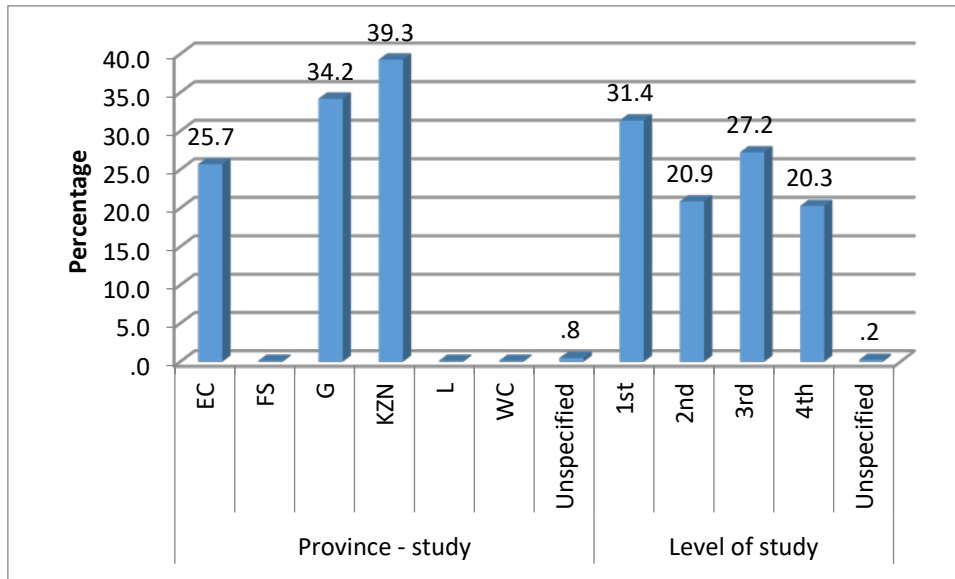


Figure 5.2 demographic details: Province of study and level of study

5.3.6 Home province of respondents

While the universities sampled are geographically situated in three provinces only, the respondents' home province presentation seem to encompass all the provinces of South Africa. A total of 322 (38.0%) respondents were from KwaZulu-Natal, 241 (28.4%) from the Eastern Cape, and 107 (12.6%) from Gauteng (GP). Sixty-seven respondents (7.9%) were from Limpopo Province, 64 (7.5%) from Mpumalanga Province. Twenty-seven respondents (3.2%) were from the North West (NW) Province, whereas 14 (1.7%) were from the Free State (FS) Province, with two (0.2%) from the Northern Cape (NC) Province and one (0.1%) from the Western Cape (WC) Province. Three (0.4%) respondents did not answer the question. In South Africa there is a phenomena known as the migrant labour system, where people from the rural provinces travel between provinces to economic hubs in search of work. This could perhaps explain why Gauteng, although viewed as one of the smaller provinces, has the largest population. It is possible that most of the respondents from the provinces neighbouring Gauteng

chose to study in that province. The migration patterns for the 2011-2016 period implied that the Western Cape and Gauteng received the highest numbers of migrant workers or inflow (StatsSA, 2016).

5.3.7 Area of residence

The majority of respondents reported coming from the rural areas, which is 64.7% of the sample, with 35.0% coming from urban areas. Two respondents did not specify. This could be better explained by the statements made in section 5.3.5 of the migrant worker phenomena. Secondly, much as there is a majority of respondents from the rural areas, there is a shortage of resources in the rural areas compared to the urban areas (Moshabela, Zuma and Gaede, 2016). The graph below shows the percentages for home province and area. The projections for the period 2011-2016, identified the Eastern Cape, Free State and Limpopo provinces as those provinces that had the largest incidence of outflow. These are mainly rural provinces (StatsSA, 2016). Furthermore, these findings appear to agree with Makhaye's (2013) report, noting that based in the then laws, some racial groups were allowed to own and occupy land in the rural areas.

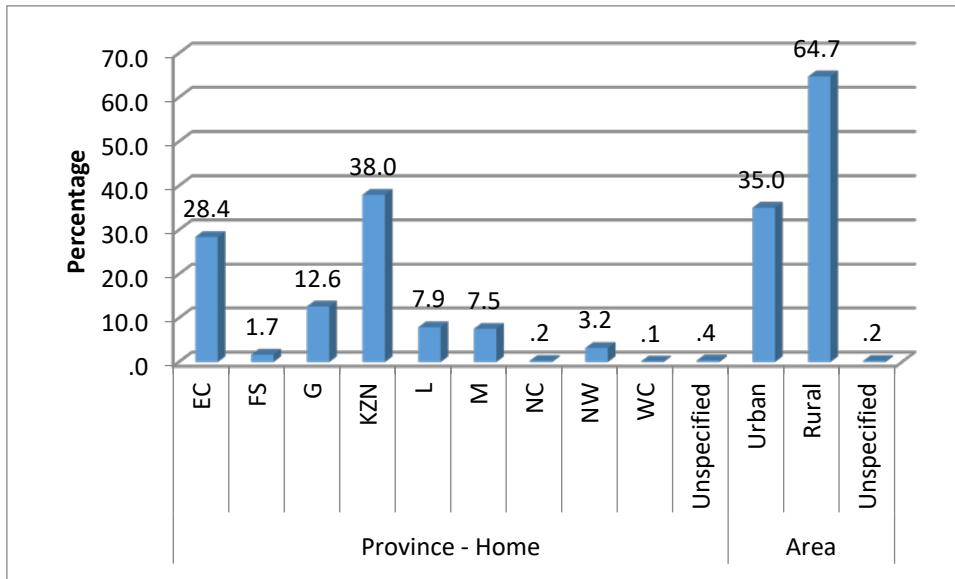


Figure 5.3 demographic details: Home Province and Area of Residence

5.3.8 Home Language of respondents

Regarding the respondents' home language, isiZulu was identified as home language for 330 respondents (38.9%), followed by isiXhosa at 252 (29.7%). Sepedi had 55 respondents (6.5%), and Setswana 41 (4.8%) respondents. There were 45 English speaking respondents (5.3%) and 40 (4.7%) Siswati speaking respondents. Sesotho was presented by 23 respondents (2.7%), while there were 22 Tshivenda speaking respondents (2.6%). There were 16 Xitsonga (1.9%), 11 isiNdebele (1.3%) and four (0.5%) Afrikaans-speaking respondents, with one respondent non-specified language. The presentation regarding home language is supported by the Census reports (2011), and by Zondi (2016), who has noted that a larger percentage of South African households speak isiZulu at home. Secondly, the fact that the majority of the respondents were from the provinces

where both isiZulu and isiXhosa are more prevalent, where they are home languages, contributed to these results.

5.3.9 Religion

Out of the total number of respondents, 817 (96.3%) classified themselves as being of Christian faith; 0.4% of Jewish faith. Eight respondents (0.9%) were of Hindu faith; with six (0.7%) of Muslim faith. Ten (1.2%) respondents did not specify, and were classified as being “other” non-specified religions, while four (0.5%) respondents did not answer the question. The majority of the black African population identify with Christianity as their religion, where it can therefore be deduced that as black people form larger percentage in the sample, Christianity would be the religion most prevalent in the sample (StatsSA, 2012). The graph below gives a visual presentation of demographic details on language and religion.

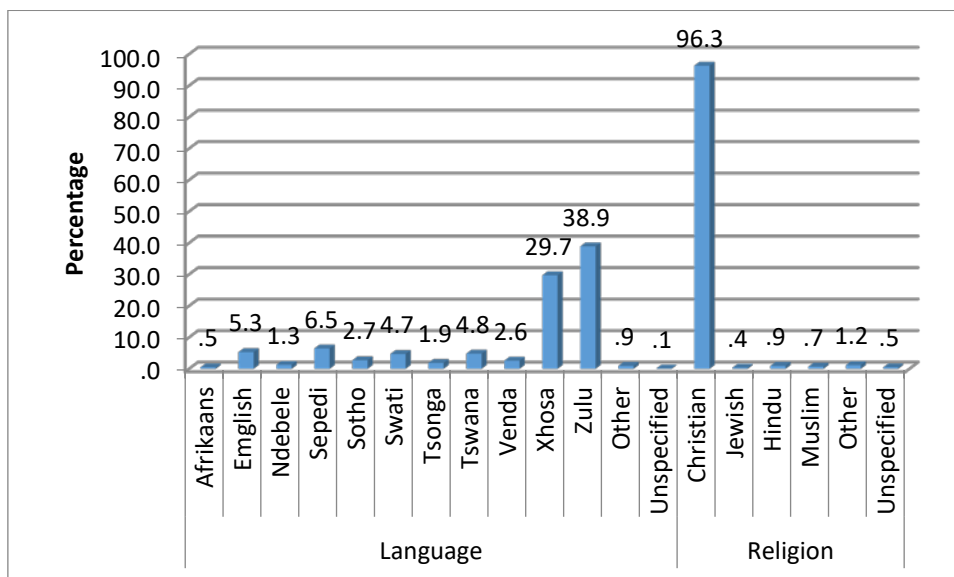


Figure 5.4 Demographic details: Language and religion

5.3.10 Age distribution

The results give an indication that the majority of students registered for the undergraduate nursing degree at the time of data collection in the sampled universities were young adults. The analysis of the age distribution indicates that the majority of the respondents in terms of frequency distribution were 21 (19.2%), followed by those who were 22 (18.0%). The mean of 21.72% was identified and the overall age distribution was from 16 to 46, with 11 respondents not specifying their age. The stage of young adulthood is the most common age range for most students, who register for a higher education qualification as they have just matriculated. A few students were outside the age range viewed as the traditional college/university age bracket (18-22), and in this study, 19-25 was the highest age range. Various factors could explain this phenomenon, such as a delay in entering higher education, financial and other personal circumstances, including career progression in those students who were already enrolled as nurses now 'bridging' to be registered nurses (Zondi, 2016; Asante and Andoh-Arthur, 2015; Moshabela, Zuma and Gaede, 2016). However, as the objective of this research was to assess prevalence of psychological distress, the factors behind this phenomenon were not explored and there was no evidence of statistical relevance warranting further exploration. The tables below give a visual presentation of age distribution.

Table 5.1 Age distribution

N	Valid	837
	Missing	11
Mean		21.72
Median		21.00
Std. Deviation		3.333
Minimum		16
Maximum		46

Table 5.2 Age distribution and Frequencies

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	16	1	.1	.1	.1
	17	9	1.1	1.1	1.2
	18	49	5.8	5.9	7.0
	19	117	13.8	14.0	21.0
	20	109	12.9	13.0	34.1
	21	163	19.2	19.5	53.5
	22	153	18.0	18.3	71.8
	23	95	11.2	11.4	83.2
	24	62	7.3	7.4	90.6
	25	28	3.3	3.3	93.9
	26	7	.8	.8	94.7
	27	10	1.2	1.2	95.9
	28	12	1.4	1.4	97.4
	29	1	.1	.1	97.5
	30	6	.7	.7	98.2
	31	1	.1	.1	98.3
	32	1	.1	.1	98.4
	34	1	.1	.1	98.6
	35	1	.1	.1	98.7
	36	2	.2	.2	98.9
	37	2	.2	.2	99.2
	38	1	.1	.1	99.3
	40	1	.1	.1	99.4
	43	2	.2	.2	99.6
	45	2	.2	.2	99.9
	46	1	.1	.1	100.0
	Total	837	98.7	100.0	
Missing	System	11	1.3		
Total		848	100.0		

5.4. RESULTS PRESENTATION FOR OBJECTIVE NUMBER 1

This section describes the results of the study based on the first objective as mentioned in 5.4.1. First the validity and reliability checking of each instrument used is reported on, followed by the results.

5.4.1 Objective 1 – Assess prevalence of psychological distress

The General Health Questionnaire was used (GHQ-28), which is a 28 item scale consisting of four subscales, namely: somatic symptoms, anxiety, social dysfunction, and severe depression. Before doing a factor analysis, several items were recoded so that a high score indicated greater presence of distress for all 28 items. Secondly, some of the items were deleted as they cross-loaded or loaded poorly onto all factors, thus convergent and discriminant validity was evident.

5.4.1.1. Reliability of the GHQ scale

Cronbach's alpha co-efficient was used to assess internal consistency. This is a widely used index for evaluating internal consistency. The Cronbach's coefficients are usually calculated within the ranges .00 to + 1.00. Some authors identify normal values to be from .80 and higher (Polit and Beck, 2017), while some have identified the normal values to be from .70 upwards (Kadioglu, Ergun and Yildiz, 2013) and as such, an alpha value of $>.7$ indicates reliability of measure. The overall alpha value score in this instrument was .88 and the calculation was based on the 28 items of the instrument. Each subscale was then measured independently for reliability based on the items.

Table 5.3 Reliability statistics: General Health Questionnaire

Reliability Statistics

Cronbach's Alpha	N of Items
.887	28

Below is the description of each subscale and the process employed in measuring reliability. Both Table 5.4 and 5.5 are referred to when explaining the subscales and the factor analysis.

For each of the subscales, calculation was done by averaging the questions that apply to each subscale and the Likert 5-point scale was treated as continuous.

A. Subscale 1: Somatic symptoms

The first subscale measured was the somatic symptoms scale which consisted of four questions. These were General Health questionnaire questions: 4, 5, 6 and 7. The actual questions are reflected in the pattern for rotated matrix structure Table 5.5 and are highlighted in yellow for ease of reference. The Cronbach's alpha for this subscale was .73.

B. Subscale 2: Anxiety symptoms

The second subscale measured was the anxiety symptoms scale which consisted of six questions. These were General Health questionnaire questions: 8, 10, 11, 12, 13 and 14. The actual questions are reflected in the pattern for rotated matrix structure Table 5.5 and are highlighted in green for ease of reference. The Cronbach's alpha for the subscale was .83.

C. Subscale 3: Social dysfunction

The third subscale measured was the social dysfunction symptoms scale which consisted of six questions. These were General Health questionnaire questions: 15, 17, 18, 19, 20 and 21. The items on these questions were recoded so that a high score would indicate greater presence of distress. The actual questions are reflected in the pattern for rotated matrix structure Table 5.5 and are highlighted in blue for ease of reference. The Cronbach's alpha for this subscale was .76.

D. Subscale 4: Severe Depression

The fourth subscale measured was the severe depressive symptoms scale which consisted of seven questions. These were General Health questionnaire questions: 22, 23, 24, 25, 26, 27 and 28. The actual questions are reflected in the pattern for rotated matrix structure Table 5.5 and are highlighted in orange for ease of reference. The Cronbach's alpha for this subscale was .83.

Table 5.4 Reliability of the GHQ subscales

Subscale	Questions	Cronbach's alpha
Somatic symptoms	4 – 7	.736
Anxiety symptoms	8, 10 – 14	.835
Social dysfunction	15, 17 – 21	.764
Severe depression	22 - 28	.833

E. Factor Analysis

An exploratory factor analysis was conducted so as to determine interrelationships between the items being measured on the scale (Polit and Beck, 2017). Before doing a factor analysis, some items needed to be recorded so that a high score indicated greater presence of distress (1, 15, 17-21). Some items (1-3, 9 and 16) were deleted because they either cross loaded or loaded poorly onto all factors. The unsatisfactory nature of poor factor loading concurs with De Kock, Gorgens-Ekermans and Dhladhla (2014), who identified same response especially on the somatic and social dysfunction. The authors cited in the last sentence attributed this occurrence to an interplay between psychopathology and culture as identified in cultural relativism, their sample was Black South Africans. Principal-axis factor analysis was used in the first phase of exploratory factor analysis and factor rotation in the second phase. Presented in Table 5.5 is the final structure of the rotated factor matrix which is used by researchers to interpret the factor analysis (Polit and Beck, 2017). On the left hand side, under the heading 'factor', are numerical entries known as weights or factor loadings (Polit and Beck, 2017; Kadioglu, Ergun and Yildiz, 2013).

According to the authors, these factor loadings can range from -1.00 to +1.00, and can be interpreted as correlations between the items in the instruments and the factors. Cut off values are set at .40 and higher, even so Polit and Beck (2017) assert that lower values may be used if they give theoretical credence. In this research study, four factor loadings were identified for interpretation of the subscales. Factor 1 (severe depression) highly correlates with items 22, 23, 24, 25, 26, 27 and 28, and the absolute values range from .483 to .818. Factor 2

(anxiety symptoms) highly correlates with items 8, 10,11,12,13 and 14 and the absolute values range from .474 to .696. Factors 3 and 4 describe social dysfunction and somatic symptoms respectively (see Table 5.5) with high loading ranging from .474 to .696 for social dysfunction and .424 to .814 for somatic symptoms. Based on this, convergent and discriminant validity are thus evident for all items.

Table 5.5- Final structure of the GHQ data (Pattern for rotated factor matrix)

Rotated Factor Matrix^a

		Factor			
		1	2	3	4
GHQ4	Felt that you are ill				.424
GHQ5	Been getting pains in your head				.814
GHQ6	Been getting a feeling of tightness or pressure in your head				.609
GHQ7	Been having hot or cold spells				.466
GHQ8	Lost much sleep over worry		.474		
GHQ10	Felt constantly under strain		.626		
GHQ11	Been getting edgy and bad-tempered		.591		
GHQ12	Been feeling scared or panicky for no good reason		.696		
GHQ13	Found everything getting on top of you		.689		
GHQ14	Been feeling nervous and strung up all the time		.608		
GHQ15R	NOT Been managing to keep yourself busy and occupied			.401	
GHQ17R	NOT Felt on the whole you were doing things well			.580	
GHQ18R	NOT Been satisfied with the way you've carried out your tasks			.694	
GHQ19R	NOT Felt you are playing a useful part in things			.695	
GHQ20R	NOT Felt capable of making decisions about things			.647	
GHQ21R	NOT Been able to enjoy your normal day to day activities			.508	
GHQ22	Been thinking of yourself as a worthless person	.534			
GHQ23	Felt that life is entirely hopeless	.715			
GHQ24	Felt that life isn't worth living	.818			
GHQ25	Thought of the possibility that you might make away of yourself	.557			
GHQ26	Found at times you couldn't do anything because of your nerves were too bad	.483			
GHQ27	Found yourself wishing you were dead and away from it all	.650			
GHQ28	Found that the idea of taking your own life kept coming in your mind	.586			

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalisation.

a. Rotation converged in five iterations.

F. One sample statistics

In order to assess the prevalence of psychological distress amongst student nurses, the mean of the four subscales was calculated and then tested for significant differences from a scalar value of 1 (none of the time). One sample t-test was used. Results as reflected below indicate that depression is suffered the least by the respondents (Table 5.5) reflected by a mean score of 1.8, with anxiety being most prevalent with a mean score of 2.7. Somatic and social dysfunction had a mean score of 2.2 and 2.5, respectively. The average scores for all four subscales are significantly different from a score of 1 (none of the time), $p < .0005$ in each case (test value 1-table 5.7). This indicates some degree of distress in these areas.

See Tables 5.6 and 5.7 below for the results of t-test results.

Table 5.6 One sample t-test

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
SOMATIC	848	2.2503	.78661	.02701
ANXIETY	848	2.5051	.86524	.02971
SOCIAL	848	2.7312	.71482	.02455
DEPRESSION	848	1.8761	.81398	.02795

Table 5.7 One sample test value = 1

One-Sample Test						
	Test Value = 1					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
SOMATIC	46.286	847	.000	1.25029	1.1973	1.3033
ANXIETY	50.657	847	.000	1.50515	1.4468	1.5635
SOCIAL	70.525	847	.000	1.73117	1.6830	1.7794
DEPRESSION	31.343	847	.000	.87610	.8212	.9310

When tested against a value of 2 (a little of the time), results show that average scores are again significantly different from a value of '2'. In particular, somatic, anxiety and social distress are shown on average more than 'a little of the time' ($p < .005$ in each case; while depression is shown less than 'a little of the time' ($p = .0005$). Table 5.8 gives a visual presentation of the one sample test value 2.

Table 5.8 One sample test value = 2

One-Sample Test						
	Test Value = 2					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
SOMATIC	9.266	847	.000	.25029	.1973	.3033
ANXIETY	17.001	847	.000	.50515	.4468	.5635
SOCIAL	29.787	847	.000	.73117	.6830	.7794
DEPRESSION	-4.433	847	.000	-.12390	-.1788	-.0690

Depending on the scoring system used, a GHQ-28 score of 15 and above is indicative of psychological distress (Haidula et al., 2003; Naygova et al., 2000; Radioglu, Ergun and Yildiz, 2013). It appears therefore that there is some degree of psychological distress in three of the subscales with social dysfunction being

the leading cause of distress, followed by anxiety symptoms and somatic symptoms. The scores for the subscales are as follows:

Somatic	$2.2503 * 7 = 15.75$
Anxiety	$2.5051 * 7 = 17.54$
Social	$2.7312 * 7 = 19.12$
Depression	$1.8761 * 7 = 13.13$

Visual graphical representation of the scores in the subscales is reflected in Figure 5.5 below.

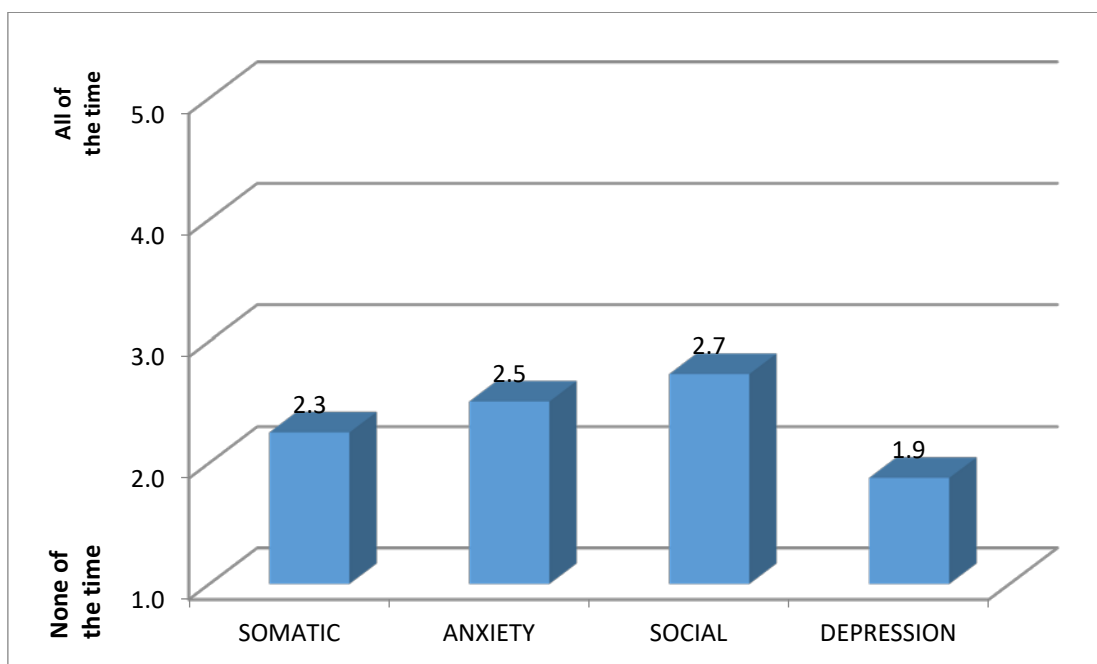


Figure 5.5 Graphical Presentation of the scores

G. Inter-correlations between the GHQ-28 subscales

A Pearson correlation test was used to measure inter-correlation between subscales. Inter-correlation between the subscales was found to be significant at the 0.01 level (Table 5.11). This score implies that the subscales are not independent of each other, there is some interrelatedness.

Table 5.9 Inter-correlation between the subscales

		Correlations			
		SOMATIC	ANXIETY	SOCIAL	DEPRESSION
SOMATIC	Pearson Correlation	1	.537**	.200**	.308**
	Sig. (2-tailed)		.000	.000	.000
	N	848	848	848	848
ANXIETY	Pearson Correlation	.537**	1	.312**	.435**
	Sig. (2-tailed)	.000		.000	.000
	N	848	848	848	848
SOCIAL	Pearson Correlation	.200**	.312**	1	.248**
	Sig. (2-tailed)	.000	.000		.000
	N	848	848	848	848
DEPRESSION	Pearson Correlation	.308**	.435**	.248**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	848	848	848	848

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

Variations between males and females for the subscales were measured as well and significant differences were observed in the first three measures that is somatic, anxiety and social dysfunction. Females seemed to be experiencing more distress than males with social dysfunction being the most experienced, followed by anxiety and somatic symptoms being the least experienced. There were no significant differences in the measure for depression.

Social dysfunction

Females (M = 2.7695, SD = .72748) experience more distress than males (M = 2.6010, SD = .66940), $t(833) = 2.906$, $p = .004$.

Anxiety

Females (M=2.5601, SD=.88234) experienced more distress than males (M=2.3199; SD=.79580), $t(833) = 3.427$, $p = .001$.

Somatic

Females (M=2.3010; SD=.79168) experienced more distress than males (M=2.0833; SD=.73784), $t(833) = 3.439$, $p.001$.

Table 5.10 and 5.11 give a visual presentation of the group statistics discussed in the paragraph above as well as independent sample test.

Table 5.10 Group statistics

Group Statistics					
Gender		N	Mean	Std. Deviation	Std. Error Mean
SOMATIC	Female	636	2.3010	.79168	.03139
	Male	199	2.0833	.73784	.05230
ANXIETY	Female	636	2.5601	.88234	.03499
	Male	199	2.3199	.79580	.05641
SOCIAL	Female	636	2.7695	.72748	.02885
	Male	199	2.6010	.66940	.04745
DEPRESSION	Female	636	1.8793	.82520	.03272
	Male	199	1.8744	.78948	.05597

Literature (Eisenberg et al., 2007; White et al., 2011; Said, Kypri, and Bowman, 2013; Chunping et al., 2012), has highlighted almost similar results regarding prevalence of psychological distress in both males and females. Gender

variations seemed to play a greater part, with females presenting more of the psychological distress than males (White et al., 2011; Said, Kypri, and Bowman, 2013; Dachew, Bisetegn and Gebremariam, 2015; Kadioglu, Ergun and Yildiz, 2013). It could be that there are other factors contributing to this occurrence. For instance, in the context of this study, there were only 199 males compared to 636 females, where this could have contributed to the results being skewed towards females and the fact that nursing has always been a 'traditionally' female profession. Secondly, the nature of the sample representation, which was mainly black Africans, may have contributed to the males, who are traditionally perceived to be stronger and therefore expected by society to endure or withstand challenges, being reluctant to share emotions, vulnerability, or weakness (De Kock, Gorgens-Ekermans and Dhladhla, 2014). Therefore, the findings could be influenced by the cultural-contextual perspectives (Hassim, 2012; Naidoo, 2015), which sees males having to be stronger than females, and not show emotion. Even so, research evidence points to more psychological distress on the part of females worldwide. Therefore this researcher's assertions do not really explain this phenomenon. It would be worthwhile for future research studies to pursue these findings in relation to prevalence of psychological distress in males within the nursing profession and the factors influencing these.

Table 5.11 Independent Samples Test

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
SOMATIC	Equal variances assumed	.938	.333	3.439	833	.001	.21764	.06329	.09341	.34187
	Equal variances not assumed			3.568	352.097	.000	.21764	.06100	.09766	.33761
ANXIETY	Equal variances assumed	3.336	.068	3.427	833	.001	.24013	.07006	.10261	.37765
	Equal variances not assumed			3.617	362.873	.000	.24013	.06638	.10959	.37067
SOCIAL	Equal variances assumed	2.678	.102	2.906	833	.004	.16854	.05800	.05470	.28239
	Equal variances not assumed			3.035	356.212	.003	.16854	.05553	.05933	.27776
DEPRESSION	Equal variances assumed	.001	.978	.074	833	.941	.00490	.06635	-.12533	.13513
	Equal variances not assumed			.076	343.976	.940	.00490	.06483	-.12261	.13241

5.5 SUMMARY

This chapter presented and discussed the findings of the demographic profiles of the study. Findings for objective number one, which was to assess the prevalence of psychological distress in undergraduate nursing students, were presented in the form of charts, graphs and a matrix with accompanying explanation and discussion. Testing for validity and reliability of the instrument used was

presented, including results for regression analysis. Chapter 6 addresses the results and explanation of objectives number two and three.

Chapter 6

PRESENTATION AND DISCUSSION OF RESULTS: OBJECTIVES TWO AND THREE

6.1 INTRODUCTION

Chapter 5 gave an overview and discussion of the respondents' demographic details, including presentation and discussion of the results for objective number one. Chapter 6 is a continuation of the presentation and discussion of results for objectives two and three. The quantitative data analysis was aimed at achieving these objectives of the study, which were to describe factors contributing to psychological distress in theoretical learning areas, and to describe factors contributing to psychological distress in the clinical learning areas.

A 5-point Likert scale was used to measure each item in the questionnaire, with the scoring ranging from 1 'None of the time', to 2 'A little of the time', 3 'Some of the time', 4 'Most of the time', and 5 'All of the time'.

6. 2 OBJECTIVES TWO AND THREE

This section reports on the findings of objectives two and three. Objective Two was to describe the factors contributing to psychological distress in undergraduate nursing students in the theoretical learning area. Objective Three was to describe factors contributing to psychological distress in the clinical

learning area. The findings from these objectives will be presented together as one instrument was used to measure both factors.

The Stress in Nursing Students Scale (SINS) was used to realise the objectives mentioned above. A five-point Likert scale was used, with 1 representing 'none of the time', and 5 representing 'all the time'. All the items (questions) in the scale were subjected to a factor analysis principal axis factoring (see to explore the structure of the data. As a result of cross- and low loadings, some items were dropped. A four factor structure was found to be the clearest for this set of data. These shall be described briefly below and highlighted in Table 6.1 for ease of reference.

Factor 1 (conflict with people) highly correlates with items 45, 48, 49, 52, 55 and 64, and the absolute values range from .471 to .711. Factor 2 (education) highly correlates with items 29, 31, 32, 35, 46 and 57, and the absolute values range from .469 to .695. Factors 3 (clinical area) highly correlates with items 36, 39, 40, 41 and 58, with high loading ranging from .465 to .668. Factor 4 (financial and time constraints) highly correlates with items 53, 56, 63, 65 and 69 and the absolute values range from .414 to .636. On the basis of the internal structure found in this data, validity of the SINS scale is claimed.

Subscales were formed by averaging the scores from the questions included in each factor. Hence the subscales were identified as stressors from:

- 1. Conflict with people (Factor 1)
- 2. Education (Factor 2)
- 3. Clinical area (Factor 3)

- 4. Financial and Time (Factor 4

Table 6.1 Rotated Factor Matrix

	Factor			
	1	2	3	4
SINS29 The amount of classwork material to be learned		.695		
SINS31 Having too much clinical responsibility		.469		
SINS32 The difficulty of the classwork material to be learned		.530		
SINS35 Examinations and placement grading		.626		
SINS36 Patient's attitudes towards me			.480	
SINS39 Relations with staff in the clinical area			.590	
SINS40 Caring for the emotional needs of patients			.668	
SINS41 Attitudes and expectations of other professionals (doctors, administrators, social workers etc.) towards nursing			.568	
SINS45 Conflict with peers	.604			
SINS46 Having too much to learn		.595		
SINS48 Dealing with un-co-operative, anxious, abusive or otherwise difficult patients and relatives	.471			
SINS49 Conflicts with staff on placements	.711			
SINS52 Criticism from peers and senior staff	.602			
SINS53 Not having enough time for family and friends				.468
SINS55 Conflict with administrators or managers	.649			
SINS56 Not having enough money for entertainment				.636
SINS57 Meeting deadlines for coursework		.500		
SINS58 Relations with other professionals			.465	
SINS63 Having no time for entertainment				.583
SINS64 Conflicts with university staff	.690			
SINS65 Surviving on a low income				.545
SINS69 The prospect of making less money than friends who are not nurses				.414

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalisation.

a. Rotation converged in six iterations.

6.2.1 Reliability of the instruments used

Apart from validity, reliability measures were ascertained by calculating the Cronbach's alpha for each subscale based on the identified factors. As stated, under Objective One, a value of $>.7$ indicates reliability of the measure (Kadioglu, Ergun and Yildiz, 2013; Moule and Goodman, 2014; Burns and Grove, 2009). All

the subscales displayed reliability of the measure ranging from .71% to .81 percent. These are presented in the tables below.

TABLE 6.2 Reliability statistics - Factor 1

F1 Conflict with people

Reliability Statistics

Cronbach's Alpha	No. of items
.814	6

TABLE 6.3 Reliability statistics - Factor 2

F2 Education

Reliability Statistics

Cronbach's Alpha	No. of items
.776	6

TABLE 6.4 Reliability statistics - Factor 3

F3 Clinical area

Reliability Statistics

Cronbach's Alpha	No. of items
.745	5

TABLE 6.5 Reliability statistics - Factor 4

F4 Financial and time constraints

Reliability Statistics

Cronbach's Alpha	No. of items
.710	5

6.3 PRESENTATION AND DISCUSSION OF FINDINGS

A one-sample statistics test was performed to ascertain factors contributing to stress and consequently psychological distress in nursing students. The average scores show that financial and time constraints caused the most stress, followed closely by education, then clinical area, and lastly people conflict. The issue of finances causes the most stress in South Africa, as is to be expected. Most students rely on government funding through the National Student Financial Aid Scheme (NSFAS), and recently there has been challenging in terms of access with most students, while having obtained admission in the institution, not getting funding even though they qualify for funding according to the set criteria (Butler-Adam, 2015; Pansters and Van Rinsum, 2016). This has contributed to student uprisings, notably the 'must fall' campaigns, where students are pushing for education reform, including free higher education (Luescher-Mamashela and Mugume, 2014; Wangenge-Ouma, 2012; Butler-Adam, 2015). The issue of

financial constraints has escalated to include ‘missing middle’ beneficiaries, whose parents who are not catered for in the funding model, which is based on total low household income (Wangenge-Ouma, 2010; Shay, 2017). With regard to the second component of time constraints, most literature has identified inherent stress relating to not enough time and more work to cover (Labrague, 2013; Chernomas and Shapiro, 2013; Al-Zayyat and Al-Gamal, 2014; Govender et al., 2015), while some have attributed this to lack of time management on the part of the students (Mirzaei, Oskouie, and Rafii, 2012; Ghiasvand et al., 2017). Nevertheless, regardless of the views, this is of concern and needs to be addressed through further research on possible interventions. Table 6.6 and Figure 6.7 give a visual presentation of the one sample test results.

Table 6.6 One sample statistics (SINS scale)

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
PEOPLE_CONFLICT	848	2.7602	.97641	.03353
EDUCATION	848	3.2230	.82644	.02838
CLINICAL_AREA	848	2.6880	.88267	.03031
FIN_TIME_CON	846	3.2432	.97390	.03348

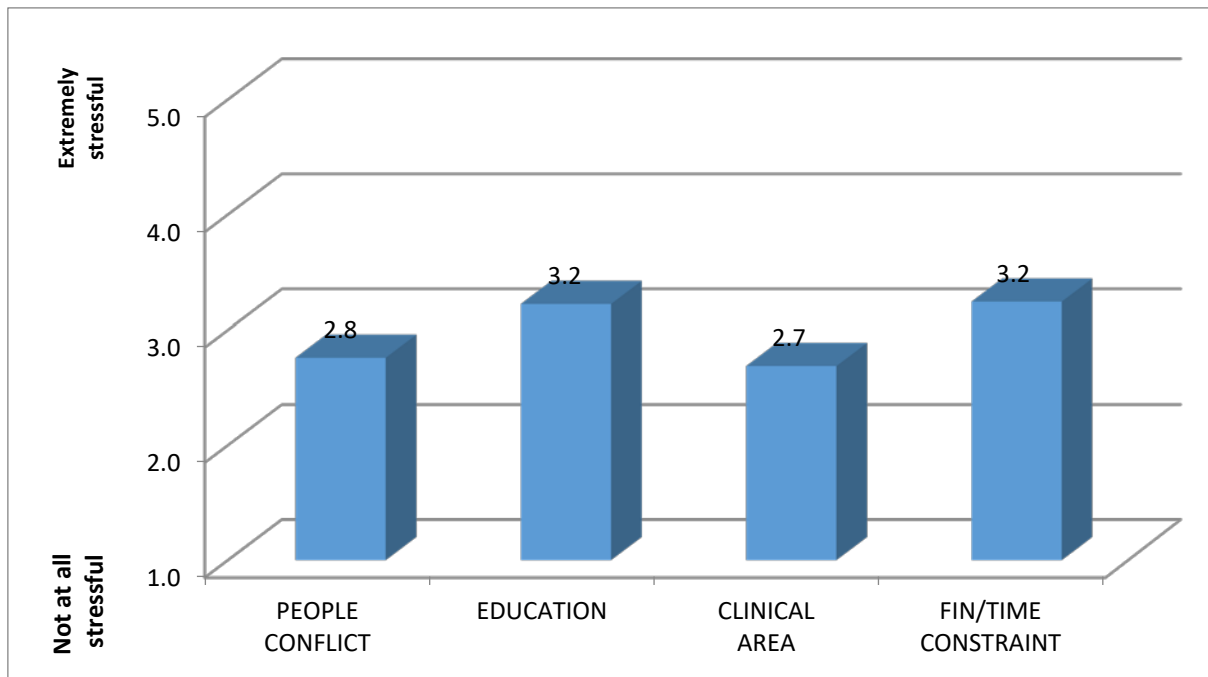


Figure 6.1 Graphical presentation of one sample results

A. One sample t-test (value =3)

A one-sample t-test, where the average is tested against a score of '3' (sometimes stressful), gave the indication that stress caused by education and financial and time constraints was significantly more than 'sometimes stressful', while the other two (clinical area and people conflict) were significantly less than 'sometimes stressful', which was $p < .0005$ in each case. A visual presentation is shown below in Table 6.8.

Table 6.7 One sample Test Value = 3

One-Sample Test						
	Test Value = 3					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
PEOPLE_CONFLICT	-7.152	847	.000	-.23982	-.3056	-.1740
EDUCATION	7.857	847	.000	.22298	.1673	.2787
CLINICAL_AREA	-10.293	847	.000	-.31199	-.3715	-.2525
FIN_TIME_CON	7.263	845	.000	.24320	.1775	.3089

A. Differences by gender and race

This section presents and discusses the results of the subscales for stressors tested, to see whether there are differences across different demographics presented in Section A of the questionnaire. ANOVA or independent samples t-test was used for this analysis. This is a measure that tests differences in means between two or more populations (Moule and Goodman, 2014; Burns and Grove, 2011). The first results were based on gender, and there were no differences noted concerning race.

Table 6.8 Differences by gender

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
PEOPLE_CONFLICT	Female	636	2.8199	.99374	.03940
	Male	199	2.6131	.90309	.06402
EDUCATION	Female	636	3.2957	.79835	.03166
	Male	199	3.0002	.88428	.06269
CLINICAL_AREA	Female	636	2.7421	.87344	.03463
	Male	199	2.5279	.91217	.06466
FIN_TIME_CON	Female	635	3.2519	.95611	.03794
	Male	198	3.2232	1.03916	.07385

Females seem to be experiencing more stress from people conflict, education and clinical area than males. There were no significant differences regarding financial and time constraints between genders as well as by race.

People conflict

Females ($M = 2.8199$, $SD = .99374$) experience more stress from people conflict than males ($M = 2.6131$, $SD = .90309$), $t(833) = 2.617$, $p = .009$.

Education

Females ($M=3.2957$, $SD=.79835$) experienced more stress from education than males ($M=3.0002$; $SD=.88428$), $t(833) = 4.439$, $p=.000$.

Clinical Area

Females ($M=2.7421$; $SD=.87344$) experienced more stress from the clinical area than males ($M=2.5279$; $SD=.91217$), $t(833) = 2.988$, $p=.003$.

The results show that female nursing students experience more stress than males, mainly in three areas, as highlighted above, whereas both genders were impacted by financial/time constraints. Various factors could be contributing to these results, such as coping styles and mechanisms used, personal challenges, as well as issue of representativeness with males fewer than females. Some studies have reported a general perception of intolerance amongst members of the same gender, such as females towards females. A number of studies have identified the issue of gender in psychological stress/ distress with females experiencing more stress (Eisenberg et al., 2007; White et al., 2011; Said, Kypri, and Bowman, 2013; Chunping et al., 2012). Various possible causes have been identified such as lack of social support, the work/family interplay to name a few. The differences are shown in Table 6.10 below.

Table 6.9 Independent samples test

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
PEOPLE_CONFLICT	Equal variances assumed	3.520	.061	2.617	833	.009	.20685	.07903	.05173	.36197
	Equal variances not assumed			2.752	360.321	.006	.20685	.07517	.05902	.35468
EDUCATION	Equal variances assumed	3.250	.072	4.439	833	.000	.29551	.06657	.16484	.42618
	Equal variances not assumed			4.208	305.674	.000	.29551	.07023	.15732	.43369
CLINICAL_AREA	Equal variances assumed	1.341	.247	2.988	833	.003	.21422	.07171	.07348	.35497
	Equal variances not assumed			2.920	319.698	.004	.21422	.07335	.06991	.35854
FIN_TIME_CON	Equal variances assumed	1.797	.180	.361	831	.719	.02866	.07948	-.12734	.18466
	Equal variances not assumed			.345	308.058	.730	.02866	.08303	-.13471	.19203

B. Differences by Age and Marital Status

To measure differences by age, Pearson's correlation was applied. This is a correlation that measures how variables or rank orders are related. The analysis showed that older age was associated with more stress due to people conflict ($r=0.96$, $p=.005$), whereas younger age nursing students experienced more stress from education ($r=.104$, $p=.003$). There were no significant differences by marital status. Nursing education in South Africa is broad, where different categories of nurses trained. It could be that the phenomenon of older age being associated with more stress may be reflected in those students who initially were of lower categories, who currently study towards higher qualifications, such as the Bachelor's degree (R425). Gorgens-Ekermans and Brand (2012) identified the work/family interface as leading to more distress among female nurses in the Western Cape region in South Africa. This sometimes happens with nurses who were enrolled as nurses loosely known as 'staff nurse' and enrolled nursing assistants are given study leave for self-development (Zondi, 2016; Asante and Andoh-Arthur, 2015; Moshabela, Zuma and Gaede, 2016). This is an assumption that needs to be investigated further. Younger nursing students may be experiencing more stress from education, because these are mainly students who have been subjected to a different education system such as being a learner in the previously white, English medium schools or lower quantile rural schools up to matric level, and now are faced with new education system in universities, including other challenges that could be either personal and environmental. Differences based on age are shown below (Table 6.11).

Table 6.10 Differences by Age and Marital Status

		Age
Age	Pearson Correlation	1
	Sig. (2-tailed)	
	N	837
PEOPLE_CONFLICT	Pearson Correlation	.096**
	Sig. (2-tailed)	.005
	N	837
EDUCATION	Pearson Correlation	-.104**
	Sig. (2-tailed)	.003
	N	837
CLINICAL_AREA	Pearson Correlation	-.015
	Sig. (2-tailed)	.671
	N	837
FIN_TIME_CON	Pearson Correlation	.043
	Sig. (2-tailed)	.219
	N	835

C. Differences by province of study

There were significant differences based on the first three subscales (people conflict, education and clinical area), and not the fourth subscale (financial and time conflicts).

Stress from people conflict, education and clinical areas is experienced significantly differently depending on the province in which the respondent is studying.

Specific differences are that stress from people conflict is higher in Eastern Cape than in Gauteng and KwaZulu-Natal ($F(5.838) = 5.136, p < .0005$). Stress from education is experienced more in Gauteng than in the Eastern Cape and KwaZulu-Natal ($F(5.838) = 6.895, p < .0005$). Stress from the clinical area is higher in KwaZulu-Natal than in the Eastern Cape and Gauteng.

Specific differences are summarised below:

People conflict: EC > G, KZN;

Education: G > EC, KZN;

Clinical area: KZN > EC, G;

The implications of these results may be seen from different perspectives. The specific differences in the provinces, such as socio-economic considerations, number and language demographics of people in that particular province may play a large part.

Table 6.11 Differences by province of study

Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
PEOPLE_CONFLICT	EC	218	3.0138	.98077	.06643	2.8828	3.1447	1.00	5.00
	FS	1	4.3333	.	.	.	.	4.33	4.33
	G	290	2.6818	.94770	.05565	2.5723	2.7914	1.00	5.00
	KZN	333	2.6483	.96312	.05278	2.5445	2.7522	1.00	5.00
	L	1	2.3333	.	.	.	.	2.33	2.33
	WC	1	1.6667	.	.	.	.	1.67	1.67
	Total	844	2.7547	.97419	.03353	2.6889	2.8205	1.00	5.00
EDUCATION	EC	218	3.0979	.82592	.05594	2.9876	3.2081	1.17	5.00
	FS	1	2.5000	.	.	.	.	2.50	2.50
	G	290	3.4288	.87996	.05167	3.3271	3.5305	1.00	5.00
	KZN	333	3.1208	.73678	.04038	3.0414	3.2002	1.00	5.00
	L	1	4.0000	.	.	.	.	4.00	4.00
	WC	1	1.6667	.	.	.	.	1.67	1.67
	Total	844	3.2193	.82570	.02842	3.1635	3.2751	1.00	5.00
CLINICAL_AREA	EC	218	2.5349	.92740	.06281	2.4111	2.6587	1.00	5.00
	FS	1	1.2000	.	.	.	.	1.20	1.20
	G	290	2.6050	.85998	.05050	2.5056	2.7044	1.00	4.60
	KZN	333	2.8666	.84300	.04620	2.7757	2.9575	1.00	4.80
	L	1	2.4000	.	.	.	.	2.40	2.40
	WC	1	1.4000	.	.	.	.	1.40	1.40
	Total	844	2.6868	.88348	.03041	2.6271	2.7465	1.00	5.00
FIN_TIME_CON	EC	218	3.3954	1.02906	.06970	3.2580	3.5328	1.00	5.00
	FS	1	2.4000	.	.	.	.	2.40	2.40
	G	289	3.1737	.96097	.05653	3.0624	3.2850	1.00	5.00
	KZN	332	3.1998	.94623	.05193	3.0977	3.3020	1.00	5.00
	L	1	3.8000	.	.	.	.	3.80	3.80
	WC	1	3.0000	.	.	.	.	3.00	3.00
	Total	842	3.2410	.97548	.03362	3.1750	3.3070	1.00	5.00

Table 6.12 ANOVA test in between and within groups

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
PEOPLE_CONFLICT	Between Groups	23.790	5	4.758	5.136	.000
	Within Groups	776.261	838	.926		
	Total	800.051	843			
EDUCATION	Between Groups	22.709	5	4.542	6.895	.000
	Within Groups	552.028	838	.659		
	Total	574.737	843			
CLINICAL_AREA	Between Groups	21.689	5	4.338	5.713	.000
	Within Groups	636.304	838	.759		
	Total	657.993	843			
FIN_TIME_CON	Between Groups	8.147	5	1.629	1.720	.128
	Within Groups	792.118	836	.948		
	Total	800.265	841			

D. Differences by Home Province and Language

This section reports on differences measured by home province. Stress from people conflict, education and financial and time constraints is experienced significantly different depending on the home province of respondents. There were no significant differences based on clinical area. Language was not measured as it is strongly related to the province of residence. Specific differences by home province are as follows:

People conflict

Stress from people conflict is higher in the Eastern Cape compared to Free State, Gauteng, KwaZulu-Natal, Mpumalanga, Limpopo and North West. Stress is higher in North West compared to Free State; higher in North West compared to Gauteng, KwaZulu-Natal and Mpumalanga ($F(8.836) = 5.715, p < .0005$).

Education

Stress from education was higher in the Free State, Gauteng, Mpumalanga, and Northwest than in the Eastern Cape. Stress is higher in Free State compared to KwaZulu-Natal and Limpopo, as well as higher in Gauteng compared to KwaZulu-Natal. Stress from education is higher in Northwest than in Gauteng. Mpumalanga and Northwest had higher stress compared to KwaZulu-Natal; the Northwest experienced higher stress compared to Limpopo and Mpumalanga ($F(8.836) = 5.715, p < .0005$).

Financial and time conflicts

The Eastern Cape Province experienced more stress from financial and time conflicts compared to KwaZulu-Natal and Mpumalanga ($F(8.834) = 2.235, p = .023$), as described in the demographic details. The Eastern Cape Province is one of the poorest rural provinces in South Africa. Therefore, these results are to be viewed in terms of both lack of finances and time as often sometimes the students are expected to travel from the villages to the cities for study purposes.

Table 6.13 Differences by Home Province and Language

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
PEOPLE_CONFLICT	EC	241	2.9450	.98795	.06364	2.8196	3.0703	1.00	5.00
	FS	14	2.2500	.88373	.23619	1.7397	2.7603	1.00	3.67
	G	107	2.7371	.80628	.07795	2.5825	2.8916	1.33	5.00
	KZN	322	2.6358	.96918	.05401	2.5296	2.7421	1.00	5.00
	L	67	2.8567	1.02909	.12572	2.6057	3.1077	1.00	4.83
	M	64	2.5505	.92546	.11568	2.3193	2.7817	1.00	4.67
	NC	2	3.1667	1.64992	1.16667	-11.6572	17.9906	2.00	4.33
	NW	27	3.2593	1.15962	.22317	2.8005	3.7180	1.00	5.00
	WC	1	1.0000	.	.	.	.	1.00	1.00
	Total	845	2.7607	.97776	.03364	2.6947	2.8267	1.00	5.00
EDUCATION	EC	241	3.1302	.83035	.05349	3.0248	3.2355	1.17	5.00
	FS	14	3.7738	.85136	.22754	3.2822	4.2654	1.83	4.83
	G	107	3.4224	.73853	.07140	3.2809	3.5640	1.83	5.00
	KZN	322	3.1063	.75790	.04224	3.0232	3.1894	1.00	5.00
	L	67	3.2269	.90210	.11021	3.0068	3.4469	1.67	4.83
	M	64	3.4089	.94558	.11820	3.1727	3.6451	1.00	5.00
	NC	2	3.3333	1.41421	1.00000	-9.3729	16.0395	2.33	4.33
	NW	27	3.8920	.81709	.15725	3.5687	4.2152	2.00	5.00
	WC	1	4.0000	.	.	.	.	4.00	4.00
	Total	845	3.2234	.82639	.02843	3.1676	3.2792	1.00	5.00
CLINICAL_AREA	EC	241	2.5413	.93495	.06023	2.4226	2.6599	1.00	5.00
	FS	14	2.6857	.90711	.24244	2.1620	3.2095	1.20	3.80
	G	107	2.6617	.79641	.07699	2.5090	2.8143	1.00	4.40
	KZN	322	2.7826	.85203	.04748	2.6891	2.8760	1.00	4.80
	L	67	2.7552	.87858	.10734	2.5409	2.9695	1.00	4.40
	M	64	2.7031	.97002	.12125	2.4608	2.9454	1.00	4.60
	NC	2	2.4000	.28284	.20000	-.1412	4.9412	2.20	2.60

	NW	27	2.8444	.83635	.16096	2.5136	3.1753	1.00	4.40
	WC	1	2.0000	.	.	.	.	2.00	2.00
	Total	845	2.6888	.88364	.03040	2.6291	2.7485	1.00	5.00
FIN_TIME_CON	EC	240	3.4000	1.02586	.06622	3.2696	3.5304	1.00	5.00
	FS	14	3.1429	.79005	.21115	2.6867	3.5990	1.40	4.40
	G	107	3.2879	.87832	.08491	3.1195	3.4562	1.40	5.00
	KZN	321	3.1425	.94964	.05300	3.0382	3.2468	1.00	5.00
	L	67	3.2716	.96841	.11831	3.0354	3.5079	1.00	5.00
	M	64	3.0281	1.02840	.12855	2.7712	3.2850	1.40	5.00
	NC	2	2.7000	.14142	.10000	1.4294	3.9706	2.60	2.80
	NW	27	3.3926	.98525	.18961	3.0028	3.7823	1.00	5.00
	WC	1	5.0000	.	.	.	.	5.00	5.00
	Total	843	3.2450	.97509	.03358	3.1791	3.3109	1.00	5.00

Table 6.13 Differences by Home Province and Language

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
PEOPLE_CONFLICT	EC	241	2.9450	.98795	.06364	2.8196	3.0703	1.00	5.00
	FS	14	2.2500	.88373	.23619	1.7397	2.7603	1.00	3.67
	G	107	2.7371	.80628	.07795	2.5825	2.8916	1.33	5.00
	KZN	322	2.6358	.96918	.05401	2.5296	2.7421	1.00	5.00
	L	67	2.8567	1.02909	.12572	2.6057	3.1077	1.00	4.83
	M	64	2.5505	.92546	.11568	2.3193	2.7817	1.00	4.67
	NC	2	3.1667	1.64992	1.16667	-11.6572	17.9906	2.00	4.33
	NW	27	3.2593	1.15962	.22317	2.8005	3.7180	1.00	5.00
	WC	1	1.0000	.	.	.	.	1.00	1.00
	Total	845	2.7607	.97776	.03364	2.6947	2.8267	1.00	5.00
EDUCATION	EC	241	3.1302	.83035	.05349	3.0248	3.2355	1.17	5.00
	FS	14	3.7738	.85136	.22754	3.2822	4.2654	1.83	4.83
	G	107	3.4224	.73853	.07140	3.2809	3.5640	1.83	5.00
	KZN	322	3.1063	.75790	.04224	3.0232	3.1894	1.00	5.00
	L	67	3.2269	.90210	.11021	3.0068	3.4469	1.67	4.83
	M	64	3.4089	.94558	.11820	3.1727	3.6451	1.00	5.00
	NC	2	3.3333	1.41421	1.00000	-9.3729	16.0395	2.33	4.33
	NW	27	3.8920	.81709	.15725	3.5687	4.2152	2.00	5.00
	WC	1	4.0000	.	.	.	.	4.00	4.00
	Total	845	3.2234	.82639	.02843	3.1676	3.2792	1.00	5.00
CLINICAL_AREA	EC	241	2.5413	.93495	.06023	2.4226	2.6599	1.00	5.00
	FS	14	2.6857	.90711	.24244	2.1620	3.2095	1.20	3.80
	G	107	2.6617	.79641	.07699	2.5090	2.8143	1.00	4.40
	KZN	322	2.7826	.85203	.04748	2.6891	2.8760	1.00	4.80
	L	67	2.7552	.87858	.10734	2.5409	2.9695	1.00	4.40
	M	64	2.7031	.97002	.12125	2.4608	2.9454	1.00	4.60
	NC	2	2.4000	.28284	.20000	-.1412	4.9412	2.20	2.60

	NW	27	2.8444	.83635	.16096	2.5136	3.1753	1.00	4.40
	WC	1	2.0000	.	.	.	.	2.00	2.00
	Total	845	2.6888	.88364	.03040	2.6291	2.7485	1.00	5.00
FIN_TIME_CON	EC	240	3.4000	1.02586	.06622	3.2696	3.5304	1.00	5.00
	FS	14	3.1429	.79005	.21115	2.6867	3.5990	1.40	4.40
	G	107	3.2879	.87832	.08491	3.1195	3.4562	1.40	5.00
	KZN	321	3.1425	.94964	.05300	3.0382	3.2468	1.00	5.00
	L	67	3.2716	.96841	.11831	3.0354	3.5079	1.00	5.00
	M	64	3.0281	1.02840	.12855	2.7712	3.2850	1.40	5.00
	NC	2	2.7000	.14142	.10000	1.4294	3.9706	2.60	2.80
	NW	27	3.3926	.98525	.18961	3.0028	3.7823	1.00	5.00
	WC	1	5.0000	.	.	.	.	5.00	5.00
	Total	843	3.2450	.97509	.03358	3.1791	3.3109	1.00	5.00

Descriptives

Table 6.14 ANOVA Test

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
PEOPLE_CONFLICT	Between Groups	30.500	8	3.813	4.105	.000
	Within Groups	776.369	836	.929		
	Total	806.869	844			
EDUCATION	Between Groups	29.888	8	3.736	5.715	.000
	Within Groups	546.498	836	.654		
	Total	576.385	844			
CLINICAL_AREA	Between Groups	9.758	8	1.220	1.571	.130
	Within Groups	649.247	836	.777		
	Total	659.005	844			
FIN_TIME_CON	Between Groups	16.800	8	2.100	2.235	.023
	Within Groups	783.775	834	.940		
	Total	800.574	842			

E. Differences by area, religion and level of study

Respondents from rural areas experienced higher stress due to people conflict compared ($M=2.8286$; $SD=.97542$) to those from urban areas ($M=2.6416$, $SD=.96608$), $t(844) = -2.670$, $p=.008$. These results are in line with the stress identified based on province of study. The researcher cannot exactly pinpoint the exact link between stress from people conflict and the rural areas. It may be that there is lack of exposure in terms of resources and socialisation. It is possible that a full comparative study is needed to compare the differences. Stress from the clinical area is higher in respondents from the rural areas ($M=2.7329$, $SD=.85898$) compared to those from the urban areas ($M=2.6076$; $SD=.92218$), $t(844) = -1.974$, $p=.049$. Respondents from the urban areas experienced higher stress due to education ($M=3.3127$, $SD=.825540$) compared to those from the rural areas ($M=3.1750$, $SD=.82471$), $t(844) = 2.318$, $p=.021$. There seems to be a link between urban areas and or affluent provinces and stress from education. It could be that these areas are most preferred in terms of resources, and therefore more populated, as there is an influx of migrant workers from other provinces (Moshabela, Zuma and Gaede, 2016). No significant difference was observed in terms of financial and time constraints. No significant difference was observed based on religion.

Table 6.15 Differences by area, religion and level of study

Group Statistics					
	Area	N	Mean	Std. Deviation	Std. Error Mean
PEOPLE_CONFLICT	Urban	297	2.6416	.96608	.05606
	Rural	549	2.8286	.97542	.04163
EDUCATION	Urban	297	3.3127	.82554	.04790
	Rural	549	3.1750	.82471	.03520
CLINICAL_AREA	Urban	297	2.6076	.92218	.05351
	Rural	549	2.7329	.85898	.03666
FIN_TIME_CON	Urban	296	3.1966	.97681	.05678
	Rural	548	3.2711	.97279	.04156

Table 6.16 Independent Samples Test

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
PEOPLE_CONFLICT	Equal variances assumed	.002	.964	-2.670	844	.008	-.18696	.07003	-.32440	-.04951
	Equal variances not assumed			-2.678	611.971	.008	-.18696	.06982	-.32408	-.04983
EDUCATION	Equal variances assumed	.057	.811	2.318	844	.021	.13773	.05943	.02109	.25437
	Equal variances not assumed			2.317	606.420	.021	.13773	.05944	.02099	.25447
CLINICAL_AREA	Equal variances assumed	3.434	.064	-1.974	844	.049	-.12536	.06351	-.25001	-.00071
	Equal variances not assumed			-1.933	571.118	.054	-.12536	.06486	-.25276	.00204
FIN_TIME_CON	Equal variances assumed	.014	.905	-1.060	842	.290	-.07446	.07027	-.21238	.06347
	Equal variances not assumed			-1.058	602.480	.290	-.07446	.07036	-.21263	.06372

F. Difference by level of study

This section reports on stress experienced by level of study. Stress amongst people when it comes to conflict, education and clinical area is experienced significantly differently depending on the level of study. Stress resulting from financial and time constraints is reported on two levels of study. Specific differences by level of study are as follows:

People conflict

Stress experienced due to people conflict is higher in the 3rd and 4th year level of study compared to the 1st and 2nd level ($F(3.842) = 9.926, p < .0005$). It could be that the R425 programme is mainly structured in such a way that the upper levels are expected to be competent in interactive work, such as unit management, and as such need to interact with people more than the lower levels. Another factor could be that senior students are more mature, and more assertive when compared to the other levels. Unar, Hisar and Gorgulu (2012) identified that students with high level of assertiveness were subjected to more vicious verbal attacks, and consequently more psychological distress in the clinical area, when compared to those found to be less assertive.

Education

Stress experienced due to education is higher in the 3rd year level compared to the 1st and 2nd year level of study ($F(3.842) = 7.834, p < .0005$). As training progresses, there could be more expectations on the part of academic staff placed on the students, which may contribute to higher stress levels compared to

the lower levels, as well as more focused placement in specialist areas that require more experience (Moridi, Khaledi and Vallie, 2014).

Clinical area

Stress experienced due to clinical area placement is significantly higher in the 4th year of study compared to the 2nd year. A Welch test was conducted in this aspect. Results are as follows (Welch (3,449.439) =2.891, p=.035). The issue of staff shortage inherent in the nursing profession in South Africa may contribute to higher stress levels in the senior groups when compared to the junior groups, as they are more knowledgeable, and as such, can be used in the wards as manpower to cover the shortage. As alluded to earlier, the degree of assertiveness may contribute to greater stressors in the clinical area, where students may experience more verbal abuse (Unar, Hisar and Gorgulu, 2012) and humiliating experiences leading to unpleasant feelings, negative emotions, and impaired interpersonal relationships (Moridi, Khaledi and Vallie, 2014).

Financial and time constraints

Stress experienced due to financial and time constraints is significantly higher in the 3rd and 4th year level compared to the 1st and 2nd year of training (F (3.840) =8.437, p<.0005. Having adjusted to the university way of life and environment, students may have a more active social life, and consequently more financial and time challenges. Generally, nursing students have challenges with time management. Both financial and time constraints are discussed in section 6.3.

Specifics:

Personal conflict: 3^{rd} and 4^{th} > 1^{st} and 2^{nd}

Education: 3^{rd} > 1^{st} and 2^{nd}

Clinical Area: 4^{th} > 2^{nd} (Welch test)

Financial/Time: 3^{rd} and 4^{th} > 1^{st} and 2^{nd}

Tables 6.17 to 6.19 below give a visual presentation of the results as discussed in this section.

Table 6.17 Difference by level of study

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
PEOPLE_CONFLI CT	1st	266	2.5792	.99674	.06111	2.4589	2.6995	1.00	5.00
	2nd	177	2.6102	.92247	.06934	2.4733	2.7470	1.00	5.00
	3rd	231	2.9668	.94003	.06185	2.8449	3.0887	1.00	5.00
	4th	172	2.9297	.97066	.07401	2.7836	3.0757	1.17	5.00
	Total	846	2.7628	.97598	.03355	2.6969	2.8286	1.00	5.00
EDUCATION	1st	266	3.1940	.82431	.05054	3.0945	3.2936	1.00	5.00
	2nd	177	3.0203	.79910	.06006	2.9018	3.1389	1.00	5.00
	3rd	231	3.4114	.83361	.05485	3.3033	3.5195	1.50	5.00
	4th	172	3.2258	.80178	.06113	3.1051	3.3465	1.00	5.00
	Total	846	3.2235	.82698	.02843	3.1677	3.2793	1.00	5.00
CLINICAL_AREA	1st	266	2.6607	.95728	.05869	2.5451	2.7762	1.00	5.00
	2nd	177	2.5585	.81630	.06136	2.4374	2.6796	1.00	4.80
	3rd	231	2.7318	.88595	.05829	2.6170	2.8467	1.00	4.60
	4th	172	2.8035	.81405	.06207	2.6810	2.9260	1.00	4.80
	Total	846	2.6877	.88369	.03038	2.6281	2.7474	1.00	5.00
FIN_TIME_CON	1st	266	3.0697	.93464	.05731	2.9569	3.1826	1.00	5.00
	2nd	176	3.1148	.95103	.07169	2.9733	3.2563	1.00	5.00
	3rd	230	3.4070	.99989	.06593	3.2770	3.5369	1.00	5.00
	4th	172	3.4349	.95987	.07319	3.2904	3.5794	1.40	5.00
	Total	844	3.2454	.97395	.03352	3.1796	3.3112	1.00	5.00

Table 6.18 ANOVA test

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
PEOPLE_CONFLICT	Between Groups	27.493	3	9.164	9.926	.000
	Within Groups	777.398	842	.923		
	Total	804.890	845			
EDUCATION	Between Groups	15.693	3	5.231	7.834	.000
	Within Groups	562.204	842	.668		
	Total	577.897	845			
CLINICAL_AREA	Between Groups	5.906	3	1.969	2.535	.056
	Within Groups	653.968	842	.777		
	Total	659.874	845			
FIN_TIME_CON	Between Groups	23.390	3	7.797	8.437	.000
	Within Groups	776.270	840	.924		
	Total	799.660	843			

Table 6.19 Welch test of Equality Means

		Robust Tests of Equality of Means			
		Statistic ^a	df1	df2	Sig.
PEOPLE_CONFLICT	Welch	9.912	3	443.143	.000
EDUCATION	Welch	7.810	3	443.128	.000
CLINICAL_AREA	Welch	2.891	3	449.439	.035
FIN_TIME_CON	Welch	8.434	3	439.339	.000

a. Asymptotically F distributed.

6. 4 SUMMARY

This chapter presented and discussed the findings of Objectives Two and Three.

Findings were presented in the form of charts, graphs and matrix with accompanying explanation and discussion. Testing for validity and reliability of

the instrument used was presented including results for regression analysis. Chapter 7 addresses the results and explanation of Objective Four.

Chapter 7

PRESENTATION AND DISCUSSION OF RESULTS: OBJECTIVES NUMBER FOUR

7.1 INTRODUCTION

Chapter 6 gave an overview and discussion of objectives number two and three. Chapter 7 is a continuation of the presentation and discussion of results for Objective Four. The quantitative data analysis was aimed at achieving the remaining objective of the study which was to describe measures and strategies identified by students in dealing with psychological distress.

The report addresses objective number four and appropriate tables and graphs are used for presentation. A 5-point Likert scale was used to measure each item in the questionnaire with the scoring ranging from 1 'none of the time', 2 'a little of the time', 3 'some of the time', 4 'most of the time', and 5 'all of the time'.

7.2 OBJECTIVE NUMBER FOUR

This section reports on the results obtained for objective number four which, was to identify measures or strategies employed by students in dealing with psychological distress. Two scales were used to realise this objective. The Coping Self-Efficacy Scale (CSE), and the Eysenck Personality Questionnaire (EPQR) brief version scales were used. The researcher will first report on the results of the EPQR scale, which measures personality traits, thereafter reporting on the results obtaining from the CSE scale will be given.

7.2.1 REPORT ON THE EYSENCK PERSONALITY QUESTIONNAIRE (EPQR) SCALE

At first, questions number 78 and 81 of the questionnaire used were recoded, such that they all faced the same direction. Thereafter, factor analysis was applied to identify the structure of the data, and the recoded questions were dropped, as they did not load strongly onto any factor. This resulted into two factors, as shown below. These are neurotic (F1) factors consisting of questions/items 84 to 95 with loadings ranging from .552 to .675, and extrovert (F2) consisting of items 72 to 77, 79, 80, 82, and 83, with loadings ranging from .451 to .671. There were in total two subscales, i.e. neurotic (F1) and extrovert (F2). Thus, validity of the scale is evident. Below is the structure that resulted, clearly separated into neurotic and extrovert factors.

Table 7.1 Rotated Factor Matrix

Rotated Factor Matrix ^a		
	Factor	
	1	2
EPQ72 Are you a talkative person?		.451
EPQ73 Are you rather lively?		.490
EPQ74 Do you enjoy meeting new people?		.574
EPQ75 Can you usually let yourself go and enjoy yourself at a lively party?		.588
EPQ76 Do you usually take the initiative in making new friends?		.671
EPQ77 Can you easily get some life into a rather dull party?		.498
EPQ79 Do you like mixing with people?		.613
EPQ80 Do you like plenty of action and excitement around you?		.551
EPQ82 Do other people think of you as being lively?		.496
EPQ83 Can you get a party going?		.531
EPQ84 Does your mood often go up and down?	.565	
EPQ85 Do you ever feel miserable for no reason?	.655	
EPQ86 Are you an irritable person?	.552	
EPQ87 Are your feelings easily hurt?	.607	
EPQ88 Do you often feel 'fed up'?	.643	
EPQ89 Would you call yourself a nervous person?	.675	
EPQ90 Are you a worrier?	.625	
EPQ91 Would you call yourself tense or highly- strung?	.565	
EPQ92 Do you worry too long after an embarrassing experience?	.601	
EPQ93 Do you suffer from nerves?	.650	
EPQ94 Do you often feel lonely?	.633	
EPQ95 Are you troubled about your feelings?	.632	

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalisation.

a. Rotation converged in three iterations.

7.2.1.1. Reliability

Cronbach's alpha was then calculated to show reliability of both subscales. The first subscale which is neurotic factors (F1) yielded .881 on the Cronbach's alpha scale thus reliability was evident (see Table 6.23). The extrovert subscale (F2) was calculated based on items highlighted above and the Cronbach's alpha scale was .808 (see table 6.22). Thus reliability of the measure for both subscales is evident.

Table 7.2 Reliability statistics Factor 2

Extrovert

Reliability Statistics	
Cronbach's Alpha	N of Items
.808	10

Table 7.3 Reliability statistics Factor 1

Neurotic

Reliability Statistics	
Cronbach's Alpha	N of Items
.881	12

Composite subscales (Neurotic and Extrovert) were then calculated by averaging scores within each subscale using one sample statistics. The variables were then analysed. The results are as reflected in the Table 6.24 and Figure 6.25. These are Extrovert (M=2.9189, SD=.74336), and Neurotic (M=2.6335, SD=.85641).

Table 7.4 One sample statistics

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
EXTROVERT	846	2.9189	.74336	.02556
NEUROTIC	845	2.6335	.85641	.02946

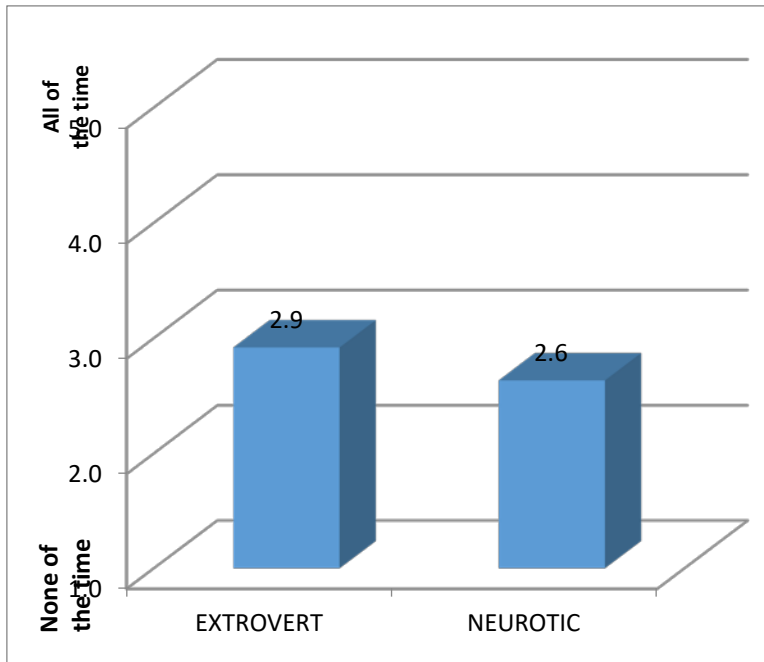


Figure 7.1 Graphical presentation of the one sample test

A one-sample t-test was applied to test whether the average score was significantly different from a central score of '3' – which is 'some of the time'. Results show that both extrovert and neurotic occur significantly 'less than some of the time', $t(854) = -3.174$, $p = .002$, and $t(844) = -12.440$, $p < .0005$, respectively. Further analysis was done, which showed that these were both significantly more than 'a little of the time' (see Table 6.26).

Table 7.5 One sample Test Value =3

One-Sample Test						
	Test Value = 3					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
EXTROVERT	-3.174	845	.002	-.08113	-.1313	-.0310
NEUROTIC	-12.440	844	.000	-.36651	-.4243	-.3087

Testing was conducted to check whether there is a relationship between the two personality traits (extrovert and neurotic) and the four areas of psychological distress. As a reminder, the four areas of psychological distress are: somatic symptoms, anxiety symptoms, depression, and social dysfunction. Pearson's correlation coefficient was used. Analysis showed a significant negative relationship between both extrovert and social dysfunction ($r=-.211$, $p<.0005$). Thus, a higher extrovert score is associated with a lower score for social dysfunction. Significant positive relationships are found between neurotic tendencies and distress in all four areas. The scores are given below:

Neurotic and somatic symptoms ($r=.305$, $p<.0005$); neurotic and anxiety symptoms ($r=.484$, $p<.0005$); neurotic and depression ($r=.382$, $p<.0005$); and neurotic and social dysfunction ($r=.262$, $p<.0005$). The table below presents the results. These results make sense in the sense that neurotic people are mainly uncomfortable being with others.

Table 7.6 Pearson Correlation test

		SOMATIC	ANXIETY	SOCIAL	DEPRESSION
EXTROVERT	Pearson Correlation	.017	.001	-.211**	.002
	Sig. (2-tailed)	.616	.976	.000	.960
	N	846	846	846	846
NEUROTIC	Pearson Correlation	.305**	.484**	.262**	.382**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	845	845	845	845

7.3 REPORT ON THE COPING SELF-EFFICACY SCALE (CSE)

Items 96-119 on the questionnaire were made up of the Coping Self-Efficacy scale. These were first explored for their structure using factor analysis. Several items were deleted because of either cross loading (loading onto more than one factor) or having a low loading ($<.4$).

Some items (CSEs 99, 110, 118, and 120) associated themselves with the 'wrong' factors as far as the original classifications of Problem (P), Emotional (E) and Social support (S) were concerned. CSE 110 was too low and needed to be excluded, drawing into question the validity of the structure. Some elements that were misaligned were then corrected and deleted, which gave the structure presented below:

Table 7.7 Rotated Factor Matrix

		Rotated Factor Matrix ^a		
		Factor		
		1	2	3
CSE97	Talk positively to yourself		.701	
CSE98	Sort out what can be changed and what cannot be changed		.598	
CSE100	Find solutions to your most difficult problems		.554	
CSE103	Make a plan of action and follow it when confronted with a problem		.455	
CSE105	Take your mind off unpleasant thoughts	.495		
CSE106	Look for something good in a negative situation	.545		
CSE107	Keep from feeling sad	.591		
CSE110	Keep yourself from feeling lonely	.521		
CSE113	Make unpleasant thoughts go away	.417		
CSE119	Stop you from being upset by unpleasant thoughts	.449		
CSE108	Make new friends			.428
CSE111	Get emotional support from community organizations or resources			.582
CSE112	Get emotional support from mentors			.727
CSE115	Get friends to help you with the things you need			.462

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalisation.

a. Rotation converged in five iterations.

7.3.1 Reliability

Based on the structure above, three subscales were identified and reliability was tested. These are problem-focused subscale (F2) consisting of items 97, 98, 100 and 103, with value loadings ranging from .455 to .701. Emotion-focused subscale (F1) consisted of items 105, 106, 107, 110, 113 and 119, with value loadings between .417 and .591. Social support subscale (F3) consisted of items 108, 111, 112, 115, loadings ranged from .428 for the lowest to .727 for the highest.

Table 7.8 Reliability statistics subscale 1
Problem focused (F2)

Reliability Statistics	
Cronbach's Alpha	N of Items
.738	4

Table 7.9 Reliability statistics subscale 2

Emotion focused (F1)

Reliability Statistics	
Cronbach's Alpha	N of Items
.762	6

Table 7.10 Reliability statistics subscale 3

Social support (F3)

Reliability Statistics

Cronbach's Alpha	N of Items
.667	4

While the reliability score for the social support subscale is lower than .7, it is not too far below the cut-off to cause major concern. The researcher and the statistician were faced with a challenge that if the deleted items were to be added back into this construct, the alpha value would be $\geq .7$ indicating reliability of the measure; however, the validity then comes into question. The researcher opted not to re-add these. The composite subscales, which are problem-focused, emotion-focused and social support, were calculated for averages of items in the subscales. Analysis of the subscales follows herewith.

Table 7.11 One sample statistics

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
PROBLEM	839	3.5236	.81863	.02826
EMOTION	839	3.2481	.81685	.02820
SOCIAL_SUPPORT	839	2.8916	.88397	.03052

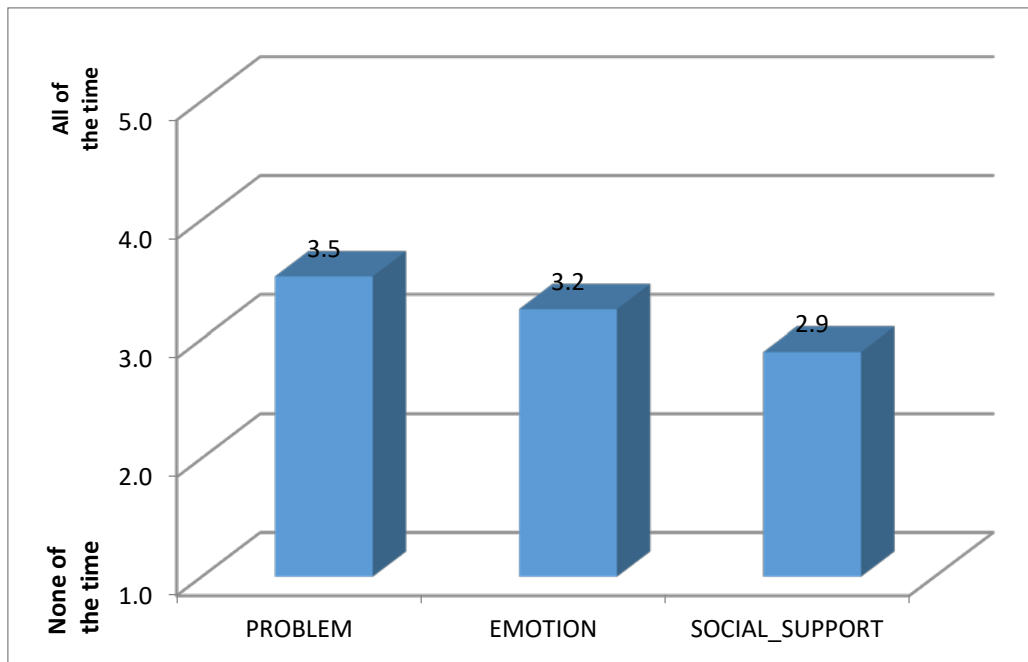


Figure 7.2 Graphical presentation of one sample test results

Table 7.12 One sample test value=3

One-Sample Test						
	Test Value = 3					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
PROBLEM	18.528	838	.000	.52364	.4682	.5791
EMOTION	8.798	838	.000	.24811	.1928	.3035
SOCIAL_SUPPORT	-3.551	838	.000	-.10836	-.1683	-.0485

A one sample t-test was conducted to measure average scores against a central score of '3' – some of the time, problem and emotion focused coping styles were found to be significantly more than 'some of the time', while social support is found significantly less than 'some of the time', where problem-focused coping style was $t(838) = 8.528, p < .0005$; emotion-focused coping style was $t(838) = 8.798, p < .0005$, and social support coping style was $t(838) = 3.551, p < .0005$.

These coping mechanisms were then analysed for relationships with personality traits and psychological distress measures, using the Pearson's correlation test. Significant negative correlations were observed, which means lower scores in the coping subscales (problem, emotion and social support) were associated with higher scores on the four areas of psychological distress. These are presented as follows:

Problem-focused coping and somatic symptoms: $r = -.106$, $p < .0005$; problem-focused and anxiety symptoms: $r = -.119$, $p < .0005$; problem-focused and depression: $r = -.232$, $p < .0005$ and problem-focused and social support: $r = -.380$, $p < .0005$.

Emotion-focused coping and somatic symptoms: $r = -.123$, $p < .0005$; emotion-focused and anxiety symptoms $r = -.156$, $p < .0005$; emotion-focused and depression: $r = -.261$, $p < .0005$ and emotion-focused and social support: $r = -.351$, $p < .0005$.

Social support and somatic symptoms: $r = -.128$, $p < .0005$; social support and anxiety symptoms $r = -.121$, $p < .0005$ and social support and social dysfunction $r = -.287$, $p < .0005$.

Table 7.13 Pearson correlation table 1

		SOMATIC	ANXIETY	DEPRESSION	SOCIAL
PROBLEM	Pearson Correlation	-.106**	-.119**	-.232**	-.380**
	Sig. (2-tailed)	.002	.001	.000	.000
	N	839	839	839	839
EMOTION	Pearson Correlation	-.123**	-.156**	-.261**	-.351**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	839	839	839	839
SOCIAL_SUPPORT	Pearson Correlation	-.128**	-.121**	-.054	-.287**
	Sig. (2-tailed)	.000	.000	.115	.000
	N	839	839	839	839

Relationships between coping mechanisms and personality traits were also explored using the same test (Pearson's correlation). The test showed that higher extrovert scores were related to higher coping skills, while higher neurotic scores were associated with lower coping skills. Extrovert and problem-focused coping: $r=.234$, $p<.0005$; extrovert and emotion-focused coping: $r=.254$, $p<.0005$ and extrovert and social support: $r=.389$, $p<.0005$. Neurotic and problem-focused coping: $r=-.173$, $p<.0005$; neurotic and emotion-focused coping $r=-.230$, $p<.0005$ and neurotic and social support, $r=-.135$, $p<.0005$

These results are in line with most study findings (Fornes-Vives et al., 2012; Reeve et al., 2013; Lesse, 2014; Passer and Smith, 2009; Orgun and Karaoz, 2014; Piyanee et al., 2013) that individuals with extrovert personality traits are more likely to possess higher coping skills than individuals who have neurotic personality traits.

Table 7.14 Pearson Correlation Table 2

		PROBLEM	EMOTION	SOCIAL_SUPPORT
EXTROVERT	Pearson Correlation	.234**	.254**	.389**
	Sig. (2-tailed)	.000	.000	.000
	N	839	839	839
NEUROTIC	Pearson Correlation	-.173**	-.230**	-.135**
	Sig. (2-tailed)	.000	.000	.000
	N	839	839	839

7.3.2 Regression analysis using Extrovert and Neurotic as independent variables (IV)

Regression analysis is a statistical technique used to calculate the values of dependent variables based on one or more variables (Polit and Beck, 2017).

A regression analysis was done to ascertain whether any of the factors (coping mechanisms and psychological traits) were significant predictors of any of the four areas of psychological distress. In this section, extrovert and neurotic were used as independent variables (IV) and Somatic as a dependent variable (DV).

Dependent Variable = SOMATIC

The tables (6.37 a, b and c) below are from regression analysis, with somatic as a dependent variable (DV), and extrovert and neurotic as an independent variables (IV). Firstly, all checks on conditions have been done and all assumptions for regression analysis are met.

The personality traits, extrovert and neurotic, account for 9.4% of the variance in somatic, $R^2 = .094$, $F(2, 842) = 43.698$, $p < .0005$). Neurotic is a significant predictor of Somatic ($\beta = .281$, $p < .0005$).

Table 7.15 Regression analysis - (Somatic as dependent variable)

Table (a)

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.307 ^a	.094	.092	.75017	1.937

a. Predictors: (Constant), NEUROTIC, EXTROVERT

b. Dependent Variable: SOMATIC

Table (b)

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49.182	2	24.591	43.698	.000 ^a
	Residual	473.843	842	.563		
	Total	523.025	844			

a. Predictors: (Constant), NEUROTIC, EXTROVERT

b. Dependent Variable: SOMATIC

Table (c)

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.422	.133		10.675	.000		
	EXTROVERT	.030	.035	.029	.874	.383	.999	1.001
	NEUROTIC	.281	.030	.306	9.329	.000	.999	1.001

a. Dependent Variable: SOMATIC

These findings appear to agree with most studies (Naidoo, Naidoo and Haripesard, 2016; Roos, 2014; Donovan, Doody and Lyons, 2013) that there is a relationship between neurotic and psychosomatic as well as musculoskeletal

complaints (Vassend et al., 2016; Kadimpati et al., 2015). Neurotic people tend to internalise stressors, and as such are viewed as displaying worse negative reaction to them (Jeronimus et al., 2016). These may manifest at a later stage as somatic complaints, such as constant headaches, stomach complaints, hypertension and fibromyalgia, chronic fatigue, sleep disorders, irritable bowel syndrome, to name but a few (Donovan, Doody and Lyons, 2013; Vassend et al., 2016; Kadimpati et al., 2015). The implications are that with these type of complaints, there could be an increase in absenteeism (Naidoo, Naidoo and Haripesard, 2016; Roos, 2014), as well as a high rate of student drop-out. Proper observations, diagnoses and systems are needed to be able to assist the students deal with these challenges.

Dependent Variable = ANXIETY

This section examines regression analysis using the same independent variables (Extrovert and Neurotic) and anxiety as a dependent variable. The tables below give a visual presentation of the regression analysis prediction.

Firstly, all checks on conditions have been done and all assumptions for regression analysis are met. The personality traits, extrovert and neurotic, account for 3.5% of the variance in anxiety, $R^2 = .235$, $F(2, 842) = 129.207$, $p < .0005$). Neurotic, once more, is a significant predictor of anxiety ($\beta = .490$, $p < .0005$).

Table 7.16 Regressions Analysis (Anxiety as dependent variable)

Table (a)

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.485 ^a	.235	.233	.75805	1.953

a. Predictors: (Constant), NEUROTIC, EXTROVERT

b. Dependent Variable: ANXIETY

Table (b)

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	148.496	2	74.248	129.207	.000 ^a
	Residual	483.848	842	.575		
	Total	632.344	844			

a. Predictors: (Constant), NEUROTIC, EXTROVERT

b. Dependent Variable: ANXIETY

Table (c)

Coefficients ^a								
		Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.158	.135		8.604	.000		
	EXTROVERT	.020	.035	.017	.576	.565	.999	1.001
	NEUROTIC	.490	.030	.485	16.075	.000	.999	1.001

a. Dependent Variable: ANXIETY

The link between neuroticism and anxiety has long been identified in the field of psychology (Goldberg, 1992; Eysenck and Eysenck, 1985). The psychological

perspective explains that people with neuroticism are more likely to experience negative emotions such as anxiety, fear, anger, depressed mood, self-consciousness, somatisation and loneliness (Jeronimus et al., 2016; Ormel et al., 2013; Donovan, Doody and Lyons 2013; Parra, 2015). According to the Diagnostic and Statistical Manual of Mental disorders (APA, 2013), there is an association between neuroticism and common mental disorders such as bipolar mood disorder, dissociative identity disorders, anxiety, eating disorders, personality disorders and schizophrenia, this is supported by other researchers (Jeronimus et al., 2016; Ormel et al., 2013), whose findings seem to collaborate the explanation given in the DSM-V by the American Psychiatric Association (2013).

Dependent Variable (DV) = SOCIAL

The tables below are from regression analysis with social dysfunction as a dependent variable (DV) and independent variables (IV) extrovert and neurotic.

Firstly, all checks on conditions have been done and all assumptions for regression analysis are met. The personality traits, extrovert and neurotic, account for 0.9% of the variance in social, $R^2 = .109$, $F(2, 842) = 51.754$, $p < .0005$). Both personality traits are significant predictors. High in extrovert personality trait is a predictor of low in social dysfunction ($\beta = -.194$, $p < .0005$). Neurotic is a significant predictor of high social dysfunction ($\beta = .214$, $p < .0005$).

Table 7.17 Regression Analyses (Social as dependent variable) Table (a)

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.331 ^a	.109	.107	.67588	1.794

a. Predictors: (Constant), NEUROTIC, EXTROVERT

b. Dependent Variable: SOCIAL

Table (b)

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.284	2	23.642	51.754	.000 ^a
	Residual	384.637	842	.457		
	Total	431.921	844			

a. Predictors: (Constant), NEUROTIC, EXTROVERT

b. Dependent Variable: SOCIAL

Table (c)

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.736	.120		22.796	.000		
	EXTROVERT	-.194	.031	-.202	-6.204	.000	.999	1.001
	NEUROTIC	.214	.027	.256	7.880	.000	.999	1.001

a. Dependent Variable: SOCIAL

As stated earlier, both neurotic and extrovert personality traits seem to be significant predictors, with high extrovert personality trait being a predictor of low social dysfunction, and high neuroticism being a predictor of high social dysfunction. People with extroversion are more likely to thrive in social interactions, and are characterised by being sociable, assertive, and generally

possess positive disposition, leading to optimism and positive frame of mind, as well as adjusted social functioning (Keyes, et al., 2015; Gramstad, Gjestad and Haver, 2013; Parra, 2015). Neurotic people are by their nature pessimistic, often with a negative view of life, lonesome, and less sociable; these factors contribute to an indirect, predicted stress reaction and increased symptoms of depression and anxiety (Gramstad, Gjestad and Haver, 2013).

Dependent Variable = DEPRESSION

The tables below are from regression analysis with depression as a dependent variable (DV) and extrovert and neurotic as independent variables (IV). Firstly, all checks on conditions were done and all assumptions for regression analysis met. The personality traits, extrovert and neurotic, account for 4.7% of the variance in depression, $R^2 = .147$, $F(2, 842) = 72.277$, $p < .0005$). Neuroticism is a significant predictor of depression ($\beta = .364$), $p < .0005$. These results are similar with the other constructs reported on that is anxiety, somatic and social dysfunction and neuroticism.

Table 7.18 Regressions Analysis (Depression as dependent variable)

Table (a)

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.383 ^a	.147	.144	.75318	1.819

a. Predictors: (Constant), NEUROTIC, EXTROVERT

b. Dependent Variable: DEPRESSION

Table (b)

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	82.003	2	41.001	72.277	.000 ^a
	Residual	477.652	842	.567		
	Total	559.655	844			

a. Predictors: (Constant), NEUROTIC, EXTROVERT

b. Dependent Variable: DEPRESSION

Table (c)

Coefficients ^a								
		Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.872	.134		6.517	.000		
	EXTROVERT	.016	.035	.015	.469	.639	.999	1.001
	NEUROTIC	.364	.030	.383	12.022	.000	.999	1.001

a. Dependent Variable: DEPRESSION

Neuroticism as significant predictor of depression has long been identified as having the strongest direct effect on depression. These results are consistent with large body of literature in this area (Kim et al., 2016; Merino, Senra and Ferreiro, 2016; Vassend et al., 2016; Kadimpati et al., 2015; Vinkers et al., 2014; Rietschel et al., 2014; Yoon, Maltby and Joormann, 2013). The identification of the link between neuroticism and depression, as well as the other components of distress, underlines the importance of developing a therapeutic intervention model tailored for students presenting with neurotic personality traits, as well as strengthening resilience for those presenting with extrovert personality traits or extroversion. While the link between depression and neuroticism is well-

documented, the mediating effects and therefore the mechanism linking the two constructs is still lacking (Yoon, Maltby and Joormann, 2013).

Dependent Variable = SOMATIC

The tables below are from regression analysis with somatic as a dependent variable (DV) and social support, problem-focused coping, and emotion-focused coping as independent variables (IV). Firstly, all checks on conditions were done and all assumptions for regression analysis were met.

The coping mechanisms: social support, problem-focused and emotion-focused, account for 2.3% of the variance in somatic, $R^2 = .023$, $F(3, 835) = 6.666$, $p < .0005$). Social support is a significant predictor. The more social support, the less somatic symptoms ($\beta = -.078$, $p < .0005$). A discussion of these results is presented below the visual presentations.

Table 7.19 Regressions Analysis (Independent variables: Social-support, emotion-focused and problem-focused)

Table (a)

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.153 ^a	.023	.020	.77874	1.957

a. Predictors: (Constant), SOCIAL_SUPPORT, PROBLEM, EMOTION

b. Dependent Variable: SOMATIC

Table (b)**ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.128	3	4.043	6.666	.000a
	Residual	506.370	835	.606		
	Total	518.498	838			

a. Predictors: (Constant), SOCIAL_SUPPORT, PROBLEM, EMOTION

b. Dependent Variable: SOMATIC

Table (c)**Coefficients^a**

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.820	.135		20.905	.000		
	PROBLEM	-.041	.041	-.042	-.999	.318	.657	1.523
	EMOTION	-.060	.042	-.062	-1.409	.159	.603	1.657
	SOCIAL_SUPPORT	-.078	.034	-.088	-2.327	.020	.815	1.226

a. Dependent Variable: SOMATIC

Social support as a significant predictor of somatic symptoms

The finding on this study imply that where there is adequate social support, there is less somatic symptoms reported or experienced. Research has revealed that support contributed to progression towards goal attainment (Powers et al., 2015). According to Powers et al. (2015), there are two kinds of support that may be required by people with neuroticism. These are autonomy support, and direct support, with the former advocated as it encompasses general well-being. Social

support has a mediating role in somatic complaints experienced as a result of neuroticism (Gini, Carli and Pozzoli, 2009). The role of social support in anxiety as well as psychological distress-related somatic complaints have been studied in a variety of psychiatric contexts. These range from trauma and Post Traumatic Stress Disorder (PTSD) (Weiss, Garvert and Cloitre, 2015); people living with severe mental illness (Sprah et al., 2017); adolescent and child psychiatry (Gullbra et al., 2016); and general psychosocial life events (Zeng et al., 2016). What is clear in all these studies is that adequate social support yielded equal positive effect resulting in decreased somatic symptoms.

Dependent Variable = ANXIETY

The tables below are from regression analysis, with anxiety as dependent variable (DV), and social support, problem-focused and emotion-focused as independent variables. Firstly, all checks on conditions have been done, and all assumptions for regression analysis are met.

Coping mechanisms, social support, problem-focused and emotion-focused, account for 2.9% of the variance in anxiety, $R^2 = .029$, $F(3, 835) = 8.302$, $p < .0005$). Emotion is a significant predictor. The greater the ability to cope emotionally, the lesser the anxiety ($\beta = -.115$, $p < .0005$). Emotional coping is defined as one's capabilities to understand, acknowledge and process emotions (Marquees et al., 2009; Uys and Middleton, 2014; Mahoney, Segal and Coolidge, 2015). Therefore, for a person to be able to use emotion-focused coping strategies, there has to be positive appraisal of one's emotions.

Table 7.20 Regressions Analysis (Independent variables: social-support, emotion-focused and problem-focused)

Table (a)

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.170 ^a	.029	.025	.85542	1.879

a. Predictors: (Constant), SOCIAL_SUPPORT, PROBLEM, EMOTION

b. Dependent Variable: ANXIETY

Table (b)

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.225	3	6.075	8.302	.000 ^a
	Residual	611.004	835	.732		
	Total	629.229	838			

a. Predictors: (Constant), SOCIAL_SUPPORT, PROBLEM, EMOTION

b. Dependent Variable: ANXIETY

Table (c)

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.199	.148		21.594	.000		
	PROBLEM	-.038	.045	-.036	-.859	.391	.657	1.523
	EMOTION	-.115	.047	-.108	-2.463	.014	.603	1.657
	SOCIAL_SUPPOR RT	-.063	.037	-.064	-1.701	.089	.815	1.226

a. Dependent Variable: ANXIETY

Emotional coping deficits have been linked to anxiety by several researchers. There is a large body of literature attesting to this (Uys and Middleton, 2014; Marques et al., 2009; Mahoney, Segal and Coolidge, 2015; Warbah et al., 2007; Gibbons, 2010; Gibbons et al., 2010; Ramkumar et al., 2011; Reeve et al., 2013; Kato, 2014).

Generally, anxious people have a negative view of self, as well as of the experiences and challenges they face (Watson et al., 2008; Takagishi, Sakata and Kitamura, 2013; Saias et al., 2014). These contribute to low self-efficacy and distorted self-image, which makes it crucial to design interventions aimed at improving emotional coping, which in turn improves self-awareness, self-image and self-efficacy. Individuals with negative coping are likely to experience anxiety and social dysfunction, whereas if positive emotion coping strategies are used, there is a greater likelihood of increased self-efficacy, optimism, and resilience being reported (Heinen, Bullings and Kocalevent, 2017).

Dependent Variable = SOCIAL

The tables below are from regression analysis with social dysfunction as dependent variable (DV) and the mechanisms or subscales of the coping self-efficacy scale as independent variables (IV). These are social support, problem focused coping, and emotion-focused coping. Firstly, all checks on conditions have been done and all assumptions for regression analysis are met.

Coping mechanisms, social support, problem-focused and emotion-focused account for 8.7% of the variance in social dysfunction, $R^2 = .187$, $F(3, 835) = 64.160$, $p < .0005$). All three coping mechanisms are significant predictors. The less coping in these three areas, the greater the social dysfunction (see table 6.43 a, b and c). The results include: problem-focused ($\beta = -.217$, $p < .0005$), emotion-focused ($\beta = -.128$, $p < .0005$), social support ($\beta = -.118$, $p < .0005$).

Table 7.21 Regressions Analysis (Independent variables: social support, emotion-focused and problem-focused)

Table (a)

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.433 ^a	.187	.184	.64666	1.785

a. Predictors: (Constant), SOCIAL_SUPPORT, PROBLEM, EMOTION

b. Dependent Variable: SOCIAL

Table (b)

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	80.488	3	26.829	64.160	.000 ^a
	Residual	349.167	835	.418		
	Total	429.655	838			

a. Predictors: (Constant), SOCIAL_SUPPORT, PROBLEM, EMOTION

b. Dependent Variable: SOCIAL

Table (c)

Coefficients ^a								
Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.257	.112		38.011	.000		
	PROBLEM	-.217	.034	-.248	-6.441	.000	.657	1.523
	EMOTION	-.128	.035	-.146	-3.635	.000	.603	1.657
	SOCIAL_SUPPORT T	-.118	.028	-.146	-4.234	.000	.815	1.226

a. Dependent Variable: SOCIAL

When there is limited coping in the three areas of coping mechanisms, then there is increased likelihood of social dysfunction. Social dysfunction is an impairment in social functioning relevant the areas of living, loving and occupational functioning. This includes impairment in communication, control of emotions and affective functioning and poor social interactive skills, leading to isolation (Waters et al., 2011; Uys and Middleton, 2014; Samame, Matino and Strejilevich, 2012). Positive coping mechanisms are necessary so as to be able to deal effectively with the challenges of daily living, such as described above. This constitutes social cognition (Samame, Mation and Strejilevich, 2012; Waters et al., 2011).

Dependent Variable = DEPRESSION

Regression analysis with depression as a dependent variable (DV) and social support, emotion-focused and problem-focused as independent variables (IV) was done. Firstly, all checks on conditions have been done and all assumptions for regression analysis are met.

Coping mechanisms, social support, problem-focused and emotion-focused, account for 8.3% of the variance in depression, $R^2 = .083$, $F(3, 835) = 25.191$, $p < .0005$). All three coping mechanisms are significant predictors. Low coping in problem- and emotion-focused areas is a predictor of high depression: problem-focused ($\beta = -.131$, $p < .0005$), and emotion-focused ($\beta = -.217$, $p < .0005$). High social support predicts high depression ($\beta = .073$, $p < .0005$). The tables below give a visual presentation of the findings.

Table 7.22 Regressions Analysis (Independent variables: social support, emotion-focused and problem-focused)

Table (a)

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.288 ^a	.083	.080	.78201	1.824

a. Predictors: (Constant), SOCIAL_SUPPORT, PROBLEM, EMOTION

b. Dependent Variable: DEPRESSION

Table (b)

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.215	3	15.405	25.191	.000 ^a
	Residual	510.638	835	.612		
	Total	556.854	838			

a. Predictors: (Constant), SOCIAL_SUPPORT, PROBLEM, EMOTION

b. Dependent Variable: DEPRESSION

Table (c)

Coefficients ^a								
		Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.838	.135		20.955	.000		
	PROBLEM	-.131	.041	-.131	-3.209	.001	.657	1.523
	EMOTION	-.217	.043	-.218	-5.106	.000	.603	1.657
	SOCIAL_SUPPORT T	.073	.034	.079	2.151	.032	.815	1.226

a. Dependent Variable: DEPRESSION

Coping as a construct is discussed in Chapter 3 (section 3.5) as a process to master environmental stressors and challenges (Uys and Middleton, 2014). This includes coping mechanisms and strategies used that are aimed at mastering

stressors such as the ones being measured in this study. These are emotion coping, problem coping, and social support. In this section, all three of these mechanisms are significant predictors of depression. Low coping in emotion and problem-focused areas contributes not only in terms of high depression, but also to social dysfunction, as well as anxiety in some instances. Anxiety on its own has been identified as being the strongest predictor of depression (Gay et al., 2017; Mahoney, Segal and Coolidge, 2015), such that it is common for people to be diagnosed with both conditions. This study has displayed the link between the constructs under investigations either directly or indirectly. The results mainly support various studies in the context of psychological distress and its manifestations which may contribute to depression, anxiety, and social dysfunction (Magidson et al., 2016; Kneisl and Trigoboff, 2009; Hulbert-Williams et al., 2013; Papazisis et al., 2008; Mostafa et al., 2011; Watson et al., 2008; Pitt et al., 2012). What is of importance is the development and identification of guidelines and intervention processes as a measure of support, taking into context the various influencing factors such as socio-cultural background and demographic details, that may impact on management of psychological distress.

Of interest in these findings is the notion of high social support being a significant predictor for high (severe) depression. While various studies have sought to highlight the link between the two, it has been most likely the positive influence social support has on depression (Weiss, Garvert and Cloitre, 2015; Sprah et al., 2017; Gullbra et al., 2016). This researcher could not identify any study examining high social support as a significant predictor for high (severe) depression. This could constitute a new area for research.

Overall, the results of this study has highlighted the importance of having a sensible understanding of the interrelatedness between the social, psychological and physical dimensions in caring for individuals with psychological distress (Fortin et al., 2007).

7.4 SUMMARY

This chapter presented and discussed the findings of the demographic profiles of the study. Findings for Objective One, which was to assess the prevalence of psychological distress in undergraduate nursing students were presented in the form of charts, graphs and matrix with accompanying explanation and discussion. Testing for validity and reliability of the instrument used was presented including results for regression analysis. Chapter 8 presents the model developed to manage psychological distress.

CHAPTER 8

DEVELOPMENT OF A MODEL FOR MANAGING PSYCHOLOGICAL DISTRESS IN UNDERGRADUATE NURSING STUDENTS

8.1. Introduction

Chapter 5, 6 and 7 presented and discussed findings and the implications thereof in relation to the objectives of the study. The aim of this study was to develop a model for managing psychological distress in undergraduate nursing students in South Africa. The development of the model has been attained through the information gained from the previous chapters. As described in Chapter 3, model development will follow the steps as described in Chinn and Kramer (2011). Therefore, the headings used for description will be as described by Chinn and Kramer's model development. These will be described briefly in this chapter, specifically to address the context of this study.

8.2. An overview of the model for Managing Psychological Distress

This model serves as a framework for the management of psychological distress in undergraduate nursing student, thus promoting the mental health of the student nurses. This will be achieved through engaging with the nursing students by cultivating positive self-awareness resulting in increased positive coping skills. The model will help the student attain the ability to maintain positive self-concept in relation to the five identified areas of being, viz. psychological, emotional, social, spiritual, and physical being. The attainment and maintenance of a positive

self-concept increases positive thinking, which leads to positive health behaviour, and in turn contributes to the concept of wholeness or wholism as described in Chapter 2 (Theoretical Framework).

Through the process of managing psychological distress, the mental well-being of nursing students is promoted. This mental well-being promotion leads to self-empowerment on the part of the student, as they are able to summon both intrinsic and extrinsic environmental resources in dealing with threatening situations regarding their mental health as they journey towards self-discovery.

Figure 7.1 gives a summarised visual presentation of the course of development of this model based on the previous chapters.

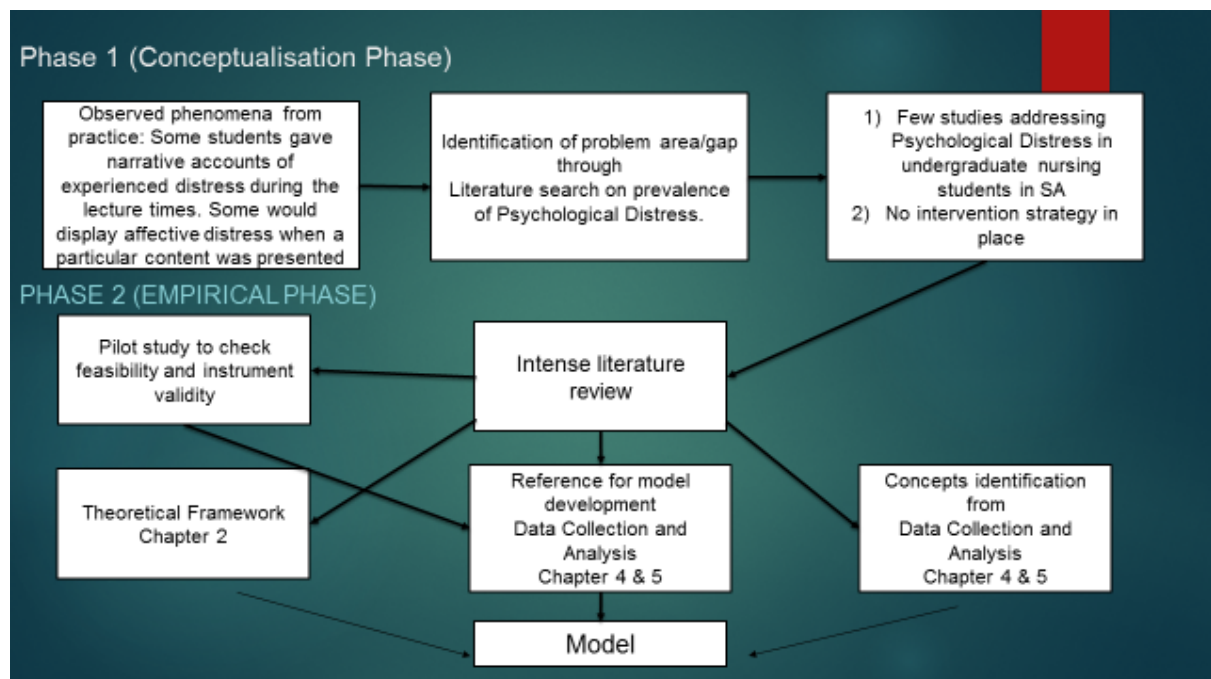


Fig. 8.1 Visual presentation of development stages

8.3 The structure of the model

According to Chinn and Kramer (2015) the development of a model should be discussed using the concepts below. For clarification, the developed model does not have to have the same headings as the concepts mentioned below, but it must reflect the concepts applicable to the specified model. These are:

- I. The purpose
- II. Basic assumptions
- III. The context
- IV. Theoretical definitions of concepts
- V. Relational statements
- VI. Description of structure
- VII. Guidelines for operation
- VIII. Evaluation of the model

The Model for Managing Psychological Distress in undergraduate nursing students is described on the following page followed by explanation and description, based on the components as highlighted in the section above.

Model For Managing Psychological Distress

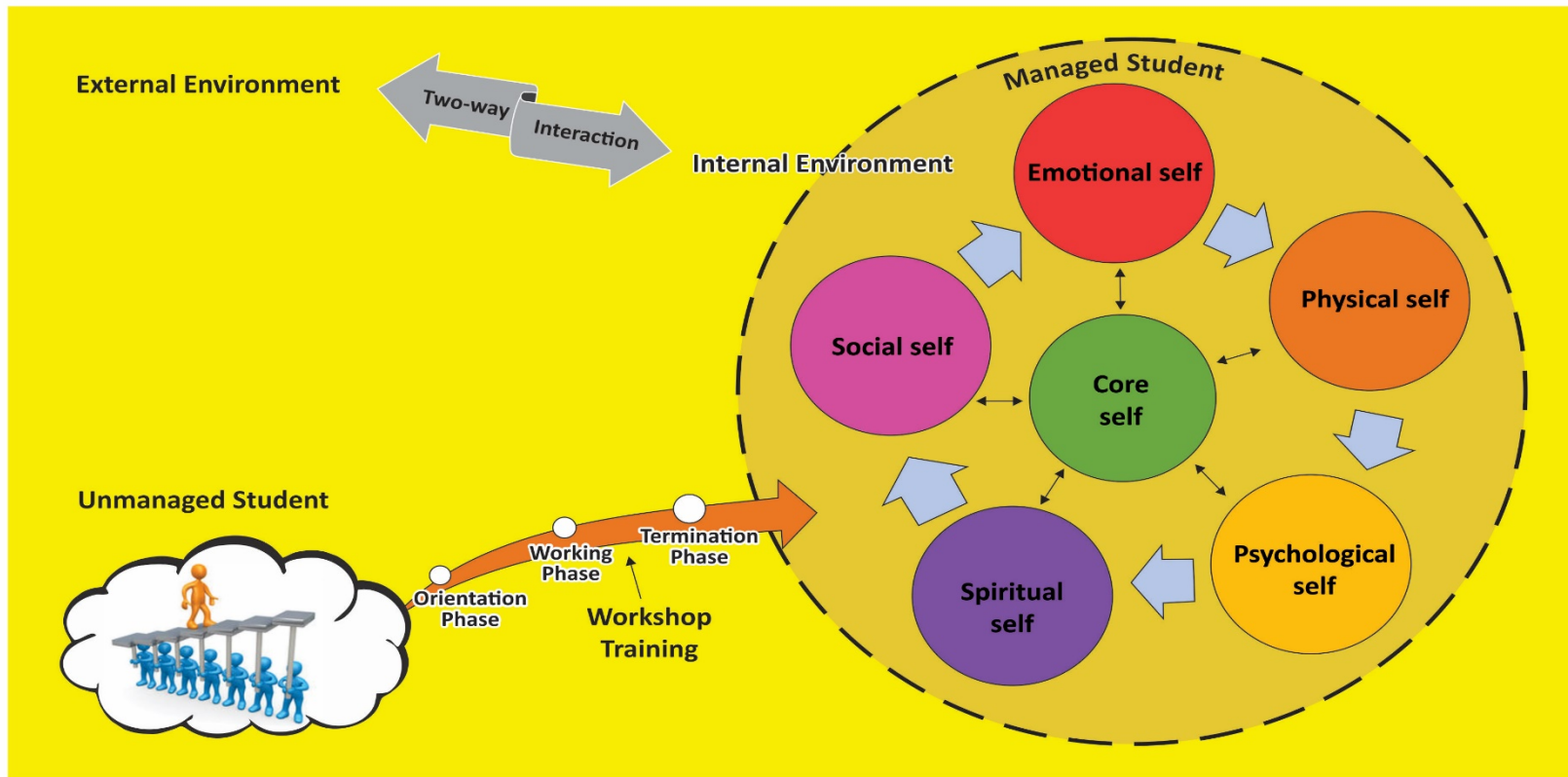


Figure 8.2 A Model for Managing Psychological Distress in Undergraduate Nursing Students

8.3.1 The purpose of the Model for Managing Psychological Distress

The purpose of this model is to serve as a framework for management of psychological distress in undergraduate nursing students in South Africa. The model supports mental well-being promotion through management of psychological distress and factors that may have an impact on how a student appraise a threatening situation or stressor. The process of self-management and the experiences of psychological distress in both areas are used to create and nurture self-awareness, so as to assist students in accomplishing their highest potential towards wholeness in all facets of being, thus becoming an integrated whole.

8.3.2. Basic assumptions of this model

Literature describes assumptions as the basic principles or statements that are viewed as being true without being verified (Chinn and Kramer 2011; Grove, Beck and Burns, 2015; Polit and Beck, 2017). In this model, the assumptions are drawn from the theoretical framework discussed in Chapter 2 as well as the results of this study, and are based on the belief that nursing students are psychological, physical, spiritual, emotional, and social beings, who are in constant interaction with their environment (see Figure 2). It is in this interaction that nursing students constantly search for meaning. As social beings socialisation has already taken place from infancy to adulthood (Vgotsky, 1978; Bandura, 1989) through norms, values and descriptions of who they are according to society (Bandura, 1989). In their constant search for core self or self-identity (Erikson, 1982) they may be identifying with the societal descriptions of who they are or should be. These

descriptions will lead them to the search for core self, which will in turn result in self-awareness. Self-awareness will lead to self-realisation of ones' potential strengths and weaknesses, including self-knowledge, and self-understanding. The student then moves from a position of the unaware self to self-awareness, thereby creating a strong interaction not only with their immediate environment, but with the intrinsic environment leading to a whole integrated being. Therefore, the central focus of the Model for Managing Psychological Distress is the core self. The diagramme below gives a summarised visual presentation of this discussion.



Figure 8.3 The core self

Obtaining the state of wholesomeness leads to empowerment and a sense of acceptance and self-determination, further leading to a positive interaction with the environment. During the orientation phase, the student becomes aware of the thin descriptions of who they are, based on the societal ideals, and seeks to deconstruct these. During the working phase, the student becomes aware of their own intrinsic strengths, potentials and opportunities.

This model serves as an enabling 'environment' in achieving a sense of wholesomeness, which leads to recognition of positive coping strategies that can be utilised, in that way promoting good mental health as an important part of whole being. Mental health promotion occurs through recognition of self as an integrated being. As the student regains a sense of awareness, a state of balance within the various parts of being (social, psychological, emotional, physical and spiritual) becomes evident. Through the sense of self awareness, the student is empowered to interact freely with the environment and to take charge of who they are without pre-conceived descriptions.

Therefore, the sense of self-awareness leads to self-realisation, which in turn leads to more active and positive communication patterns and assertiveness. Positive communication patterns and assertiveness become tools in the nurturing and development of students within their intrinsic, immediate and external environments.

8.3.3. The context

The context of this study is mental health promotion taking into consideration the five components of being. As highlighted in the section on basic assumptions, these components are physical, social, psychological, emotional, and spiritual forms of being. The aim is the attainment of an integrated state of wholeness, both in the clinical and theoretical learning areas. Havenga, Poggenpoel and Myburgh (2014) describe various types of theories in nursing. These are grand theories, middle theories, and situation-specific theories under which this model falls, referring to a theory that focuses on specific populations and has limited scope (Havenga, Poggenpoel and Myburgh, 2014). The model developed in this research study is classified as a situation-specific theory within a specific social and historical context, and focuses on the field of mental health nursing practice. The focus is the mental well-being of nursing students in managing psychological distress within their training environment.

8.3.4 Theoretical definitions of concepts

The central concept is defined first and related concepts thereafter are defined in such a way that description show how they fit in together with the central concept.

8.3.4.1 Description of the central concepts: Management of psychological distress by facilitating positive self-concept through empowerment measures leading to a process of self-determination and transformation. The central concept of this model is the core self. The core self is the innermost part of being, including qualities and personality traits that form the basis of who a human being

is, and does not change over time (Papalia, Duskin-Feldman and Martorell, 2012; genderwholeness, 2016). Management of psychological distress in nursing students is a process of empowering students to not only recognise and obtain positive self-concept, self-awareness and self-identity but obtaining self-efficacy as well, which will help them foster positive social interactions within their respective environments. Understanding who they are helps in promoting good mental well-being, further leading to effective emotional coping abilities. The effective coping abilities make it possible for the students to deal with and solve social dysfunction and conflict situations in both internal and external environments. The ability to possess a positive self-concept and being able to manage conflict situations contributes to a sense of empowerment, self-determination and transformation. The concept of psychological distress has been exhaustively described in Chapter 3.

8.3. 4. 2 Definition of related concepts

Self-concept is the understanding and knowledge of self-based on beliefs the persons hold about themselves and the responses of others around them (Merriam-Webster Online Dictionary). Self-concept is a multi-dimensional construct (Cao, Liu, Tian and Guo, 2013) related to a variety of factors such as socialisation, personality, self-perception, and behaviours, that are consistent with each other (Swartz et al., 2013; Cao, Liu, Tian and Guo, 2013). The self-concept or sense of self is developed from childhood through interactions with people (social) and the environment and as the child grows into an adult the core self-beliefs are still based on these interactions (Uys and Middleton, 2014). One term that is closely related to self-concept is **self-esteem**; both reflective

processes (Cao, Liu, Tian and Guo, 2013). Self-esteem consists of a subjective view of the self, which could be either high/low, positive/negative based on self-evaluation (Goodman and Ley, 2012; Van Vuren, 2013; Uys and Middleton, 2014). High self-esteem denotes positive view of self-leading to self-acceptance, general positivity and optimism whereas low self-esteem denotes negative views of self, pessimism, excessive worrying about other's views. The notion of cultivating positive self-concept therefore comes in the event where the self-knowledge and self-perception is somewhat distorted with inconsistencies based on self-evaluation and socialisation.

Self-identity is the individual's ability to recognise one's qualities and potential in relation to the social context (Goodman and Ley, 2012; Van Vuren, 2013).

Self-awareness is a process of introspection that enables one to possess self-knowledge in relation to one's character, feelings and motives (Goodman and Ley, 2012; Van Vuren, 2013).

Self-efficacy: Bandura (1977, 1989) defines self-efficacy as one's ability to recognise one's capabilities to complete set tasks successfully (see section 3.6). It is a belief that one can or is able and it is through this belief that one views threatening situations, therefore self-efficacy is critical in determining behaviour, thoughts and environmental appraisal (Swartz et al., 2013; Goodman and Ley, 2012; Van Vuren, 2013; Uys and Middleton, 2014).

Empowerment and transformation: the online Journal of Extension (JOE, 2016) defines empowerment as a multi-dimensional, social process aimed at assisting people gain control of their own lives, through increasing autonomy and **self-determination**. It does not only help people gain self-determination and

autonomy, but self-awareness, as well leading to positive self-concept (Turner and Masch, 2015). The Webster Merriam online dictionary (accessed 10.11.2016) on the other hand defines transformation as a process of dramatic change in form or appearance. In the context of this study, empowerment refers to equipping students with knowledge and skills (Janse Van Rensburg, Poggenpoel and Myburgh, 2012), which will help them cope with challenges of training leading to improved mental health well-being.

8.3.4.3. Relational statements between central and co- concepts

The nurse training programme (R425) in South Africa is structured in such a way that nursing students are allocated specific periods of work in the respective theoretical nursing areas, also known as 'being on block', as well as being allocated in various hospitals, clinics and health institutions for the clinical learning component of the course. This is in line with the fulfilment of the South African Nursing Council (SANC) requirements and stipulations as the regulating body of nurse training.

Literature including results of this current study has identified evidence of psychological distress relating to various challenges facing students in different times during the course of training. In this study, the most identified area of psychological distress was the area of social dysfunction followed by emotional distress, as seen through anxiety, with somatic complaints being the third area. Some of the stressful areas associated with psychological distress in this study are interpersonal conflict, and education.

Those students presenting with the neurotic personality type presented with greater challenges in terms of emotional coping with stressors, resulting in high

social dysfunction and a need for social support. It is in this period that the nursing students need to have a better understanding of self, which will help them to better manage conflict situations leading to better interaction with the environment.

The agent who is a mental health specialist facilitates the process of positive self-awareness by helping the nursing students obtain self-identity (core self), and being able to identify their own strengths and weaknesses leading to the ability of knowing when to seek help. The process of facilitation takes place during the three phases of this interaction, as described in section 7.3.2. The journey from orientation to termination phase helps the student discover their self-identity and forms an essential aspect of mental well-being as they are able to realise their potential.

These are the relational statements and basic assumptions as identified in section 1.8.1

- Nursing students are spiritual beings who function in an integrated bio-psychosocial manner to achieve their quest for wholeness, therefore they are in need of mental health intervention to help them attain the state of wholeness.
- Nursing students interact with their internal and external environment in a holistic manner, which requires therapeutic partnering with the environment.
- As spiritual, mental, physical, social and emotional beings, fulfilment of personal wholeness contributes to the seeking of wholeness for others,

namely their clients and/or patients, resulting in rendering effective nursing care in totality.

- The interaction between the students' levels of self-awareness and level of motivation, which constitutes the internal environment with the external environment, may contribute to and/or cause some level of psychological distress, more so if the principles of self-compassion, self-care and self-healing are not observed.
- As the students' journey of personal and professional growth continues, there is an impact on the health of the individuals within the community, which gives rise to a transformational kind of healthcare leadership.
- The restoration, promotion and maintenance of the students' sense of well-being requires effective mobilisation of all resources within the theoretical (classroom) and clinical (work integrated learning) environment. This contributes to the attainment of optimal wellness.
- By virtue of their age, the nursing students seek self-awareness and self-development and the realisation of self as a sacred, infinite being helps in broadening self-awareness and self-acceptance, which comes with practicing self-compassion as well.

8. 4. Description of the structure of the model

The sections below explain the different parts of the model and how these parts link together. The model is presented in Figure 8.2.

8.4.1 Description of the background structure

The yellow background of the model symbolises the external environment. This refers both to the multicultural training environment incorporating both the clinical and theoretical environment, as well as to society at large. The rectangle shape of the external environment symbolises the structure, order rationality, support and the foundational construction blocks upon which other structures are based. The round shape of the 'self' denotes the sacred, infinite nature of energy as an eternal whole, within which the students as individuals function (Thornton, 2005; Alligood, 2014). It denotes the wholesomeness of being and the intuitive nature of human beings, in this case, the students and other human beings with whom they interact as biopsychosocial, emotional, and spiritual beings (Rogers, 1992; Thornton, 2005; Shiffiona and Poggenpoel, 2014). Circles are sometimes referred to as nurturing protective boundaries and represent life and life cycles (Elliot and Maier, 2014). The circles are demarcated by short, black, incomplete solid lines that denote the intrinsic environment, which is made up of the core self and the five facets of being.

The grey arrow ribbon pointing in two directions indicates the connection and interactions between the intrinsic and the external environment. It suggests the bi-directional social interaction between the person and the environment around them, a concept referred to as reciprocal determinism by Bandura (1989). The two-way arrow is presented below, refer to Figure 8.2 in this chapter as well.

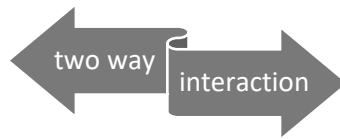


Figure 8.4 Two-way interaction

8.4.2 Socio-cultural background of the students

When the nursing students are registered for nurse training, they enter the programme with learning that took place through socialisation. Socialisation is the process whereby human beings develop awareness of norms, values, precepts, skills and habits shared by other members of the family, and the society in which they live (Papalia and Feldman, 2012; Giddens, 2011). According to social cognitive theory (Bandura, 1989) as well as socio-cultural theory (Vygotsky, 1978), cognitive and cultural processes are always at work as from infancy, where human beings observe, model and learn from each other. Both theorists viewed cognitive growth and development as being collaborative processes, which make people learn through social interaction (socialisation).

Socialisation does have a carry-over effect on self-identity of the students and the way they interact with their environment. Based on social interactions while growing up, the students may deal differently with given challenges.



Figure 8.5 socio-cultural background

On the left-hand side of the model depicted above (Fig. 8.2), is an illustration of a cloud, within which appear human figures, carrying a figurine. The figurine represents the student, the other human figures represent the people in the community, and the cloud represents the socio-cultural environment where the student grew up and was socialised, respectively. The cloud symbolises nurturing, guidance, source of life, and a period of transition and transformation, in the shape of a cocoon. The grey and blue colours of the figurines, on the other hand, speak to the contrasting meanings or diverse views concerning socialisation and the socio-cultural environment in which the student lives. Depending on the context, the socio-economic and cultural factors, and on the level of socialisation, some students may go through life with a negative view of who they are, referred to as thin descriptions. The thick whitish-grey cloud refers to various psychological patterns of socialisation, values, norms upon which the student as a child was exposed to and the influence of these in their life.

8.4.3 Journey towards personal growth and wholeness

As the students are ushered into the journey of life, towards personal and professional growth, they possess the psycho-social and cultural factors as a frame of reference in life. This is based on their socialisation background. In the model, this is represented by the thin end of the orange upward progressive arrow (Figure 8.2). The thin side represents the thinner worldview of the self as perceived by an unmanaged student.

The upward progressing arrow also represents the process of deconstructing negative descriptions of self that begins in the first phase of intervention. The process of intervention consists of a series of workshops divided into phases. These are the orientation phase, working phase, and the termination phase. The arrow is orange in colour. The significance of the orange colour is shelter in tough moments, positive attitude and optimism, as well as moving forward, onward and upward (Elliot and Maier, 2014). The colour brings about a new perspective, independence, motivation and self-confidence. The solid fill of the arrow symbolises grounding, wholeness, a process of completeness. The direction of the arrow as it becomes wider symbolises holistic growth, enlightenment, the awareness of being the one within the context of the whole, becoming wider as the sense of consciousness of nature from the core expands (Elliot and Maier, 2014; Shiffiona and Poggenpoel, 2014). As the journey to wholeness through facilitation continues, the arrow becomes broader and wider denoting a process of empowerment, transformation and receptiveness. Below is a diagramme of the upward progressive arrow:

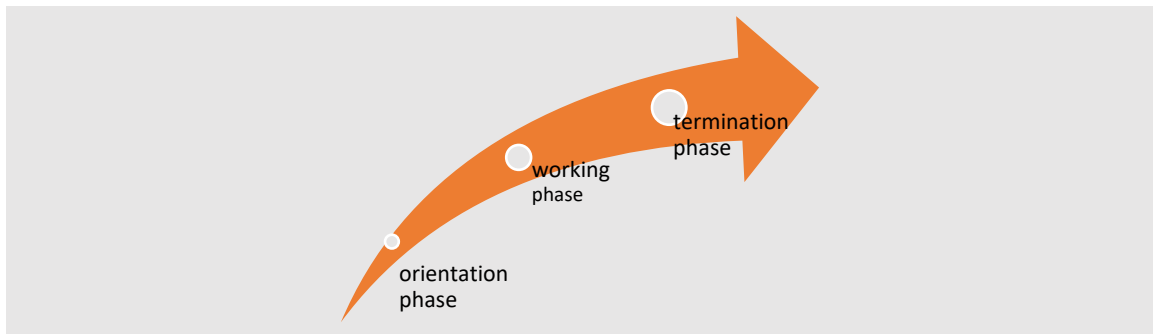


Figure 8.6 The upward progressive arrow

8.4.4 Multi-dimensional facets of self

As the process of facilitation continues, it gives rise to a stable core self or self-concept, which is evident through the richer and broader dimensions of self as symbolised by the circles illustration. The self-concept is represented by the centre circle in the illustration. While each dimension of self (each independent circle) manifests on its own, it remains inseparable and almost similar in structure with the other circles thereby being interrelated to the whole. There are no distinct parts in terms of shape, and if there could be one part that falls off, the whole structure ceases to be the whole, where the circles surrounding the centre circle represent each dimension of self. The dimensions are illustrated in different colours in the model, and each shall be explained briefly here. The colours used in this model and significance thereof are interpreted using the psychological meaning described in colour psychology (Elliot and Maier, 2014).

- Self-concept is illustrated in green, which signifies depth and stability.
The colour green is considered to be of benefit for the mind and body.
The core self refers to the part of self that is all-encompassing.
- The spiritual self is purple in colour. Purple signifies power, mobility, spirituality and ambition.
- Physical self is illustrated in orange. This colour is associated with social communication, optimism, self-confidence, joy, sunshine, encouragement, motivation, determination and is found to enhance open communication.
- Emotional self is highlighted in red. The colour red is said to be the colour of courage, energy, power, and strength.
- Social self is highlighted in pink. This colour is associated with optimism, calmness, nurturing, and innocence.
- Psychological self is illustrated in gold. The colour is associated with stability, thoughtfulness, self-esteem, sensibility, mental clarity, and intelligence.

The section below identifies and discusses the guidelines to be used in operationalisation of the model. The guidelines are separated into three phases, with accompanying objectives to be achieved for each phase. Included as well is the strategy and action to be utilised in order to meet each objective.

8.4.5 Guidelines to operationalisation

The process of facilitating management of psychological distress involves three phases, according to Dickoff, James and Wiedenbach (1968). These are pre-workout or orientation phase, working phase and termination phase. The guidelines are highlighted below using these phases.

The orientation phase

Guideline 1. Creation of a non-threatening, therapeutic environment that will encourage verbalisation of thoughts, emotions and feelings by the student.

Objective: Facilitate interaction, building of a trusting relationship and promoting of group cohesion.

Strategy and action

The facilitator, being a mental health specialist, acts as an agent to foster a therapeutic relationship with the students. Prior to the commencement of the orientation or pre-workout phase, the facilitator should embark on self-preparation. This include recognising own belief system, values and emotions and suspending these so as to work in an objective way. The meeting or group norms should be discussed in this phase, including identifying meeting times, dates and venues to be used. Depending on the size of the group of students being facilitated, it may be ideal to divide them into sub-groups, which could be homogeneous or heterogeneous in terms of gender, age, and/or need. Ideally there should not be more than 10 members in the group so as to create a sense of balance between interaction and sharing. The facilitator will collaborate with student health services so as to timeously refer identified students, who are

deemed to be at risk of morbidity. Invisible boundaries, either real or imagined, are deconstructed by demonstrating acceptance and empathy towards the students leading to building of trust. The establishment of trust and a therapeutic environment leads to identification and or exploration of distress perceived and experienced by nursing students in the clinical and theoretical learning areas. It is in this phase that the facilitator fully engages with the students and encourages sharing of and discussion of narrative experiences of growing up. Interaction between groups is encouraged. On the other hand, the student may initially show a level of engagement or choose not to engage in the process, therefore they need to be given a choice regarding self-expression, whether verbal or non-verbal, in the form of reflective diaries and or art or drawings.

The working phase

Guideline 2. Management of psychological distress through developing positive self-concept, self-awareness, and self-knowledge.

Objectives

- encouraging and fostering participation and interaction leading to a sense of empowerment and transformation;
- encouraging students to recognise their personal strengths and reflect on these through the use of reflective journals resulting in enhanced self-knowledge and image; and
- encouraging self-disclosure and provision of a chance to compare one's perception of self with that of how others perceive them.

Strategies and actions

The working phase focuses on the management of psychological distress through cultivating a positive self-concept. The facilitation of management of psychological distress, which could be in a form of mini-interactive workshops, case-based scenarios and roleplay can be structured as follows:

Workshop 1-Positive self-concept

- Increasing sense of self-awareness leading to increased self-efficacy and positive coping strategies. This will be done by conducting small group activities and exercises in human development and development of self-concept including the Johari window.
- Increasing self-knowledge and understanding of own strengths and weaknesses by focusing on various activities that build self-identity.
- Increase positive thinking (self-talk) and balance leading to positive health behaviour by facilitating activities focused on changing a failure identity (thin description of self) through practising rational self-analysis and awareness.

Workshop 2. Assertiveness and communication skills training

The overall aim in this workshop is encouraging assertiveness and good communication skills (relational and social) within the groups and individuals, as well as empathic understanding of self and self-experiences, further facilitating empathic understanding of others. Exploration of both negative and positive emotions and their effect on general well-being is done through structured activities and exercises. Facilitating communication by identifying intrinsic and extrinsic environmental factors that may help or hinder the students' movement

towards true self. The facilitator helps the student understand that both the extrinsic and intrinsic environmental factors are within the physical, emotional, social, psychological and spiritual spheres of being.

Workshop 3 Stress management techniques and developing a sense of calmness

This workshop is aimed at facilitating good stress management techniques by creating a sense of balance in the five facets of being (psychological, emotional, social, spiritual and physical). Physically, maintenance of physiological needs, including awareness of nutritional needs, rest, sleep, and exercise is encouraged. Emotional needs and challenges are taught, such as expressing and dealing with negative emotions and feelings are identified and the use of alternative practices such as cognitive behaviour techniques to deal with negative emotions. Cognitive behaviour techniques can be used in the psychological realm as well to shift the negative thinking patterns that contribute to emotional challenges, including critical appraisal of situations viewed to be overwhelming. Students are encouraged to be aware and use spiritual support to facilitate positive self-awareness, strong values and ultimately positive mental health. An example of this would be incorporating activities and practices such as prayer, and attending prayer meetings. The social dimension involves interactions and social support that the nursing student may obtain from others, including family, peers, and community, including being able to talk to trusted people (Janse Van Rensburg, Poggenpoel, Myburgh and Czabo, 2014). Developing a sense of calmness includes encouraging the use of relaxation techniques, meditation, and guided visualisation.

Termination phase

Guideline 3. Facilitating recognition of the process of self-empowerment and transformation.

Objective 3. The aim of this phase is finalising the process of interaction and resolution, as well as individual and group reflection on the whole process.

The management of psychological distress is explored in the context of emotional, psychological, social, spiritual, and physical empowerment and transformation within the environmental interaction. This is done through discussion by the facilitator with the students on a personal level, as well as in the sub-groups. The students are encouraged to do self-reflection by using reflective diaries. The sense of empowerment in the five spheres/facets transcends from the core self (inner person) through interpersonal, relational, social, and community relationships. It is in this phase that a reflection on the process of managing psychological distress is undertaken, the sense of self-empowerment and transformation is explored, and the journey to self-discovery begins.

In order for empowerment and transformation to be made manifest, there has to be a recognised positive change in the dimensions described. In the psychological dimension, this includes self-acceptance, personal growth, and mastery of environment as seen through environmental adaptation. In the emotional dimension there has to be good levels of positive affective expression and overall life satisfaction (Keyes, 2011; Van Zyl, 2012).

It is hoped that after the termination phase, the nursing student will move from a position of psychological discomfort to a journey of self-discovery leading to personal wholesome transformation.

8.4.6 Evaluation of the model

Chinn and Kramer's (2015) theory evaluation criteria was used to evaluate this model. This criterion consists of five components which are: clarity, simplicity, generality, accessibility and importance.

- Clarity of the model

Clarity refers to how clear the model is, and how well can it be understood by others. Four areas are identified by Chinn and Kramer (2015) concerning clarity. These are: semantic clarity, semantic consistency, structural clarity, and structural consistency. Semantic and structural clarity are somewhat related in that semantic clarity denotes the definition and description of concepts; and structural clarity refers to the interrelationships between concepts. Semantic consistency refers to whether concepts are used as defined and structural consistency examines whether the model follows a definite structure. The concepts in this model were defined and described. Interrelationship statements and assumptions were stated and explained, including the structure of the model.

- Simplicity of the model

Simplicity of the theory refers to the number of concepts identified and the relationships between the concepts which are few or minimal. This model identified few concepts in the sense that there were six major concepts and relationship statements.

- Generality of the model

Generality explains whether the theory can be generalised to other contexts, situations and settings. This is often obtained from the concepts and the purpose of the model. While the purpose of this model was for managing psychological distress in nursing students, it is applicable and can be generalisable to other disciplines outside of nursing such as social sciences, sociology, psychology as well as education.

- Accessibility of the model

When the empirical indicators of the chosen concepts can be identified and the purpose of the model attained, then accessibility is addressed (Chinn and Kramer, 2015). This model is aimed at nurturing and developing positive self-concept of the nursing students so as to assist them in managing stressful situations during their training period therefore management of psychological distress.

- Importance of the model

Nursing professionals operate within a realm of high stress living and inherent psychological morbidity, more so in those individuals at high risk, both in the clinical practice of the nursing profession and with regards to various personal challenges within the lives of nursing students and staff as members of the community. This model is important, as it can be used in the clinical practice, education and as a basis for further research. The importance of theory is described as being closely linked to its

clinical significance, as being both forward looking and practical (Chinn and Kramer, 2015).

8.5 SUMMARY

Chapter 8 discussed the structure of the model. This was done by giving the overview of the model, purpose, basic assumptions, context, identification and definition of concepts, relationship statements, description of structure, operationalisation guidelines, as well as evaluation of the model. Chapter 9 will discuss recommendations, imitations and conclusion of this research process.

CHAPTER 9

EVALUATION OF THE STUDY, LIMITATIONS AND RECOMMENDATIONS

9.1 Introduction

Chapter 8 presented and explained the Model for Managing Psychological Distress. This chapter will give the evaluation and conclusion to the whole research process, significance of the study, limitations, as well as recommendations for nursing education, nursing practice, and nursing research.

9.2 Evaluation and conclusion of the study

This study was undertaken in fulfilment of the requirements for a doctoral degree in Nursing. The overall purpose of this study was the development of a model for managing psychological distress in undergraduate nursing students. The model consisted of a series of training workshops aimed at facilitating positive self-concept leading to positive self-awareness, assertiveness, positive communication skills, and positive coping strategies.

The identified need for some psycho-educational intervention in the form of a model was based on observations by the researcher, who is a mental health care specialist, as well as from the empirical, statistical and anecdotal evidence of prevalence of psychological distress. The prevalence of psychological distress often leads to increased psychiatric morbidity as alluded to from the previous chapters. Literature highlighted evidence of psychological distress in nursing students in the international context, but there was limited information in the Sub-Saharan region, in particular, South Africa. Various factors were taken into consideration when conceptualising the study, such as factors influencing or leading to psychological distress, personality traits and coping measures used by respondents. The objectives of this study described the

prevalence of psychological distress amongst undergraduate nursing students, factors contributing to psychological distress in the theoretical learning areas, factors contributing to psychological distress in the clinical learning areas, measures and strategies identified by students in dealing with psychological distress; and developed a model for managing psychological distress.

The study utilised a functional approach using a quantitative, descriptive, contextual and theory generating research design. A data collection questionnaire consisting of four scales was used and SPSS programme 23 for data analysis was utilised. Chapter 2 gave the theoretical framework underpinning the study, whereas Chapter 3 discussed literature related to the concept of psychological distress and Chapter 4 discussed the research methodology utilised. In order to realise the purpose of this study, the questions below were asked:

- What is the prevalence of psychological distress amongst undergraduate nursing students?
- What are the factors contributing to psychological distress in the theoretical learning areas of undergraduate nursing students?
- What are the factors contributing to psychological distress in the clinical learning areas of undergraduate nursing students?
- What are the measures and strategies identified by students in dealing with psychological distress?
- How could students experiencing psychological distress be supported?

Out of these questions, objectives were then identified, and the manner in which these objectives were fulfilled is presented in Chapters 5, 6 and 7 through presentation and discussion of results and Chapter 8, which is the presentation of the developed model.

The objectives of this research were to describe:

- prevalence of psychological distress amongst undergraduate nursing students;
- factors contributing to psychological distress in the theoretical learning areas;
- factors contributing to psychological distress in the clinical learning areas;
- measures and strategies identified by students in dealing with psychological distress; and
- develop a model for managing psychological distress.

9.3. Limitations

While this study contributes to the existing body of knowledge regarding psychological distress in undergraduate nursing students and the intervention model, there are limitations which were identified during the research process. The first limitation was in terms of race representation, where the majority of the respondents (94%) were black; with very few participants from other racial groups as follows: white, 2.2%; coloured, 1.8%; and Indian, 1.3% percent. Nevertheless, it must be noted that this research was not a comparative study. Other factors that could have contributed to the limitations described above were beyond the researcher's control, such as the challenges encountered during data collection phase, as a result of the recent student uprisings. As mentioned earlier in this Chapter (section 8.2), the study was undertaken for qualification purposes which means there were time constraints as well.

While the researcher sought to minimise any bias that could arise from the study, the fact that the respondents were aware of being involved in a research study could have contributed to the Hawthorne effect.

9.4 Recommendations

Recommendations are discussed below in relation to three areas: nursing education, nursing practice, and nursing research.

9.4.1 Recommendations for Nursing Education

The model for management of psychological distress in undergraduate nursing students in South Africa can be used to assist students with regard to adjusting to the new environment of higher education. The research findings highlighted a few issues that contribute to psychological distress in nursing students. These include the area of education, time and financial constraints. The results may contribute to the structuring of the curriculum throughout the levels of training, including identification and bridging of gaps. The model extends to other components of training such as in the clinical learning areas, such that clinical lecturers and preceptors are able to assist students with the challenges they encountered. As the model focuses on the role of advanced psychiatric nurse lecturer, and it can be used to help nursing students attain self-empowerment and transformation in their quest towards self-awareness. Furthermore, the model can be used as an addition to the mental health nursing curriculum, extending the subject knowledge in terms of managing stressors and challenges in one's environment leading to correct debriefing procedures.

9.4.2 Recommendations for Nursing Research

In describing the conceptualisation of the study and ultimately the problem statement, the researcher noted that there is a scarcity of literature in the Sub-Saharan Africa region regarding the prevalence of psychological distress amongst undergraduate nursing students. The findings therefore add to the existing body of knowledge regarding psychological distress in nursing students. More research could be undertaken using qualitative means. The researcher recommends extension, application and evaluation of this model in contexts within the higher education ambit, outside of nursing. A comparison study between racial and ethnic groupings as well as gender with enough distribution and representation of respondents is also recommended. Lastly, the researcher recommends a refinement of this model through empirical testing, perhaps as post-doctoral research.

9.4.3. Recommendations for Nursing Practice

As mentioned in the background, nursing is one of the most highly stressful professions, often resulting in psychological, emotional and moral distress. The research findings in this study highlighted factors that contribute to psychological distress in the clinical placement such as: interpersonal (people) conflicts mainly with the 4th year level students. The section on discussion of findings (chapter 7), identifies factors that may be contributing to these findings such as the staff shortage, contributing to more senior students being used as a workforce. Therefore the findings from the study provide insights for clinical managers to plan properly in terms of providing mentorship programmes for nursing students in the clinical environment. This may help nurses deal with challenges encountered in practice. The model does

not only address student issues, but can be applied to all human resource personnel through a series of workshops aimed at stress reduction.

9.5 Significant contribution

The study contributes to the holistic management of psychological distress in undergraduate nursing students using their own intrinsic resources. The model for managing psychological distress was designed in such a way that it can be generalised to other settings, both within and outside of the higher education sphere. Finally, this research raised awareness of psychological distress amongst undergraduate nursing students as neophytes, speaking to nursing education stakeholders and policy makers involved in deciding how to deal with challenges and processes in nursing education.

9.6 Summary

This chapter gave a brief overview of the research process undertaken including presenting limitations, recommendations and significant contribution of this study.

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ANNEXURE A: Letter of information to the participants



Title of the research study: **A model for managing psychological distress in undergraduate nursing students in South Africa.**

Principal investigator/researcher: Mrs. N. Radana, Masters: Nursing

Co –investigators /supervisors: Dr PM Basson, PhD (Nursing); Dr L. van Rhyn PhD (Nursing)

Brief Introduction and Purpose of the study: You are invited to take part in this research study. The purpose of this study is to develop a model for management of psychological distress in South African student nurses. Your participation is greatly appreciated and important in order to improve support system and standards related to your welfare as a student, in that way contributing to the improvement of nursing education and nursing in general as a profession.

Outline of the procedure: You are kindly requested to complete a questionnaire. It will take approximately forty-five minutes. Please complete all questions, where possible. Once you have completed to fill in the questionnaire, please drop it in the box that is provided to you.

Risks or discomforts to the participant: None

Benefits: This study may contribute to the improvement of student support systems

Reasons why the participant may withdraw from the study: your participation is voluntary; you are under no obligation to participate but it will be appreciated if you do decide to participate.

Remuneration: None

Costs of the study: None

Confidentiality: All data collected will be strictly private and confidential and will only be used for the purpose of the study. No information will be linked to your identity or participating institution.

Research- related injury: There will be no risk of research related study.

Persons to contact in the event of any problems or queries: Please contact the researcher Mrs. N. Radana on 078 558 3504, Dr Basson, my supervisor on 031 373 2687 or the Institutional Research Ethics administrator on 031 373 2900. Complaints can be reported to the DVC: TIP, Prof F. Otieno on 031 373 2382 or dvctip@dut.ac.za

Annexure B: Survey Questionnaire

SECTION A

The first sections include questions on demographic and various personal and professional background variables. Please tick the applicable box.

Gender

Female	Male	NR -1
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Race

Black	Coloured	Indian	White	Other	NR-2
-------	----------	--------	-------	-------	-------------

Age

NR-3

Marital status

Single	<input type="checkbox"/>
Married	<input type="checkbox"/>
Divorced	<input type="checkbox"/>
Widowed	<input type="checkbox"/>
Living together	<input type="checkbox"/>

NR-4

Province where you are currently studying

Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Limpopo	Mpumalanga	Northern Cape	North West	Western Cape	NR-5
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Home province:

Easter n Cape	Free State	Gaut eng	KwaZulu -Natal	Limpo po	Mpumalan ga	Northe rn Cape	Nort h West	Weste rn Cape	NR-6
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Home language:

	NR-7
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Which area are you from:

Urban	Rural	NR-8
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Religion:

Christian	Jewish	Hindu	Muslim	Other- specify		NR-9
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Level of study

1 st year	2 nd year	3 rd year	4 th year	NR-10
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SECTION B

These questions concern how you have been feeling over the past 30 days. Please tick a box below each question that best represents how you have been.

Statement: During the last 30 days how often did you feel:	1.None of the time	2.A little of the time	3.Some of the time	4.Most of the time	5.All of the time	OFFICE USE
1. Been feeling perfectly well and in good health						NR-11
2. Been feeling in need of a good tonic						NR-12
3. Been feeling rundown and out of sorts						NR-13
4. Felt that you are ill						NR-14
5. Been getting pains in your head						NR-15

6. Been getting a feeling of tightness or pressure in your head						NR-16
7. Been having hot or cold spells						NR-17
8. Lost much sleep over worry						NR-18
9. Had difficulty in staying asleep once you are off						NR-19
10. Felt constantly under strain						NR-20
11. Been getting edgy and bad-tempered						NR-21
12. Been feeling scared or panicky for no good reason						NR-22
13. Found everything getting on top of you						NR-23
14. Been feeling nervous and strung up all the time						NR-24
15. Been managing to keep yourself busy and occupied						NR-25
16. Been taking longer over things you do						NR-26
17. Felt on the whole you were doing things well						NR-27
18. Been satisfied with the way you've carried out your tasks						NR-28
19. Felt you are playing a useful part in things						NR-29
20. Felt capable of making decisions about things						NR-30
21. Been able to enjoy your normal day to day activities						NR-31
22. Been thinking of yourself as a worthless person						NR-32
23. Felt that life is entirely hopeless						NR-33
24. Felt that life isn't worth living						NR-34
25. Thought of the possibility that you might make away of yourself						NR-35
26. Found at times you couldn't do anything because of your nerves were too bad						NR-36
27. Found yourself wishing you were dead and away from it all						NR-37

28. Found that the idea of taking your own life kept coming in your mind						NR-38
SECTION C How stressful are the following aspects of being a nursing student? 1-not at all stressful, 2- a little stressful,3-sometimes stressful,4-most of the time stressful, 5- extremely stressful						
29. The amount of classwork material to be learned						NR-39
30. Relationships with family members						NR-40
31. Having too much clinical responsibility						NR-41
32. The difficulty of the classwork material to be learned						NR-42
33. Personal problems either than health						NR-43
34. Not getting enough feedback about performance						NR-44
35. Examinations and placement grading						NR-45
36. Patient's attitudes towards me						NR-46
37. Fear of making mistakes in clinical placement						NR-47
38. Competition from fellow students						NR-48
39. Relations with staff in the clinical area						NR-49
40. Caring for the emotional needs of patients						NR-50
41. Attitudes and expectations of other professionals (doctors,administrators,social workers etc.) towards nursing						NR-51
42. Being interrupted in clinical studies						NR-52
43. Not having enough staff or equipment to meet patients' needs						NR-53
44. Fear of poor job prospects						NR-54
45. Conflict with peers						NR-55
46. Having too much to learn						NR-56
47. The atmosphere created by teaching staff						NR-57

48. Dealing with un-co-operative, anxious, abusive or otherwise difficult patients and relatives						NR-58
49. Conflicts with staff on placements						NR-59
50. The lack of free time						NR-60
51. Not being sure what is expected in the course						NR-61
52. Criticism from peers and senior staff						NR-62
53. Not having enough time for family and friends						NR-63
54. The university response to student needs						NR-64
55. Conflict with administrators or managers						NR-65
56. Not having enough money for entertainment						NR-66
57. Meeting deadlines for coursework						NR-67
58. Relations with other professionals						NR-68
59. Not having anyone to talk to about course problems						NR-69
60. Patients attitude towards nursing						NR-70
61. Fear of failing on the course						NR-71
62. Not being sure what is expected on placement						NR-72
63. Having no time for entertainment						NR-73
64. Conflicts with university staff						NR-74
65. Surviving on a low income						NR-75
66. Personal health problems						NR-75
67. Feeling responsible for what happens to patients						NR-76
68. Speaking to patients relatives						NR-77
69. The prospect of making less money than friends who are not nurses						NR-78
70. Physical health of family members						NR-79
71. Coping with suffering or death of patients						NR-80

SECTION D

Tell me about yourself. 1 (one) would indicate not at all, 2 a little of the time, 3 some of the time, 4 most of the time and 5 (five) would indicate all the time.

72. Are you a talkative person?						NR-81
73. Are you rather lively?						NR-82
74. Do you enjoy meeting new people?						NR-83
75. Can you usually let yourself go and enjoy yourself at a lively party?						NR-84
76. Do you usually take the initiative in making new friends?						NR-85
77. Can you easily get some life into a rather dull party?						NR-86
78. Do you tend to keep in the background on social occasions?						NR-87
79. Do you like mixing with people?						NR-88
80. Do you like plenty of action and excitement around you?						NR-89
81. Are you mostly quiet when you are with other people?						NR-90
82. Do other people think of you as being lively?						NR-91
83. Can you get a party going?						NR-92
84. Does your mood often go up and down?						NR-93
85. Do you ever feel miserable for no reason?						NR-94
86. Are you an irritable person?						NR-95
87. Are your feelings easily hurt?						NR-96
88. Do you often feel 'fed up'?						NR-97
89. Would you call yourself a nervous person?						NR-98
90. Are you a worrier?						NR-99
91. Would you call yourself tense or highly- strung?						NR-100
92. Do you worry too long after an embarrassing experience?						NR-101
93. Do you suffer from nerves?						NR-102
94. Do you often feel lonely?						NR-103

95. Are you troubled about your feelings?						NR-104
<p>For each of the items, tick the corresponding number. 1 would present not at all confident, 2 a little of the time, 3 some of the time, 4 most of the time and 5 would be confident all the time</p> <p>When things are not going well for you, how confident are you that you can:</p>						
96. Keep from getting down in the dumps						NR-105
97. Talk positively to yourself						NR-106
98. Sort out what can be changed and what cannot be changed						NR-107
99. Get emotional support from friends and family						NR-108
100. Find solutions to your most difficult problems						NR-109
101. Break an upsetting problem down into smaller parts						NR-110
102. Leave options open when things get stressful						NR-111
103. Make a plan of action and follow it when confronted with a problem						NR-112
104. Develop new hobbies or recreations						NR-113
105. Take your mind off unpleasant thoughts						NR-114
106. Look for something good in a negative situation						NR-115
107. Keep from feeling sad						NR-116
108. Make new friends						NR-117
109. Pray or meditate						NR-118
110. Keep yourself from feeling lonely						NR-119
111. Get emotional support from community organizations or resources						NR-120

112.	Get emotional support from mentors						NR-121
113.	Make unpleasant thoughts go away						NR-122
114.	Visualize a pleasant activity or place						NR-123
115.	Get friends to help you with the things you need						NR-124
116.	Stand your ground and fight for what you want						NR-125
117.	Do something positive for yourself when you are feeling discouraged						NR-126
118.	Think about one part of the problem at a time						NR-127
119.	Stop you from being upset by unpleasant thoughts						NR-128
	Resist the impulse to act hastily when under pressure						NR-129

Thank you for your participation.

ANNEXURE C

8 Kidwell Road
Bisley Heights
Pietermaritzburg
3201
18.08. 2015

Dear Lavisha

Ethical clearance number: IREC 035/15- N.RADANA

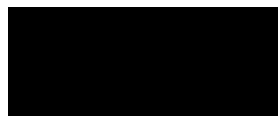
This letter serves to report that the data collection tool was piloted as recommended by the IREC. This took place from the 11th to the 22nd of May 2015. No changes have been made to the content of the tool itself, except improvement on technical presentation and making the instructions clear. I have highlighted the corrected areas in red.

Find herein together with this letter, the original tool as well as the after piloting tool.

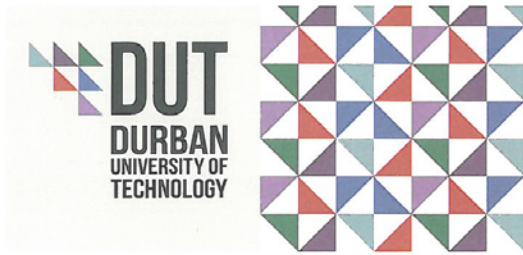
Regards

Nolundi Radana

Signature:

A black rectangular box redacting the signature of Nolundi Radana.

ANNEXURE D



*Directorate for Research and Postgraduate Support
Durban University of Technology
Tromso Annexe, Steve Biko Campus
P.O. Box 1334, Durban 4000
Tel.: 031-3732576/7
Fax: 031-3732946
E-mail: moyos@dut.ac.za*

5th October 2015

Ms Nolundi Radana
c/o Department of Nursing
Durban University of Technology

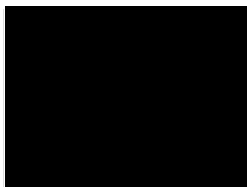
Dear Ms Radana

PERMISSION TO CONDUCT RESEARCH AT THE DUT

Your email correspondence in respect of the above refers. I am pleased to inform you that the Institutional Research Committee (IRC) has granted permission for you to conduct your research "A model for managing psychological distress in undergraduate nursing students in South Africa" at the Durban University of Technology.

We would be grateful if a summary of your key research findings can be submitted to the IRC on completion of the project.

Kindest regards.
Yours sincerely



PROF. S. MOYO
DIRECTOR: RESEARCH AND POSTGRADUATE SUPPORT

ANNEXURE E



Institutional Research Ethics Committee
Faculty of Health Sciences
Room MS 49, Mansfield School Site
Gate 8, Ritson Campus
Durban University of Technology

P O Box 1334, Durban, South Africa, 4001

Tel: 031 373 2900
Fax: 031 373 2407
Email: lavishad@dut.ac.za
http://www.dut.ac.za/research/institutional_research_ethics

www.dut.ac.za

5 November 2015

IREC Reference Number: **REC 37/15**

Mrs N Radana
8 Kidwell Road
Bisley Heights
Pietermaritzburg
3201

Dear Mrs Radana

A model for managing psychological distress in undergraduate nursing students in South Africa

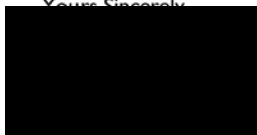
The Institutional Research Ethics Committee acknowledges receipt of your notification regarding the piloting of your data collection tool.

Kindly ensure that participants used for the pilot study are not part of the main study.

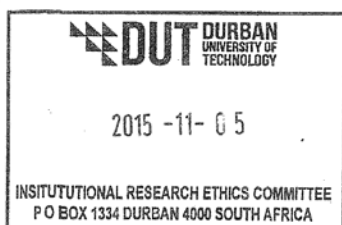
In addition, the IREC acknowledges receipt of your gatekeeper permission letters.

Please note that **FULL APPROVAL** is granted to your research proposal. You may proceed with data collection.

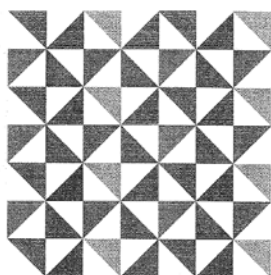
Yours Sincerely,



Professor J K Adam
Chairperson: IREC



ANNEXURE F



Institutional Research Ethics Committee
Faculty of Health Sciences
Room MS 49, Mansfield School Site
Gate 8, Ritson Campus
Durban University of Technology

P O Box 1334, Durban, South Africa, 4001

Tel: 031 373 2900

Fax: 031 373 2407

Email: lavishad@dut.ac.za

http://www.dut.ac.za/research/institutional_research_ethics

www.dut.ac.za

5 May 2015

IREC Reference Number: **REC 37/15**

Mrs N Radana
8 Kidwell Road
Bisley Heights
Pietermaritzburg
3201

Dear Mrs Radana

A model for managing psychological distress in undergraduate nursing students in South Africa

I am pleased to inform you that Provisional Approval has been granted to your proposal REC 37/15 subject to:

- Piloting of the data collection tool and
- Obtaining and submitting the necessary gatekeeper permission/s to the IREC.

Full approval is subject to meeting the above conditions.

The Proposal has been allocated the following Ethical Clearance number **IREC 035/15**. Please use this number in all communication with this office.

Approval has been granted for a period of one year, before the expiry of which you are required to apply for safety monitoring and annual recertification. Please use the Safety Monitoring and Annual Recertification Report form which can be found in the Standard Operating Procedures [SOP's] of the IREC. This form must be submitted to the IREC at least 3 months before the ethics approval for the study expires.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the IREC according to the IREC SOP's. In addition, you will be responsible to ensure gatekeeper permission.

Please note that any deviations from the approved proposal require the approval of the IREC as outlined in the IREC SOP's.

Please note that you may continue with validity testing and piloting of the data collection tool. Research on the proposed project may not proceed until IREC reviews and approves the final document. If there are no changes to the data collection tool, kindly notify the IREC in writing.

ANNEXURE G



DEPARTMENT OF NURSING EDUCATION

Durban University of Technology
Department of Nursing
Indumiso Campus
Sithole Road
Imbali
Pietermaritzburg

20 August 2015

NOLUNDI RADANA

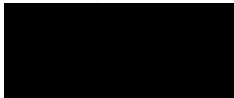
This serves to confirm that permission has been granted for the abovementioned student from the Durban University of Technology, Indumiso Campus to conduct the study.

"A model for managing psychological distress in undergraduate nursing students in South Africa."

The candidate has requested permission to conduct the study at the University of the Witwatersrand, School of Therapeutic Sciences in the Department of Nursing Education. Ethical clearance has been obtained from the Institution of Research Ethics Committee, Durban University of Technology REC 37/15

Should you require any further information please do not hesitate to contact me?

Sincerely



Professor JE Maree
Head: Department of Nursing Education

ANNEXURE H



Sefako Makgatho Health Sciences University
Department of Nursing Science
Po. O. Box 142
MEDUNSA 0204
5th October 2015


Nolundi Radana
Lecturer (Mental Health)
Department of Nursing
Durban University of Technology
Indumiso Campus
Work: 033 8459023
Fax : 033 3980824

Dear Nolundi

PERMISSION TO COLLECT RESEARCH DATA FRO STUDIES

This is to confirm that you have been granted permission to collect research data from basic student nurses in our department. We believe that our assistance will benefit you in your studies.

Kind regards *MD*


Dr DLL Madalane
Senoir Lecturer & Acting HOD

ANNEXURE I



University of Fort Hare

OFFICE OF UNIVERSITY REGISTRAR

Alice (main) Campus:

Private Bag X1314, King William's Town Road, Alice, 5700, RSA
Tel: +27 (0) 40 602 - 2501 • Fax: +27 (0) 40 602 - 2577
Email: nmabindisa@ufh.ac.za



September 01, 2015

Ms N Radana
8 Kidwell Road
Bisley Heights
Pietermaritzburg
3201

Dear Ms. Radana

Approval from the Registrar's Office to Conduct Research

Having consulted the Chairperson of the Research Ethics Committee, I hereby grant permission for Ms. S Radana to conduct research relating to her thesis "A model for managing psychological distress in undergraduate nursing students in South Africa".

We look forward to reading the research report.

Kind regards,

Prof M M Somniso
REGISTRAR

Bhisho Campus:

P. O Box 1153, KWT 5600, Independence Avenue, Bhisho, 5600, RSA
Tel: +27 (0) 40 608 - 3407 • Fax: +27 (0) 40 608 - 3408

East London Campus:

Private Bag X9083, EL 5200, 50 Church Street, East London, 5201, RSA
Tel: +27 (0) 43 704 - 7000 • Fax: +27 (0) 43 704 - 7095
V/C Dial Up: +27 (0) 43 704 - 7143/ 7144

together in excellence



www.ufh.ac.za





Department of Nursing
NMD, Mthatha Campus
MTHATHA 5177
(047) 502 2709
mntsaba@wsu.ac.za

Ms Nolundi Radana
Kidwell Road
Bisley Heights
Pietermaritzburg 3201

Dear Ms Radana

Re: Permission to conduct a study at WSU, Mthatha Campus

This is to confirm to you that the Dean of FHS has given you permission to conduct a study on a **model for managing psychological distress in undergraduate nursing students in South Africa.**

May I take this opportunity to wish you well in your endeavours. Please do not hesitate to contact me on (047) 502 2709 if there are any questions.

Thank you



Dr MJ Ntsaba RN, RM, RCHN, RNA, RNE, B A Cur (I et A) (UNISA), M. Tech: (DUT), PhD (UKZN);
HOD: WSU Department of Nursing; Chair: Faculty Health Sciences Bioethics Committee

Walter Sisulu University

ANNEXURE K

Gill Hendry B.Sc. (Hons), M.Sc. (Wits), PhD (UKZN)
Mathematical and Statistical Services

Cell: 083 300 9896
email : hendryfam@telkomsa.net

16 December 2016

Re: Assistance with statistical analysis

Please be advised that I have assisted Nolundi Radana (student number 21449559), who is presently studying for a DTech (Nursing) with the statistical analysis for her study.

Yours sincerely

Gill Hendry (Dr)

ANNEXURE L

GEN EVIEVE WOOD

P.O. BOX 511 WITS 2050 | 0616387159

2

EDITING CERTIFICATE

LANGUAGE EDITING SERVICES

Date: 2017/11/1

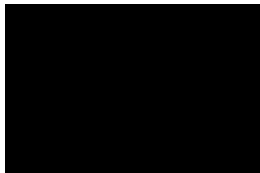
This serves to confirm that the document entitled:

**A MODEL FOR MANAGING PSYCHOLOGICAL DISTRESS IN UNDERGRADUATE NURSING
STUDENTS IN SOUTH AFRICA**

by

Nolundi Jevu Radana (21449559)

has been language edited on behalf of its author.*



Genevieve Wood
PhD candidate
Wits University

* Several recommendations were made for reformulation requiring the student's due diligence.