

**COPING WITH STRESS DURING REPORT WRITING IN AN ODL  
ENVIRONMENT**

By

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## DECLARATION

Student Number: 4105 445 8

I declare that “*Coping with stress during research report writing in an ODL environment*” is my own work, and that all the sources used in this dissertation have been indicated and acknowledged by means of complete references.

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Signature (Miss F. Silinda)

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Date

## **DEDICATION**

This dissertation is dedicated to all the masters and doctoral students in South Africa.

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## **ABSTRACT**

The aim of this study was to demonstrate how postgraduate students cope with the stress induced while adjusting to the various proposal and research report writing phases they are involved in. It is further purported that difficulties in adjusting to the various proposal and research report writing phases and lack of support lead to students experiencing stress. The population consisted of 815 students enrolled for masters and doctoral programmes at Unisa for the 2012 academic year. This study employed the Stress and Support Questionnaire for University Students to determine the stress postgraduate students encountered while adjusting to the proposal and research report writing phases they were in. Furthermore, this questionnaire was also used to understand how these students use support as a coping mechanism. The various research hypotheses were tested using an explanatory mixed method research design. The population consisted of 815 students enrolled for masters and doctoral programmes at Unisa for the 2012 academic year. Data was analysed using Statistical Package for Social Sciences (SPSS), Strata software and Microsoft Excel. Statistical analyses included tests, Analysis of Variance (ANOVA) and chi-square tests. The results demonstrated that students experience stress during the adjustment process to the various research report writing phases. However, masters students showed higher levels of stress while adjusting to the research report writing phases, compared with doctoral students. Some of the doctoral students reported that they felt fewer levels of stress, because they were already exposed to postgraduate studies and were aware of what is expected. Furthermore, students who reported feeling stress to a large extent indicated the reasons to be a lack of support from supervisors, delayed and insufficient feedback, lack of financial support, lack of social support, procrastination, and balancing work and studies. Some of the students

indicated that they do not feel any stress at all because they have surrounded themselves with people who have travelled the path, and their environment is conducive to study. Support from colleagues at work, supervisors, friends and family have also shown to help students adjust to the research report writing phases of their programmes. Although some of the students indicated that they do not experience stress, it is imperative that interventions be designed for those students who do experience challenges when adjusting to the research report writing phases.

**Keywords:** Support, SPSS, academic stress, academic performance, stress, research report, locus of control, mixed method.

## OPSOMMING

Die doel van hierdie studie was om te demonstree hoe nagraadse studente stres hanteer terwyl hulle aanpas by die verskillende voorstel en navorsingsverlag skryffases waarin hulle betrokke is. Dit is verder voorgestel dat moeilikhede in die aanpassing tot die verskeie voorstel en navorsingsverlag skryffases en 'n gebrek aan ondersteuning daartoe lei dat studente stres ervaar. Die populasie het uit 815 studente bestaan wat vir meesters en doktorale programme by Unisa vir die 2012 akademiese jaar ingeskryf was. Hierdie studie het van die Stres en Ondersteuningsvraelys vir universiteit studente gebruik gemaak om die stres wat nagraadse studente ondervind terwyl hulle aanpas tot die voorstel en navorsingsverlag skryffases vas te stel. Verder was hierdie vraelys ook gebruik om te verstaan hoe hierdie studente ondersteuning as 'n hanteringsmeganisme gebruik. Die verskeie navorsingshipoteses was deur 'n verduidelikende gemengde metode navorsingsontwerp getoets. Data was deur middel van die Statistiese Paket vir Sosiale Wetenskappe, SPSS, Statistica en Microsoft Excel geanaliseer. Statistiese analiese het toetse soos Analiese van Afwyking en die chi-kwadraat toetse ingesluit. Die resultate demonstree dat studente stres tydens die aanpassings proses tot die verskeie navorsingsverlag skryffases ervaar. In vergelyking met doktorale studente het die meesters studente hoer vlakke van stres getoon terwyl hulle aangepas het tot die navorsingsverlag skryffases. Sommige van die doktorale studente het verslag gelê dat hulle minder vlakke van stres ervaar aangesien hulle reeds aan nagraadse studies blootgestel was en hulle was bewus van wat verwag word. Verder het studente wat gevoelens van stres tot 'n groot mate ervaar, aangedui dat die gebrek van ondersteuning van toesighouers, laat en oneffektiewe terugvoer, gebrek aan finansieële ondersteuning, gebrek aan sosiale ondersteuning, prokrastinasie en die balansering

van werk en studies daartoe lei. Sommige van die studente het aangedui dat hulle geen stres ervaar nie aangesien hulle hulself omring deur mense wat dieselfe pad gestap het en hul omgewing is geleidend tot hul studies. Ondersteuning van kolegas by die werk, toesighouers, vriende en familie het ook getoon om te studente te help aanpas tot die navorsingsverslag skryffases van hul programme. Alhoewel sommige van die student aangedui het dat hulle nie stres ervaar nie is dit noodsaaklik dat intervensies ontwikkel word vir dié student wat uitdagings ervaar waneer hulle by die navorsingsverslag skryffases aanpas.

**Sleutelwoorde:** Ondersteuning, SPSS, akademiese stres, akademiese prestasie, stres, navorsingsverslag, lokus van beheer, gemengde metode.

## **LIST OF ABBREVIATIONS**

<b>ODL</b>	Open Distance Learning
<b>Unisa</b>	University of South Africa
<b>SASQUS</b>	Stress and Support Questionnaire for University Students
<b>SPSS</b>	Statistical Package for Social Sciences
<b>UNICEF</b>	United Nations Children's Fund

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# CHAPTER ONE

## INTRODUCTION AND BACKGROUND

*“Let us think of education as the means of developing our greatest abilities, because in each of us there is a private hope and dream which, fulfilled, can be translated into benefit for everyone and greater strength for our nation.”*

*(John F. Kennedy, 1961)*

### **Background**

International studies suggest that the student attrition rate for postgraduate students is approximately 50% for all students enrolling for postgraduate programmes (Hockey, 1994; Lovitts, 2001; Lovitts & Nelson, 2000; Lott, Gardner & Powers, 2009). Masters and doctoral student attrition has cost consequences, cutting across government, universities, society, and those students who do not complete their programmes (Lovitts, 2001). According to the Department of Higher Education, 2001, Section 2.1.3, a student attrition rate of 20% suggests that approximately R1.3 billion of government subsidies is spent every year on students who do not complete their studies. Regardless of the high attrition rate in masters and doctoral students, the problem of these students who fail to complete their programmes still receives little attention.

The graduation rate of masters and doctoral students in South Africa is of concern to the country. According to the Council of the Academy of Science of South Africa’s (ASSAf) report on a study of the state of doctoral degrees in South Africa, the country produces 23 to 27 PhDs

per million of the population, per annum (ASSAf, 2010). This is in comparison with the PhD graduates produced in Portugal (569 per million) and Australia (264 per million).

Masters and doctoral attrition rates are increasingly of concern for institutions of higher learning in South Africa, as well. Student records indicate that there were approximately 7541 postgraduate students enrolled for masters and doctoral degrees at the University of South Africa (Unisa) in 2012. Unisa faces the challenge of high attrition rates. It is estimated that 70% to 80% of the postgraduate students drop out of their programmes during the first two years of registration in the College of Economic and Management Sciences at Unisa (E.Swanepoel, personal communication, February 07, 2012). In 2010, the cohort attrition rate of Unisa students was at an alarming rate of 43.8%. In order to address these challenges in an informed manner, it is imperative to understand the challenges masters and doctoral students face in their research report writing phases.

The process of writing a research report is stressful, and postgraduate students encounter a number of challenges while writing their dissertations. Firstly, they have to adjust to the research phases they are engaged in – that is, data gathering, data analysis, writing up of chapters and submitting these chapters to promoters. Secondly, the level of support they receive in relation to their studies can help them cope with the stress they face while adjusting to the various research report writing phases. In addition, the lack of support for students at postgraduate level can make the adjustment process challenging, and, hence, cause them to depart from their programmes. Thirdly, it is important for postgraduates to be aware of their competency in conducting research – such as language proficiency, literature searches and writing skills. Students who lack

competence in research skills may feel stressed, as they may not be sure of the tasks they are involved in. Lastly, how they perceive their learning environment is also important. Students who perceive a 'fit' with their learning environment are more likely to persist and complete their programmes. However, students who do not perceive a fit with their learning environment may be unable/find it difficult to complete their programmes. Research conducted globally on academic stress often focuses on academic success in providing interventions. It is therefore relevant to understand the students' experiences when writing their research reports, which, in turn, contribute to stress. This understanding will assist in interventions to address the challenges students are faced with when writing their research reports, thereby increasing academic success.

### **Definitions of terms**

The literature in this study employs a variety of terms, including 'open distance learning', 'stress', 'social support' and 'postgraduate students' – all referring to the students and their experiences while writing their research reports.

**Open Distance Learning (ODL)** is a form of learning used to enhance learning at institutions, with the application of support systems to students (Dzakiria & Christopher, 2010; Pityana, 2004). These support structures are in the form of academic and career development facilities, tutoring, teleconferencing and interconnected means to accomplish an extended learning experience. Tait (2000) highlights cognitive, affective and systemic supports as primary functions of student support. This form of learning has become a tuition policy option for a

growing number of African states. ODL allows students to merge the world of work and their studies, and gain exposure to the corporate world while pursuing their studies (Pityana, 2004).

**Social support** is the perceived availability of assistance from other people, when individuals are in need of assistance. Further, the act of seeking social support is understood by researchers as either a problem-solving or an emotion-focused coping mechanism. In this study, reference will be made to the use of social support as a coping mechanism for students writing their research reports.

The literature reviewed in this chapter is based on the assumption that stress is harmful to an individual's wellbeing (Seaward, 2002). In this study, **stress** is defined in the context of a transactional model that acknowledges interaction between a student and their learning environment. Stress is viewed as causing distress to individuals – such as postgraduate students at Unisa – and therefore affecting their academic performance and personal wellbeing.

In this dissertation, **postgraduate students** are defined as students registered for masters dissertations and doctoral theses at Unisa. Furthermore, masters dissertations and doctoral theses will be referred to in this study as **research reports**.

## **Problem Statement**

Most of the studies conducted on students' academic stress and student attrition focuses on undergraduate students and the challenges they face. There has been limited research focusing

on the stressful process of writing research reports, among masters and doctoral students. Some themes emerged from the review of literature of adjustment into postgraduate programmes. Firstly, the transition from undergraduate to postgraduate programmes requires adjustment in personal life, which may be stressful for a number of students, as most students work while studying (Griffiths, Winstanley & Gabriel, 2005). In addition, the life adjustments postgraduate students go through are stressful, because students are faced with uncertainties and ambiguities. Sometimes, students who are unable to cope with the challenges they are faced with in their programmes, do not complete their programmes (Pascarella & Terenzini, 1980). Secondly, the adjustments postgraduate students go through in their various programmes are different from the adjustments undergraduate students go through (Gardner & Barnes, 2007). For instance, both academic and social integration are more important for an undergraduate student to complete their programmes (Tinto, 1987; 1993). However, academic integration is more important for programme completion for postgraduate students, for that is the relationship between the student and their department and discipline, rather than with the institution as a whole (Golde, 2000; Lovitts, 2001; 2005; Tinto, 1993).

In addition, some stressors students are faced with have a greater impact on postgraduate students than on their counterparts. Some of the stressors include, among others, financial problems, balancing work, studies and family commitments, and the relationship with department staff and their peers (Gardner, 2009a; Golde, 2000; Lovitts, 2001). Lastly, students' responses to the stress induced while writing research reports is influenced by both individual and situational factors. Some of the individual factors influencing students' responses to the stressful situations include abilities, motivation and past experience. Situational factors influencing students'

responses are social support and interaction with peers and departments in ways contributing to the socialisation of their disciplines.

In addressing these concerns this study investigates, explores and understands the coping mechanisms postgraduate students employ when dealing with stress induced while writing research reports during the various phases of their postgraduate programmes. The aim of this study is to understand how postgraduate students who are engaged in their proposal and research report writing phases cope with the aspects of stress induced when adjusting to the different phases. The specific focus of this study is on the use of social support as a coping mechanism in dealing with stress-related symptoms while postgraduate students complete their proposal and research reports, to improve student success.

Although masters and doctoral students encounter different experiences in their phases, there are however some similarities in their experiences, that is among others, supervision (Allen, Szollos, & Williams, 1986; Girves and Wemmerus, 1988; Lumadi, 2011) and information seeking or the literature review process (George, Bright, Hurlbert, Linke, St Clair, & Stein, 2006; Korobili, Malliari & Zapounidou, 2011; Malliari, Korobili, & Zapounidou, 2011; Rempel, 2010). Literature of supervision of masters and doctoral students suggests that supervision of postgraduate research students varies enormously, depending on the subject area, the background and needs of the student, and the work patterns and personalities of both the student and the supervisor. With regards to information seeking behaviours of masters and doctoral students, these studies found that students demonstrated low to medium information seeking behaviours. In addition, information seeking behaviour is influenced by students' search experiences,

computer and web experience, and the frequency of using e-resources. However, the results also postulate that attending workshops can have long term effects on the students' literature review process.

Several studies that have looked at the variances between masters and doctoral students have been cited, however they differ from this study in line with the problem statement. This study will look for differences between masters and doctoral students stress related symptoms in the different phases they are engaged in. The differences between the masters and doctoral students' use of support to deal with the challenges they encounter when adjusting to the proposal and research phases, will also be established. Postgraduate students in this study are referred to as students enrolled for masters and doctoral qualifications in an ODL environment.

### **Research questions**

A mixed method research design was used, with the aim of answering the following research questions:

- Is there a difference between masters and doctoral students in the stress related symptoms they experience in the various research report writing phases they are engaged in?
- Is there a difference between the stress related symptoms experienced by masters and doctoral students engaged in proposal and research report writing phases and those who are not?
- Are there significant stressors affecting students during the proposal and research report writing phases?

- Are there differences between the support systems masters and doctoral students use in the various proposal and research report writing phases?

## **Outline of chapters**

Below is an outline of the chapters of this document:

### **Chapter One: Introduction**

This chapter presented the background, the statement of the problem, as well as the research questions of this study.

### **Chapter Two: Literature Review and Theoretical Background**

In Chapter Two the theoretical background and key constructs will be presented.

### **Chapter Three: Research Design and Methodology**

The research approach and design, together with the research questions and hypotheses, are presented in Chapter Three. In addition, the chapter also presents the sampling strategy, research instruments, data collection and data analysis procedures.

### **Chapter Four: Analysis and Results**

This chapter provides a report on the analysis of the quantitative and qualitative data of this study. The quantitative data provides a description of the demographics of the population, the difference in students' stress related symptoms, as well as the relationship between students'

stress related symptoms and the support systems they use as a coping mechanism. Furthermore, a thematic presentation of the qualitative results is presented in Chapter Four.

### **Chapter Five: Conclusions and Discussion**

A summary of the results and interpretations in context to the study, are provided in this chapter. Additionally, a discussion of the results, together with the conclusion, is provided in this chapter.

### **Chapter Six: Limitations and Recommendations**

Chapter Six documents the limitations of the study and provides recommendations for future research.

### **Chapter summary**

In this chapter the introduction and orientation to the study was presented. An introduction of the problem statement and the aims of the study's research design and research methodology were also provided in this chapter. Chapter Two will provide a discussion of the review of literature, as well as the theoretical framework.

## **CHAPTER TWO**

### **LITERATURE REVIEW AND THEORETICAL BACKGROUND**

*"...education (should be seen) as a complex system embedded in political, cultural and economic context... It is important to keep in mind education's systemic nature, however these dimensions are interdependent, influencing each other in ways that are sometimes unforeseeable."*

*United Nations Children's Fund (UNICEF, 2000, p.4)*

#### **Introduction**

This chapter provides the theoretical background (section 2.2) to guide the study and interpretation of findings. Section 2.3 - 2.9 provides a combination of literature on stress, academic stress, academic stressors, academic success, coping, academic support and social support.

#### **Theoretical framework**

Research on undergraduate student attrition is abundant (Bean & Metzner, 1985; Pascarella, 1980; Tinto, 1993). Tinto (1975) developed a student integration model focusing on the social and academic integration of undergraduate students. Furthermore, Bean and Metzner developed a model focusing on non-traditional student attrition. However, research on postgraduate student attrition is still scant. Gardner (2009a) and Reason (2009) developed the attrition model focusing on the multiple factors contributing to the understanding of doctoral

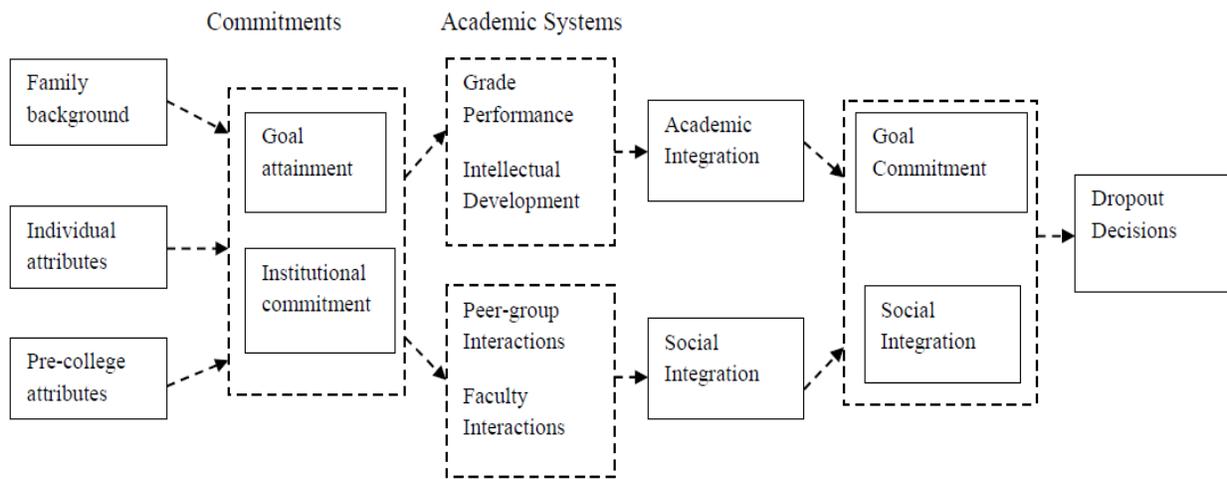
student dropout, while Golde and Dore (2001) and Lovitts (2001) developed a model explaining the factors contributing to doctoral students' abandonment of their programmes.

Student attrition is attributed to a number of factors. Studies indicate that attrition rates of undergraduate students are attributed either to students not being prepared for university, or poor academic performance. However, Tinto (1975) introduced the student integration model, indicating that a student has to be integrated into the institution both academically and socially, in order to persist with their programmes. The student integration model suggests the importance of a match between a student's commitment and the institution. Academic integration focuses on the academic performance of the student in the institution and their interrelations with the department staff, while social integration includes students participating in peer group interactions (see Figure 2.1). According to Tinto (1975), the greater the students' interaction with the social and academic system, the greater the chances that the students will remain in the institution until completion of their studies. However, students are unlikely to complete their qualifications when they integrate poorly with the institution. This model is relevant for undergraduate students, as they have to be integrated with the institution and their environment, in completing their programmes. Furthermore, these students have to perform well academically and have relationships with their peers. However, academic and social integration is relevant for postgraduate students on a different level. Postgraduate students integrate with the institution by forming part of their discipline in their day-to-day interaction with their department, supervisors and peers.

Moreover, institutional commitments also have an influence on student attrition. High levels of institutional commitments may lead students to remain in college even though they are not fully committed to completing their studies (Tinto, 1975, 1987). Tinto (1975, p. 7) states: “Individuals enter institutions of higher education with a variety of attributes (for example sex, race, ability), pre-college experiences (for example grade-point averages, academic and social attainments), and family backgrounds (for example social status attributes, value climates, expectational climates), each of which has both a direct and indirect impact upon performance in college. More importantly, these background characteristics and individual attributes also influence the development of the educational expectations and commitments the individual brings with him into the college environment. It is these goals and institutional commitments that are both important predictors of and reflections of the person's experiences, disappointments and satisfactions, in that collegiate environment.” Students indeed bring with them a variety of attributes which have the potential to influence their decisions to abandon their programmes. This is more prevalent among postgraduate students, a number of whom enrol for postgraduate qualifications while, among other things, working full time. Some of these variables – that is, working full time, and family background and commitments – may interfere with a student’s adjustment process in their postgraduate programme phases. Depending on the support system available to students, those students without sufficient support systems are unlikely to complete their programmes.

The various forms of student attrition have different contributions to student departure rates. Tinto (1975) states that voluntary student attrition – that is, departure not formally initiated by academic institutions – accounts for the largest portion of student departures. Tinto (1975)

studied student integration and reported that a student's experience in the academic domain plays a major role in the student re-evaluating their educational expectations and making the decision to depart voluntarily from the institution. He further added that a student's voluntary departure may occur despite the student having been socially integrated into the institution. Voluntary student attrition holds true for a number of postgraduate students. Some students may enrol at an institution before doing a background check of the institution and decide not to continue with their programme with the institution, after they realise that there is no match between their expectations of the institution and what the institution offers. The conceptual schema for dropout from college is provided in figure 2.1.



**FIGURE 2.1: Conceptual schema for dropout from college. Reprinted from "Dropout from higher education: A theoretical synthesis of recent research", by V. Tinto, 1975, *Review of Educational Research*, 45(1), 89-125. Copyright [1975] by American Educational Research Association. Reprinted with permission**

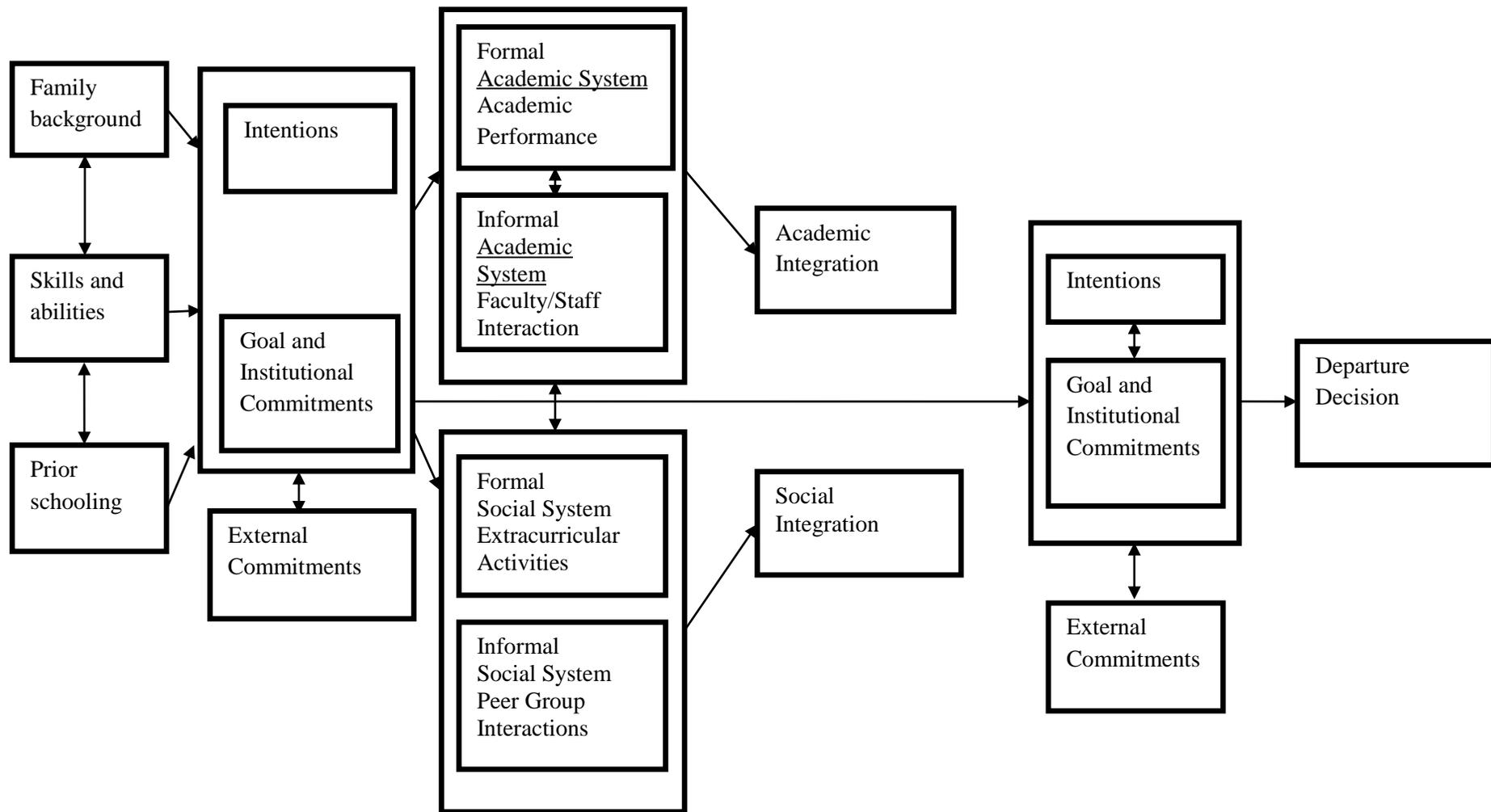
Tinto revised the student attrition model by adding factors influencing persistence: adjustment, difficulty, incongruence, isolation, finances, learning, and external obligations or commitments. He identified that different types of students (for example at-risk, adult, transfer) and various types of post-secondary institutions (residential, non-residential, two-year, urban, and large public universities) require different types of retention programmes and policies (Tinto, 1993). Tinto also included student finances in his revised model, as a key element to student integration. Some of the variables Tinto included in the new model are also important for postgraduate student success. Students faced with financial problems are likely to depart from institutions when they seek employment in order to deal with their financial commitments. He therefore refined the student attrition model, using his model as a guide (see Figure 2.2). Tinto (1993) added intentions and external commitments to personal goals, as well as commitments to the institution, to the student attrition model. Furthermore, he divided the academic and social systems into formal and informal interactions. The key difference between Tinto's original model and the more recent version is acknowledgement of the importance of the external environment for students who live off-campus.

While Tinto's revised model is similar to the student integration model in structure, this model, however, offers another explanation for student departure. The variables Tinto introduced in the revised model are imperative for postgraduate student retention. Several students enrolled for postgraduate programmes have a number of responsibilities (family, work and studies) which may affect their commitment to their studies and persistence in their programmes. In addition, a factor contributing to students working and studying at the same time, is a lack of finances.

These students are unable to study full time, as they have family commitments to attend to – which have the potential of inducing stress in students.

Some of the scholars to develop a student attrition model focusing on non-traditional students are Bean and Metzner. Bean and Metzner (1985) developed the non-traditional student attrition model after identifying past theoretical models of student retention which did not acknowledge the significance of external factors of college student attrition. Bean and Metzner (1985) describe a non-traditional student as a student older than twenty-four years old, a commuter (does not live in campus residence), and a part-time student, who is primarily concerned with the institution's academic offerings.

There are various variables contributing to students' persistence in programmes. According to Bean and Metzner (1985), a student's decision to persist in an institution is related to background and defining variables, academic variables and environmental variables. The background and defining variables are those variables that take into account demographic characteristics such as age, ethnicity, gender, educational goals, high school performance and number of hours enrolled; the most influential are expected to be a student's high school performance and educational goals. Academic variables describe a student's involvement with the academic process at the institution as study skills, study hours, class attendance, academic advising, major and job certainty and course availability. In addition, environmental variables are external to the institutional environment: finances, family responsibilities, employment, outside encouragement and opportunity to transfer to other colleges or programmes. Figure 2.2 shows Tinto's revised attrition model.



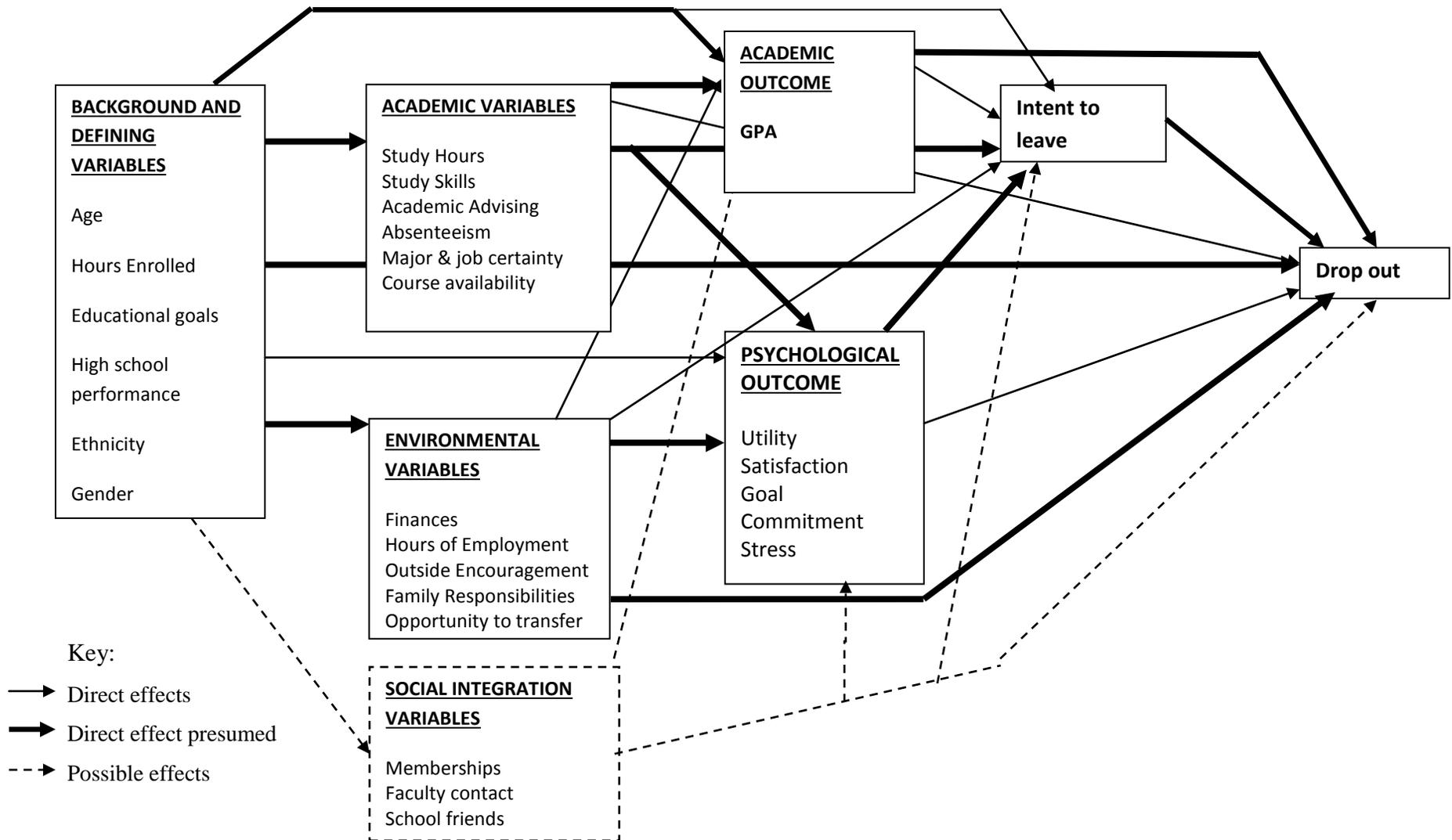
**FIGURE 2.2: Revised attrition model. Reprinted from *Leaving college: Rethinking the causes and cures of student attrition* (p.114), by V. Tinto, 1993, Chicago, IL: University of Chicago Press. Copyright 1993 by University of Chicago Press. Reprinted with permission**

These sets of variables interact and result in a range of academic and psychological outcomes which then influence students' persistence at institutions (Bean & Metzner, 1985). Environmental variables are directly related to the decision to depart from college. This prediction is based on two basic assumptions: firstly, the interaction of non-traditional students with the college environment is focused primarily on academic programmes, due to minimal opportunities for integration or socialisation into extracurricular activities; secondly, non-traditional students have more interaction with the environment external to the educational setting (Bean & Metzner, 1985; Metzner & Bean, 1987). Students are expected to depart from institutions when academic variables are good and environmental variables are poor, because they cannot afford to overcome some of the challenges they are faced with – for instance, financial difficulties and family problems. In most cases, a student will try to overcome the challenges they are faced with; for instance, students facing financial problems may seek employment in order to address their needs.

Most of the scholars focused on traditional students living in student residences when developing the student attrition models. Bean and Metzner (1985) focused more on what was happening to the student off-campus than what was happening to the student on-campus. According to these authors, the primary difference between traditional and non-traditional students is that non-traditional students are affected to a greater extent by the external environment than by social integration. According to Bean and Metzner, the non-traditional student's departure is due to four sets of variables: background and defining variables, academic performance, environmental variables and the intent to leave. Bean and Metzner theorised that student background variables could affect their decisions to depart from institutions, as these

variables influence the interaction of the student and the institution. Some of the background variables include educational goals, ethnicity and gender – which have an influence on the academic and/or environmental variables. Academic variables such as study hours, directly affect academic outcomes. These poor academic outcomes can lead to academic exclusion in institutions. These academic variables can also influence voluntary departure among students, as they can cause negative psychological outcome variables which may lead to stress and weakened goal commitment. These psychological variables may cause students to depart.

Figure 2.3 below illustrates the Metzner and Bean model (1985) of non-traditional students' decisions to depart. The model indicates that more students with poor academic performance are predicted to depart from college compared with those students who perform better. A student's decision to leave is influenced by psychological outcomes, as well as academic variables. A student's high school performance, as well as their educational goals, is expected to affect attrition. Metzner and Bean theorised that environmental variables are predicted to have a direct effect on students' decisions to depart from institutions. A postgraduate student's educational goals and their support system have the potential of increasing or decreasing a student's persistence in their programme. A student who hopes to complete his/her programme and make a contribution in their discipline, will persist in their programme, compared with a student who would like to complete their programme because their designation is determined by attaining a qualification. Furthermore, the support provided to students from family members and the academic departments is imperative for completion of their studies.



**FIGURE 2.3: A conceptual model of non-traditional student attrition. Reprinted from "The estimation of a conceptual model of non-traditional undergraduate student attrition", by B.S. Metzner and J.P. Bean, 1987, *Research in Higher Education*, 27(1), 15-38. Copyright [1986] by Agathon Press, Inc. Reprinted with permission.**

Most retention and attrition models focus on undergraduate students and the challenges they face. Although postgraduate students are faced with different challenges, compared with undergraduate students, failure to deal with these challenges will lead to stress and, thereafter, departure from the institutions. Furthermore, in encouraging postgraduate students to complete their programmes, these students have to be integrated with their academic departments. Postgraduate programmes entail various phases which students have to adjust to in order to complete their programmes. Sometimes students find it challenging to adapt to these different phases. Adjusting from one phase to another can be stressful, and may lead students to depart from the institutions when they do not have a strong support system from their academic and social environment.

Research on masters and doctoral student attrition is still scant. Research on postgraduate student attrition indicates that postgraduate students who are unable to adjust to the various phases, fail to complete their programmes and, thereafter, depart from their programmes (Ali & Kohun, 2007; Beeler, 1991; Gardner, 2009a).

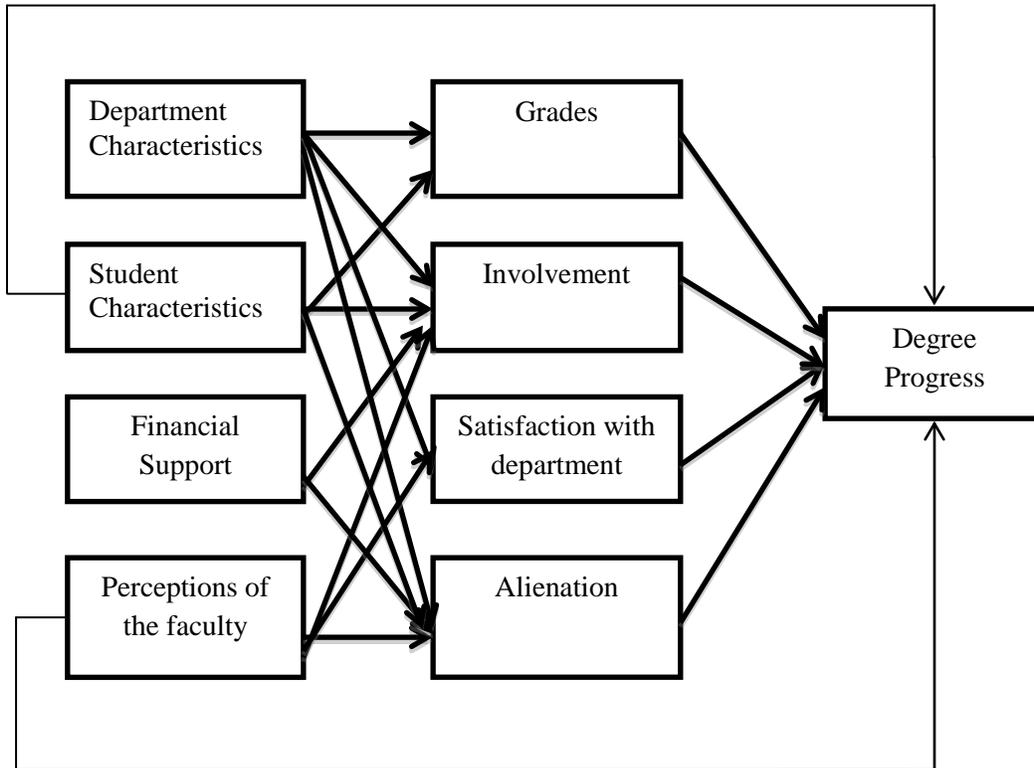
Postgraduate programmes involve various phases when writing research reports. Furthermore, postgraduate students need to go through the various phases of the masters and doctoral programmes because academic adjustment is more important than social adjustment, in order for these students to persist. The adjustments postgraduate students go through are sometimes stressful and can cause them to depart from their programmes. According to Golde (2000), the most academically capable, successful and carefully selected doctoral students in the entire higher education system, are least likely to complete their chosen academic goals. Golde

(2000) theorises that students who departed from postgraduate programmes were not academically and socially integrated with their departments. In other words, students at postgraduate level are not taught anymore, and are expected by their supervisors/promoters, to have acquired the relevant requirements for conducting research, including, among others, literature review and writing skills. Furthermore, Golde (2000) emphasises that postgraduate students are more restricted, compared with their undergraduate student counterparts. According to Golde (2000), when postgraduate students integrate academically, they form part of the work department and the discipline of interest – including developing research skills and writing papers for presentation and publication. Students are socially integrated when they make friends with other doctoral students and become part of the department and the university. In addition, Golde (2000) suggests that students can socially integrate by attending departmental social events and interacting socially with the department. Relationships with departmental staff appear to be more important for doctoral student success, as well as their relationships with peers (Gold, 2000). The department staff help student integrate to their discipline through discussions and assisting students with their studies. Peers may provide support to fellow students through their informal interactions as well as collaborations in writing papers for publication in academic journals and presenting at conferences. Golde (2000) concludes that doctoral students depart from their doctoral programmes because they are not adjusted and attached to the academic and social life of a department.

Attrition models for masters students are scant. Girves and Wemmerus (1988) developed a two-stage model for masters students, and indicate that departmental and student characteristics, financial support, and their perceptions of their department, influence persistence.

Girves and Wemmerus also emphasise that a student's perception of their relationship with their supervisor is important for completing their master's programme. In other words, a student's relationship with their supervisor is imperative, as a supervisor can determine the student's success as well as the career the student wants to pursue. A student may experience stress and thereafter depart from their masters programme if they perceive their relationship with their supervisor as being poor. Furthermore, a student's relationship with the departmental staff is very important for the student's programme, as the student will have the necessary support when they come across challenges in the various phases of their masters programme. Students are able to understand the programme requirements and their discipline of interest when they integrate with their department. Figure 2.4 provides an illustration of the two-stage model of the masters student programme process.

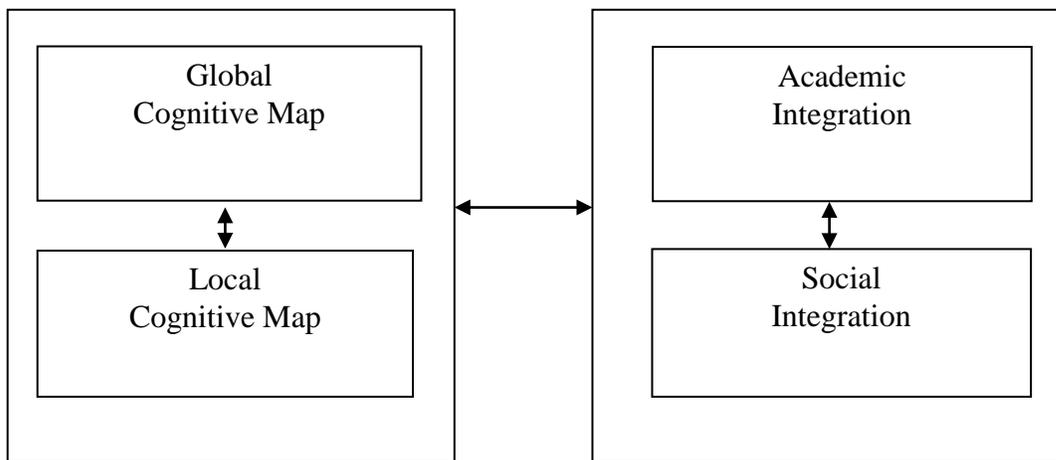
Lovitts (2001) reports that postgraduate student attrition has costs and consequences for institutions and their departments, as well as society, and that it sometimes has serious consequences for the student who departs. Some of the consequences facing students departing from doctoral programmes are feelings of loss, failure and guilt, and these may lead to students losing their self-confidence. "The most important reason to be concerned about graduate student attrition is that it can ruin individuals' lives" (Lovitts, 2001, p. 6).



**FIGURE 2.4: Conceptual model of the masters' student degree process. Reprinted from "Developing Models of Graduate Student Degree Progress", by J. E. Girves and V. Wemmerus, 1988, *Journal of Higher Education*, 59, 163-189. Copyright [1988] by Ohio State University. Reprinted with permission**

Secondly, when doctoral students depart from their programmes, institutions and governments experience losses, as both invest time and resources in doctoral programmes. Lastly, society also experiences a loss of skills and knowledge from students who depart from their doctoral programmes. Lovitts uses the community membership theory to explain postgraduate student retention. She reports that community membership shows how bonds that tie an individual to a community develop through interaction, and provide individuals with support structures that promote retention.

Figure 2.5 is a representation of the cognitive map Lovitts (2001) uses for the doctoral attrition model. Moreover, Lovitts (2001) uses cognitive maps to develop and expand the doctoral student attrition model. According to Lovitts (2001), cognitive maps assist people in making sense of what they experience by providing them with a conceptual understanding of their surrounding environment, a plan of action, and a platform for informed decision-making. In other words, a cognitive map would be useful for a postgraduate student, as it would assist them with understanding their environment, and to make sense of what they experience, in developing a means of action and a platform for decision-making.



**FIGURE 2.5: The relationship between cognitive maps and integration. Reprinted from "Leaving the ivory tower: The causes and consequences of departure from doctoral study", (p. 46), by B. E. Lovitts, 2001, Lanham, MD: Rowman & Littlefield. Reprinted with permission**

Lovitts introduced cognitive maps to understand doctoral student integration. Cognitive maps are imperative tools for student integration, as they assist in directing the student through the formal and informal structures of the doctoral programme, and thus come into contact with

people who can provide them with assistance throughout the programme. In addition, students with good cognitive maps upon enrolling for a doctoral degree, will integrate into the doctoral programme without challenges. However, those who do not have good cognitive maps, but are able to integrate academically and socially, will develop these maps as they are in contact with the relevant people who can provide them with the required information.

Another scholar to develop a model for doctoral students after Lovitts is Gardner. Gardner (2009b), in particular, has developed a model on doctoral student development and attrition. Gardner uses the student development theory to understand the doctoral students' development in addressing the subject of students departing from their programmes. The student development theory is used to explain the way a student grows, progresses, and how their knowledge increases while they adjust to the doctoral programme after they have enrolled at an institution. This theory can assist lecturers and supervisors to understand, support, and serve students. However, the student development theory is not applicable to all students, because students are unique and react to situations differently.

A student's development is imperative for students to persist in their programmes. According to McEwen (2005), student development is the process whereby a student becomes a more complex individual. Gardner (2009b) argues that development is a lifelong process. According to Gardner, as much as doctoral students are capable and talented individuals, they are still students who seek knowledge and skills of their discipline of interest by completing their doctorate degree. Furthermore, Gardner emphasises that the process of doctoral transformation is much more than the student's professional preparation, as it also entails the development of the

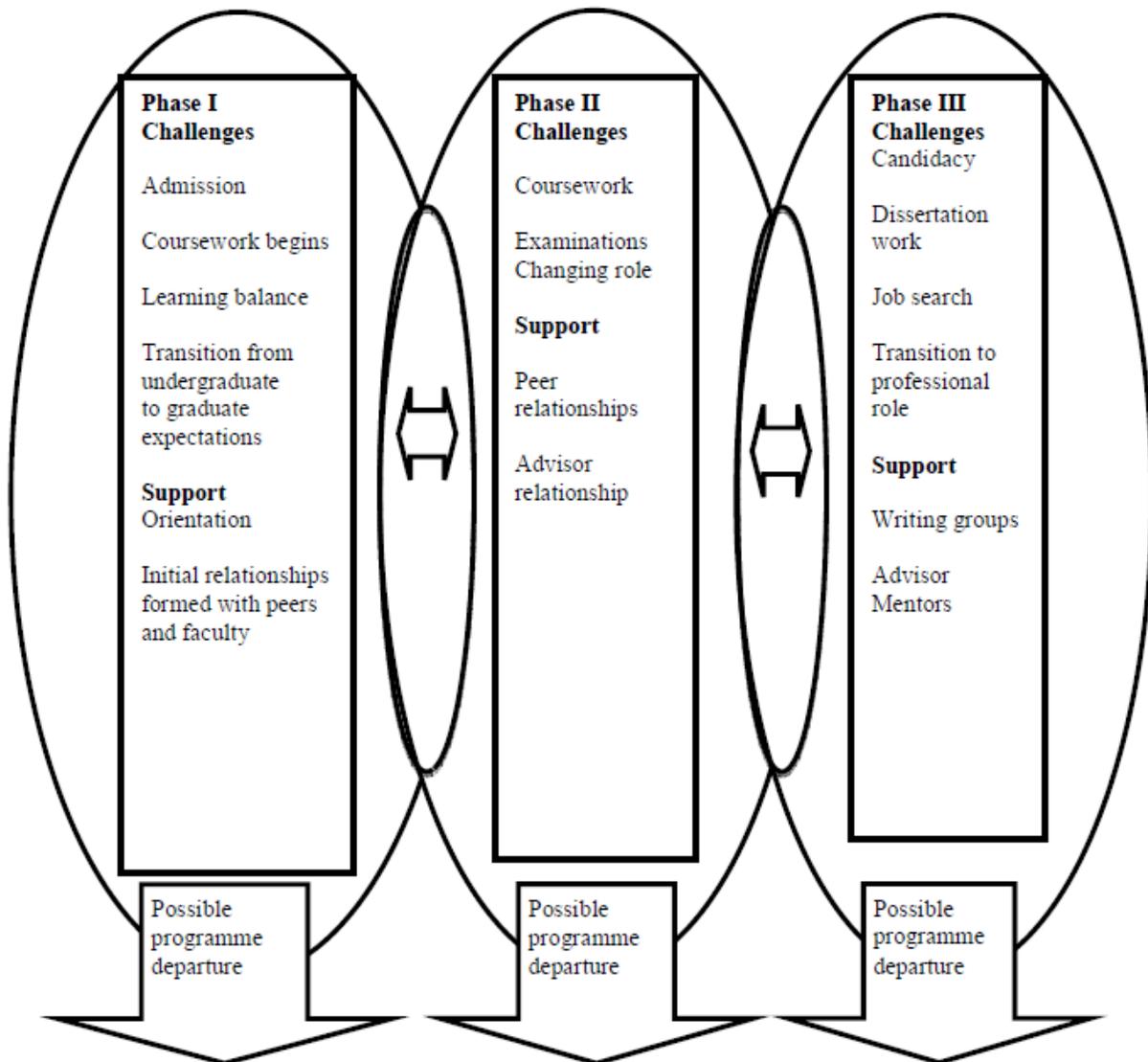
whole self. However, a student can only develop when they have support to help them deal with the challenges they encounter while in the development phases. According to Sanford (1966), students who are faced with challenges need to have a way to cope with these challenges. The coping mechanisms a postgraduate student adopts in dealing with the challenges they are faced with will aid in the student's development. However, if a student is unable to cope with the challenges they encounter, they may experience stress and anxiety and, as a result, this may affect their development.

Gardner's theory of student development includes the cognitive, psychological and social identity taking place as a result of the challenges students are faced with, as well as the support they receive. The cognitive-structural identity focuses on the moral and intellectual development of students. According to McEwen (2005), cognitive-structural development looks into how students think and make decisions. The psychosocial development focuses on understanding how students define themselves and their relationships with others. The student development model takes into account three phases that doctoral students get involved in during their programmes: entry, integration and candidacy. In addition, doctoral students' social identity and support play an integral role throughout the various phases. Gardner (2009b) suggests that interactions do not take place during one phase; however, these interactions are fluid in nature, which allows students to visit and revisit issues and opportunities throughout the doctoral programme. For instance, there are various stages students go through when writing research reports, that is; literature review, writing the literature review chapter, writing the methodology chapter, collecting data and writing the analysis chapter among other phases. The phases can sometimes be overwhelming for students, leading to longer adjustments to these phases.

The first phase (entry phase) involves a student enrolling for, and taking, the first lessons of the doctoral programme: coursework. Students are faced with a number of challenges during this phase, as they have to apply for admission, submit the required documents for admission to the programme and for funding, and meet with the department staff members. Some students may even relocate when they feel that they want to be closer to the institution. At the same time, students come to terms with balancing their work, studies and family commitments. Gardner indicates that doctoral students can use their sources of support – that of department staff and peers. However, if doctoral students do not have enough support, it may be challenging for them to go through this phase and they may depart from their programme. Those doctoral students with sufficient support from their peers and department staff will complete their programmes, as they will have the resources for dealing with the challenges of the entry phase.

Phase two (integration phase) includes students integrating socially and academically as they progress to the final phase. Students are challenged with demonstrating competency in their coursework, and then in their final exams as they make the transition from consuming knowledge to producing the knowledge. Furthermore, students also face challenges in forming relationships with their peers and department staff. The support students receive from their peers and department staff is important for them to complete the doctoral programmes. Gardner's model of student development is depicted in figure 2.6.

## Identity Development



**FIGURE 2.6: Gardner's (2009b) model of student development. Reprinted from "The development of doctoral students: Phases of challenge and support", by S. K. Gardner, 2009, *ASHE Higher Education Report*, 34(6), 1-126. Copyright 2009 by Jossey-Bass. Reprinted with permission**

The last phase (candidacy phase) involves students producing independent research, submitting their doctoral thesis and seeking employment after they have completed their examinations. Students will need support from their peers and academic departments, in this phase, as the support may disappear – which can make this phase stressful for the student. Support for students in this phase usually disappears because this phase requires students to work independently in producing innovative research, writing papers for publication as well as locating employment with prospective employers.

Several scholars have employed the doctoral attrition models in understanding attrition in their respective countries. In South Africa, Herman (2011) used Lovitts' (2001) and Gardner's (2009b) theories to understand the underlying factors causing doctoral students to depart from their programmes. Herman found that the doctoral students', as well as the programme leaders' attributions were partly similar, and different. He reported that there needs to be sufficient funding to assist students to complete their doctoral programmes, as most of the students reported that they were facing financial challenges – hence, they departed from their programmes. Some of the factors Herman (2011) reported that contributed to student departure were personal problems, poor supervision, and balancing work, studies and family responsibilities.

## **Stress**

Stress has been conceptualised in various ways. Seyle (1978) defines stress as a collection of physical, mental and emotional responses that occur when an individual encounters something novel, challenging, dangerous or exciting. Furthermore, Seyle (1978) distinguishes the

experience of stress as either a positive or negative force in an individual's life. According to Seyle (1978), positive stress, or eustress, can heighten awareness and improve performance and motivation. In addition, Seyle (1978) states that negative stress, or rather distress, can impede performance, reduce concentration and motivation, and contribute to poor health.

In addition to the various definitions of stress, Lazarus (1966) and Lazarus and Folkman (1984) suggest that stress occurs as a result of an individual's appraisal of an event, when they do not have the necessary resources to cope with the situation they face. The environmental demands an individual is faced with are labelled as stressors, and can put strain on that particular individual (Pearlin, 1989). Furthermore, Pearlin (1989) defines stress as an individual's internal, perceived emotions and cognitions. Omura (2007) emphasises that different individuals may perceive the same stressful situation differently, due to the differences in individuals. Stress may be both positive and negative, depending on the appraisal by an individual. A positive appraisal leads to positive responses (studying harder, reliance on social support, problem solving and positive interpretation of situations). However, negative appraisals lead to negative responses in individuals – for example, disengagement (problem avoidance, self-criticism, social withdrawal and dropping out). It is worth noting that stress is one of the factors individuals deal with everyday (Canales-Gonzales, Kranz, Granberry & Tanguma, 2008). Cochran (2001) describes stress as acute and chronic, and explains that acute stress is related to small daily hassles, while chronic stress takes place when several environmental stressors such as finance and schoolwork continue to be a concern to an individual over a long period of time.

## **Academic stress**

Academic stress has been studied extensively as an important factor in college student adjustment (Gall, Evans & Bellerose, 2000; Mallinckrodt, 1988). In general, college-related stress has been found to be inversely related to academic performance (Felsten & Wilcox, 1992; Pritchard & Wilson, 2003; Russell & Petrie, 1992; Talib & Sansgiry, 2011). Academic stress has also been identified as a factor negatively affecting persistence of students (Perrine, 1999; Zhang & RiCharde, 1998) and older non-traditional students (Chartrand, 1992). However, some studies have failed to detect an association between academic stress and academic outcomes. Sandler (2000) concludes that perceived academic stress does not predict the intent to stay in school for adult college students.

The academic environment also contributes to students' levels of stress. Marshall, Allison, Nykamp and Lanke (2008) state that university students often experience an undue amount of stress, which can have negative academic, emotional and health outcomes. Students can be affected negatively when experiencing high levels of stress while completing their tasks in the different stages of their dissertation or thesis writing process – thereby encouraging student departure.

Although academic stress has negative effects, it can be beneficial and students may be influenced to respond positively to stress. Whitman, Spendlove and Clark (1985) argue that stress is a necessary part of what it means to be at university. Furthermore, Brown (1999) emphasises that students experience positive stress when at university. Stress can be positive as

well as negative. Stress may be regarded as positive in this instance when students are confronted with a situation while writing research reports motivating them to perform better. Students are motivated to perform better since they feel that they are able to handle the situation they are faced with. However, stress can also be negative. Negative stress may lead students to experience problems such as depression and low self-esteem, among others, leading to students dropping out of programmes.

Adjustment to any life event is stressful, for example a new job, moving to a new neighbourhood, even winning a jackpot. Students may find the adjustment from one phase to another, stressful. These students may find it challenging to adjust to these phases and, hence, depart from their programmes because they are not socially and academically integrated with their department and discipline. Social and academic integration assist a student in adjusting to the different phases of their programme. When students fail to adjust to the phases of their programme, they feel overwhelmed and may depart from their programme, particularly when they do not have sufficient support (Gardner, 2009a; Golde, 2000; Lovitts, 2001).

### **Academic stressors**

Seyle (1978) defines a stressor as a factor that influences a stress response to occur. Sources of academic stress include, among others, academic workload, scholastic achievement, financial pressures, employment needs, time management and social re-adjustments. Procrastination is one of the factors inducing stress among students as they struggle to meet assessment deadlines (Misra, McKean, West & Russo, 2000; Robotham, 2008). Furthermore,

students report that they feel anxious due to academic workload (Marshall et al., 2008; Robertson & Ruiz, 2010) and fear of failure (Koochaki, Charkazi, Hasanzadeh, Saedani, Qorbani & Marjani, 2009). Fear of failure may also act as a form of motivation of fear; however, extreme fear of failure may create emotional and physical distress among students (Laio, Lu & Yi, 2006). Sometimes, students have to ignore one task in order to prepare for another task which may be due for assessment (Bean & Harper, 2006).

One of the stressors contributing to students abandoning their programmes is financial uncertainty. Financial uncertainty (Koochaki et al., 2009) may have a negative impact on an individual's wellbeing. According to Robotham (2008), the combination of paid work and academic study can cause students stress, due to the demands on their time. McAndrew, Akande, Turner and Sharma (1998) reported in their study that South African university students perceived financial stressors to be the most stressful of all. The Student Living Report (2004) reported that 58% of the students who got a job to support themselves while studying, stated that they felt more stressed in comparison with their previous educational experiences. Further, fatigue has the potential of negatively affecting working students' academic performance, life, social relations, and, in some cases it interferes with their job performance and family life (Taylor & Owusu-Banahene, 2010).

The lack of financial support is among the other academic stressors postgraduate students are faced with. Moreover, because the financial responsibilities are mostly on the shoulders of men, particularly young male adults who have just begun taking care of their families, they may feel that the dissertation process is a burden (Eremsoy, Çelimli & Gençöz, 2005). It would

appear that family responsibilities are one of the factors leading postgraduate students abandoning their programmes. Funding of student programmes as well as providing stipends to registered students is still concerning in South Africa. Several students in South African abandon programmes due to a lack of financial support. Moreover, the South African government has taken student funding into account as a factor for postgraduate students dropping out, and has recognised it as a policy concern (Lewin, 2007).

In addition to the academic stressors, family expectations seem to be stressful to students. Sometimes, expectations from family members and students themselves can lead to stress for a number of students (Tan & Yates, 2010). Academic excellence in some cultures is perceived to be a filial duty and source of pride for the family, and in most cases families value academic excellence. The need to please parents with their academic achievements was one of the sources of stress among Hong Kong Chinese students (Wong, Salili, Ho, Mak, Lai & Lam, 2005). Moreover, students' high self-expectations have the potential of negatively affecting their academic performance.

Distance education can be seen as another academic stressor. Studies have reported high departure rates, particularly among distance education postgraduate students (Carr, 2000; Kember, 1989; Parker, 1999). Students completing their studies through distance education are faced with a number of challenges, which they have to deal with inside and outside their learning institutions. Some of the challenges include personally related internal and external variables, challenges set by the distance learning environment, time management, and absent or uncertain support from an employer and family (Kember, 1990). In addition, these students generally have

a number of commitments to family, work and social lives, which may increase stress and leave them more vulnerable to factors that potentially interfere with their academic progress (Calicchia & Graham, 2006; Goplerud, 2001; Holmberg, 1995; Hyun, Quinn, Madon & Lustig, 2006; Thompson, 1998).

### **Academic success**

A number of factors have been identified to contribute to student success. Past research into student attrition emphasises the value of underlying factors impacting on student success. Killen (1994) states that students at university align their success with factors, which are related to issues they can control, and the commitment of the learner is important for them to succeed at an institution of higher learning. Xenos, Pierrakeas and Pintelas (2002) have categorised the factors relevant for the success and dropout of learners at institutions of higher learning. These categories are factors related to the perception and locus control of learners, course and tutors, as well as the demographic characteristics of the learners. Furthermore, Xenos et al. (2002) state that student departure is caused by professional, academic, health, family and personal reasons, which vary depending on the education system adopted by the institution providing the distance learning. Xenos et al. (2002) argue that tutors must also provide students with support, to avoid them dropping out.

Student success has been attributed a various factors. A number of scholars stated different motives for encouraging students' departure from universities; some of the reasons for dropping out being teaching strategies, student motivation, students' approach to studying, the

integration between students and the university, and the cultural expectations of students. Some of the significant factors in student success were: interest in the course, motivation, self-discipline and putting more effort into one's studies (Fraser & Killen, 2003). According to Okopi (2011) counsellors can help students to overcome obstacles by providing them with the motivation to succeed in their studies. Although Okopi recommends counsellors for undergraduate students, counsellors are also relevant for postgraduate students. Sometimes, postgraduate students do not have sufficient support to help them deal with the stress induced when adjusting to the master's and doctoral programme phases. Counsellors can serve as a form of support for these students, and they may provide them with the necessary support they need to complete their studies.

Scholars have for many years used several indicators for student success. Blanchfield (1971) states that the indicators of student success should be re-evaluated, as there is a question as to whether high school grades and test criteria deserve the attention they get to identify the success of a student. According to Fraser and Killen (2003), the ability to determine student success has been limited in South Africa, Australia and, mainly, the United States, due to the practice of matriculation results as the only determinant for the success of students at university level.

Some of the indicators for student success are academic self-efficacy and locus of control. Research shows that academic self-efficacy (Zajacova, Lynch & Epenshade, 2005) and locus of control are more robust in predicting academic success of students than academic stress (Dille & Mezack, 1991; Parker, 1999; Wood, Saylor & Cohen, 2009). Research indicates that academic self-efficacy has a positive relationship with academic success in institutions of higher learning

(Bong, 2001; Brown, Lent & Larkin, 1989; Hackett, Betz, Casas & Rocha-Singh, 1992; Lent, Brown & Larkin, 1984; Multon, Brown & Lent, 1991) and persistence (Lent et al., 1984; Zhang & RiCharde, 1998). Self-efficacy forms a central part of the self-system, as it is an individual's belief in their abilities to succeed in a particular state. Bandura (1993) posits that self-efficacy influences cognitive development and functioning. Self-efficacy beliefs may influence academic achievement, as students are encouraged to perceive their own abilities and skills. In addition, self-efficacy beliefs increases a student's motivation and persistence in mastering challenging academic tasks by fostering the efficient use of acquired knowledge and skills. Torres and Solberg (2001) investigated the importance of self-efficacy in academic performance among college students, and reported a positive association between academic self-efficacy and the number of hours students spend studying.

While social cognitive theory provides a coherent framework linking self-efficacy and stress, most research has explored their independent roles in explaining academic outcomes. Very little work has examined their joint influence as determinants of academic success in college. Hackett et al. (1992) identify both perceived stress and academic self-efficacy as predictors of the cumulative grade-point average (GPA) for traditional students enrolled in engineering schools. Good grades were associated with low perceived stress and high self-efficacy.

Furthermore, in a study to analyse the effect of self-efficacy on academic success in first-generation sophomore students, Vuong, Brown-Welty and Tracz (2010) found that self-efficacy beliefs affect GPA and persistence rates of sophomore students. Focusing more specifically on

mathematics performance among high school students, Pajares and Kranzler (1995) concluded that mathematics self-efficacy exerted a strong influence on performance, while mathematics anxiety had an effect only through its association with self-efficacy. In a study with even younger students, both stress and self-efficacy were significantly associated with performance in English, but self-efficacy appeared to be a stronger predictor (Pintrich & De Groot, 1990). These studies found self-efficacy to be a somewhat better predictor of academic success than stress. In a study to identify students' experiences with statistics courses, Perepiczka, Chandler and Becerra (2011) reported that postgraduate students who believed that they were not capable of being successful in a statistics course, were more anxious than those students who were confident in their capacity. Overall, Deane and Peterson (2011) investigated supervision and researched self-efficacy among doctoral students. Overall et al. (2011) reported that supervision encouraging autonomous learning and decision-making, is most likely to cultivate students' confidence in their research abilities.

Postgraduate students may view the process of writing a research report as a potential obstacle in the quest for obtaining a masters or doctoral degree. The phases involved in writing a research report are stressful – in line with Kobasa's (1979) reasoning that adjustments in an individual's normal routine lead to stressful situations. Furthermore, a student will need a social and academic support system to assist them in dealing with some of the challenges they encounter.

## **Coping**

Lazarus and Folkman (1984) defined effective coping as the process whereby an individual thinks and assesses what they should do, and the specific actions and behaviours they should undertake in dealing with the situation they face. A number of ways in categorising coping mechanisms have taken place, due to the differences in the conceptualisation of coping. Lazarus and Folkman categorised coping mechanisms in two broader clusters: problem solving and emotional ways of coping. Subsequently, Higgins and Endler (1995) categorised coping mechanisms into three clusters: task oriented, emotion oriented and avoidance oriented. In addition, social support, in the form of seeking advice, is also a problem-solving mechanism (Carver, Scheier & Weintraub, 1989).

The application of coping mechanisms is entirely dependent on the framework within which the stress occurs. In a study by O'Brien and DeLongis (1996), the roles of personality and situational factors were monitored, using three coping mechanisms: problem-, emotion- and relationship-focused. It was found that coping mechanisms were correlated with the condition of the stress an individual was faced with. Situational factors were associated with problem- and relationship-focused coping mechanisms. Emotion-focused coping may differ, as personal and communal conditional demands may induce different emotions (Lazarus, 1991; Pearlin & Schooler, 1978).

The coping strategies students adopt to deal with life-changing situations vary from one student to another. Some coping strategies students employ include withdrawing from family and friends, social coping (that is, being around friends), negotiating arrangements (Shaikh,

Kahloon, Kazmi, Khalid, Nawaz, Khan & Khan, 2004; Spangler, Pekrun, Kramer & Hofmann, 2002; Yum, Kember & Siaw, 2005), and also cognitive and spiritual coping. Evaluative conditions are perceived to be stressful by their very nature. Accumulation of stress may have implications for adapting when students face failure in a series of evaluative conditions (Soric, 1999).

In a study regarding late-night eating as a coping mechanism among college students, Wichianson, Bughi, Unger, Spruijt-Metz and Nguyen-Rodriguez (2009) reported that more than 60% of college students reported enduring high or low levels of stress. Stress may occur among students as a result of having to make necessary lifestyle changes while managing the challenges of course loads (Robertson & Ruiz, 2010). Caplan, Naidu and Tripathi (1984) cite that the way in which people cope depends partly on disposition and partly on the situation. Stress may be beneficial when associated with goal attainment. However, it may be detrimental to students and their health. Moffat, McConnachie, Ross and Morrison (2004) emphasise the fact that stress may have a positive effect, although it may be harmful when it leads to psychological morbidity in students. Although stress may have negative effects particularly on an individual's body, stress can have positive effects as well. Most life events - including the positive ones - can cause stress in an individual; for example, a new job, getting married and enrolling for a programme at an institution of higher learning. Positive stress help an individual adapt to change and various situations they encounter. In this context, positive stress will help student's adapt to the changes in the various research report writing phases.

There is a relationship between academic stress and the coping mechanisms students employ. Studies have been conducted, focusing on the relationship between academic stress coping mechanisms such as repression, disengagement, seeking support from peers, institutions or family, substance abuse as well as midnight snacking (Krypel & Henderson-King, 2010; Murray-Harvey, Slee, Lawson, Silins, Banfield & Russell, 2000; Shirachi & Spirrison, 2006; Wichianson, Bughi, Unger, Spruit-Metz & Nguyen-Rodriguese, 2009; Zaleski, Levey-Thors & Schiaffino, 1998). According to Zaleski et al. (1998), in some situations, depending on the level of stress being experienced, coping mechanisms may amount to adaptive and maladaptive coping.

Locus of control, among other coping mechanisms students use, is necessary for students at undergraduate level to assist them in completing their programme. However, postgraduate students need more coping mechanisms than locus of control. Academic and social integration is imperative for students to adjust to the different research report writing phases, in order to complete their research reports. This study has investigated the use of academic and social support as coping mechanisms among postgraduate students.

### **Academic support**

Academic support may assist students in dealing with the academic challenges they are faced with, as well as in persisting with their programmes. Research has shown that support from peers, supervisors, departments and university administrators, encourages programme completion and student persistence (Halawah, 2006; LaPadula, 2003; Shelton, 2003). Supportive

relationships within an academic environment may nurture a sense of belonging in students, while assisting them in dealing with some of the challenges they encounter in their programmes (Gardner, 2009b; Lovitts, 2001; Tinto, 1975). Furthermore, postgraduate student development is dependent upon the support provided to the student in a particular discipline within an academic environment (Gardner, 2009b; Golde, 2000). The informal interactions among peers and department staff are also supportive relationships (Gardner, 2001; Golde, 2000; Lovitts, 2001; Tinto, 1975).

Postgraduate programmes offer supportive programmes to students in the academic environment in order to complete their programmes in the required time frame. Institutions offer supportive relationships, offered in turn by the department members, supervisors and mentors. The departments form these relationships as an effort to increase students' academic and social integration in their postgraduate programmes (Ellis, 2001). Although departments provide supportive relationships to students, these relationships do not accomplish the anticipated outcomes (Grover & Malhotra, 2003; Herman, 2011; Overall et al., 2011). The relationship between a supervisor and a student is imperative for the student's integration. Although supervision leads to programme completion, academic evidence shows that supervision can be difficult. Researchers have established that supervision can enhance postgraduate students' programmes (Martinsuo & Turkulainen, 2011; Overall et al., 2011). However, supervision is reported to be complicated (Abiddin, Ismail & Ismail, 2011), and can sometimes fail (Herman, 2011). In addition, researchers have expressed their criticisms of postgraduate supervision (Herman, 2011; Lessing & Schulze, 2002). In one study, students reported dissatisfaction with feedback, overdue feedback, supervisors who were neither interested nor supportive, a general

lack of expertise in certain fields of supervisors in South Africa, and a lack of access to and a lack of communication with supervisors (Herman, 2011).

## **Social support**

Social support is the perceived availability of assistance from other people when individuals are in need of assistance. Further, the act of seeking social support is understood by researchers as either a problem-solving or an emotion-focused coping mechanism. Support structures have enormous value, as they inform the performance of students in institutions (Astin, 1971; Cope, 1978; Robbins & Tanck, 1995; Tinto, 1975). As life progresses, support is firstly derived from other members in the family, then from peers, and in situations of special need, from a member of a helping profession (Cobb, 1976). Cobb (1976) further states that social support facilitates coping with crises and adaptation to change. In addition, social relationships contribute to the psychological wellbeing of an individual (Corsano, Majorano & Champretavi, 2006; Lowe, Chan & Rhodes, 2010). On the other hand, inadequate social support has been associated with psychological distress and mortality (Hawkley, Masi, Berry, & Cacioppo, 2006), and can be perceived as social rejection for the receiver of the support. According to Amith and Ronit (1999), socio-emotional support – such as affection, sympathy and emotional support – may assist in meeting the social support needs of individuals. Family support has been found to correlate with social adjustment and academic achievement; students are often likely to contact their parents and peers when they are stressed (Barnett, 2004).

There are several support systems students may use to cope with stress. The different forms of support systems students use may provide them with the necessary tools to cope with stress, compared with individuals who have fewer support systems. It would appear that those students with more support systems – social, university and professional support – experience less stress and adjust to the various research report writing phases with greater ease than their counterparts with fewer support systems.

## **Conclusion**

A multitude of student attrition models exist globally, which have similar characteristics employed to help the design criteria for this study. The literature on student attrition, stress, academic stress, academic support and social support was employed to construct a conceptual framework for this dissertation. Adjusting to various research report writing phases is a complex and stressful process. Available literature focuses on academic stress as a factor in student attrition. This study focuses on the process of adjustment to the various research report writing phases. The results will provide an understanding of the support systems relevant for programme completion among students.

The postgraduate completion rates reveal what happens to students at the point of departure from programmes; however, less is known about what happens to them while they are in their programmes. Furthermore, little is known about the various types of support institutions provide to postgraduate students. Research has focused on supervision in contact institutions, and less is available in the form of empirical studies about postgraduate students pursuing their

programmes through distance education. This study investigated support systems used as coping mechanisms in dealing with the stress induced while adjusting to different phases of the research report writing phases.

# **CHAPTER THREE**

## **RESEARCH METHODOLOGY**

*“Pragmatist researchers have the opportunity to combine the macro and micro levels of research issues... They are more likely to be cognizant of all the available research techniques and to select methods with respect to their values for addressing the underlying research questions, rather than with regard to the some preconceived biases about which paradigm is a hegemony in social science research.”*

*(Onwuegbuzie & Leech, 2005, p. 291)*

This chapter provides a discussion of the research design and methods used to answer the research questions. In addition, a discussion of how the research questions inform the paradigm and how the research design is appropriate to answer the research questions is provided. The chapter also serves to explain the population, sampling methods, research instruments, data collection and data analyses procedures. Finally, the methodological norms and ethics maintained throughout this study are considered.

### **Research paradigm**

De Villiers (2004) defines a paradigm as the underlying philosophy and assumptions forming the approach of a researcher's approach and methodology. Paradigms have become a central concept in social science research methodology, but often with a meaning that is rather different from the way that the term is used in the field of science studies (Morgan, 2007).

Researchers are often faced with challenges when they have to decide on a research paradigm of choice. For many years, qualitative and quantitative paradigms such as positivism, interpretivism and constructionism have been used by most researchers as research approaches. However, the inception of paradigm conflicts in the 1970s has resulted in the polarisation of qualitative and quantitative purists. These paradigm conflicts led to more conflicts among purists, referred to as 'paradigm wars'. Paradigm shifts took place as a result of the paradigm wars between quantitative and qualitative purists. The pragmatic paradigm came into existence as a result of the paradigm wars.

Researchers of the pragmatic paradigm combine both quantitative and qualitative measures in understanding research questions properly. This pragmatic paradigm identifies phenomena holistically, as it emphasises the strengths of the paradigm to complement their weaknesses. According to Sechrest and Sidani (1995), the use of multiple measures is critical to avoid the limitations posed by a single approach while permitting triangulation in other important areas of a study. A number of authors believe that the pragmatic paradigm can yield new insights and understanding of a phenomenon (Greene & Caracelli, 1997; Maxwell & Loomis, 2003).

In this study the pragmatic paradigm was used to investigate and understand the stress post-graduate students are faced with, and how they cope with this stress when writing research reports. However, a phenomenon such as stress cannot be assessed on its own, thus in assessing this phenomenon, consideration should be taken within an ongoing context where the researcher has pre-existing commitments to other systems of beliefs and practices (Morgan, 2007). In understanding any paradigmatic perspectives, it is imperative for researchers to understand the

worldviews and assumptions of pragmatism. The knowledge researchers derive, plays an important role in applying paradigmatic assumptions when assessing a phenomenon.

According to Lincoln (2011), paradigms are imperative, as they provide one with something important about a particular researcher's stance. Lincoln gives two other explanations for the importance of paradigms. Firstly, paradigms provide an explanation of what the researcher thinks counts as knowledge, and who will deliver the valuable slice of this knowledge. Secondly, paradigms provide information about how the researcher intends to take into account the multiple conflicting and contradictory values he or she will come across.

The paradigm framework is made up of epistemological, ontological, axiological and methodological assumptions (Johnson & Onwuegbuzie, 2004; Guba & Lincoln, 2005). These assumptions are discussed briefly next.

## **Ontology**

The concept 'ontology' can be defined as the assumption focusing on the form and nature of what individuals view as reality. The ontological assumption of pragmatism emphasises the need to take into account both qualitative and quantitative approaches. Johnson and Onwuegbuzie state that mixed methods research should, instead (at this time), use a method and philosophy that attempts to fit together the insights provided by qualitative and quantitative research into a workable solution.

The quantitative research method in this study followed the post-positivism paradigm, which bases knowledge on a careful observation and measurement of objective reality (Creswell, 2009). In addition, post-positivists believe that probability truth existing investigated measurements due to intellectually flawed mechanisms (Guba & Lincoln, 1994).

The qualitative methods of this study were grounded in the social constructionist paradigm which holds that individuals construct their unique meanings according to their historical and social lived experiences; people share multiple realities through social interactions – that is, individuals and cultures (Guba & Lincoln, 1994).

## **Epistemology**

Epistemology is concerned with the nature and scope of knowledge, and understanding the relationship between the researcher and postgraduate students who need to gain accurate knowledge (Mertens, 2009). Post-positivists are of the opinion that a researcher cannot be objective because there is probability truth from investigated measurements due to the flawed mechanisms of human intellect (Guba & Lincoln, 1994). Furthermore, according to Mertens (2009), quantitative measurements decrease a researcher's subjectivity and bias. The post-positivist approach sensitises the researcher towards understanding that he or she may not be objective, particularly when analysing the quantitative data, as there may be other factors influencing his or her objectivity.

The social constructionist paradigm holds that a great deal of human life exists as a result of social and interpersonal influences (Gergen, 1985). In this regard, the researcher will be aware of the influences of cultures in open distance learning institutions, and the individual personality factors of the respondents in this study. Some of the personality factors of which the researcher will be aware are self-efficacy, locus of control and coping mechanisms. The researcher will also be aware of the role social support plays in a student's life – which increases student success.

### **Axiological Assumption**

The axiological assumption relates to ethics and values pragmatic researchers need to take into account when conducting research. Assumptions about human nature are deterministic or voluntarist. One views individuals as products of their environment; the other believes that individuals create their own environment (Putnam, 1983). The researcher was aware of the need to obtain consent from the respondents and respondents were not forced to continue completing the questionnaire, should they have wished to withdraw from the study. The researcher also understood that the information gathered should be kept confidential and that the anonymity of respondents should be maintained.

In this study the pragmatic paradigm was used to investigate and understand the stress postgraduate students are faced with, and how they cope with this stress when writing research reports. The pragmatic paradigm provides a platform to investigate, explore and understand the challenges postgraduate students face. Furthermore, this paradigm provides more information regarding how postgraduate students deal with the stress induced when writing research reports.

## **Methodological assumption**

The methodological assumption is concerned with the application of appropriate methods of systemic enquiry. Ongoing debates still question mixed methods research and their value in research. Sale, Lohfield and Brazil (2002) argue that a researcher cannot be a positivist as well as a constructivist or interpretivist. Moreover, some purists believe that quantitative and qualitative methods cannot be mixed together (Smith, 1983; Smith & Heshusius, 1986). Mixed methods designs are a form of triangulation, and a number of authors have referred to mixed methods as ‘triangulation’ (Denzin, 1978). In order to appropriately address the research questions, this study centred on the strengths of both qualitative and quantitative research methods.

According to Johnson and Onwuegbuzie (2004), mixing methods comprises the use of induction (or the discovery of patterns), deduction (testing of theories and hypotheses) and abduction (uncovering and relying on the best set of explanations for understanding one’s results). The design employed in this study is the mixed method research design. The following section provides more information about the research design and its suitability to address the research questions of this study.

## **Research design**

*“We hope the field will move beyond quantitative versus qualitative research arguments because, as recognized by mixed methods research, both quantitative and qualitative research are important and useful. The goal of mixed methods research is not to replace either of these approaches but rather to draw from the strengths and minimize the weaknesses of both in single research studies and across studies.”(Johnson & Onwuegbuzie, 2004, p. 14)*

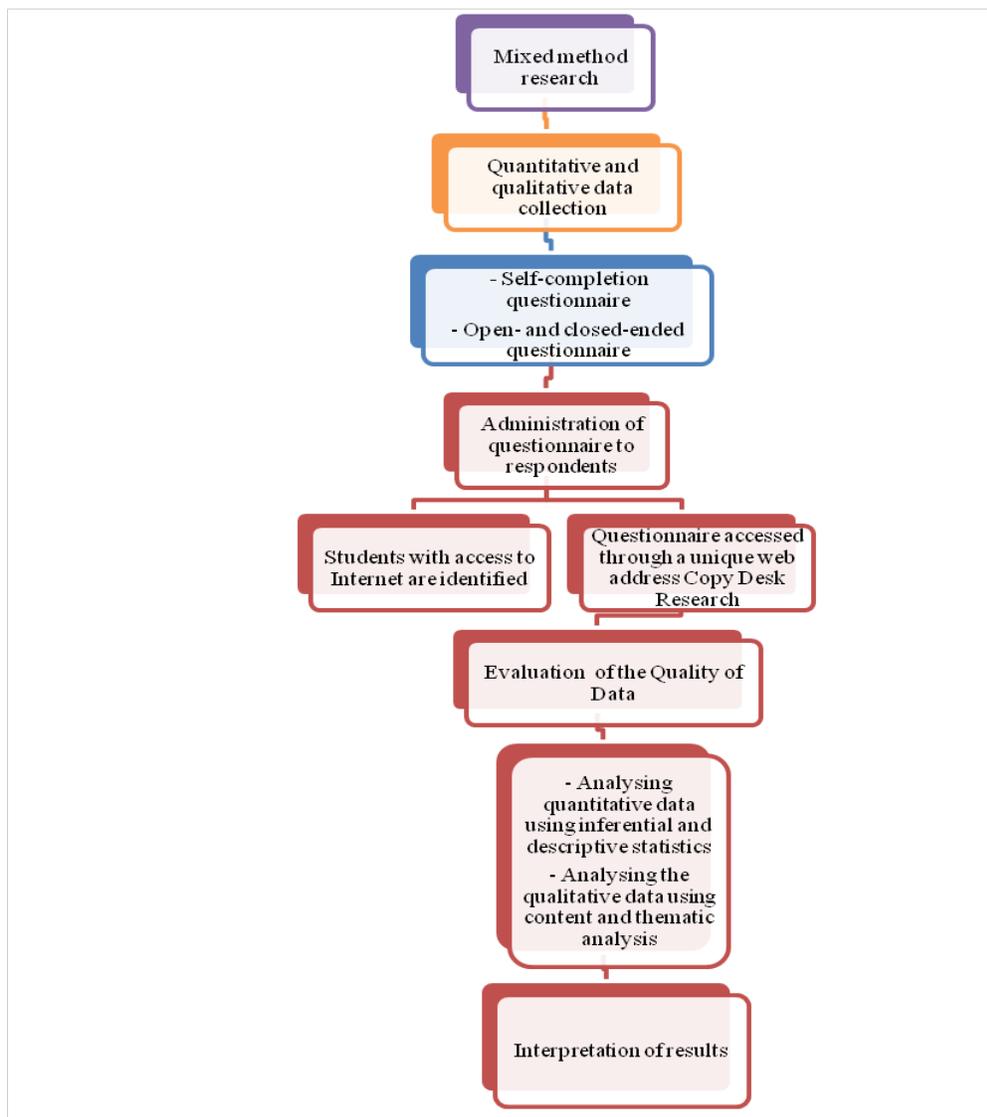
Quantitative research methods have limitations in that they do not provide additional information to the quantitative data. However, when the research paradigms are mixed, the qualitative research methods will provide more information to the quantitative data while the quantitative samples will further ensure that the qualitative research is generalisable to the entire population. The mixed methods research design has been used by various researchers to better understand quantitative and qualitative phenomena (Benoit & Holbert, 2008; Sieber, 1973).

A mixed methods research design comprises four main research designs, which can be subdivided into sequential or concurrent forms (Creswell, 2010). These research designs are: convergent parallel, explanatory sequential, exploratory sequential and the embedded design. The convergent design involves collecting quantitative and qualitative data concurrently and analysing the data separately. Thereafter the researcher mixes the two databases by merging the results during data analysis or interpretation. The explanatory sequential design involves collecting the quantitative data and thereafter collecting the qualitative in the second phase. The qualitative data is used to follow up on the quantitative results. The exploratory sequential design involves collecting and analysing qualitative data followed by quantitative data. The qualitative analysis assists in constructing the quantitative phase. The embedded design involves collecting qualitative or quantitative data and thereafter embedding a small strand of the quantitative design (experiment) or qualitative design (case study) to improve the research.

The explanatory sequential mixed methods design is employed in this study to provide a holistic perspective of the study. The sequential explanatory research design is a two-phase design whereby a researcher first collects quantitative data, and then follows up the quantitative results with qualitative research. The qualitative research can be in the form of in-depth

interviews, focus group discussions, or open-ended questions in a survey. However, the researcher also has to explore the inner world of a subject since this is the heart of qualitative research. The researcher in this study included reflexive material regarding her own experiences as a masters student (see Appendix D). Exhibit 3.1 below provides an illustration of the research process based on the research approach and design:

**EXHIBIT 3.1: Research process**



## **Research questions**

The following research questions were posed to indicate the research foci:

- Is there a difference between the masters and doctoral students in the stress related symptoms they experience in the various research report writing phases they are engaged in?
- Is there a difference between the stress related symptoms experienced by masters and doctoral students engaged in proposal and research report writing phases and those who are not?
- Are there significant stressors affecting students during the proposal and research report writing phases?
- Are there differences between the support systems masters and doctoral students use in various proposal and research report writing phases?

## **Hypotheses**

The following research hypotheses, based on the research questions, were postulated for this study:

- H<sub>10</sub>: There is no difference between the stress related symptoms experienced by masters and doctoral students in the various research report writing phases they are engaged in.
- H<sub>11</sub>: There is difference between the stress related symptoms experienced by masters and doctoral students in the various research report writing phases they are engaged in
- H<sub>20</sub>: There are no significant stressors affecting those students who are engaged in the various proposal and research report writing phases and those who are not.

- H<sub>21</sub>: There are significant stressors affecting those who are students engaged in the various proposal and research report writing phases and those who are not.
- H<sub>30</sub>: There are no significant stressors affecting masters students during the proposal and research report writing phases.
- H<sub>31</sub>: There are significant stressors affecting masters students during the proposal and research report writing phases.
- H<sub>40</sub>: There are no differences between the support systems masters and doctoral students use in various proposal and research report writing phases?
- H<sub>41</sub>: There are differences between the support systems masters and doctoral students use in various proposal and research report writing phases?

## **Population**

The population of interest for this study consisted of Unisa postgraduate students enrolled for their masters and doctoral programmes in 2012. An important inclusion criterion was that students had to be busy compiling their research proposals or be engaged in dissertation and thesis writing at Unisa.

A census approach was used for this study, where all the registered masters and doctoral students were invited to complete an online adapted questionnaire by accessing a unique URL (LimeSurvey 1.87) in the study. A total of 6 758 questionnaires were sent out to students, using the LimeSurvey software and 815 completed questionnaires were received from students currently enrolled for masters and doctoral degrees at Unisa.

## **Research instruments**

The study involved an online, self-administered, quantitative questionnaire, which had been adapted from Pillay and Ngcobo (2010), and was used to elicit responses from the participants (see Appendix A). The questionnaire was adapted to suit the framework of all the registered Unisa postgraduate students and the quantitative survey contained both closed- and open-ended questions, which the participants had to complete.

This questionnaire consisted of questions investigating the masters and doctoral students' stress related symptoms during the previous four months with regard to research report writing phases they were engaged in. The questionnaire also investigated the forms of support systems as well as their satisfaction levels with the support they received in the four months prior to participation in the study. To assess the respondents' levels of stress, respondents were asked to rate the extent of stress they experienced while engaged in the research report writing phases on a 5-point scale (1 = Not at all; 5 = Large extent). Stress scales included '*please indicate the intensity of the stress you experienced while engaged in writing your dissertation/thesis*'. Respondents were also asked to rate how they perceived the stressors they were faced with, on a 6-point Likert scale (1 = Feeling no stress, 5 = Extremely stressed, and 6 = Not applicable).

## **Validity and reliability**

Validity refers to whether an instrument measures what it is supposed to measure, whereas reliability refers to whether an instrument can be interpreted consistently across different

situations (Field, 2009). The validity test provided an analysis of the usefulness and meaningfulness of the results of this study.

The reliability test provided the stability of scores of the study. The Stress and Support Questionnaire for University Students (SASQUS) (Pillay & Ngcobo, 2010) was adapted in this study. The Cronbach alpha of .840 for the stress subscale was considered acceptable (Pillay & Ngcobo, 2010) whilst the Cronbach alpha for the stress subscale in the adapted questionnaire used in the current research was .955. However, a reliability coefficient of .466 was obtained for the “support” subscale which according to Pillay and Ngcobo (2010), is low due to the various support systems being investigated. The Cronbach alpha for the “support” subscale in the current questionnaire was .471.

The internal reliability test measures the consistency of items within an instrument or items in a construct. The internal reliability of the “support” subscale measured the consistency of the different support items. The internal reliability showed that students found some statements both easy and difficult to endorse in the support scale. Furthermore, the internal reliability test performed, provided an indication that the support systems used by master’s and doctoral students had different contributions in the various research report writing phases (see Figure 3.4).

To assess respondents' levels of stress while engaged in the research report writing phases, the respondents were asked to rate the extent of stress they perceived to experience while engaged in the research report writing phases on a 5-point scale (1 = Not at all, and 5 = Large

extent). Stress items included: *'to what extent do you experience stress-related symptoms in the dissertation/thesis writing phase you are in currently?'*

## **Data collection**

Data were gathered for the study electronically using the LimeSurvey 1.87 online survey. The Unisa ICT service supported this study and provided the researcher with a full database of students who had been registered for masters and doctoral qualifications. Content and construct validity were performed on the survey before it was administered to respondents. The responding students were asked to complete the survey from a secure website during the month of March 2012 and the survey was deactivated during the month of November 2012. A final reminder was sent out to students who did not complete the questionnaire after two weeks. In order to maintain the confidentiality of the information collected from the postgraduate students, a confidentiality agreement was part of the email message sent.

## **Ethics**

All masters and doctoral students who activated their myLife emails were invited to participate in an online self-completion survey. The questionnaire provided the postgraduate students with the aim of the study and anonymity was guaranteed to students. The students were informed that their participation in the study was voluntary and that they could withdraw from the study whenever they wished to do so. Students who completed the questionnaire were finally asked: (a) if they were able to understand the questions, (b) whether there were questions on

which they needed clarity, and (c) what their inputs were, concerning what could be changed in the questionnaire.

### **Data analyses procedures**

Table 1 provides a depiction of the test statistics used to assess the hypotheses posed in this study.

**TABLE 1: *Data analysis procedure***

<b>Test statistic</b>	<b>Hypothesis</b>
<i>t</i> test	There is no difference between masters and doctoral students' stress related symptoms during the various research report writing phases.
<i>t</i> test	There is no difference in stress related symptoms experienced by students engaged in various research report writing phases and those who are not..
Analysis of Variance (ANOVA)	There are no significant stressors affecting students during the various research report writing phases.
Chi-square	There is no significant difference between the support systems postgraduate students use in the various research report writing phases.

In addition, the Decision Analysis 2.0 statistical package was used to calculate the significant differences of the stress related symptoms experienced by masters and doctoral students. Moreover, the inductive approach was employed to analyse the qualitative data. Thematic analyses were used to interpret the qualitative data.

## **Chapter summary**

A discussion of the research design with specific emphasis on the design of the explanatory sequential mixed methods research design was provided in this chapter. The decision to choose the pragmatics paradigm was also outlined. An explanation was provided of the role of the researcher as a facilitator, as well as the chosen methodological quality of this study. In Chapter Four a detailed discussion of the data analysis as well as the results and findings of the study will be provided.

# CHAPTER FOUR

## ANALYSIS AND RESULTS

*“The world we’ve made as a result of the level of thinking we have done thus far creates problems that we cannot solve at the same level at which we created them.”*

*(Albert Einstein)*

### **Introduction**

The results obtained from the respondents are presented in this chapter. A survey was sent out to 6758 respondents who had registered for a myLife email account and 815 complete responses were received for the study from postgraduate students enrolled for masters and doctoral programmes at Unisa. The quantitative results are presented in the first section of this chapter and the qualitative results will be presented in the second section.

In registering for postgraduate programmes, a student has to adapt, acquire various skills, and perform well academically. This study seeks to investigate, explore and understand the coping mechanisms students adopt in dealing with stress while writing their postgraduate research reports. In this chapter the dataset of the study will be analysed. This dataset was be used as a focal point to respond to the survey questions posed in Chapter One. Descriptive characteristics of the participants and independent variables are provided in the first part of this chapter. The second part of this chapter provides the inferential statistical findings for each of the

hypotheses in this study are summarised in this chapter. The findings of the open-ended survey questions are provided in the third section.

### **Descriptive and inferential statistics results**

A crucial aspect of applying statistics consists of analysing the data in such a way as to obtain a more efficient and comprehensive summary of the overall results. To achieve this goal, both descriptive and inferential statistics (Coolidge, 2006) were employed to describe the data collected and to test the hypotheses formulated.

### **Descriptive analysis**

Descriptive analysis provides a very useful initial examination of the data, even when the ultimate concern of the investigator is inferential (Diamantopoulos & Schlegelmilch, 2006). The descriptive analysis was done to provide insight into the nature of the respondents who participated in the study; this was done through the use of tables and charts. The population elements of the study were all students registered for their masters and doctoral degrees for the 2012 academic year, and the descriptive results are reported in respect of these groups. They were asked to complete the online questionnaire in April 2012.

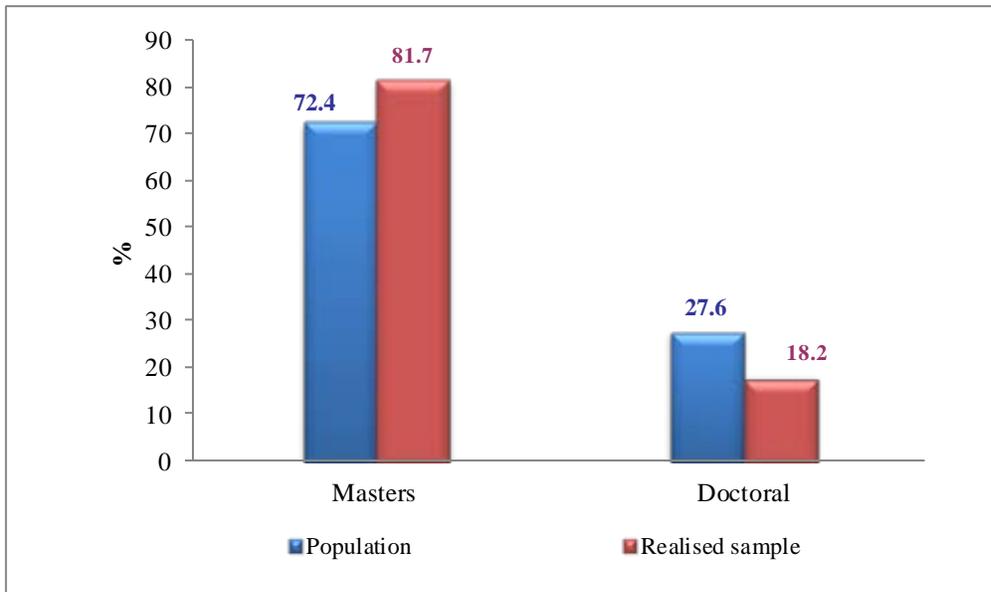
The sections to follow present descriptive analyses of respondent's age, gender, region, and number of years registered for the course and the study phase, and other questions related to student stress while writing their research reports, are presented. The sections will also provide a

comparison of the population and realised sample in line with age, gender and number of years registered for the course. This comparison will ascertain the representivity of the sample.

### Population profile

Student demographics describe the participants in terms of gender, age, registration status, number of years registered, and region. In addition, these demographics provide an imperative description to understand the respondents in the study.

Figure 4.1 represents the proportion of masters and doctoral students who participated in this study.

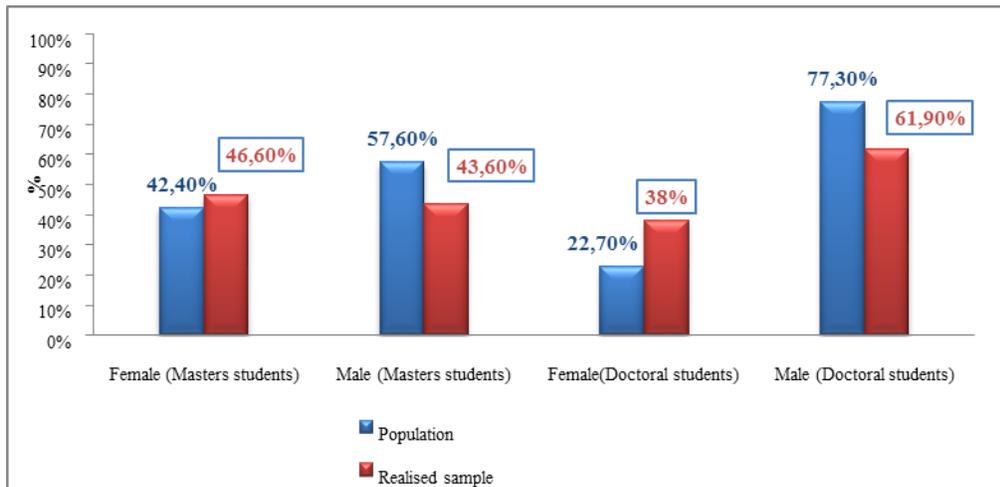


**FIGURE 4.1: Population and realised sample– masters and doctoral students**

It is illustrated in figure 4.1 that there were more masters students than doctoral students who participated in this study. The realised sample consisted of a minor overrepresentation of masters students (81.7%). However there were also small overrepresentations of the population of doctoral students (27.6%) who participated in this study compared to the realised sample.

## Gender

All 815 respondents who completed the questionnaires were profiled in terms of gender, among students enrolled for their masters and doctoral programmes. Figure 4.2 shows the realised sample by gender of masters and doctoral students enrolled for postgraduate programmes.



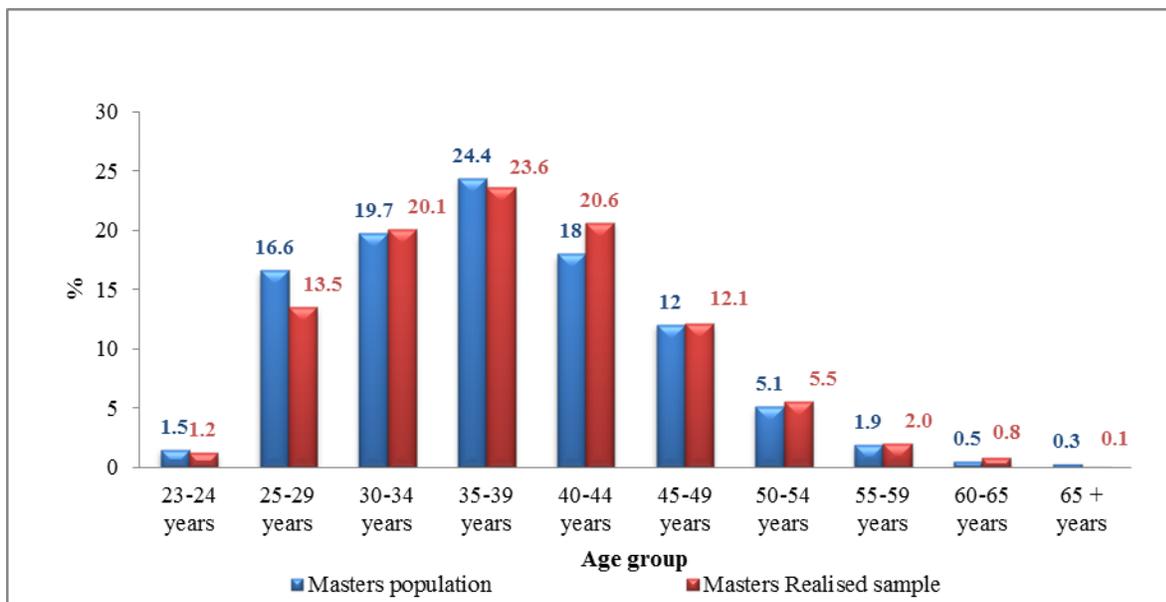
**FIGURE 4.2: Gender representation of sample – population and realised sample**

According to figure 4.2, there were more females (46.6%) enrolled for masters programmes in the realised sample. It is however apparent that there was an overrepresentation of males in the population of masters (57.6%) and doctoral (77.3%) students who participated in

this study. The gender representation of the sample is fairly representative of the realised sample considering the population of the study.

### Respondent age groups

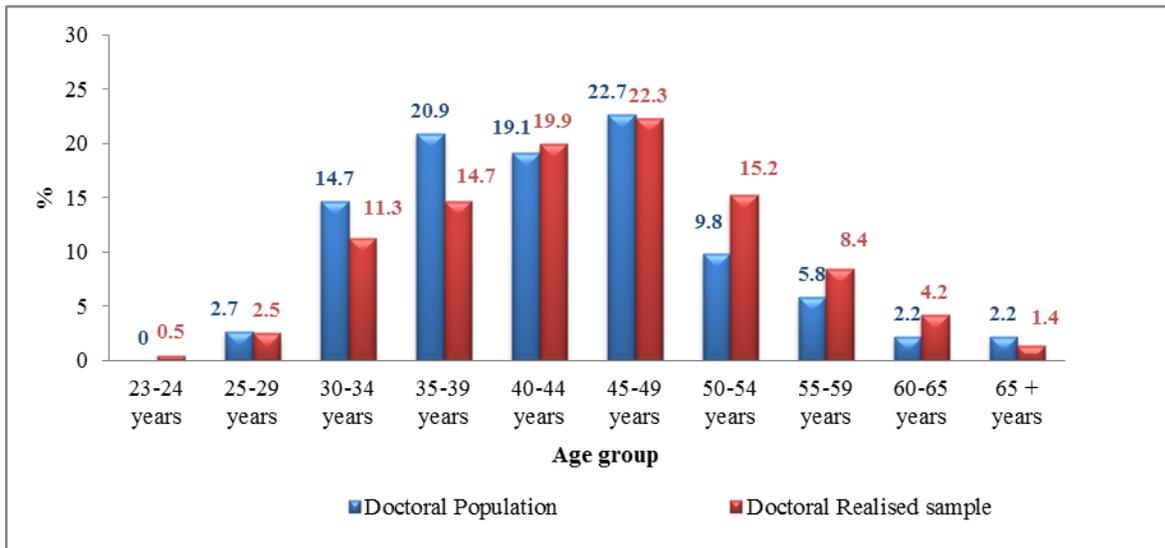
A number of students in distance education institutions are likely to be older, have families, and be full time employed. Figure 4.3 shows the age groups of all masters students who were enrolled for masters programmes in the 2012 academic year.



**FIGURE 4.3: Ages of registered masters students**

It is depicted in figure 4.3 that the majority/a large number of masters students registered for masters (23.6%) programmes were aged between thirty five to thirty nine years old. There is a slight overrepresentation of the masters population in the 25-29 years (16.6%) age group. However, the population is fairly representative of the realised sample in the following age

groups: 23-24 years, 30-34 years, 35-39 years, 45-49 years, 50-54 years, 55-59 years, 60-65 years and 65 and older age group. Figure 4.4 provides a depiction of the age group of students registered for doctoral programmes in the 2012 academic year.



**FIGURE 4.4: Ages of registered doctoral students**

A majority of students who were registered for doctoral programmes in the sample were aged between forty five years and forty nine years. It is also evident from figure 4.4 that there was an overrepresentation of the realised sample compared to the doctoral population who participated in the study. With this in mind, the population is fairly representative of the realised sample in the following age groups: 23-24 years, 25-29 years, 40-44 years, 45-49 years and 65 years and older age group. Figure 4.4 demonstrated that the doctoral population reflect a similar profile of the realised sample.

The analysis involved establishing the proportion of masters and doctoral students enrolled for postgraduate programmes across Unisa regions as well as the research report writing

phases students were engaged in. The following figures refer to the population who completed the online questionnaire. Table 2 illustrates the research report writing phases masters students were engaged in.

**TABLE 2: Masters and doctoral students study phases**

Study phase	Masters		Doctoral	
	<i>n</i>	%	<i>n</i>	%
Writing proposal	256	43.4	85	37.8
Submitted proposal	94	15.9	32	14.2
Proposal accepted	60	10.2	60	10.2
Writing the introductory chapter	65	29	29	12.9
Submitted introductory chapter	33	16	16	7.1
Writing theoretical framework and literature review chapter(s)	70	26	26	11.6
Submitted theoretical framework and literature review chapter(s)	34	15	15	6.7
Writing research methodology chapter(s)	42	31	31	13.8
Submitted research methodology chapter(s)	25	8	8	3.6
Writing analysis chapter(s)	25	19	19	8.4
Submitted analysis chapter(s)	6	7	7	3.1
Writing research findings chapter(s)	20	18	18	8
Submitted research findings chapter(s)	6	4	4	1.8
Writing interpretation and limitation chapter(s)	13	8	8	3.6
Submitted interpretation and limitation chapter(s)	7	1	1	0.4
Research dissertation/thesis submitted for examination	18	9	9	0.4
Final editing of dissertation/thesis draft	42	9	9	0.4

N= 815

According to Table 2, there were more students writing their proposals compared to those students who have submitted their analysis and research findings chapters. However, it is apparent that there were very few masters students engaged in submitting their research analysis and findings chapters. It is evident from table 2 that more masters students have enrolled for their programmes for the first time in 2012 hence they are engaged in the proposal phase.

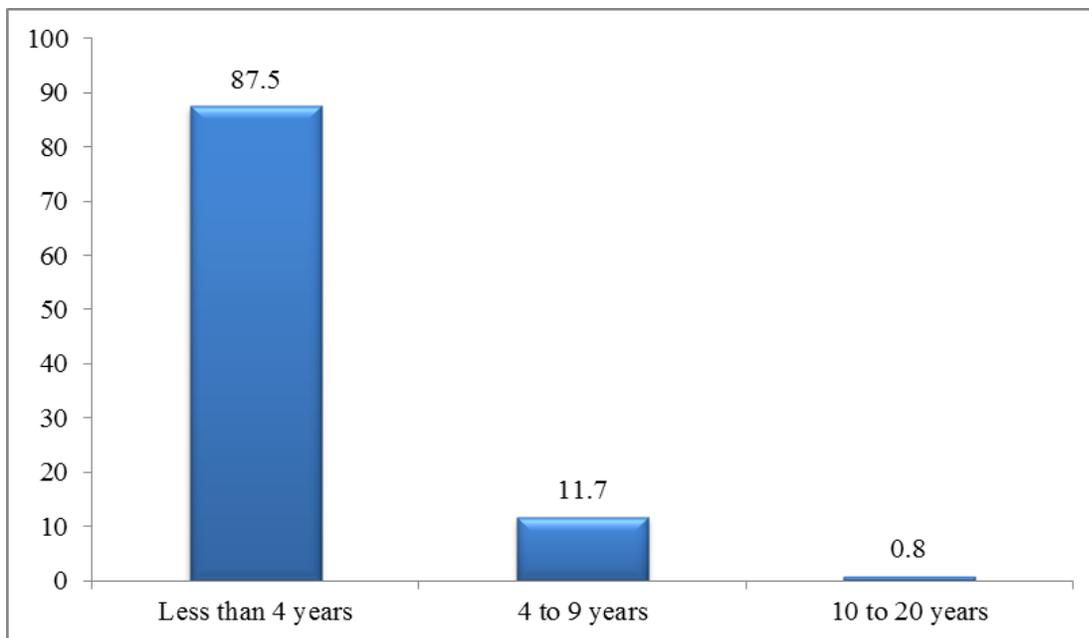
However some of the masters students who have are engaged in the other phases including writing the methodology, introduction and findings chapter could be enrolled for their masters programme for more than one year. Furthermore, 10 in 100 masters students are editing their draft dissertation and others have submitted their dissertations for examination.

A large number of doctoral students were engaged in the writing of proposals phase compared to those writing the research methodology chapter as well as those students who submitted their interpretation and limitations chapter. However, there were few students who had submitted their interpretation and limitation chapters. Furthermore, according to table 2 only 1 in 100 submitted their doctoral thesis for examination.

The submission of research reports for examination for masters and doctoral students is concerning. The results depict that masters and doctoral students need more support to assist them in completing their programmes.

## Respondents

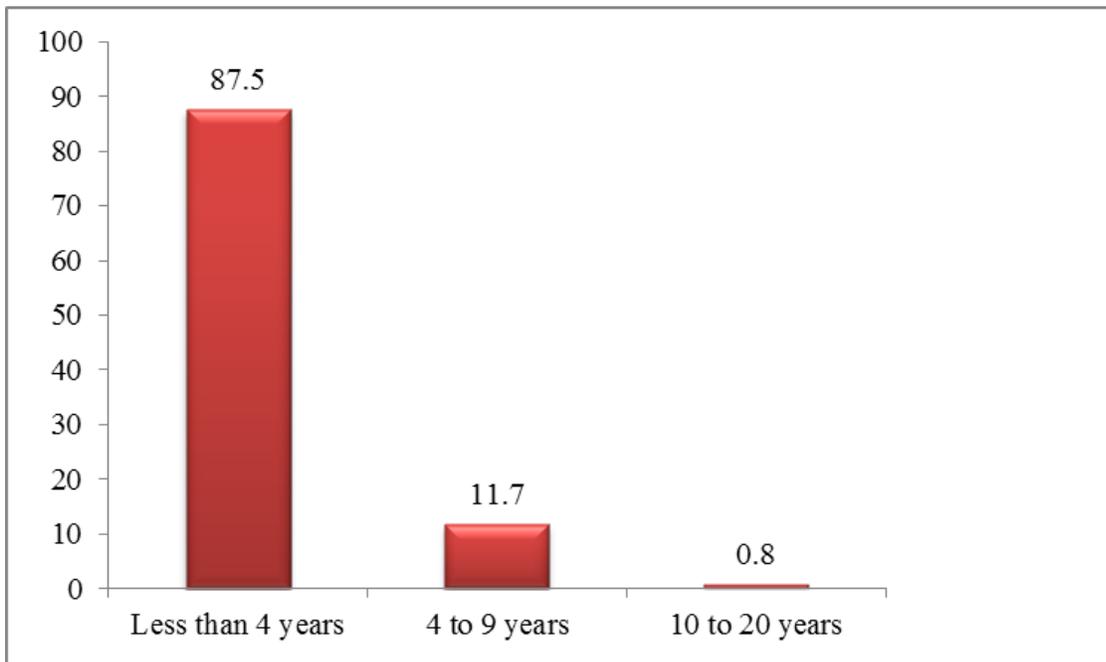
Additional demographic data indicated that the majority of students were enrolled for masters programmes for less than four years (87.5%) compared to those who were enrolled for ten to twenty years (0.8%). Figure 4.5 below shows the number of years masters students (population) who were enrolled for programmes in the 2012 academic year.



**FIGURE 4.5: Number of years students were enrolled for masters programmes**

According to figure 4.5 a few of the masters students (0.8%) were enrolled with Unisa for ten years and over. The results in figure 4.5 show that the majority of students enrolled for doctoral programmes were enrolled for less than four years. However, 12.5% of the remaining students had been enrolled for their masters programmes for more than four years. According to the Unisa policy for masters and doctoral programmes, the maximum period for a student to enrol for a masters programme is three years. It would seem that more attention should be paid to

some of the students who had been enrolled for masters programmes for more than four years. In addition, Figure 4.6 provides a depiction of the number of years doctoral students were enrolled at Unisa.



**FIGURE 4.6: Number of years students were enrolled for doctoral programmes**

According to Figure 4.6, (87.2%) of students had been enrolled for doctoral programmes at Unisa for less than four years. Conversely, (12.8%) of the students had been enrolled for doctoral programmes for more than four years.

The fact that some of the doctoral students remained in the student system for more than four years, is concerning. According to the Unisa policy for masters and doctoral programmes, the maximum period a student can enrol for a doctoral programme is six years. Moreover the results depict that some of the doctoral students found it challenging to adjust to the various

stages of their research report writing phases. Postgraduate students enrolled in their programmes for longer periods, may depart from their programmes when they are not provided with the relevant support they need.

### **Inferential analysis: hypothesis testing**

Inferences involve describing the findings from the sample data for example among others means, standard deviation and proportions, to say something about the population from which the sample was drawn (Tustin, Ligthelm, Martins & Van Wyk, 2005). A complementary approach to making inferences about the population is via hypothesis-testing (Diamantopoulos & Schlegelmilch, 2006).

Formulation of the Null and Alternative Hypothesis:

A hypothesis is an educated guess about some state of affairs. The research hypothesis is usually what the researcher believes to be true; all research begins with the null hypothesis (Coolidge, 2006).

The following hypotheses were formulated:

- $H_{10}$ : There is no difference between the stress related symptoms experienced by masters and doctoral students in the various research report writing phases they are engaged in.
- $H_{11}$ : There is difference between the stress related symptoms experienced by masters and doctoral students in the various research report writing phases they are engaged in

- H<sub>20</sub>: There are no significant stressors affecting those students who are engaged in the various proposal and research report writing phases and those who are not.
- H<sub>21</sub>: There are significant stressors affecting those who are students engaged in the various proposal and research report writing phases and those who are not.
- H<sub>30</sub>: There are no significant stressors affecting masters students during the proposal and research report writing phases.
- H<sub>31</sub>: There are significant stressors affecting masters students during the proposal and research report writing phases.
- H<sub>40</sub>: There are no differences between the support systems masters and doctoral students use in various proposal and research report writing phases.
- H<sub>41</sub>: There are differences between the support systems masters and doctoral students use in various proposal and research report writing phases?

### *Statistical analysis*

Data was analysed using the parametric and non-parametric test statistics due to the fact that data consisted of mainly nominal and ordinal data. According to the non-parametric statistics assumptions, non-parametric tests should be considered when data is: (a) distinctly non-normal and cannot be transformed (b) from a sample that is too small for the central limit theorem to lead to normal averages (c) from an unknown distribution (d) nominal or ordinal (Pallant, 2010). Some of the non-parametric tests include, Chi-square test, McNemar's test, Mann Whitney Test, Kruskal-Wallis Test and the Friedman Test. Although non-parametric tests have less stringent assumptions, they too have their shortcomings. These tests are less sensitive compared to parametric tests. This may result in these tests being unable to detect differences among groups which may exist.

The parametric test statistics have four main assumptions to be considered, that is; (a) data should be normally distributed, (b) the variances should be the same throughout the data (homogeneity of variance), (c) the data should be measured at least at the interval level, and (d) the data from different respondents should be independent; that is, the behaviour of one respondent does not influence another. Some of the parametric tests include, T-tests, one way analysis of variance (ANOVA), two way analysis of variance, multivariate analysis of variance (MANOVA), and analysis of covariance (ANCOVA).

## **Research hypotheses**

Data analysis and findings for each research question are presented in this section.

### **Research hypothesis 1**

Research Question 1 assessed the students' stress related symptoms versus the dissertation and thesis writing phases they were engaged in, by posing the following null hypothesis: *There is no difference between the stress related symptoms experienced by masters and doctoral students in the various research report writing phases they are engaged in.*

The *t* test was used to assess the stress related symptoms of the masters and doctoral students' engaged in research report writing phases. The assumptions of the *t* test hold that the population of the sample has to be normally distributed and the variance of the population to be compared should be normal.

**TABLE 3: Significant differences of research report writing phases and stress symptoms**

Research report writing phase	M			D			t	p
	n <sub>1</sub>	$\bar{X}$	SD	n <sub>2</sub>	$\bar{X}$	SD		
Writing proposal	256	3.45	1.18	85	3.33	1.09	0.802	.408
Submitted proposal	94	3.39	1.22	32	3.38	1.24	0.04	.968
Proposal accepted	60	3.33	1.89	60	3.44	1.09	0.282	.697
Writing the introductory chapter	65	3.58	1.20	29	3.34	1.17	0.871	.361
Submitted introductory chapter	33	3.82	1.07	16	3.25	1.06	1.754	.087
Writing theoretical framework and literature review chapter (s)	70	3.81	1.11	26	3.54	1.17	1.044	.299
Submitted theoretical framework and literature review chapter (s)	34	3.38	1.13	15	3.47	1.30	0.245	.807
Writing research methodology chapter (s)	42	3.83	1.01	31	3.29	1.27	2.023	.047*
Submitted research methodology chapter (s)	25	3.56	1.19	8	3.75	1.28	0.020	.984
Writing analysis chapter (s)	25	3.16	1.14	19	3.05	1.03	0.33	.743
Submitted analysis chapter (s)	6	4.00	1.26	7	3.29	1.38	0.962	.354
Writing research findings chapter (s)	20	3.75	1.02	18	3.50	1.10	0.727	.472
Submitted research findings chapter (s)	6	3.33	1.21	4	3.00	1.15	0.43	.676
Writing interpretation and limitation chapter (s)	13	3.85	0.98	8	2.75	1.28	2.225	.037*
Submitted interpretation and limitation chapter (s)	7	3.43	1.51	1	4.00	1.50	0.353	.733
Final editing of dissertation/thesis draft	18	3.33	1.33	9	3.56	1.51	0.405	.689
Research dissertation/thesis submitted for examination	42	3.14	1.32	9	2.78	1.48	0.727	.470
<i>n</i>	590			225				

N = 815

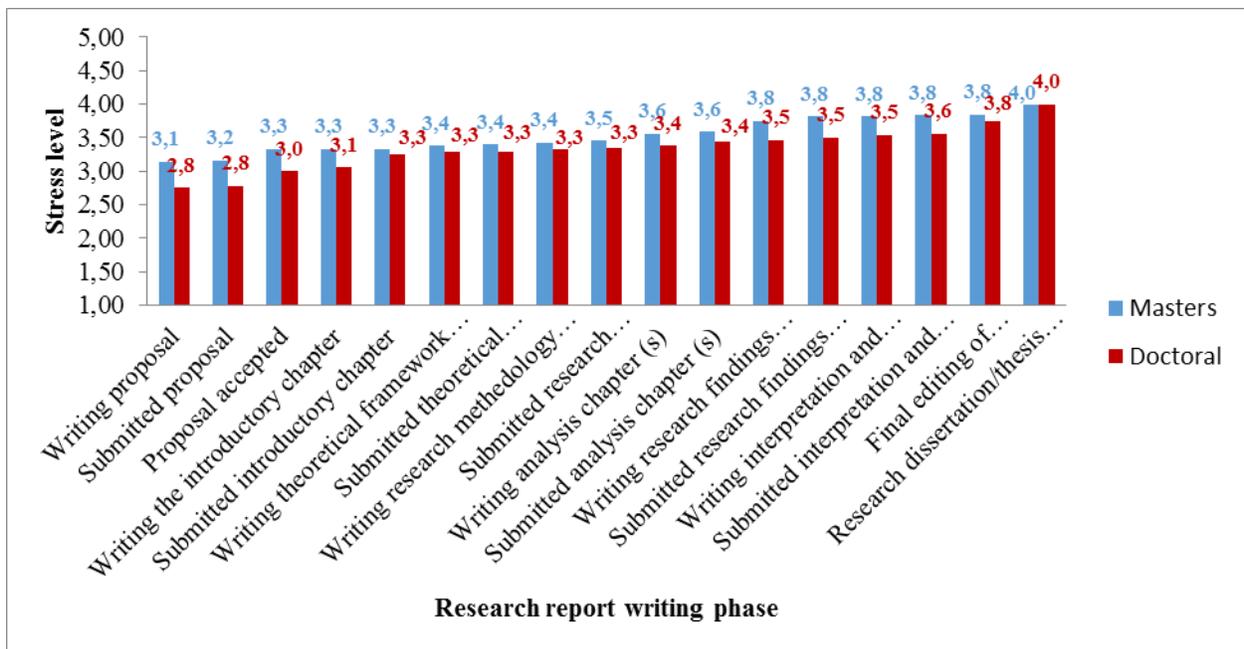
\* $p \leq 0.05$ 

Table 3 provides a depiction of the differences in the stress related symptoms experienced by doctoral and masters students in the various research report writing phases.

There were significant differences in writing the research methodology chapter for masters students ( $\bar{x} = 3.83, SD = 1.01$ ) and doctoral students ( $\bar{x} = 3.29, SD = 1.27$ ),  $t(588) = 2.023, p = .05$ . Also there were significant differences in the writing of the interpretation and limitation chapter of masters students ( $\bar{x} = 3.85, SD = 0.98$ ) and doctoral students ( $\bar{x} = 2.75, SD = 1.28$ ),  $t(588) = 2.225, p = .037$ .

This suggests that masters students feel limited stress when engaged in the writing of the research methodology and the writing of the interpretation and limitation chapter.

Figure 4.7 provides a graphical depiction of the stress masters and doctoral students experienced in the various research report writing phases.



**FIGURE 4.7: Masters and doctoral students stress levels in the various research report writing phases**

There were significant differences in the stress related symptoms experienced by masters and doctoral students in the various research report writing phases they were engaged in. Therefore, the null hypothesis that *there is no difference between the stress related symptoms experienced by masters and doctoral students in the various research report writing phases they are engaged in.*

## **Research hypothesis 2**

Research Question 2 assessed the difference in stress related symptoms between students engaged in the various research report writing phases and those who are not, by posing the following null hypothesis: *There are no significant stressors affecting those students who are engaged in the various proposal and research report writing phases and those who are not.* The *t* test was employed to assess the differences between the research report writing phases contributing to students feeling stress, specifically between students who are engaged in a particular phase and those who are not.

To address this hypothesis, the various research report writing phases students were engaged in, were analysed in detail. The *t* test was used to compare the postgraduate students' stress related symptoms between the various research report writing phases. The test assumes the normality, independence and homogeneity of the distribution of responses.

The *t* test was used to test the following null hypothesis: *There are no significant stressors affecting those students who are engaged in the various proposal and research report writing phases and those who are not.* Table 4 provides an illustration of the significant differences of the phases students find stressful.

**TABLE 4: Significant differences of research report writing phases and stress symptoms**

Research report writing phase		Yes			No			<i>t</i>	<i>p</i>
		<i>n</i> <sub>1</sub>	$\bar{x}$	<i>SD</i>	<i>n</i> <sub>2</sub>	$\bar{x}$	<i>SD</i>		
	Submitted introductory chapter (s)	33	3.82	1.07	557	3.42	1.23	2.051	.047*
<b>Masters</b>	Writing theoretical framework and literature review chapter (s)	70	3.81	1.11	520	3.39	1.22	2.953	.004*
	Writing research methodology chapter (s)	42	3.83	1.01	548	3.41	1.23	2.559	.014*
	Research dissertation submitted for examination	42	3.14	1.31	548	3.47	1.21	-1.651	.099

*N* = 815.

*n*<sub>1</sub> = 590, *n*<sub>2</sub> = 225

\**p* ≤ .05

An independent sample t-test was conducted to compare the stress related symptom scores for masters students engaged in research report writing phases and those who were not. There were significant differences in the scores for students who are engaged in the submitted introductory chapter phase ( $\bar{x} = 3.82$ , *SD* = 1.07), and those who are not engaged in this phase ( $\bar{x} = 3.42$ , *SD* = 1.23; *t* = (588) = 1.82, *p* = .047). There were substantial variances in the scores for students who are engaged in the writing of the theoretical framework and literature review chapter ( $\bar{x} = 3.81$ , *SD* = 1.11) and students who were not engaged in this phase ( $\bar{x} = 3.39$ , *SD* = 1.22, *t* = (588), *p* = .004). There were also extensive differences in the scores for students engaged in the writing of the research methodology chapter phase ( $\bar{x} = 3.83$ , *SD* = 1.01) and those students who are not engaged in this phase ( $\bar{x} = 3.41$ , *SD* = 1.23, *t* = (588), *p* = .014). Lastly, there were significant differences at .10 in the scores for students who have submitted their dissertations for examination ( $\bar{x} = 3.14$ , *SD* = 1.31) and those who have not submitted their dissertation for examination ( $\bar{x} = 3.14$ , *SD* = 3.47, *t* = (588), *p* = .099).

The results suggest that students who were engaged in the submission of the introductory chapter felt more stress than those students who were not engaged in this phase. This could be due to the anxiety from waiting for feedback from their supervisors. The results also show that students engaged in the writing of the research methodology and theoretical framework and literature review chapters felt more stress than those students who were not engaged in these phases. This could be due to the novelty in preparing chapters for their dissertations since they are not used to the academic ways of writing. Students may have also felt more stress during these phases because they were not sure of what is expected of them. However, the submission of the research report for examinations suggests that students who have not submitted their research reports for examination felt more stress than those who submitted their research reports. This could be explained by adjusting to the different phases of writing the proposal since students need a lot of support during this time.

It is apparent that there were no differences in the stress related scores for doctoral students who are engaged in proposal and research report writing phases and those who were not. Although there were no significant differences in the stress related symptoms doctoral students engaged in various proposal and research report writing phases and those who are not, it is in line with the stress related symptoms they experienced. There was however significant differences in the stress related symptoms masters students engaged in different proposal and research report writing phases and those who are not experienced. Therefore, the null hypothesis is rejected.

### **Research hypothesis 3**

Research Question 3 assessed the prevalence of stressors during various research report writing phases, by posing the following null hypothesis: *There are no significant stressors affecting masters students during the proposal and research report writing phases.* To address this hypothesis, the various stressors affecting postgraduate students, as well as the research report writing phases, were analysed in detail. The stress related symptoms for the various stressors are measured as follows: 1 = Not at all stressed, 2 = Some stress, 3 = Moderate stress, 4 = A lot of stress and 5 = Extreme stress.

All the seventeen phases were categorised in the following phases: initial phase, intermediary phase and final phase. The initial phase consists of those students who are writing their proposals, submitted proposals and those whose proposals were accepted. The intermediary phase comprises of students who are currently writing their chapters of their research reports such as introductory, research methodology limitation and recommendation chapter. The final phase comprises of those students who are busy editing their draft research reports and those who have submitted their research reports for examination. Table 5 shows the significant differences of the three phases masters students were engaged in.

The significant stressors during research report writing phases are provided in table 5. Appendix B provides the mean scores of the different stressors masters students experienced in the various research report writing phases.

**TABLE 5: Summary of ANOVA**

Stressor		Sum of Squares	df	Mean Square	F	<i>p.</i>
Difficulties with colleagues	Between Groups	10.953	2	5.476	3.714	.025*
	Within Groups	620.811	421	1.475		
	Total	631.764	423			
Stressful job	Between Groups	13.592	2	6.796	3.570	.029*
	Within Groups	905.999	476	1.903		
	Total	919.591	478			

$n_1 = 590$

\* $p \leq .05$

A one-way between-groups analysis of variance was conducted to explore the impact of stressors on masters students when they are engaged in the proposal or research report writing phases. Proposal or research report writing phases were divided into groups. There was a statistically significant difference at  $p < .05$  level in the stressors scores for the three phases in terms of difficulties with colleagues:  $F(421) = 3.714$ ,  $p = .025$  and stressful job  $F(476) = 3.570$ ,  $p = .029$  in the initial phase.

Table 5 suggests that, masters students in the initial phase find difficulties with their colleagues and their jobs stressful. Table 6 provides a depiction of the differences between the initial, intermediate and final phases.

**TABLE 6: Summary of ANOVA**

Stressor		Sum of Squares	df	Mean Square	F	<i>p</i>
Time management	Between Groups	8.126	2	4.063	3.329	.038*
	Within Groups	251.377	206	1.220		
	Total	259.502	208			
Parents in conflict	Between Groups	3.355	2	1.677	2.945	.056
	Within Groups	80.305	141	.570		
	Total	83.660	143			
Failing to meet deadlines	Between Groups	14.827	2	7.413	4.550	.012*
	Within Groups	301.402	185	1.629		
	Total	316.229	187			

$n_2 = 225$

\* $p \leq .05$

A one-way between groups analysis of variance was conducted to explore the impact of stressors on doctoral students when engaged in the proposal or research report writing phases. There was a statistically significant difference at  $p < .05$  level in the stressors scores for the three phases in terms of time management  $F(206) = 3.329$ ,  $p = .038$ ; parents in conflict with each other  $F(141) = 2.945$ ,  $p = .056$  and failing to meet deadlines  $F(187) = 4.550$ ,  $p = .012$ . However, the one way analysis of variance showed that parents in conflict with each other is significant at  $p = .10$ .

According to table 6, doctoral students in initial phase find time management, parents in conflict with each other and failing to meet deadlines stressful.

The results showed the significant stressors during research report writing that students deal with in the different phases. Therefore, the null hypothesis that *there are no significant stressors affecting masters students during the proposal and research report writing phases*, is rejected.

#### **Research hypothesis 4**

Research Question 4 assessed the most used support systems postgraduate students employed as a coping mechanism, by posing the following null hypothesis: *there are no differences between the support systems masters and doctoral students use in various proposal and research report writing phases*. To address this hypothesis, the various support systems postgraduate students used, as well as the research report writing phases, were analysed in detail.

The Chi-square test for independence was employed for data analysis as the support and support variables were both categorical. The Chi-square test for independence's assumptions state the following: (a) The sample data is a random sampling from a fixed distribution, (b) A sample with a sufficiently large size is assumed (c) Adequate expected cell counts and (d) The observations are always assumed to be independent of each other. This statistical technique was employed to assess the differences in the support systems students used during the various research report writing phases. Significant differences and insignificant differences of the support systems students use in certain phases are reported in table 7-23. Table 7 shows the Chi-square test for independence results of the support students received during the proposal writing phase.

**Table 7: Phase 1: Support systems used during proposal writing**

	Masters		Doctoral				$\chi^2$	<i>p</i>
	Yes <i>n</i> %	No <i>n</i> %	Yes <i>n</i> %	No <i>n</i> %	No <i>n</i> %			
Parents	59 23.05	197 76.95	13 15.29	72 84.71	2.303	.129		
Siblings	43 16.80	213 83.20	5 5.88	80 94.12	6.285	.012*		
Other relatives	10 3.91	246 96.09	3 3.53	82 96.47	.025	.875		
Spouse/Partner	109 42.58	147 57.42	36 42.35	49 57.65	.001	.971		
Friends	96 37.50	160 62.50	31 36.47	54 63.53	.029	.865		
Colleagues at work	95 37.11	161 62.89	35 41.18	50 58.82	.447	.504		
Religious leader	3 1.17	253 98.83	2 2.35	83 97.65	.616	.432 <sup>b</sup>		
Health care professionals (e.g. nurses, doctors, psychologists)	13 5.08	243 94.92	6 7.06	79 92.94	.476	.490		
Neighbours	2 .78	254 99.22	1 1.18	84 98.82	.114	.735 <sup>c</sup>		
Supervisor	100 39.06	156 60.94	46 54.12	39 45.88	5.907	.015*		
Community library	26 10.16	230 89.84	14 16.47	71 83.53	2.457	.117		
Community centre	4 1.56	252 98.44	1 1.18	84 98.82	.066	.798		
Unisa library	133 51.95	123 48.05	47 55.29	38 44.71	.286	.593		
Unisa Learning Centre	10 3.91	246 96.09	7 8.24	78 91.76	2.525	.112		
Unisa Regional Centre	7 2.73	249 97.27	14 16.47	71 83.53	20.83	.000*		

The Chi-square test for independence indicated differences between support received from siblings  $\chi^2 (1, N = 815) 6,29, p < ,05$ , supervisor  $\chi^2 (1, N = 815) 5,90, p < ,05$  and the Unisa regional centre  $\chi^2 (1, N = 815), = 20,8, p < ,001$ .

Table 7 illustrates that few masters and doctoral students pursued support from support systems. According to table 7, only (17%) of the masters students and (6%) doctoral students used support from siblings  $p = .012$ . Only (39.1%) masters used support from supervisors while only (54.1%) doctoral students used support from supervisors  $p = .015$ . The Unisa regional centre was used by only (2.7%) masters and (16.5%) doctoral students  $p = .000$ .

The support systems postgraduate students used after they submitted their chapters are depicted in table 8.

**Table 8: Phase 2: Support systems used after submitting research proposal**

	Masters				Doctoral				$\chi^2$	<i>p</i>
	Yes		No		Yes		No			
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
Parents	27	28.72	67	71.28	6	18.75	26	81.25	1.228	.268
Siblings	12	12.7	82	87.23	4	12.50	28	87.50	.002	.969
Other relatives	6	6.38	88	93.62	1	3.13	31	96.88	.483	.487
Spouse/Partner	41	43.62	53	56.38	17	53.13	15	46.88	.869	.351
Friends	43	45.74	51	54.26	15	46.88	17	53.13	.012	.912
Colleagues at work	45	47.87	49	52.13	11	34.38	21	65.63	1.761	.184
Religious leader	2	2.13	92	97.87	2	6.25	30	93.75	1.320	.251
Health care professionals (e.g. nurses, doctors, psychologists)	6	6.38	88	93.62	1	3.13	31	96.88	.483	.487
Neighbours	1	1.06	93	98.94	0	0.00	32	100.00	.343	.558
Supervisor	48	51.06	46	48.94	16	50.00	16	50.00	.011	.917
Community library	13	13.83	81	86.17	6	18.75	26	81.25	.451	.502
Community centre	2	2.13	92	97.87	0	0.00	32	100.00	.692	.406
Unisa library	47	50.00	47	50.00	22	68.75	10	31.25	3.388	.066
Unisa Learning Centre	2	2.13	92	97.87	3	9.38	29	90.63	3.290	.070
Unisa Regional Centre	6	6.38	88	93.62	5	15.63	27	84.38	2.559	.110
Other sources of support	12	12.77	82	87.23	6	18.75	26	81.25	.698	.403

Table 8 depicts insignificant results between the use of support systems and the research phase postgraduate students are involved in,  $p > .05$ . Table 9 below shows the significant differences of the support systems postgraduate students when writing the introductory chapter. .

**Table 9: Phase 3: Support systems students use after proposals were accepted**

	Masters				Doctoral				$\chi^2$	<i>p</i>
	Yes		No		Yes		No			
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
Parents	21	35.00	39	65.00	5	18.52	22	81.48	2.414	.120
Siblings	13	21.67	47	78.33	3	11.11	24	88.89	1.382	.240
Other relatives	1	1.67	59	98.33	1	3.70	26	96.30	.344	.558
Spouse/Partner	32	53.33	28	46.67	13	48.15	14	51.85	.200	.654
Friends	29	48.33	31	51.67	15	55.56	12	44.44	.389	.533
Colleagues at work	24	40.00	36	60.00	12	44.44	15	55.56	.152	.697
Religious leader	4	6.67	56	93.33	0	0.00	27	100.00	1.887	.170
Health care professionals (e.g. nurses, doctors, psychologists)	1	1.67	59	98.33	2	7.41	25	92.59	1.843	.175 <sup>c</sup>
Neighbours	0	0.00	60	100.00	0	0.00	27	100.00		
Supervisor	28	46.67	32	53.33	17	62.96	10	37.04	1.980	.159
Community library	6	10.00	54	90.00	3	11.11	24	88.89	.025	.875
Community centre	1	1.67	59	98.33	0	0.00	27	100.00	.455	.500 <sup>c</sup>
Unisa library	29	48.33	31	51.67	18	66.67	9	33.33	2.520	.112
Unisa Learning Centre	1	1.67	59	98.33	2	7.41	25	92.59	1.843	.175
Unisa Regional Centre	3	5.00	57	95.00	7	25.93	20	74.07	8.015	.005 <sup>*</sup>

N = 815

\* $p \leq .05$

The Chi-square test for independence indicated significant differences between support received from the Unisa regional centre and the proposal writing phase (proposal accepted)  $\chi^2 (1, N = 815), = 8.01, p < .05$ . It is depicted in table 9 that few masters students looked for support after they submitted their proposal for ethical clearance. Only (5%) masters and (26%) doctoral students received support from Unisa regional centres after their proposals were accepted  $p = .005$ .

Table 10 provides an illustration of the support systems postgraduate students used when wiring their introductory chapters.

**Table 10: Phase 4: Support systems students when writing the introductory chapters**

	Masters		No		Doctoral		Yes		$\chi^2$	<i>p</i>
	Yes <i>n</i>	%	No <i>n</i>	%	Yes <i>n</i>	%	No <i>n</i>	%		
Parents	16	24.62	49	75.38	4	13.79	25	86.21	1.402	.236
Siblings	8	12.31	57	87.69	2	6.90	27	93.10	.618	.432
Other relatives	4	6.15	61	93.85	1	3.45	28	96.55	.291	.589
Spouse/Partner	37	56.92	28	43.08	15	51.72	14	48.28	.219	.640
Friends	31	47.69	34	52.31	14	48.28	15	51.72	.003	.958
Colleagues at work	30	46.15	35	53.85	16	55.17	13	44.83	.653	.419
Religious leader	1	1.54	64	98.46	1	3.45	28	96.55	.351	.553
Health care professionals (e.g. nurses, doctors, psychologists)	2	3.08	63	96.92	1	3.45	28	96.55	.009	.925
Neighbours	0	0.00	65	100.00	0	0.00	29	100.00		
Supervisor	31	47.69	34	52.31	19	65.52	10	34.48	2.559	.110
Community library	10	15.38	55	84.62	3	10.34	26	89.66	.427	.513
Community centre	1	1.54	64	98.46	0	0.00	29	100.00	.451	.502
Unisa library	33	50.77	32	49.23	19	65.52	10	34.48	1.765	.184
Unisa Learning Centre	5	7.69	60	92.31	3	10.34	26	89.66	.181	.670
Unisa Regional Centre	3	4.62	62	95.38	4	13.79	25	86.21	2.451	.117

Table 10 depicts insignificant results between the use of support systems and writing of the introductory chapter phase,  $p > .05$ . Table 11 below shows the significant differences of the support systems postgraduate students used after submitting the introductory chapter.

**Table 11: Phase 5: Support systems postgraduate students use after submitting their introductory chapters**

	Masters				Doctoral				$\chi^2$	<i>p</i>
	Yes <i>n</i>	%	No <i>n</i>	%	Yes <i>n</i>	%	No <i>n</i>	%		
Parents	8	24.24	25	75.76	2	12.50	14	87.50	.915	.339
Siblings	3	9.09	30	90.91	1	6.25	15	93.75	.116	.733
Other relatives	0	0.00	33	100.00	0	0.00	16	100.00		
Spouse/Partner	20	60.61	13	39.39	7	43.75	9	56.25	1.238	.266
Friends	14	42.42	19	57.58	6	37.50	10	62.50	.108	.742
Colleagues at work	15	45.45	15	45.45	6	37.50	10	62.50	1.253	.263
Religious leader	0	0.00	33	100.00	0	0.00	16	100.00		
Health care professionals (e.g. nurses, doctors, psychologists)	1	3.03	32	96.97	1	6.25	15	93.75	.285	.593
Neighbours	0	0.00	33	100.00	0	0.00	16	100.00		
Supervisor	15	45.45	18	54.55	7	43.75	9	56.25	.013	.910
Community library	2	6.06	31	93.94	2	12.50	14	87.50	.596	.440
Community centre	0	0.00	33	100.00	0	0.00	16	100.00		
Unisa library	15	45.45	18	54.55	9	56.25	7	43.75	.503	.478
Unisa Learning Centre	1	3.03	32	96.97	1	6.25	15	93.75	.285	.593
Unisa Regional Centre	1	3.03	32	96.97	2	12.50	14	87.50	1.681	.195

Table 11 depicts insignificant results between the use of support systems and the submitting of the introductory chapter phase,  $p > .05$ . Table 12 below shows the significant differences of the support systems postgraduate students used when writing the literature review and theoretical framework chapter.

Table 12 depicts insignificant results between the use of support systems and writing the theoretical framework and literature review chapter phase,  $p > .05$ . Table 13 below shows the significant differences of the support systems postgraduate students used after submitting the literature review1 and theoretical framework chapter.

**Table 12: Phase 6: Support systems postgraduate students use when writing the theoretical framework and literature review chapter**

	Masters				Doctoral				$\chi^2$	<i>p</i>
	Yes		No		Yes		No			
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
Parents	18	25.71	52	74.29	6	23.08	20	76.92	.070	.791
Siblings	11	15.71	59	84.29	4	15.38	22	84.62	.002	.968
Other relatives	4	5.71	66	94.29	0	0.00	26	100.00	1.550	.213
Spouse/Partner	39	55.71	31	44.29	13	50.00	13	50.00	.249	.618
Friends	34	48.57	36	51.43	12	46.15	14	53.85	.044	.833
Colleagues at work	37	52.86	33	47.14	13	50.00	13	50.00	.062	.803
Religious leader	3	4.29	67	95.71	1	3.85	25	96.15	.009	.924
Health care professionals (e.g. nurses, doctors, psychologists)	5	7.14	65	92.86	3	11.54	23	88.46	.480	.489
Neighbours	0	0.00	70	100.00	0	0.00	26	100.00		
Supervisor	37	52.86	33	47.14	13	50.00	13	50.00	.062	.803
Community library	6	8.57	64	91.43	3	11.54	23	88.46	.196	.658
Community centre	0	0.00	70	100.00	0	0.00	26	100.00		
Unisa library	37	52.86	33	47.14	13	50.00	13	50.00	.062	.803
Unisa Learning Centre	3	4.29	67	95.71	1	3.85	25	96.15	.009	.924
Unisa Regional Centre	5	7.14	65	92.86	3	11.54	23	88.46	.480	.489

**Table 13: Phase 7: Support systems postgraduate students use after submitting the theoretical framework and literature review chapter**

	Masters				Doctoral				$\chi^2$	<i>p</i>
	Yes		No		Yes		No			
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
Parents	13	38.24	21	61.76	5	33.33	10	66.67	.108	.743
Siblings	3	8.82	31	91.18	1	6.67	14	93.33	.065	.799
Other relatives	0	0.00	34	100.00	0	0.00	15	100.00		
Spouse/Partner	17	50.00	17	50.00	5	33.33	10	66.67	1.169	.280
Friends	13	38.24	21	61.76	6	40.00	9	60.00	.014	.907
Colleagues at work	15	44.12	19	55.88	5	33.33	10	66.67	.501	.479
Religious leader	0	0.00	34	100.00	1	6.67	14	93.33	2.314	.128 <sup>b</sup>
Health care professionals (e.g. nurses, doctors, psychologists)	0	0.00	34	100.00	2	13.33	13	86.67	4.726	.030*
Neighbours	0	0.00	34	100.00	0	0.00	15	100.00		
Supervisor	15	44.12	19	55.88	9	60.00	6	40.00	1.051	.305
Community library	4	11.76	30	88.20	1	6.67	14	93.33	.295	.587
Community centre	0	0.00	34	100.00	0	0.00	15	100.00		
Unisa library	15	44.12	19	55.88	11	73.33	4	26.67	3.567	.059
Unisa Learning Centre	1	2.94	33	97.06	2	13.33	13	86.67	1.956	.162
Unisa Regional Centre	1	2.94	33	97.06	1	6.67	14	93.33	.369	.544

N = 815

\**p* ≤ .05

The Chi-square test for independence indicated significant differences between support received from health care workers and the submission of the theoretical framework and literature review chapter  $\chi^2 (1, N = 815), = 4.73, p \leq .05$ . It is depicted table 13 that few postgraduate students looked for support from health care workers after submitting their chapter. None of the masters students pursued support from health care workers. Only (13%) doctoral students received support from health care workers after submitting their theoretical framework and literature review chapters  $p = .030$ .

Table 14 provides an illustration of the support systems postgraduate students used when writing their research methodology chapters.

**Table 14: Phase 8: Support systems postgraduate students use when writing the research methodology chapter**

	Masters				Doctoral				$\chi^2$	<i>p</i>
	Yes		No		Yes		No			
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
Parents	13	30.95	29	69.05	6	19.35	25	80.65	1.246	0.264
Siblings	6	14.29	36	85.71	2	6.45	29	93.55	1.122	.290
Other relatives	1	2.38	41	97.62	0	0.00	31	100.00	0.748	.387
Spouse/Partner	29	69.05	13	30.95	16	51.61	15	48.39	2.293	0.13
Friends	24	57.14	18	42.86	13	41.94	18	58.06	1.65	0.199
Colleagues at work	19	45.24	23	54.76	11	35.48	20	64.52	0.701	0.402
Religious leader	0	0.00	42	100.00	0	0.00	31	100.00		
Health care professionals (e.g. nurses, doctors, psychologists)	3	7.14	39	92.86	0	0.00	31	100.00	2.309	.129
Neighbours	0	0.00	42	100.00	0	0.00	31	100.00		
Supervisor	22	52.38	20	47.62	18	58.06	13	41.94	0.233	0.63
Community library	3	7.14	39	92.86	1	3.23	30	96.77	0.528	.467
Community centre	0	0.00	42	100.00	0	0.00	31	100.00		
Unisa library	16	38.10	26	61.90	16	51.61	15	48.39	1.324	0.25
Unisa Learning Centre	2	4.76	40	95.24	1	3.23	30	96.77	0.107	.744
Unisa Regional Centre	2	4.76	40	95.24	6	19.35	25	80.65	3.892	.049*

N = 815

\* $p \leq .05$

The Chi-square test for independence indicated significant differences between support received from Unisa regional centre and writing the research methodology chapter  $\chi^2 (1, N = 815), = 3.89, p \leq .05$ . It is depicted in table 14 that few postgraduate students looked for support from the Unisa regional centre when writing the research methodology chapter. Only few masters and doctoral students pursued support from the Unisa regional centre. Only (5%) of masters and (19.3%) of doctoral students looked for support from the Unisa regional centre  $p = .049$ .

Table 15 shows The Chi-square test for independence indicated significant differences of the support postgraduate students used after submitting their research methodology chapters.

**Table 15: Phase 9: Support systems postgraduate students use submitting the research methodology chapter**

	Masters				Doctoral				$\chi^2$	$p$
	Yes		No		Yes		No			
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
Parents	9	36.00	16	64.00	2	25.00	6	75.00	.330	.566
Siblings	2	8.00	23	92.00	1	12.50	7	87.50	.149	.700
Other relatives	0	0.00	25	100.00	0	0.00	8	100.00		
Spouse/Partner	11	44.00	14	56.00	2	25.00	6	75.00	.916	.338
Friends	12	48.00	13	52.00	3	37.50	5	62.50	.270	.604
Colleagues at work	10	40.00	15	60.00	4	50.00	4	50.00	.248	.618
Religious leader	0	0.00	25	100.00	1	12.50	7	87.50	3.223	.073
Health care professionals (e.g. nurses, doctors, psychologists)	1	4.00	24	96.00	2	25.00	6	75.00	3.234	.072
Neighbours	0	0.00	25	100.00	0	0.00	8	100.00		
Supervisor	12	48.00	13	52.00	6	75.00	2	25.00	1.782	.182
Community library	3	12.00	22	88.00	2	25.00	6	75.00	.797	.372
Community centre	0	0.00	25	100.00	0	0.00	8	100.00		
Unisa library	9	36.00	16	64.00	5	62.50	3	37.50	1.742	.187
Unisa Learning Centre	0	0.00	25	100.00	0	0.00	8	100.00		
Unisa Regional Centre	1	4.00	24	96.00	1	12.50	7	87.50	.769	.380

Table 15 depicts insignificant results between the use of support systems and the submitting of the research methodology chapter phase,  $p > .05$ . Table 16 below shows the

significant differences of the support systems postgraduate students used when writing the literature review and theoretical framework chapter.

**Table 16: Phase 10: Support systems postgraduate students use when writing the analysis chapter**

	Masters				Doctoral				$\chi^2$	p
	Yes		No		Yes		No			
	n	%	n	%	n	%	n	%		
Parents	9	36.00	16	64.00	4	21.05	15	78.95	1.159	.282
Siblings	4	16.00	21	84.00	1	5.26	18	94.74	1.236	.266
Other relatives	1	4.00	24	96.00	1	5.26	18	94.74	.040	.842
Spouse/Partner	15	60.00	10	40.00	8	42.11	11	57.89	1.386	.239
Friends	11	44.00	14	56.00	7	36.84	12	63.16	.229	.632
Colleagues at work	9	36.00	16	64.00	5	26.32	14	73.68	.467	.495
Religious leader	2	8.00	23	92.00	1	5.26%	18	94.74	.127	.721
Health care professionals (e.g. nurses, doctors, psychologists)	0	0.00	25	100.00	0	0.00	18	94.74	1.346	.246
Neighbours	0	0.00	25	100.00	0	0.00	19	100.00		
Supervisor	16	64.00	9	36.00	12	63.16	7	36.84	.003	.954
Community library	2	8.00	23	92.00	0	0.00	19	100.00	1.592	.207
Community centre	0	0.00	25	100.00	0	0.00	19	100.00		
Unisa library	13	52.00	12	48.00	9	47.37	10	52.63	.093	.761
Unisa Learning Centre	0	0.00	25	100.00	1	5.26	18	94.74	1.346	.246
Unisa Regional Centre	0	0.00	25	100.00	8	42.11	11	57.89	12.865	.000*

N = 815

\* $p \leq .05$

The Chi-square test for independence indicated significant differences between support received from the Unisa regional centre and writing the analysis chapter  $\chi^2 (1, N = 815), = 12.87, p \leq .05$ . Table 16 shows that few postgraduate students looked for support from the Unisa regional centre when writing the analysis chapter. None of the masters students pursued support from the Unisa regional centre. Only (42%) doctoral students looked for support from the Unisa regional centre  $p = .000$ .

Table 17 shows The Chi-square test for independence indicated significant differences of the support postgraduate students used after submitting their analysis chapters.

**Table 17: Phase 11: Support systems postgraduate students use after submitting the analysis chapter**

	Masters		Doctoral		$\chi^2$	<i>p</i>
	Yes	No	Yes	No		
	<i>n</i> %	<i>n</i> %	<i>n</i> %	<i>n</i> %		
Parents	2 33.33	4 66.67	2 28.57	5 71.43	.034	.853
Siblings	0 0.00	6 100.00	0 0.00	7 100.00		
Other relatives	0 0.00	6 100.00	0 0.00	7 100.00		
Spouse/Partner	3 50.00	3 50.00	3 42.86	4 57.14	.066	.797
Friends	4 66.67	2 33.33	3 42.86	4 57.14	.737	.391
Colleagues at work	3 50.00	3 50.00	3 42.86	4 57.14	.066	.797
Religious leader	0 0.00	6 100.00	2 28.57	5 71.43	2.026	.155
Health care professionals (e.g. nurses, doctors, psychologists)	0 0.00	6 100.00	2 28.57	5 71.43	2.026	.155
Neighbours	0 0.00	6 100.00	0 0.00	7 100.00		
Supervisor	3 50.00	3 50.00	5 71.43	2 28.57	.627	.429
Community library	1 16.67	5 83.33	0 0.00	7 100.00	1.264	.26
Community centre	0 0.00	6 100.00	0 0.00	7 100.00		
Unisa library	2 33.33	4 66.67	4 57.14	3 42.86	.737	.391
Unisa Learning Centre	0 0.00	6 100.00	0 0.00	7 100.00		
Unisa Regional Centre	0 0.00	6 100.00	0 0.00	7 100.00		

Table 17 shows insignificant differences between the use of support systems and the research phase postgraduate student are involved in, that is the submitting of the analysis chapter phase  $p > .05$ . Table 18 below shows the significant differences of the support systems postgraduate students used when writing the research findings chapter.

The Chi-square test for independence indicated significant differences between support received from the health care professionals and writing the findings chapter  $\chi^2 (1, N = 815), = 4.97, p \leq .05$ . According to table 18 few postgraduate students looked for support from the health care professionals when writing the findings chapter. None (0%) of the masters students pursued support from health care professionals. Only (22%) doctoral students looked for support from health care professionals  $p = .026$ .

**Table 18: Phase 12: Support systems postgraduate students when writing the research findings chapter**

	Masters		Doctoral		Masters		Doctoral		$\chi^2$	<i>p</i>
	Yes		No		Yes		No			
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
Parents	10.00	50.00	10.00	50.00	4.00	22.22	14.00	77.78	3.14	0.08
Siblings	5.00	25.00	15.00	75.00	2.00	11.11	16.00	88.89	1.22	.270
Other relatives	1.00	5.00	19.00	95.00	0.00	0.00	18.00	100.00	0.92	.336
Spouse/Partner	15.00	75.00	5.00	25.00	8.00	44.4	10.00	55.56	3.70	0.05
Friends	11.00	55.00	9.00	45.00	5.00	27.78	13.00	72.22	2.88	0.09
Colleagues at work	11.00	55.00	9.00	45.00	8.00	44.44	10.00	55.56	0.42	0.52
Religious leader	1.00	5.00	19.00	95.00	2.00	11.11	16.00	88.89	0.49	.485
Health care professionals (e.g. nurses, doctors, psychologists)	0.00	0.00	20.00	100.00	4.00	22.22	14.00	77.78	4.97	.026*
Neighbours	0.00	0.00	20.00	100.00	0.00	0.00	18.00	100.00		
Supervisor	11.00	55.00	9.00	45.00	11.00	61.11	7.00	38.89	0.15	0.70
Community library	3.00	15.00	17.00	85.00	1.00	5.56	17.00	94.44	0.90	.344
Community centre	0.00	0.00	20.00	100.00	0.00	0.00	18.00	100.00	0.12	0.73
Unisa library	10.00	50.00	10.00	50.00	8.00	44.44	10.00	55.56	0.92	.336
Unisa Learning Centre	1.00	5.00	19.00	95.00	0.00	0.00	18.00	100.00	3.62	.057
Unisa Regional Centre	0.00	0.00	20.00	100.00	3.00	16.67	15.00	83.33		

N = 815

\* $p \leq 0.05$

Table 19 shows the Chi-square test for independence indicated significant differences of the support postgraduate students used after submitting their research findings chapters.

**Table 19: Phase 13: Support systems postgraduate students after submitting the research findings chapter**

	Masters				Doctoral				$\chi^2$	<i>p</i>
	Yes		No		Yes		No			
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
Parents	1	16.67	5	83.33	0	0.00	4	100.00	.741	.389
Siblings	0	0.00	6	100.00	0	0.00	4	100.00		
Other relatives	0	0.00	6	100.00	0	0.00	4	100.00		
Spouse/Partner	3	50.00	3	50.00	1	25.00	3	75.00	.625	.429
Friends	3	50.00	3	50.00	2	50.00	2	50.00	0.000	1.000
Colleagues at work	3	50.00	3	50.00	2	50.00	2	50.00	0.000	1.000
Religious leader	0	0.00	6	100.00	1	25.00	3	75.00	1.667	.197
Health care professionals (e.g. nurses, doctors, psychologists)	0	0.00	6	100.00	0	0.00	4	100.00		
Neighbours	0	0.00	6	100.00	0	0.00	4	100.00		
Supervisor	4	66.67	2	33.33	4	100.00	0	0.00	1.667	.197
Community library	2	33.33	4	66.67	1	25.00	3	75.00	.079	.778
Community centre	0	0.00	6	100.00	0	0.00	4	100.00		
Unisa library	3	50.00	3	50.00	3	75.00	1	25.00	.625	.429
Unisa Learning Centre	0	0.00	6	100.00	0	0.00	4	100.00		
Unisa Regional Centre	0	0.00	6	100.00	1	25.00	3	75.00	1.667	.197

Table 19 shows insignificant results between the use of support systems and the writing of the interpretation and limitations chapter phase  $p > .05$ . Table 20 below shows the significant differences of the support systems postgraduate students used when writing the interpretation and interpretation chapters.

**Table 20: Phase 14: Support systems postgraduate students after writing the interpretation and limitation chapters**

	Masters				Doctoral				$\chi^2$	<i>p</i>
	Yes		No		Yes		No			
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
Parents	6	46.15	7	53.85	2	25.00	6	75.00	.940	.332
Siblings	1	7.69	12	92.31	1	12.50	7	87.50	.133	.716
Other relatives	1	7.69	12	92.31	0	0.00	8	100.00	.646	.421
Spouse/Partner	10	76.92	3	23.08	4	50.00	4	50.00	1.615	.204
Friends	8	61.54	5	38.46	3	37.50	5	62.50	1.147	.284
Colleagues at work	6	46.15	7	53.85	6	75.00	2	25.00	1.683	.195
Religious leader	0	0.00	13	100.00	2	25.00	6	75.00	3.592	.058
Health care professionals (e.g. nurses, doctors, psychologists)	0	0.00	13	100.00	1	12.50	7	87.50	1.706	.191
Neighbours	0	0.00	13	100.00	0	0.00	8	100.00		

Supervisor	7	53.85	6	46.15	5	62.50	3	37.5	.151	.697
Community library	1	7.69	12	92.31	2	25.00	6	75.00	1.212	.271
Community centre	0	0.00	13	100.00	0	0.00	8	100.00		
Unisa library	7	53.85	6	46.15	5	62.50	3	37.50	.151	.697
Unisa Learning Centre	0	0.00	13	100.00	0	0.00	8	100.00		
Unisa Regional Centre	0	0.00	13	100.00	2	25.00	6	75.00	3.592	.058

Table 20 shows insignificant results between the use of support systems and the writing of the interpretation and limitation chapters phase  $p > .05$ . Table 21 below shows the significant differences of the support systems postgraduate students used after they submitted their interpretation and limitation chapters.

**Table 21: Phase 15: Support systems postgraduate students after submitting the interpretation and limitation chapter**

	Masters				Doctoral				$\chi^2$	$p$
	Yes		No		Yes		No			
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
Parents	3	42.86	4	57.14	0	0.00	1	100.00	.686	.408
Siblings	1	14.29	6	85.71	0	0.00	1	100.00	.163	.686
Other relatives	0	0.00	7	100.00	0	0.00	1	100.00		
Spouse/Partner	4	57.14	3	42.86	0	0.00	1	100.00	1.143	.285
Friends	3	42.86	4	57.14	1	100.00	0	0.00	1.143	.285
Colleagues at work	2	28.57	5	71.43	0	0.00	1	100.00	.381	.537
Religious leader	0	0.00	7	100.00	0	0.00	1	100.00		
Health care professionals (e.g. nurses, doctors, psychologists)	0	0.00	7	100.00	1	100.00	0	0.00	8.000	.005*
Neighbours	0	0.00	7	100.00	0	0.00	1	100.00		
Supervisor	2	28.57	5	71.43	0	0.00	1	100.00	.381	.537
Community library	2	28.57	5	71.43	1	100.00	0	0.00	1.905	.168
Community centre	0	0.00	7	100.00	0	0.00	1	100.00		
Unisa library	4	57.14	3	42.86	0	0.00	1	100.00	1.143	.285
Unisa Learning Centre	1	14.29	6	85.71	0	0.00	1	100.00	.163	.686
Unisa Regional Centre	0	0.00	7	100.00	0	0.00	1	100.00		

N = 815

\* $p \leq .05$

The Chi-square test for independence indicated significant differences between support received from the health care professionals and submitting the interpretation and limitation chapter  $\chi^2 (1, N = 815), = 8.00, p \leq .05$ . According to table 21 few postgraduate students looked

for support from the health care professionals when writing the findings chapter. None (0%) of the masters students pursued support from health care professionals. Only 1 doctoral student looked for support from health care professionals  $p = .005$ .

Table 22 below shows the significant differences of the support systems postgraduate students used after they submitted their research reports for examination.

**Table 22: Phase 16: Support systems postgraduate students after submitting their research reports for examination**

	Masters				Doctoral				$\chi^2$	$p$
	Yes		No		Yes		No			
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
Parents	11	26,19	31	73,81	1	11,11	8	88,89	,937	.333
Siblings	10	23,81	32	76,19	0	0,00	9	100,00	2,666	.103
Other relatives	3	7,14	39	92,86	0	0,00	9	100,00	,683	.409
Spouse/Partner	27	64,29	15	35,71	4	44,44	5	55,56	1,224	.269
Friends	24	57,14	18	42,86	1	11,11	8	88,89	6,284	.012*
Colleagues at work	23	54,76	19	45,24	1	11,11	8	88,89	5,669	.017*
Religious leader	2	4,76	40	95,24	1	11,11	8	88,89	,540	.463
Health care professionals (e.g. nurses, doctors, psychologists)	0	0,00	42	100,00	0	0,00	9	100,00		
Neighbours	0	0,00	42	100,00	0	0,00	9	100,00		
Supervisor	18	42,86	24	57,14	6	66,67	3	33,33	1,687	.194
Community library	1	2,38	41	97,62	1	11,11	8	88,89	1,499	.221
Community centre	0	0,00	42	100,00	0	0,00	9	100,00		
Unisa library	21	50,00	21	50,00	2	22,22	7	77,78		
Unisa Learning Centre	2	4,76	40	95,24	0	0,00	9	100,00	2,310	.129
Unisa Regional Centre	0	0,00	42	100,00	0	0,00	9	100,00	,446	.504

N = 815

\* $p \leq .05$

The Chi-square test for independence indicated significant differences between support received from friends  $\chi^2 (1, N = 815), = 6.28, p \leq .05$  and colleagues at work ( $\chi^2 (1, N = 815), = 5.67, p \leq .05$  after postgraduate students submitted their research reports for examination.

According to table 22, only (55%) masters and (11%) of doctoral students looked for support

from friends  $p = .012$ . Only (57%) masters students and (11%) doctoral students pursued support from their colleagues at work  $p = .017$ .

Table 23 below shows the significant differences of the support systems postgraduate students used during the editing of the draft research report.

**Table 23: Phase 17: Support systems postgraduate students during editing the draft research report**

	Masters				Doctoral				$\chi^2$	$p$
	Yes		No		Yes		No			
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
Parents	6	33,33	12	66,67	2	22,22	7	77,78	,355	.551
Siblings	1	5,56	17	94,44	1	11,11	8	88,89	,270	.603
Other relatives	1	5,56	17	94,44	1	11,11	8	88,89	,270	.603
Spouse/Partner	12	66,67	6	33,33	5	55,56	4	44,44	,318	.573
Friends	8	44,44	10	55,56	5	55,56	4	44,44	,297	.586
Colleagues at work	9	50,00	9	50,00	5	55,56	4	44,44	,297	.586
Religious leader	0	0,00	18	100,00	2	22,22	7	77,78	,074	.785
Health care professionals (e.g. nurses, doctors, psychologists)	2	11,11	16	88,89	2	22,22	7	77,78	4,320	.038*
Neighbours	0	0,00	18	100,00	0	0,00	9	100,00	,587	.444
Supervisor	11	61,11	7	38,89	7	77,78	2	22,22		
Community library	1	5,56	17	94,44	1	11,11	8	88,89	,750	.386
Community centre	0	0,00	18	100,00	0	0,00	9	100,00	,270	.603
Unisa library	10	55,56	8	44,44	5	55,56	4	44,44		
Unisa Learning Centre	0	0,00	18	100,00	0	0,00	9	100,00	0,000	1.000
Unisa Regional Centre	0	0,00	18	100,00	0	0,00	9	100,00		

The Chi-square test for independence indicated significant differences between support received from health care professionals  $\chi^2 (1, N = 815), = 4.32, p \leq .05$  during the editing of the draft research report. According to table 23, only (11%) masters and (22%) of doctoral students

looked for support from health care workers when engaged in the final editing of their draft research reports  $p = .038$ .

The results suggest that few masters students use support systems when engaged in the proposal and research report writing phases. This implies that students could be using other forms of coping mechanisms to deal with the stress induced during proposal writing. This could be something that further research could look into with regards to the various coping mechanisms masters and doctoral students use in dealing with the stress induced when adjusting to the various proposal and research reports.

Support is imperative for students particularly when students have submitted their research reports for examination. Academic and social support assists manage the anxieties of research report writing. It is disturbing to see that few of the postgraduate students receive academic and social support. The results showed significant differences between students engaged in particular phases and those who are not in line with how they employed the various support systems. Masters and doctoral students used more than one support system in dealing with stress induced by various research reports writing phases, therefore, the null hypothesis is rejected.

### **Summary of results**

There were significant differences between the stress-related symptoms experienced by masters and doctoral students in the various proposal and research report writing phases. Hence,

the null hypothesis of the differences in *that there is no difference between the masters and doctoral students in the stress related symptoms they experience in the various research report writing phases they are engaged in*, is rejected.

There were differences between stress related symptoms experienced by postgraduate students engaged in the research report writing phases and those who are not. Therefore the null hypothesis is rejected.

There were significant stressors students encountered during research report writing. Therefore the null hypothesis is rejected.

There were differences between the support systems students engaged in a particular research phase and those who are not used. Hence, the null hypothesis that *there are no differences between the support systems masters and doctoral students use in various proposal and research report writing phases*, is rejected.

### **Qualitative analysis and findings**

Qualitative data was obtained from seven open-ended questions in this study to support the quantitative results. The open-ended questions relating to the students' experiences of their programmes, were the following:

- Please indicate the reason for your dissatisfaction with the level of support you receive from your supervisor.

- Please indicate the reason for your level of dissatisfaction with the support you received from your sources of support.
- Please indicate the reason for experiencing stress-related symptoms to a large extent in the phase you are currently in.
- Please indicate the reason for experiencing stress-related symptoms to a certain extent in the phase you are currently in.
- Please indicate the reason for not being sure about the level of stress-related symptoms you may be experiencing in the phase you are currently in.
- Please indicate the reason for experiencing limited stress-related symptoms in the phase you are currently in.
- Please indicate the reason for not experiencing any stress-related symptoms at all in the phase you are currently in.

The qualitative data was analysed, using themes which identified how postgraduate students experience their programmes using an inductive approach. The themes of the studies were extracted using Excel, by identifying and coding the responses, resulting in the pertinent findings impacting on postgraduate students' student success at Unisa. There were various themes and categories identified from the open-ended questions. The main theme for this section was academic support, personal support and institutional support. Responses to the question, *Please indicate the reason for your dissatisfaction with the level of support you receive from your supervisor* was as follows:

### *Delay in providing feedback*

There was consensus among masters and doctoral students that the delay in supervisors providing them with feedback was frustrating. A number of the students referred to instances whereby they would attempt to communicate with their supervisors, only to receive no feedback. The following comments support the statement that effective supervision encourages student success:

“Supervisor/mentor had no time to effectively and efficiently look at any proposal, interim, draft and, finally, final report submitted and advice way forward. Always had excuses, especially which I was a student from Zambia.”

“There is no acceptance or acknowledgement of receipt of the first email and calls go unanswered so I am not sure on the way forward and I wonder if this pace of events will hinder my next registration for the thesis in October.”

“I’ve sent a motivation, which is 4 pages but two weeks down the line I have not heard a word from my advisor.”

### *Not sure what is required*

Various masters students indicated that they were not sure of what was required of them in their masters programmes. This indicator is expected to cause some anxiety among those who are not sure about what is expected of them in the various masters and doctoral programmes:

“It was never indicated that I needed to write the research proposal before the topic is approved. I have wasted too much time wrongly waiting for topic approval.”

“Not clear whether proposal should be sent first then discuss, or some initial level of discussion required before starting the proposal.”

*Lack of support from supervisors*

Both masters and doctoral students had the same sentiments; that their supervisors were not supportive. These students indicated that they did not receive sufficient guidance required for the phase they were in. However, there were those students who indicated that supervisors were supportive, but needed to improve in other areas such as providing timely feedback to students:

“This is the first proposal I have ever done so I am not sure if I am receiving sufficient guidance.”

“I believe it is adult education, no spoon-feeding; but expect support like giving schedule, indicate direction & references. I have not got such things; for me, I am full time employee, I have activities that compete with my study, I allocated for my UNISA study. Self-regulation is not a habit for me, I am sorry.”

“Support has been very therapeutic and beneficial for me and my professional research practice, however, in regards to agreeing and concretizing the topic and thesis composition, support could have been more directive and decisive.”

“Technically, I have got valuable support, but there was too much delay in getting response (2 to 4 months).”

### *Feeling discouraged*

Some masters and doctoral students highlighted that they felt despondent about continuing with their programmes due to the feedback they received from supervisors. Other students indicated that they were not even sure if they would be registered for the dissertation phase:

“I rarely get feedback or acknowledgement from my supervisor whenever I write or send something. This keeps me blank with no proper direction making it difficult to proceed with confidence.”

“I haven't spoken to him. I was only told to be patient and that they are a team, they will contact me when they deem it necessary. Being a foreign student, I find it hard to finish my studies; especially after the closure of the call centre (for international students).”

“The feedback I received was too high level. I do not believe there was enough guidance given.”

### *Insufficient feedback*

All postgraduate students agreed that supervisors provided them with feedback. However, the students' concern was the fact the supervisors did not provide them with sufficient feedback in order for them to understand where they needed to improve:

“Supervisor feedback is limited and sporadic feedback during the proposal process focused more on format than content. Feedback from a secondary subject matter expert was more useful.”

“I struggled to follow what she expected me to do.”

“Lack of constructive comments, the comments is not clear and constructive. Moreover it takes longer time to get feedback.”

Postgraduate students completed multiple-response questions on the various support systems they used, as well as their satisfaction with the support they received. Some of the support systems students had to select from the quantitative questions were: parents, siblings, other relatives, spouse or partner, friends, colleagues at work, supervisor, Unisa library, community library, community centre and Unisa learning centre, among others. Some of the

postgraduate students also raised finance problems, and stated that their parents were not financially stable enough to assist them with their studies.

The second open-ended question required students to indicate their level of dissatisfaction with the support they received from their supervisors. The responses for the question, *Please indicate your level of satisfaction with the support you received from your support system,* follows.

#### *Support from parents*

Students indicated that they were not happy with the support from their parents, because their parents did not encourage them to complete their programmes. In addition, other students indicated that their parents did not understand the stress involved in taking part in postgraduate studies:

My mother does not see the importance of pursuing a master's degree.”

“Lack of understanding the extent of postgraduate studies due to the fact that they have not been exposed to such studies themselves.”

#### *Support from siblings*

The results from the qualitative data indicated that some of the masters students felt demotivated as their siblings were not supportive. There was consensus among the masters

students that it was difficult for their siblings to provide them with support, since they were not aware of the amount of effort required to complete postgraduate programmes. However, there were masters students who indicated that their siblings provided them with social support:

“They can only listen when I vent out my frustrations in trying to package the research but offer no substantial support.”

“Since they are young, they could not understand what I am doing and they want me to have more time with them.”

#### *Support from spouse or partner*

Some students indicated that their spouses or partners were supportive towards their studies, while others indicated that their spouses or partners were not supportive. Some of the students indicated that their family commitments put them under pressure, resulting in them postponing their postgraduate studies. However, there were those students who felt that their partners were supportive, and have assisted them in adjusting to the various postgraduate phases:

“The support of my wife and friends and clear communication with my adviser have made the process thus far rather painless. In contrast, the application and acceptance process was more confusing and stressful.”

“Encouraging, motivating me and giving me time and space to work on my dissertation.”

“My spouse is not supporting me at all, I’m currently requesting for my registration to be moved to next year so that I can sort out this issue first.”

“My husband got tired of me always wanting to use time to work. Later on he refused to help look after the children or to help with household chores. In spite of complaining, my husband was and remains my strongest support structure throughout my study.”

### *Support from friends*

There were mixed experiences about the support masters and doctoral students received from their friends. Some indicated that their friends were supportive, while others indicated their friends were not supportive due to the fact that they also have commitments. Furthermore, friends were regarded as providing social support but not academic support, particularly when students went through challenges in the various dissertation phases:

“They are not ready even to hear about my progress and problems.”

“My friends have not done a master’s programme so are not equipped to give sound support; provide the necessary moral support and encouragement.”

### *Support from colleagues at work*

Social support from the workplace is imperative, particularly for postgraduate student success. Both masters and doctoral students expressed consensus that some of their colleagues

helped them, while others indicated that they did not receive support from their colleagues or departments:

“I’m in teaching. Not many people have studied further, so they don't know what it is like to work and have the additional load of university work. They are not interested, but never miss an opportunity to gossip or back-stab one, if you are battling to cope. Perhaps it is just the 'teacher-mentality'.”

“Colleagues studying for a doctoral degree and are Ethiopians, have their workload reduced. My workload is very high, because I am on contract work. Some of my colleagues do not appreciate that I need time to read and prepare for my studies. Maybe it is because they haven't started their studies.”

“I am satisfied with any assistance from Colleagues as these individuals have first-hand experience with post graduate studies within my field and are always eager to share their knowledge and expertise.”

#### *Support from Unisa library*

A number of students indicated using electronic resources; however, some of the students felt that Unisa did not subscribe to journals relevant to their studies. In addition, some students were not happy with the Unisa library services, particularly when requesting books:

“The Unisa Library lacks feedback. I cannot get the book I requested timely. The library also asks to return book that I didn't take. The frequent letter written to me in this regard is really surprising.”

“I requested a book which I got 2 months later. I was given a week to use it.”

“Always no books, no photocopy machine, lack of information from the staff seems they not equipped about how to help students.”

“I have not gotten sufficient e-resource that would help to prepare my proposal.”

To follow are the comments to the question, *Please indicate the reason for experiencing stress-related symptoms to a large extent in the phase you are currently in.* The main theme for this section was academic pressure, personal pressure and institutional pressure.

Both masters and doctoral students expressed feeling overwhelmed due to uncertainties as to whether they would complete their programmes. The main theme of this section is work, personal and institutional pressure. In addition, students reported that some of the factors leading to feeling stress-related symptoms to a large extent, were financial problems, lack of support from supervisors, personal problems, and balancing work, family commitments and studies. Some students indicated that they were overwhelmed by the transition from one phase to another. It would appear that some of the students did not feel confident in their abilities in the various postgraduate stages, due to the delay in feedback from supervisors:

“I can hardly get any support from the supervisors. I am just on my own. I am thinking of quitting this programme.”

“I am currently experiencing stress in actually starting the second chapter since I sometimes feel the task is too big for me to complete.”

“I feel like I am in darkness. Don’t know if I am going North or South but I’m going anyway. Not having classmates is not good. No student would want to be seen stupid by supervisor but some students will understand the frustration if there were any classmates.”

“Not always sure whether I am on the right track. No plan, and do not know what to expect next. No time schedule in place. Waiting too long to receive feedback on work submitted.”

“Lack of support and cooperation from the whole department.”

“I procrastinate and struggle to meet deadlines.”

“The stress that emanates from the lack of achieving balance between work, family and study demands. Usually completes study work at the last moment which is stressful as it might call for unplanned leave from work.”

“Unable to conceptualise (literature review), busy with research methodology no books at the library they are loaned and to be returned later.”

The aim of the next question was to ensure an understanding of some of the aspects contributing to students experiencing a certain amount of stress. These comments are for the question, *Please indicate the reason for experiencing stress-related symptoms to a certain extent in the phase you are currently in.*

Some students find certain stages of their postgraduate studies stressful, such as the writing of the methodology chapter, questionnaire design and the literature review, among others. Postgraduate students reported that they got anxious when they did not receive the required literature and communication from supervisors, indicating what they expected from students. However, other students reported that they were mostly stressed to a certain extent because they did not spend enough time with their families, as they spend most of their time on their studies. It would seem that some students resorted eating more often as a coping mechanism for the stress-related symptoms they experienced.

Masters and doctoral students reported that their inability to manage their time made them feel somewhat stressed. It also appears that students experienced anxieties because they were uncertain about what they were doing in the various tasks they were allocated.

“The various comments from both the supervisor and the editor, the whole process of writing the dissertation especially chapter 2- literature review.”

“Not making enough progress. Not having enough time for my DTh or not spending enough time with my family when I take time for my DTh.”

“Not understanding certain concept related to my study and missing the structure and logic of where I want my research to expose or explain.”

“I am a mother of four, have a full time job and have to find time to do the PHD.”

The third question explored what made postgraduate students feel unsure about their stress related symptoms during their various postgraduate phases. The results for the question, *Please indicate the reason for not being sure about the level of stress-related symptoms you may be experiencing in the phase you are currently in*, follows.

Postgraduate students indicated that they were unsure of their stress-related symptoms, as they were at the first stage of their proposal phase. Some of the students felt that the support from their supervisors made the postgraduate programme phases stress free:

“I am also engaged in other commitments. I am working on my thesis work together with all those chores and commitments. Because of that, I feel some level of stress, on and off.”

“I have no symptom of stress I observed but I feel that the writing process was/is a strange to me; needs extensive time to read while busy with office jobs and other commitments.”

“Reviewing of chapters places a bit of time related planning and rescheduling in order to finalise the qualification this year. The support and assistance from the Profs are wonderful and my supervisors is so empowering and motivating. It really is a great experience.”

“Am not sure because I don’t know if I can say I experience stress or not. However, the thing of just writing things without being sure whether you will get feedback or not may be stressful, hence motivation to work hard becomes low as you is not sure of what you are doing due to lack of encouragement or direction to continue with what you are doing.”

The following question, *Please indicate the reason for experiencing limited stress-related symptoms in the phase you are currently in*, required students to indicate some of their reasons for experiencing limited stress.

According to most of the postgraduate students, they felt limited stress because they were naturally calm and stress free. For other masters students, their stress related symptoms decreased once they were provided with funding, after they felt frustrated due to financial problems. Time management, and balancing work and studies, also appeared to play a role in postgraduate students feeling limited stress. Resilience and willingness to learn have contributed in students feeling limited stress:

“Because I am working according to the programme and the response of my supervisors is satisfactory.”

“Being in the beginning stage of my proposal there is sometimes a feeling of pressure but is manageable.”

“I am a 54 year old mother of eight children, with a husband who is diabetic and one of daughters who was diagnosed with temporal lobe epilepsy in 2009 just after I had registered for MBA. I also work full time. I have managed to balance my time and hence the stress was very limited.”

“Ok, When I started studying at Unisa, was stressed because my English level was low. As you I studied in French system from my nursery schools to bachelor. As I was reading much my English improved. The stress that I have had disappeared. I can write and express my idea freely without any restriction. This was not possible in the past.”

“I am at the level of preparing proposal and have ample time to prepare it. Besides I know very well what I am going to do.”

*Please indicate the reason for not experiencing any stress-related symptoms at all in the phase you are currently in.* This final question required postgraduate students to provide their reasons for not feeling any stress at all, in assisting with the understanding of the quantitative results.

Both masters and doctoral students indicated that they felt confident in their ability to conduct research. In addition, doctoral students indicated that they did not feel anxious, since

they had been exposed to conducting research during their master's programmes. Postgraduate students reported that support from supervisors was satisfactory, and assisted them in coping with the challenges they faced throughout the various stages of the postgraduate programmes. Most of the postgraduates felt stress free, as they had already submitted their dissertations and thesis for examinations, and were awaiting results:

“I am confident in my own ability to complete the thesis to the highest standard. I have done a lot of preparation and time management to ensure I am not stressed.”

“I already possess a Ph.D. from another institution, and am a professor with an American university. The Unisa doctorate will be my second doctorate. I already know how to conduct research independently and how to write a dissertation.”

“I have surrounded myself with people who have travelled the path and have been so supportive in ensuring that I complete the dissertation. I create time and my work environment is conducive.”

“Have handed in dissertation for examination and have already received results. Passed dissertation so no stress. I did not experience stress while waiting for the results either - I was glad to have submitted and felt great relief.”

## **Summary of findings**

The students found the following to be stressful in their academic environment, supervisors' delay in providing students with feedback. Furthermore, it is apparent that academic support plays a major role in student's persistence in their programmes. The fact that some supervisors are not supportive, provide them with insufficient feedback resulting in students not being sure of what is expected of them is worrying. However, there were those students who reported that their supervisors were very supportive. Furthermore, the support assisted in managing the student's anxieties.

Also students experienced anxieties due lack of time management, procrastination, and not being sure what is expected. There were however other students who reported not to experience stress as they were confident in their abilities to conduct research and others were already exposed to postgraduate programmes and were aware of what is expected of them.

## **Chapter summary**

In this chapter the survey results were presented both quantitatively and qualitatively. The quantitative results suggest that postgraduate students experience different levels of stress in relation to the research report writing phase they are engaged in. Furthermore, postgraduate students use more than one support system to deal with the stress induced when they are involved in the different research report writing phases. Themes were extracted from the open-ended responses from all the respondents in the survey. These themes supported the quantitative results

reported in this chapter. The quantitative and qualitative data will be used to support topics discussed in Chapter Five, which also provides conclusions and a discussion of the results.

# CHAPTER FIVE

## CONCLUSIONS AND DISCUSSION

*“There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things.”*

*(Niccolo Machiavelli)*

### **Introduction**

In the previous chapter findings resulting from this study was provided. In this chapter, the conclusion, discussion, research methods, and the findings and limitations of this study will be given. Recommendations for future research are provided in Chapter Six, based on the findings from this study. Postgraduate students were referred to in this study, as students who are enrolled for masters and doctoral programmes and in the research reports they were referred to as masters and doctoral students.

This study, *Coping with stress during research report writing in an ODL environment*, investigated and explored how masters and doctoral students coped with the stress induced during the various research report writing phases. In understanding how postgraduate students coped with the stress induced when writing research reports, the study created an instrument to capture students' perceptions on how they coped with stress-related symptoms while they were engaged in writing research reports. As previously noted, the domains of interest were students' experience with stressors, the support system(s) they used, their extent of stress in the various

research report writing phases, as well as their satisfaction with the support they received. For students to complete their programmes – particularly students engaged in postgraduate programmes – these four domains are vital.

In Chapter One the background of the study was provided, the statement of the problem was discussed, the research questions of the study were specified, the significance of the study was identified, and the definition of terms was set. In Chapter Two the theoretical framework and literature review of undergraduate and postgraduate student attrition models was discussed as well as factors contributing to student success, and some attrition models tested in South Africa. In Chapter Three the researcher assessed the methods for analysing data, eligibility inclusion criteria of the population sample, validity and reliability, data collection methods, and also confidentiality and anonymity. A summary and discussion of the results of the study were discussed in Chapter Four. This chapter will identify the conclusions and in Chapter Six, recommendations will be given, as well as explanations of the limitations of this study.

### **Summary of the study**

The research questions of this study were addressed using quantitative and qualitative research methods. The mixed methods research design was used to address the research questions holistically (Creswell, 2009).

The primary purpose of this study was to investigate, explore and understand how postgraduate students cope with the stress induced during research report writing phases. The relationship under investigation was the different stress related symptoms of the various research report writing phases, and how students use support systems as a coping mechanism. The study intended to contribute to student well-being and student success research, as well as assist institutions offering postgraduate programmes in understanding the challenges students go through during the process of completing their research reports. Some of the challenges postgraduate students reported were: financial problems, personal problems, not being sure of what is expected, lack of social support, lack of support from supervisors, and lack of support from the departments. Increased understanding of these domains will further assist institutions in providing sufficient support to those students who find it challenging to adjust to the phases of their research reports. Furthermore, institutions may want to provide additional support to these students, which may also improve postgraduate student success and the relationship between postgraduate students, their departments and supervisors.

To understand how postgraduate students coped with the stress induced when they are writing their research reports, a survey was administered to students registered for their masters and doctoral programmes for the 2012 academic year (see Appendix A). The correlation process between research questions and results suggest that postgraduate students experience stress while adjusting to the various research report writing phases. The data further reported that students experienced different stress related symptoms in relation to the research report phase they are engaged in and these students use social and academic support in dealing with the stress-related symptoms they experience.

## **Conclusions and discussion**

Conclusions to this study will be discussed in this section which will include quantitative and qualitative data to support the conclusions of this study. Postgraduate student comments refer to satisfaction with support from supervisors, the institution and other sources of support, as well as how they perceive their stress related symptoms with regard to the research report writing phases they are engaged in.

The response rate for this study was 12.1%, which when compared to other surveys using web enabled survey approaches is fairly reasonable. According to Porter and Umbach (2006), survey responses have been viewed to decline, however, they have also proved to be a means of reliable data collection (Chaudron, 2006; DeVellis, 2003). The value of this study is its potential to become a catalyst for improving postgraduate students' well-being and their success in institutions of higher learning.

The following comments were made by masters and doctoral students on their experiences of the postgraduate programmes. The results of the study provide an indication that a number of students need more academic and social support in order to deal with the challenges they are faced with:

“The supervisor should be able to assist students cope with past and current education system. It is difficult for older people and it should be made easier to them, for instance computer

literacy, supervisors must advise and assist learners. Supervisors should be monitored and inform the learner properly of their progress.”

“Distance learning is a good option to learn but for employed people with families it is a bit tough if they can't manage themselves well: the pressure is more on the student. But a thoughtful supervisor can make it a lot better for the student just by paying a little more attention despite the fact that supervisors themselves can be overworked at times.”

### **Context of research question**

Previous studies have suggested that adjustment to the various stages of postgraduate studies can be stressful (Ali & Kohun, 2007; Golde, 2000; Lovitts, 2001). In addition, social and institutional support has been viewed as a buffer for stress in academic settings (Golde, 2000; Lovitts, 2001; Tinto, 1987) and scholars suggest that both social and academic support assist postgraduate students in dealing with the challenges they are faced with when adjusting to the various postgraduate phases, and therefore assists in completing their programmes (Gardner, 2009a; Lovitts, 2001). According to Kaufman (2006), research into the stress that masters and doctoral students experience during the process of writing their research reports, as well as the support systems they use as a coping mechanism, is scant; to date a limited number of studies have investigated the relationship between the stress postgraduate students experience and social support.

Postgraduate students are faced with various challenges which impact programme completion. Some of these challenges include; challenging relationships with their environment outside their programmes, dealing with adjustment challenges to different phases, and feeling lonely in their journey (Longfield, Romas & Irwin, 2006). Furthermore, postgraduate students' psychological well-being is at risk due to these domains (Bowman, Bowman & DeLucia, 1990).

### **Students' stress related symptoms in relation to research report writing phases**

The first hypothesis examined the difference in masters and doctoral students experience of stress related symptoms during research report writing. The results indicate that there are differences between the stress related symptoms experienced by masters and doctoral students. Masters students appeared to experience more stress than doctoral students. Masters students are likely to experience more stress related symptoms than doctoral students due to among other explanations, the novice experience to postgraduate studies (Girves & Wemmerus, 1988; Lovitts, 2001).

The second hypothesis of this study examined the difference in stress related symptoms experienced by postgraduate students engaged in a particular phase and those who are not. The results indicate that all postgraduate students experience different stress related symptoms in the different research report writing phases. In other words, students experience stress related symptoms when adjusting to the different stages of the research report writing phases (Ali & Kohun, 2007; Golde, 2000; Lovitts, 2001).

The third hypothesis assessed the significance of stressors during research report writing. The results show that students are faced with a number of stressors during research report writing. Some of these stressors have the potential of encouraging student attrition (Gardner, 2009a; Golde, 2000; Lovitts, 2001). Masters and doctoral students encountered difficulties with their jobs, difficulties with their colleagues, time management and failing to meet deadlines in the initial phase of research report writing (Gardner, 2009a; Golde, 2000; Kember, 1990; Lovitts, 2001). Gardner (2009a) postulated that students encounter challenges when they have to demonstrate the competencies of their coursework and produce knowledge. With this in mind, the support postgraduate students get from their supervisors and peers can help deal with the challenges they face in these phases.

The finding that postgraduate students are faced with various stressors which may affect their academic performance, is supported by literature. In order for students to succeed, they need to have a clear understanding of the institution and the requirements of each department. Sometimes students find it challenging to find their way through a postgraduate programme individually (Lovitts, 2001; Tinto, 1987, 1993).

Students reported that they felt anxious, due to, among others, fear of academic failure, (Koochaki, Charkazi, Hasanzadeh, Saedani, Qorbani & Marjani, 2009). Fear of academic failure was found to act as a form of motivation; however, extreme fear of failure may create emotional and physical distress among students (Laio, Lu & Yi, 2007). Although this is undergraduate student literature, it is, however, relevant to postgraduate student literature, as feelings of fear evoke similar responses in both undergraduate and postgraduate students.

Social and academic support is very important, as it determines a student's success or failure (Gardner, 2009a; Gardner & Barnes, 2007; Lovitts, 2001; 2005; Martinsuo & Turkulainen, 2011; Tinto, 1993). Furthermore, Grover and Malhotra (2003) identify four supervisor archetypes. These scholars highlight the management of interaction with supervisors as important for a student to complete their programme in record time. Rudd (1986) reports that students depart from their programmes due to, among others, personal problems, problems related to research projects, and poor supervision.

Research conducted among PhD students in South Africa has indicated that a number of students find balancing work and studies a challenge. In a study to understand the obstacles South African doctoral students are faced with, Herman (2011) identified financial problems, personal problems and balancing work, studies and family commitments, as factors encouraging student departure.

### **Differences between research report writing phases and the use of support systems**

The fifth hypothesis assessed the difference in the use of support system in relation to the research report writing phase of a student. Results indicate that students use more than one source of support in dealing with stress-related symptoms during research report writing phases, which previous literature supports; thus social support is valuable to these students (Gardner, 2009a; Gardner & Barnes, 2007; Nelson, Dell'Oliver, Hoch & Buckler, 2001; Lovitts, 2001, 2005; Martinsuo & Turkulainen, 2011):

“The support of my wife, friends and clear communication with my adviser has made the process thus far rather painless. In contrast, the application and acceptance process was more confusing and stressful.”

## **Conclusion**

In this chapter the conclusions and discussion of the findings of this study was documented. In the following chapter a discussion on the limitations and recommendations of this study will be provided.

## CHAPTER SIX

### LIMITATIONS AND RECOMMENDATIONS

*“When after several hours, I came to myself again, I asked myself what it is that had so fascinated me. The answer is simple. The results were not presented ready-made, but scientific curiosity was first aroused by presenting contrasting possibilities of convening the matter. Only then the attempt was made to clarify the issue through argument. The intellectual honesty of the author makes us share the inner struggle of the mind. It is this which is the mark of a born teacher. Knowledge exists in two forms – lifeless, stored books, and alive in the consciousness of men. The second form of existence is after all the essential one; the first, indispensable as it may be, occupies only an inferior position. “*

*(Einstein, 1954, p. 80)*

#### **Introduction**

The limitations of this study are documented in this chapter and recommendations for future research are also considered here.

#### **Limitations of the study**

This study investigated, explored and attempted to understand some of the coping mechanism postgraduate students use in dealing with stress-related symptoms during research report writing phases. One of the limitations of this study is the use of the instrument to

investigate stress-related symptoms, and social support as a coping mechanism. The instrument used in this study was an undergraduate student scale which was adapted to fit the context of masters and doctoral students. These results may not be generalised to all masters and doctoral students, as this study did not use a holistic approach to understand the challenges students are faced with – such as the use of other scales including: academic self-efficacy scale, academic stress scale and the academic locus of control scale just to name a few.

A second limitation of this study is that of the use of the survey method and collecting data through the Internet. In order to reduce social desirability bias taking place when an individual feels that they should respond to questions in a particular manner desirable and socially acceptable to the research, one may use self-reported data. The survey method is cost effective if employed appropriately for collecting large amounts of data. Furthermore, survey methods allow effective, convenient and cost-effective collection of data. Research shows that participants taking part in online surveys are as motivated as their pen and paper counterparts (Gosling, Vazire, Srivastava & John, 2004). Furthermore, Gosling et al. (2004) report that the anonymity of the surveys encourage high quality data. Conversely, survey data tends to be problematic, as researchers do not have control over the respondents' environment.

The third limitation is the individual differences in perceived support systems. The Cronbach alpha of the support systems students used was very low, due to the differences in how masters and doctoral students perceive support.

Although trustworthiness/impartiality was ensured through an external researcher, the researchers' own understanding and experiences of postgraduate education were present during this study.

Finally, sample size is another limitation of this study. The response rate of this study was 12.1%, although email requests with the unique url to the survey were sent to all students registered on the myLife email account. However, some students with the myLife email accounts may have missed the invitations. Additionally, students who were not included in the survey were students who had not registered for myLife email accounts. More respondents could have increased the statistical power of analysis of this study.

### **Recommendations for further studies**

Future studies can replicate this study with other instruments, to obtain clearer results. The instruments used in this study had a good reliability; however, future studies may consider using the academic stress scale since there is a difference between academic stress and general stress.

In addition, future research may use postgraduate students from various institutions in South Africa; this will increase the generalisability of the study, and provide diverse views of the stress postgraduate students are faced with, as well as the support systems they use in dealing with the challenges they encounter while writing research reports in the various phases.

The results of this study can be used to improve academic support and understanding of the challenges faced by postgraduate students – this will in turn improve academic success of postgraduate students. Furthermore, the results can be used to initiate programmes which may assist in eliminating the stressors affecting postgraduate students during their research report writing phases. Research on masters and doctoral students is still limited. Future research on this population will aid in understanding the challenges the students are faced with, and how to support these students to improve academic success.

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# **APPENDIX A**

## **Perceived stressors and coping mechanisms for masters and doctoral students in an Open Distance Learning environment**

### **SECTION A: DISSERTATION/THESIS WRITING PHASE**

- Writing proposal
- Submitted proposal
- Proposal accepted
- Writing the introductory chapter
- Submitted introductory chapter
- Writing theoretical framework and literature review chapter(s)
- Submitted theoretical framework and literature review chapter(s)
- Writing research methodology chapter(s)
- Submitted research methodology chapter(s)
- Writing analysis chapter(s)
- Submitted analysis chapter(s)
- Writing research findings chapter(s)
- Submitted research findings chapter(s)
- Writing interpretation and limitation chapter(s)
- Submitted interpretation and limitation chapter(s)
- Final editing of dissertation/thesis draft
- Research dissertation/thesis submitted for examination

## SECTION B: COMMUNICATION WITH SUPERVISOR

1. How do you mostly communicate with your supervisor?

Please choose **all** that apply:

- Electronic communication (e.g. email, Skype)
  - Personal visits
  - Telephone
  - Fax
  - Other
2. How many times have you discussed issues relating to your dissertation/thesis with your supervisor, using electronic forms of communication, in the past 4 months (March-June, 2012)?
3. How many times have you personally visited your supervisor to discuss issues relating to your dissertation, in the past 4 months (March-June, 2012)?
4. How many times have you phoned your supervisor to discuss issues relating to your dissertation/thesis, in the past 4 months (March-June, 2012)?
5. How many times have you faxed your supervisor to discuss issues relating to your dissertation/thesis, in the past 4 months (March-June, 2012)?
6. How many times have you used other forms of communication to discuss issues relating to your dissertation/thesis with your supervisor, in the past 4 months (March-June, 2012)?

7. How satisfied are you with the level of support you receive from your supervisor?

Level of support received from supervisor	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

8. Please indicate the reason for your dissatisfaction with the level of support you receive from your supervisor.

**SECTION C: SUPPORT**

1. Which of the following sources of support have you used in the past 4 months (March-June, 2012)?

**Choose all that apply**

- Parents
- Siblings
- Other relatives
- Spouse/Partner
- Friends
- Colleagues at work
- Religious leader

- Health care professionals (e.g. nurses, doctors, psychologists)
- Neighbours
- Supervisor
- Community library
- Community centre
- Unisa library
- Unisa Learning Centre
- Unisa Regional Centre

2. Please indicate your level of satisfaction with the support you received from your parents:

Level of satisfaction with the support received from parents	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

3. Please indicate your level of satisfaction with the support you received from your siblings:

Level of satisfaction with the support received from siblings	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

4. Please indicate your level of satisfaction with the support you received from your other relatives:

Level of satisfaction with the support received from	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

other relatives					
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5. Please indicate your level of satisfaction with the support you received from your spouse/partner:

Level of satisfaction with the support received from spouse/partner	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

6. Please indicate your level of satisfaction with the support you received from your friends:

Level of satisfaction with the support received from friends	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

7. Please indicate your level of satisfaction with the support you received from your colleagues at work:

Level of satisfaction with the support received from colleagues at work	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

8. Please indicate your level of satisfaction with the support you received from your religious leader:

Level of satisfaction with the support received from religious leader	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

9. Please indicate your level of satisfaction with the support you received from your health care professionals (e.g. nurses, doctors, psychologists):

Level of satisfaction with the support received from health care professionals – e.g. nurses, doctors, psychologists	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

10. Please indicate your level of satisfaction with the support you received from your neighbours:

Level of satisfaction with the support received from neighbours	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

11. Please indicate your level of satisfaction with the support you received from your supervisor/promoter:

Level of satisfaction with the support received from supervisor/promoter	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

12. Please indicate your level of satisfaction with the support you received from your community library:

Level of satisfaction with the support received from community library	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

13. Please indicate your level of satisfaction with the support received from your community centre:

Level of satisfaction with the support received from community centre	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

14. Please indicate your level of satisfaction with the support you received from a Unisa library near you:

Level of satisfaction with the support received from Unisa library	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

15. Please indicate your level of satisfaction with the support you received from a Unisa learning centre near you:

Level of satisfaction with the support received from Unisa learning centre	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

16. Please indicate your level of satisfaction with the support you received from a Unisa regional centre near you:

Level of satisfaction with the support received from Unisa regional centre	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

17. Please indicate the level for your level of dissatisfaction with the support you received from other sources of support:

Level of satisfaction with the support received from other sources of support	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied

**SECTION D: INTENSITY OF STRESS**

- To what extent do you experience stress-related symptoms in the dissertation/thesis writing phase you are in currently?

Extent of stress related symptoms	Not at all	Limited	Not sure	Certain extent	Large extent

2. Please indicate the reason for experiencing stress-related symptoms to a large extent in the phase you are currently in:
3. Please indicate the reason for experiencing stress-related symptoms to a certain extent in the phase you are currently in:
4. Please indicate the reason for not being sure about the level of stress-related symptoms you may be experiencing in the phase you are currently in:
5. Please indicate the reason for experiencing limited stress-related symptoms in the phase you are currently in:
6. Please indicate the reason for not experiencing any stress-related symptoms at all in the phase you are currently in:
7. The following stressors have been identified as affecting postgraduate students when writing dissertations/theses. Please indicate the intensity of the stress you experienced while engaged in writing your dissertation/thesis:

<b>Stressors</b>	<b>Feeling</b>	<b>Some</b>	<b>Moderate</b>	<b>A lot</b>	<b>Extreme</b>	<b>Not</b>
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	<b>no stress</b>	<b>stress</b>	<b>stress</b>	<b>of stress</b>	<b>stress</b>	<b>applicable</b>
Lack of time management						
Procrastination						
Personal relationship problems						
Difficulties with colleagues at work						
Difficulties with parents						
Difficulties with siblings						
Difficulties with other relatives						
Difficulties with friends						
Parents in conflict with each other						
Personal illness						
Family members (ill)						
Death of a family member						
Death of a significant person						
Academic work too						

demanding						
Fear of failing						
Failing to meet deadlines with supervisor						
Supervisors/promoters not supportive						
Accommodation problems						
Transport problems						
Financial problems						
Pushing yourself beyond the limit						
Stressful job						
Personal problems						
Not sure what is expected of you						

## APPENDIX B

Doctoral	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Phase 9	Phase 10	Phase 11	Phase 12	Phase 13	Phase 14	Phase 15
	$\bar{x}$														
Stressful Job	2,62	2,72	2,19	2,67	2,47	2,84	2,62	2,60	2,57	2,17	2,00	3,25	2,00	1,50	2,25
Lack of time management	2,62	2,72	2,19	2,67	2,47	2,84	2,62	2,60	2,57	2,17	2,00	3,25	2,00	1,50	2,25
Procrastination	2,61	2,81	2,09	2,83	2,00	3,00	2,00	2,46	2,17	1,71	2,25	2,67	2,00	2,00	1,86
Personal relationship problems	2,17	2,83	2,42	2,07	1,71	2,62	2,25	2,31	3,00	1,78	2,00	1,57		1,25	2,33
Academic work too demanding	2,62	2,77	2,52	2,46	2,38	2,56	2,64	2,55	2,83	2,06	2,25	2,29	2,00	1,78	2,44
Fear of failing	2,33	2,60	2,07	2,39	1,94	2,35	2,00	1,83	2,50	1,61	2,00	2,14	1,00	2,13	2,33
Failing to meet deadlines	2,61	2,54	1,84	2,23	1,64	2,36	1,55	1,87	1,88	1,40	1,50	1,83	1,00	1,43	2,75
Supervisor not supportive	2,22	2,46	1,76	1,76	2,00	2,00	2,11	2,28	1,60	1,73	2,50	2,00	1,00	2,38	2,43
Financial problems	2,77	3,07	3,08	2,88	2,71	2,61	2,55	2,89	3,00	2,71	1,00	2,29	5,00	2,57	2,40
Pushing yourself beyond limit	2,49	2,68	2,46	2,44	2,60	2,65	2,54	2,52	3,50	2,00	1,25	2,63	5,00	1,67	2,67
Personal problems	2,14	2,53	2,29	1,87	2,00	2,22	2,00	1,85	2,40	1,71	1,50	1,71	5,00	1,43	2,33

Not sure what is expected of you	2,39	2,31	2,17	2,18	1,85	2,23	2,33	2,15	2,50	1,67	1,75	2,13	4,00	2,43	2,57
Difficulties with colleagues at work	2,17	2,43	2,12	2,39	1,86	2,44	2,33	2,03	2,60	1,88	1,75	2,38		1,00	2,29
Difficulties with parents	1,43	1,63	1,55	1,45	1,40	1,48	1,67	1,48	1,20	1,07	1,25	1,00		1,00	1,40
Difficulties with siblings	1,50	1,73	1,43	1,64	1,55	1,48	1,50	1,38	1,25	1,29	1,00	1,00		1,00	1,50
Difficulty with other relatives	1,66	1,77	1,57	1,61	1,64	1,55	1,88	1,67	1,00	1,29	1,00	1,20		1,00	2,00
Difficulty with friends	1,44	1,83	1,63	1,71	1,45	1,71	1,56	1,64	1,25	1,47	1,50	1,17		1,00	1,80
Parents in conflict	1,43	1,79	1,36	1,39	1,30	1,35	1,43	1,21	1,25	1,08	1,00	1,00		1,00	1,25
Personal illness	1,97	2,14	1,88	1,75	1,69	1,73	2,00	1,44	1,67	1,41	1,00	1,14	5,00	1,88	1,80
Family members ill	1,86	2,12	2,12	1,67	1,82	2,04	2,33	1,64	1,60	1,73	1,25	1,71		1,50	2,00
Death of a family member	1,67	1,89	1,67	1,90	1,20	2,00	1,78	1,71	2,20	1,43	1,00	2,17		1,00	2,40
Death of a significant other	1,54	1,89	1,48	1,84	1,00	1,95	1,67	1,43	2,00	1,47	1,00	2,14		1,00	2,40
Accommodation problems	1,84	2,00	1,68	1,57	1,25	1,91	1,38	2,11	1,33	1,44	1,00	1,00	1,00	1,57	1,25
Transport problems	2,03	2,22	1,75	1,52	1,25	1,68	1,25	2,04	1,33	1,59	1,00	1,67	1,00	1,43	2,40

### APPENDIX C

Doctoral	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Phase 9	Phase 10	Phase 11	Phase 12	Phase 13	Phase 14	Phase 15
	$\bar{x}$														
Stressful Job	2,62	2,72	2,19	2,67	2,47	2,84	2,62	2,60	2,57	2,17	2,00	3,25	2,00	1,50	2,25
Lack of time management	2,62	2,72	2,19	2,67	2,47	2,84	2,62	2,60	2,57	2,17	2,00	3,25	2,00	1,50	2,25
Procrastination	2,61	2,81	2,09	2,83	2,00	3,00	2,00	2,46	2,17	1,71	2,25	2,67	2,00	2,00	1,86
Personal relationship problems	2,17	2,83	2,42	2,07	1,71	2,62	2,25	2,31	3,00	1,78	2,00	1,57		1,25	2,33
Academic work too demanding	2,62	2,77	2,52	2,46	2,38	2,56	2,64	2,55	2,83	2,06	2,25	2,29	2,00	1,78	2,44
Fear of failing	2,33	2,60	2,07	2,39	1,94	2,35	2,00	1,83	2,50	1,61	2,00	2,14	1,00	2,13	2,33
Failing to meet deadlines	2,61	2,54	1,84	2,23	1,64	2,36	1,55	1,87	1,88	1,40	1,50	1,83	1,00	1,43	2,75
Supervisor not supportive	2,22	2,46	1,76	1,76	2,00	2,00	2,11	2,28	1,60	1,73	2,50	2,00	1,00	2,38	2,43
Financial problems	2,77	3,07	3,08	2,88	2,71	2,61	2,55	2,89	3,00	2,71	1,00	2,29	5,00	2,57	2,40
Pushing yourself beyond limit	2,49	2,68	2,46	2,44	2,60	2,65	2,54	2,52	3,50	2,00	1,25	2,63	5,00	1,67	2,67
Personal problems	2,14	2,53	2,29	1,87	2,00	2,22	2,00	1,85	2,40	1,71	1,50	1,71	5,00	1,43	2,33

Not sure what is expected of you	2,39	2,31	2,17	2,18	1,85	2,23	2,33	2,15	2,50	1,67	1,75	2,13	4,00	2,43	2,57
Difficulties with colleagues at work	2,17	2,43	2,12	2,39	1,86	2,44	2,33	2,03	2,60	1,88	1,75	2,38		1,00	2,29
Difficulties with parents	1,43	1,63	1,55	1,45	1,40	1,48	1,67	1,48	1,20	1,07	1,25	1,00		1,00	1,40
Difficulties with siblings	1,50	1,73	1,43	1,64	1,55	1,48	1,50	1,38	1,25	1,29	1,00	1,00		1,00	1,50
Difficulty with other relatives	1,66	1,77	1,57	1,61	1,64	1,55	1,88	1,67	1,00	1,29	1,00	1,20		1,00	2,00
Difficulty with friends	1,44	1,83	1,63	1,71	1,45	1,71	1,56	1,64	1,25	1,47	1,50	1,17		1,00	1,80
Parents in conflict	1,43	1,79	1,36	1,39	1,30	1,35	1,43	1,21	1,25	1,08	1,00	1,00		1,00	1,25
Personal illness	1,97	2,14	1,88	1,75	1,69	1,73	2,00	1,44	1,67	1,41	1,00	1,14	5,00	1,88	1,80
Family members ill	1,86	2,12	2,12	1,67	1,82	2,04	2,33	1,64	1,60	1,73	1,25	1,71		1,50	2,00
Death of a family member	1,67	1,89	1,67	1,90	1,20	2,00	1,78	1,71	2,20	1,43	1,00	2,17		1,00	2,40
Death of a significant other	1,54	1,89	1,48	1,84	1,00	1,95	1,67	1,43	2,00	1,47	1,00	2,14		1,00	2,40
Accommodation problems	1,84	2,00	1,68	1,57	1,25	1,91	1,38	2,11	1,33	1,44	1,00	1,00	1,00	1,57	1,25
Transport problems	2,03	2,22	1,75	1,52	1,25	1,68	1,25	2,04	1,33	1,59	1,00	1,67	1,00	1,43	2,40

## APPENDIX D

### Reflective Essay

I am going to discuss my experienced as a masters student in this reflective essay. I enrolled for the Masters in Psychology with specialisation in Research Consultation (MARC) in 2012. I believe being a masters student taught me a lot about life, myself and research. My first year in the MARC programme involved attending classes full time for the whole year. I learned a lot about research, networking, importance of friendship, world of work, balancing work, family responsibilities and studies. I had friends in the MARC programme and we still continue to keep in touch. Their presence made my masters journey easier even though I c encountered some challenges. My friends were always there to give me moral support when I needed a shoulder to cry. They were also my sounding board when I needed their input on a burning idea. The course work of the MARC programme was fairly easy when I compare it to the dissertation phase of the programme. This is because my friends and the lecturers in the psychology department were within my reach during the course work phase. The lecturers had an open door policy and we could approach them at any time when they are available.

Our lecturers at the psychology department encouraged us to participate in conferences, subscribe as well as submitting manuscripts in journals. I managed to present two papers at two different conferences in 2012, that is, the 30<sup>th</sup> International Congress of Psychology as well as Unisa's first Open Distance Learning Conference. Looking back at the opportunities we were offered, I feel that they helped me stay in touch with the department and the psychology discipline. These opportunities also helped me develop networks which I would have not developed had I not grabbed the opportunity to present in conferences.

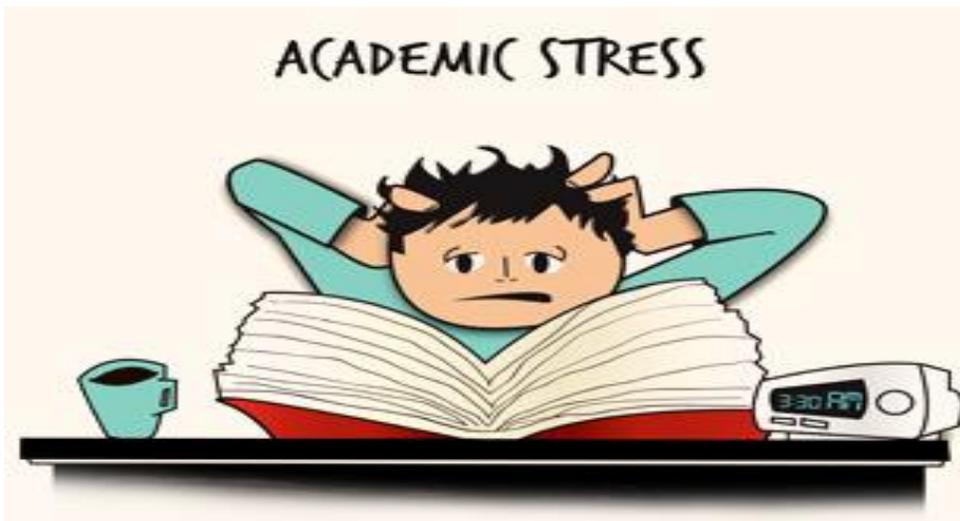
The seminars and casual conversations I used to have with my lecturers at the psychology department also taught me that people have various reasons for doing research but research is never done for fun. This is something that I will always take with me whenever I conduct research, I will always remember that research is not done for fun. Also, the fact that one needs to plan their research carefully including the research instrument they are going to use to elicit

responses. This has taught me the art of being meticulous when conducting research because if it is can lead to a waste of funds and peoples time if not planned carefully.

Well in a nutshell, my experience with the coursework phase in the MARC programme went from this:



to this:



Well the dissertation phase of my masters was not pleasant at all. I used to think that I am the Unisa student ambassador and I felt strongly about this during the coursework phase of my masters. However, when started writing my dissertation I often wondered if being Unisa student ambassador is key as I felt that I was not doing any justice to the title. Sometimes I refrain from

thinking about it to help me maintain my sanity. Conversations with friends during and after class escalated to communicating through Facebook, Whatsapp, LinkedIn and Emails. My colleagues and I had other responsibilities, I continued working at the Bureau of Market Research and they were offered internships Postgraduate Student Assistantships at the Psychology department. However I was lucky enough to have supportive colleagues around me who like the lecturers in the psychology department had open door policies. My colleagues were supportive when I was writing my dissertation. I could pop by their office at any time when I felt overwhelmed and wanted to reflect my fears, anxieties and uncertainties. They all understood where I was coming from and provided me with guidance which I will be eternally thankful for. I remember Prof Retha Visagie saying to me, “It is normal to feel uncertain and anxious at the stage you are in.”

The methodology and analysis chapters made me more anxious because there were times when I was not sure of what is expected of me and whether or not I am in the right track or not. My good friend Mr Andries Masenge always encouraged me to read up on research designs and analysis techniques. I continued doing as he advised and did more analysis with the data of this study. Today my statistics has improved and I am not afraid anymore. I am grateful for his encouragement and the fact that he believed in me. My supervisor taught me something profound which I will apply even my doctoral degree. He taught me not to be too involved in my work that I fail to see what the reader might see because I am not writing the dissertation for myself but for other scholars.

Every time I reflect on my dissertation experience I always think that I would not be where I am if I did not go through the challenges and joys I went through. The experience I got from being a masters student has been worthwhile. I think one thing that also makes my experience to be worthwhile is because of the support I received. This experience has made me ponder how the experience of a student in Tanzania or Zimbabwe who is enrolled for the masters by research experience and is not exposed to the opportunities I am exposed to is? My dissertation writing experience made me wonder, what a masters student registered for their programme anywhere in the world feels like, particularly when they are not in an academic setting and are surrounded by aloof colleagues. Last my experience as a masters student made me think of how a student who has an unsupportive supervisor who does not respond to their emails, give them feedback in time

and guidance, a supervisor who does not support them in any way to help them persist in their programme feels like.

These thoughts made empathise and understand why some students leave their programmes. This masters journey gave me a clear perspective of how students who are not lucky enough to be exposed to a supportive environment feel when they are engaged in their proposal and research report writing phases. Sometimes when a student encounters challenges and does not receive support to help them deal with these challenges, the only way out is to depart from their programme. This perspective made me learn to understand and not judge students who leave their programmes but question how one can help students adjust to their programmes so that they do not leave their programmes. This is because it does not matter what happens before a student enrolls for their programme, what matters most is what happens after a student enrolls for their programme. It does not matter how much the student believes in their ability to conduct certain tasks or destiny is in their hands and they have to fulfil it. Without support a student will leave their programme because there is no one to help them cope with the challenges they are faced with. Saying that a student can complete their programme without support is like saying that a student can study for an exam knowing fully well that there is no food in the house. This student is going to leave their programme so that they can get a job in order to get food in the house and then they will think about studying.

### Conclusion

Although my journey was filled with ambiguities and uncertainties as well as unanswered questions, looking back at my experiences I am grateful to God for allowing my journey to be the way it was. I believe that I would have been shaped to be the person I am today had I not gone through what I went through. I have learned a lot about myself. I used to be a perfectionist but I am now okay with being uncertain and not having an answer for everything. I have also learned to empathise with students who encounter challenges in their proposal and research report writing phases because sometimes it is not their fault as it always assumed. One thing that will always stand out for me is the importance of support to a student during their masters journey.

Well guess what, the Unisa student ambassador is back and this is the quote that kept me going including the support I got:

“You may encounter many defeats, but you must not be defeated. In fact, it may be necessary to encounter the defeats, so you can know who you are, what you can rise from, how you can still come out of it.”

— Maya Angelou