



Academic stress and coping strategies among  
North-West University post-graduate students

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## DECLARATION

I, Tumisang Modise, declare that the mini dissertation entitled “*Academic stress and coping strategies among North-West University post-graduate students*” has not been previously submitted for any degree or examination at this or any other institution. I further declare that this is my own work in writing, design, and execution and that the material contained herein has been duly acknowledged through complete references. I understand what plagiarism is and I am aware of the university policy and implications in this regard.

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**Initials & Surname**

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**Date**

## **DEDICATION**

This study is wholeheartedly dedicated to myself, Tumisang Modise, as an indication of my effort, hard work, and dedication in completing this study.

## ACKNOWLEDGEMENTS

First and foremost, I am grateful to God Almighty, for guiding me through this journey, and for providing me with strength and wisdom and the ability to complete my research successfully. Without Him, I would not have made it this far. God, thank you for your unfailing love and grace upon my life.

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### **List of Abbreviations**

APA	American Psychological Association
NWU	North-West University
HREC	Health Research Ethics Committee
SPSS	Statistical Package for the Social Sciences
RDGC	Research Data Gatekeeper Committee
LARS	Lakaev Academic Stress Response Scale
COMPRES	Community Psychosocial Research Committee

## SUMMARY

**Problem:** Attending University and embarking on an academic career can be both exciting and stressful at the same time. As a response to stressful situations, and to deal with stress, students often find themselves in search of different coping strategies. However, the nature and extent of the relationship between academic stress and coping strategies are complex due to the significant difference in the way that post-graduate students deal with and respond to academic stress or stressful situations as compared to other students or individuals. In the academic environment, much emphasis is placed on the acquisition of knowledge and students' academic performance, while neglecting the experience of stress, emotions, and feelings of the post-graduate students as they learn. Research on post-graduate samples is limited with the core findings reflecting higher stress levels and the use of more adaptive coping strategies such as emotional and social support, cognitive restructuring, acceptance, religion, and venting.

**Aim:** The aim of the study was to investigate the relationship between academic stress and coping strategies among North-West University post-graduate students.

**Method:** Using a quantitative, descriptive correlational survey research design, 365 post-graduate respondents (116 males and 249 females) were conveniently sampled to participate in the study. The age of the respondents ranged between 20 to 60 years and older. A self-administered survey was used to collect data from the respondents. Section A focused on the demographic characteristics of the respondents, section B focused on the Academic Stress Scale, and section C was based on the BRIEF-Cope Inventory.

Standard multiple regression, descriptive, and inferential analysis using SPSS was performed to test the two hypotheses.

**Results:** The post-graduate students answered the research survey and stated that they experienced different affective, cognitive, behavioral, and physiological symptoms caused by academic stress. The findings of the study highlighted the various coping strategies employed by post-graduate students at the university. It was noted that most post-graduate students used problem-focused coping strategies as compared to emotion-focused coping strategies.

It was concluded that there is a significant relationship between academic stress and coping strategies among North-West University post-graduate students. Thus, there is a need to formulate and implement intervention programs to enhance academic stress awareness and strategies to help post-graduate students manage and cope with academic stress.

**Keywords:** Academic stress, coping strategies, post-graduate students, stress and coping.

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## CHAPTER 1

### Introduction to the Study

#### Introduction and Background of the Study

Attending university and embarking on an academic career can be both exciting and stressful at the same time (Apriliyani & Maryoto, 2020). However, for many students, the experience may be far more stressful than exciting (Aihie & Ohanaka, 2019). The expectation of achieving a higher level of academic performance can lead to the development of academic stress, which may in turn lead to lower levels of academic performance (Oduwaiye et al., 2017). In this case, students may use various coping strategies to cope with their individual experiences of academic stress.

The current chapter includes the background of the study and briefly explains academic stress and coping. The chapter also outlines the problem statement, research questions, hypothesis, aims, objectives, and theoretical framework relevant to the current study. To conclude the chapter, the measurements taken to uphold the research quality and ethical considerations are also outlined.

#### *Academic Stress*

Stress is a normal reaction that forms part of an individual's everyday life. It is defined as the degree to which individuals appraise situations as stressful and relevant to their context (Aihie & Ohanaka, 2019). According to Apriliyani and Maryoto (2020), there are different types of stress, namely emotional, psychological, psychosocial, and academic stress (Böke et al., 2019). The current study focused on 'academic stress', which is defined as

emotional and cognitive demands, which are related to academic work that exceeds accessible internal and external resources (Böke et al., 2019).

In the context of the current study, academic stress can also be defined as anxiety or stress within the education environment (Aihie & Ohanaka, 2019). It reflects the perceptions of an individual's frustrations, conflict, pressure, and anxiety (Aihie & Ohanaka, 2019).

Extant research on academic stress and coping strategies shows that academic stress is very prevalent and pervasive among university students (Al-Dubai et al., 2011). Paying specific attention to South Africa, university students also are vulnerable to stress, with more than 70% of graduate students in universities having reported impaired levels of functionality as a result of stress (Myers et al., 2012). The origins of academic stress may vary with every individual, but in general academic stress is mostly caused by several sources such as life changes, uncertainty, lack of control, and conflict (Aihie & Ohanaka, 2019). When individuals are experiencing academic stress, they may present with physical symptoms such as headaches, chest pains, high blood pressure, and insomnia, to name a few (Baqtayan, 2015). In addition, referring to post-graduate students, in particular, academic stress may also cause anxiety, and changes in behavior such as being irritable, hostile, angry, and frustrated (Apriliyani & Maryoto, 2020). Aihie and Ohanaka (2019) further stipulated that when post-graduate students are stressed and preoccupied, this takes over their ability to focus on their research studies, and assignments, or even attend lectures, which may subsequently cause them to drop certain classes or drop out of university.

### ***Coping***

Stress is regarded as a part of academic life because it is instigated by day-to-day problems, which affect an individual's body, feelings, thoughts, and behavior (Baqtayan,

2015). Thus, students often find themselves in search of different coping strategies to mitigate the effects thereof.

Baquatayan (2015) has identified two styles of coping strategies, namely problem-focused and emotion-focused coping. Problem-focused coping refers to efforts to do something to alleviate stressful circumstances, while emotion-focused coping involves efforts to regulate the emotional consequences of stressful situations (Baquatayan, 2015). According to Boyle (2014), problem-focused coping includes strategies such as active coping, planning, and seeking instrumental support. Emotion-focused coping strategies are commonly divided into two sub-categories namely; active emotion-focused and avoidant emotion-focused strategies (Carroll, 2020). Active emotion-focused strategies involve strategies, such as turning to religion, acceptance, emotional support, positive reframing, humor, and venting. Avoidant emotion-focused coping strategies, on the other hand, include strategies such as the use of substances, self-blame, denial and behavioral disengagement (Ben-Zur, 2020). An individual's subjective experience of academic stress and the feeling of not being able to cope with academic stress can elicit additional feelings, including anxiety, a sense of loss, helplessness, and hopelessness (Sadiq et al., 2019).

### **Problem Statement**

The nature and extent of the relationship between academic stress and coping strategies are complex due to the significant difference in the way that post-graduate students deal with and respond to academic stress or stressful situations as compared to other students or individuals (Calvarese, 2015). The individual student's response to academic stress can either have a positive or negative effect on their academic performance and well-being (Abdullah et al., 2020; Clabaugh et al., 2021). This also depends on the severity of the academic stress that they experience (Apriliyani & Maryoto, 2020).

Previous research on coping strategies among student populations mostly focused on investigating stress and coping styles in undergraduate students (Aihie & Ohanaka, 2019). Research on post-graduate samples is limited with core findings that reflect higher stress levels and the use of more adaptive coping strategies such as venting, acceptance, emotional and social support, cognitive restructuring, and religion (Adomako-Saahene, 2019; Baqutayan, 2015; Boyle, 2014). Maladaptive coping strategies such as detaching and self-distraction were also used, especially with low social support (Chao, 2012).

A few studies have focused on the challenges related to academic stress and those that potentially limit the success of post-graduate studies. Such studies revealed that many post-graduate students either drop out or fail to complete their studies within the stipulated time (Cekiso et al., 2019; Styger et al., 2015). Despite large amounts of funds invested in post-graduate students, there is a national shortage of highly qualified post-graduate students (Styger et al., 2015). High dropout rates, as well as the slow progression of post-graduate students, have revealed themselves as persistent challenges and crises in various South African universities (Cekiso et al., 2019).

In the academic environment, much emphasis is placed on the acquisition of knowledge and students' academic performance, while neglecting the experience of stress, emotions, and feelings of the post-graduate students as they learn (Aihie & Ohanaka, 2019). Thus, this study aimed to investigate the relationship between academic stress and coping strategies among North-West University post-graduate students. There is adequate research on the relationship between stress and coping, but limited research exists regarding the relationship between academic stress and coping among post-graduate students as a cohort. Based on the problem statement the following research question was asked in this study:

What is the relationship between academic stress and coping strategies among North-West University post-graduate students?

## **Operational Definition of Terms**

### ***Academic Stress***

Abdullah et al. (2020), conceptualizes academic stress as individuals' interaction with environmental stressors, their academic-related stressors, as well as physiological and psychological responses to the stressors.

For this study, academic stress occurs because of several academic-related demands and pressures that exceed the adaptive, social and psychological capabilities of students (Alsulami et al., 2018).

### ***Coping***

Coping can be viewed as what individuals think and do in particularly stressful situations (Abraham et al., 2019).

For the purpose of this study, coping refers to the students' appraisal of the perceived academic stress and their ability to overcome and manage the academic stress (Agbaria & Mokh, 2021).

### ***Coping Strategies***

Coping strategies refer to the specific processes and tools such as emotional, behavioral, and cognitive processes used by students to respond to an academic stressor, threat or situation (Freire et al., 2020).

### ***Postgraduate Students***

For this study, postgraduate students are students who have completed their undergraduate degree-level studies at a university and are undertaking further studies at a more advanced level (Orakcı, 2020).

### ***Emotion-focused Strategies***

Emotion-focused coping strategies refer to the efforts utilized by students to manage or change situations that are causing academic stress (Ben-Zur, 2020).

### ***Problem-focused Coping Strategies***

Problem-focused coping strategies refer to the efforts utilized by students to manage the negative feelings associated with academic stress (Carroll, 2020).

## **Theoretical Framework**

### ***The Transactional Model of Stress and Coping***

A useful framework for understanding the potential predictive nature of the post-graduate student's experience of academic stress and coping is the transactional model of stress and coping by Lazarus and Folkman (2000). The transactional model of stress and coping views stress as a process that involves continuous interactions and adjustments known as the transaction between an individual and the environment. The individual is regarded as an active agent who can influence the impact of a stressor through behavioral, cognitive, and emotional strategies. The transactional model of stress and coping serves as a foundation for the researcher to understand how post-graduate students come to view a situation as academically stressful, as well as the chosen options to cope with such a situation.

According to this model, the experience of academic stress refers to the relationship between the individuals and the environment, which exceeds their resources and endangers their well-being (Chaudhury & Mujawar, 2018). Academic stress is experienced in the form of thoughts, emotions, feelings, and behaviors. As a result, the extent of academic stress depends on the appraisal of the situation and whether the internal or external demands exceed the resources (Chaudhury & Mujawar, 2018).

According to Lazarus (2000), who was one of the first theorists to write about the appraisal view of stress, different situations are perceived as stressful due to the appraisal or threat. He explained that for a threat to occur, it must first be evaluated to signify the harm that is present. The evaluation of the threat encompasses not only the perception of the stressful events occurring, but also the judgment, ideas, and expectations of the person-environment encounter (Lazarus, 2000). All of these constitute the cognition and understanding behind the appraisal. If the background of the cognition is changed, the appraisal of harm may be removed, and a different meaning may be attached to the encounter or experience.

Lazarus and Folkman's transactional model of stress consists of two types of appraisals, namely primary and secondary appraisal. Primary appraisal involves determining whether an event or situation is stressful or not (Folkman et al., 1986). This involves the categorization of the situation as being positive, irrelevant, or stressful to the individual. If the event or situation is determined as being stressful, it must be evaluated on whether it threatens, poses harm/loss, or challenges an individual. Threat refers to the anticipation of future harm (Lazarus, 2000). Harm or loss refers to damage that has been done, it can be through physical illness or injury (Biggs et al., 2017). Challenge refers to an individual's confidence in overcoming difficult situations or demands (both internal and external) (Lazarus, 2000). The sequential process of primary appraisal begins with the appraisal of

what is at stake followed by secondary appraisal (what can be done), which often helps with effective decision-making and adaptive coping (Adomako-Saahene, 2019). In other words, how individuals interpret a stressor will determine how they respond to manage the stress (Chaudhury & Mujawar, 2018).

When a threat is appraised, a secondary appraisal of coping options is triggered. Secondary appraisal occurs when the relationship between the person and the environment has meaning (Lazarus, 2000). During a secondary appraisal, an individual forms an impression of their ability to control or cope with stress. This has a great impact on the individual's stress levels. If the individuals feel that they can successfully manage or cope with a stressful situation, their stress levels are reduced. If the individuals doubt their ability to manage a stressful situation, their stress levels are increased (Biggs et al., 2017). A primary and secondary appraisal cannot be considered separate processes because they are dependent on one another. For example, the experience of academic stress may lead to underperformance or failure for post-graduate students and can be viewed or appraised differently by each one of them. To any given stressful academic situation, post-graduate students respond differently. Thus, the significance of the encounter is influenced by their personal beliefs, commitments, and goals. How each post-graduate student appraises an academically stressful event will shape their emotional and behavioral response and how they will cope with academic stress (Rudland et al., 2020).

### ***The Theory of Coping***

Lazarus and Folkman (1984), define coping as a process to manage stressors that have been evaluated as demanding or surpassing an individual's resources. Coping strategies are a set of adaptive tools that individuals proactively administer to deal with a stressful situation or avoid burn-out. These tools can be applied through an individual's thoughts, emotions,

and/or actions (Dillard, 2019). Coping strategies are said to have two primary functions. The first function is to manage events and factors that are causing distress to individuals. The second function is to govern individuals' emotions, which are related to the situation or stressor (Biggs et al., 2017).

The theory of coping explains that coping strategies vary among different individuals and can constantly change for any one individual (Biggs et al., 2017). As the researcher attempted to understand the existence of academic stress among post-graduates at North-West University, she was aware that differences existed in terms of academic stress experienced and the vast number of coping strategies available. Within this theory, the researcher was also able to gain knowledge of the different coping strategies employed by post-graduate students at the university.

According to Altinsoy and Aypay (2021), the coping theory is classified into two independent categories namely problem-focused and emotion-focused coping. Problem-focused coping is seen as having an adaptive nature that involves active planning or engaging in a specific behavior to overcome the cause of the distress (Lazarus, 2000). It includes strategies that are directed at managing or altering the distressing encounter (Altinsoy & Aypay, 2021). Examples of problem-focused coping strategies include planning, active coping, and using instrumental support such as lecturers or supervisors. An example of a problem-focused coping strategy would be devising and sticking to a study plan in preparation for an exam which has been perceived as academically stressful.

An emotion-focused approach involves strategies directed at regulating individuals' emotional responses and the way they feel and think about a stressful situation. It involves changing their relationship with the stressor in a way that reduces the stress it causes (Böke et al., 2019). This type of coping also involves attempts to regulate the emotions that are caused

by an encounter with a stressful event. (Ben-Zur, 2020). Emotion-focused coping may involve the use of emotional or behavioral strategies such as positive reframing or seeking emotional support from family and friends.

Emotion-focused coping strategies are often divided into two sub-categories: active emotion-focused coping and avoidant emotion-focused coping. Active emotion-focused coping strategies such as positive reframing, acceptance, religion, venting, seeking emotional support and humor, are generally viewed as being adaptive emotional regulation strategies. Avoidant emotion-focused coping strategies such as substance use, self-blame, behavioral disengagement, denial and self-distraction, where one tries to avoid the stressor, are seen to be maladaptive (Biggs et al., 2017).

The coping theory states that successful coping strategies depend on the emotional functions related to the problem. According to Lazarus, there are eight classified functions that most individuals use for coping namely:

***Self-control*** – Individuals try to control their emotions in response to stress.

***Confrontation*** – Individuals face pressure and retaliate to change the situation and bring it back in their favor.

***Social support*** – Individuals talk to others or look for social help to help themselves survive a difficult or distressing time.

***Emotional distancing*** – Individuals stay indifferent to what is going on around them to prevent distress from controlling their actions.

***Escape/Avoidance*** – Involves individuals denying the existence of stress as a coping response.

***Positive re-appraisal*** – Individuals seek to find answers during a time of distress and grow from it.

***Strategic problem-solving*** – It involves implementing specific solution-focused strategies to get through a tough time and re-directing one's emotions accordingly.

This theory of coping stipulates that coping strategies vary among different post-graduate students. The eight functions of Lazarus form the base of active emotional coping and lie at the core of an individual's behavior while experiencing academic stress (Lazarus, 1993). Moreover, understanding coping as a theory requires an understanding of how people react to stress in context; this includes assessing whether their coping thoughts and actions are appropriate for the given challenge and context (Berardi et al., 2019). Furthermore, the process of coping includes the particular individual, the specific encounter with the stress, the time of the individual's reactions and the outcome being examined (Berardi et al., 2019).

## **Aim and Objectives**

### ***Aim***

The study aimed to investigate the relationship between academic stress and coping, using a sample of post-graduate students at the North-West University.

Understanding the relationship between academic stress and coping strategies will assist in documenting and recommending the best practices for managing and coping with academic stress among university students in general, and post-graduate students.

### ***Objectives of the Study***

The objectives of the study were as follows:

- Determine the existence of academic experienced by post-graduate students at North-West University.
- Determine the different coping strategies employed by post-graduate students at North-West University during the experience of academic stress.
- Investigate the relationship between academic stress and coping strategies among North-West University post-graduate students.

## **Hypotheses**

### ***Null Hypothesis (H<sub>0</sub>)***

There is a significant relationship between academic stress and coping strategies among North-West University Post-graduate students.

### ***Alternative Hypothesis (H<sub>A</sub>)***

There is no significant relationship between academic stress and coping strategies among North-West University Post-graduate students.

## **Research Design and Methodology**

This section is discussed in detail in Chapter 3. A summary of the methodology is given below.

### ***Research Design***

A quantitative approach, as described by Blaikie and Priest (2019), was used in this study. A cross-sectional research design with the use of a self-administered online survey was implemented. The cross-sectional study was deemed appropriate by the researcher to be used in the study because it allowed the researcher to collect data from a large pool of subjects and

also allow the researcher to compare differences between groups (Cherry, 2018). This design was also used to measure the relationship between the two variables, academic stress, and coping strategies among North-West University post-graduate students.

## ***Methodology***

### *Sampling and Population*

The population of post-graduate students enrolled at the North-West University in 2021/ 2022 was  $N = 7420$ . The sample size was determined using a simplified survey sample size generating formula. Therefore, based on the simplified survey sample size generating formula, the recommended sample size, necessary for data to be considered reliable and generalizable to the given population was 365 with a 95% confidence level and 5% margin of error. A convenient sample of 365 respondents was therefore obtained for the current study.

### *Data Collection and Recruitment Process*

A survey method, as described by Ikehi et al. (2019), was used to collect relevant descriptive data from the respondents. This study utilized an online survey generated through Google forms (Liu & Wronski, 2018). To recruit respondents, an advertisement with an invitation to participate was posted on the Facebook pages of the university across all three campuses.

The recruitment process took place without the use of coercion, threat, or intimidation. The advertisement provided a link that respondents could follow to complete the survey online. In addition, respondents received R15 airtime vouchers as a token of appreciation after the data collection process.

### *Measurements Used in the Study*

Biographical data items were collected and combined with a battery of standardized measures of the two constructs, academic stress, and coping strategies. Academic stress was measured using the Lakaev Academic Stress Response Scale (LARS) while coping strategies were measured using the Brief COPE inventory.

### *Data Analysis*

Data analysis was performed using the Statistical Package for the Social Sciences (SPSS), version 25. Descriptive and inferential statistics were performed during data analysis. Descriptive statistics utilized consisted of simple percentages, frequency, and mean. These were used to describe the demographic data of the respondents such as age and gender. The Standard regression test was used to predict the relationship between academic stress and coping strategies.

### **Ethical Considerations**

The Health Sciences Research Ethics Committee (HREC) of North-West University was responsible for giving ethical clearance (NWU-00245-A1). According to the HREC research risk level descriptors, this research was classified as a medium risk due to the involvement of the post-graduate students. The researcher obtained permission from North-West University's Research Data Gatekeeper Committee (RDGC) to allow the researcher to conduct the study with the post-graduate students at the university.

According to North-West University's guidelines for ethical research, the researcher considered the following ethical principles:

### ***Confidentiality***

Participation in the study was completely voluntary, with the respondents being allowed to withdraw at any given time. Respondents were not asked to provide their names. Thus, all information collected and references to respondents in the research or any subsequent presentations have been, and will be, kept anonymous.

### ***Incentives***

There were no incentives given to the respondents, however, respondents received a R15 airtime voucher as a token of appreciation. After the completion of the survey, respondents were asked to provide their phone numbers and the service provider that they use. This information was kept confidential by an independent person who was responsible for distributing the airtime vouchers to the respondents to ensure anonymity and confidentiality.

### ***Informed Consent***

The researcher compiled an informed consent form as part of the online survey, using Google forms. The form included a summary of the study and conditions that both the researcher and the respondents adhered to. The informed consent also included that, if respondents felt uncomfortable or uneasy during the study, they had a choice to withdraw from the study with no explanation needed or consequences from the researcher. Once respondents agreed to the conditions of the study, they had to click on a link to complete the questionnaire. Additionally, there were clear instructions on how to answer questionnaires, instructing them to first complete the informed consent before moving on to the questionnaires.

### ***Data Storage***

The respondents were informed that data obtained from them would only be used for research purposes. Only the researcher, supervisors, and statistician had access to the data for analysis purposes. After the completion of the study, the original response questionnaires were deleted from the researcher's computer. Only the analyzed data remained inside the researcher computer, in a protected folder. The data would be destroyed after five years using the Department of Defence (DoD) compliant service software.

### ***Risks and Benefits***

The possibility of the medium risk to participants was carefully considered. The research did not aim to put any of the respondents through any physical, emotional risk or discomfort. Thus, the respondents were informed that should they have felt uncomfortable or uneasy during the study, they could choose to withdraw from the study up with no explanation owed to the researcher or consequences from the researcher. Any respondent who experienced distress as result of the study procedure, were be referred to the Counselling service center of the North-West University. The receptionist at the Counselling Department was made aware and contact details would be provided to any responded who needed counselling services. Participants will be informed that they can work via the receptionist. The abovementioned psychological services were rendered for free.

The respondents were informed that the data obtained from them would only be used for research purposes. After the completion of the study, the data would be destroyed after five years using the Department of Defence (DoD) compliant service software.

### ***Dissemination of Results***

The researcher was truthful and honest in the dissemination and presentation of the research and did not fabricate, falsify, or manipulate data for her own benefit. The results of

the study will be made available to the students through the Boloka Institutional repository on the North-West University library website after the completion of the study.

## **Research Outline**

Following the rules and regulations of North-West University for a mini dissertation in the traditional format, this dissertation is presented in the form of chapters. The mini dissertation contains five chapters. The outline of the remaining five chapters is as follows:

### ***Chapter 1: Introduction***

The current chapter outlined the background of the research, problem statement, research question, aims and objectives of the study and further introduced and defined the relevant terms of the study. The current chapter included a discussion of the relevant framework used by the researcher and outlined the measures put in place to ensure that all ethical considerations were addressed. Finally, the chapter was concluded by providing a synopsis of the chapters that would follow.

### ***Chapter 2: Literature Review***

In the literature review, the body of literature surrounding post-graduate students and their experience of academic stress, with a focus on academic stress, as well as coping strategies with which to overcome academic stress, was reviewed. The chapter is comprised of an overview of current and past literature that is relevant to the topic at hand.

### ***Chapter 3: Research Design and Methodology***

The chapter outlines the research design and methodology employed in the study. The chapter justifies the research design approach of the study, describes the population of the

study, details the research process that ensued, classifies how the quality of the research was maintained, and finally, explains how the ethical considerations were addressed.

#### ***Chapter 4: Results and Discussion***

The chapter presents the statistical results obtained from the data gathered and analyses performed. The most relevant data are presented through tables, and figures. The chapter also focuses on the discussion of the research findings with the support of literature that aligns with or contradicts the findings of the research.

#### ***Chapter 5: Reflections***

The chapter serves as a conclusion to the research. It includes a critical reflection on the research approach, designs, aim and objectives. This is followed by the research limitations, contributions, and recommendations.

The current chapter outlined the background of the research, problem statement, research question, aims and objectives of the study and further introduced and defined the relevant terms of the study. The current chapter included a discussion of the relevant framework used by the researcher and outlined the measures put in place to ensure that all ethical considerations were addressed. Finally, the chapter was concluded by providing a synopsis of the chapters that would follow.

## CHAPTER 2

### Literature Overview

#### Introduction

This chapter outlines relevant literature that focuses on the relationship between academic stress and coping strategies. The first section explains stress and coping while the second section focuses on the link between stress and coping among post-graduate students.

#### *Stress*

Stress is how human beings react to changes, situations, and events, physically and mentally (Abraham et al., 2019). It is a feeling experienced when one is overwhelmed by the stimuli in the environment. According to Fink (2016), there are different reasons and ways for human beings to experience stress. The reaction is based on the individuals' perceptions of a specific event or situation. The experience of stress can either be negative or positive, for instance, the stress experienced by students before exams may result in students studying and working harder to achieve good grades. However, when stress impairs the physical and mental health of an individual, it can lead to negative outcomes such as students not being able to study before exams, which may result in low academic performance or failure (Alsulami et al., 2018).

#### *Academic Stress*

Academic stress is generally a global emotional inequity. It demands an extra ability to cope, often in new and different situations (Dodd, 2021). According to Eroy et al. (2018), academic stress refers to the unpleasant psychological situation that occurs as a result of educational expectations from significant and close role players, namely the pressure to

achieve academically. Another study went further to define academic stress as a mental problem or difficulty as a reaction to anticipated frustration associated with academic failure or awareness of such possible failure (Raj & Sabita, 2021).

Academic stress causes various internal and external expectations placed upon students' shoulders (Reddy et al., 2018). It can have a negative psychological and social impact on students and can negatively impact their performance and learning (Raj & Sabita, 2021). Academic stress during post-graduate studies may additionally result in a wide range of common academic stressors that impede the academic and professional performance of post-graduate students. These various common causes of academic stress include:

**Academic Coursework/Overload** - A major source of academic stress is meeting academic, research, and assignment deadlines, and students who feel overwhelmed. Academic workload results in students spending less time with friends and family or engaging in outdoor activities (Reddy et al., 2018).

**Financial Difficulties and Problems** – According to Heo and Han (2018), financial problems are listed as one of the top sources of academic stress in South Africa. University fees/registration fees/ are on the rise and there is a lack of bursaries and scholarships. Many university students have debt (Heo & Han, 2018). The biggest financial pressures for post-graduate students include reimbursement of university study loans, more fee structure, borrowing money for studies, and challenges to find employment after graduation (Reddy et al., 2018). Post-graduate students, experience pressure due to financial issues.

**Time Management Problems** - The issue of time management is also an indispensable reason for post-graduate students' academic stress. According to Jibril (2021), it is not the administration of time itself that causes academic stress, but the students' view of control over time that is the cause of academic stress.

**Research/Recurrent Examinations** - The level of achievement is measured mostly by the use of semester or annual tests, assignments, or examinations, which are a major cause of significant academic stress (Wuthrich et al., 2020). Academic stress increases during examination preparation and climaxes during the examinations. The stress then declines after the completion of the examination (Abdullah et al., 2020). Therefore, continuous examinations and deadlines are associated with elevated academic stress.

**Parental-Expectations** – The high expectations of parents for their children’s children to perform academically may lead to academic stress (Abdullah et al., 2020). The gap between students’ academic performance and perceived parent-expectations can further lead to psychological distress.

**Relationship Problems** – Often, personal relationships form are part one of the important factors in the lives of post-graduate students. According to Shakeel et al. (2022), relationship problems are listed as one of the sources of academic stress. Self-confidence and academic competency are mostly associated with secure and happy relationships (Goyal et al., 2021). Students with academic stress who are in happy relationships views academic stress as a challenge. They approach it positively because they know that they are supported (Shakeel et al., 2022). Insecure or unhappy relationships may cause increased anxiety, which may lead to lower academic achievement. Students in unhealthy relationships rather spend their time and energy to on mental health needs than to dedicating it their time and energy to academic pursuits (Reddy et al., 2018).

**Lack of Social Support** – Social support comes from a range of sources such as friends, family members, lecturers, supervisors, and partners. In an academic environment, a lack of social support may maximize academic stress and minimize their ability to cope

(Reddy et al., 2018). Social support shows students that they are valued and that there are people who care for them (Karaman et al., 2019).

**Social Comparison and a Competitive Academic Atmosphere** – The opposition to evaluation and the need to perform well academically can also be the cause of academic stress (Reddy et al., 2018). This involves the social pressure that is applied to students to succeed academically and in their careers, which may lead to academic stress.

Based on the above-mentioned sources it seems appears as if academic stress can take a toll on post-graduate students. Students appear to experience multiple sources of academic stress, from working hard in order to secure employment, earning good grades, completing research and coursework, sitting exams trying to build adult relationships, establishing a social life, budgeting for expensive tuition fees, and balancing one or more part-time jobs during studies. They struggle to meet academic standards, do efficient time management, have concerns over grades and scores (Freire et al., 2020) and are affected by the negative causes of academic stress (Reddy et al., 2018). Therefore, understanding the severity, contributing factors, and coping strategies to for academic stress may facilitate the development of effective coping strategies to facilitate students' success (Yousef, 2015).

During post-graduate studies there are various sources of stress which are a result of the combination of academic expectations, demands, and commitments (Mc Connachie, 2019), all of which may exceed a student's available resources needed to adapt (Prabu, 2015), resulting in stress. These sources of stress have resulted in many university students experiencing intense academic stress (Alsulami et al., 2018). The level of academic stress is furthermore influenced by the resources available to the student (Reddy et al., 2018).

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### **Coping and Coping Strategies**

According to Folkman (2020), different individuals experience specific situations and events differently. The individual's perception and awareness of a stressful event are determined by the extent to which such an event is perceived as threatening, harmful or challenging (Crowe & Van Puymbroeck, 2019). Coping refers to behavioral and cognitive efforts that individuals use to manage external demands that they assess as harmful and exceeding their resources (Bakker & de Vries, 2021). According to Folkman (2020), the concept of coping represents an adjustment to a situation. It is a process that necessitates

adaptive changes and aims at reinstating the balance that is disturbed due to stress. Coping strategies on the other hand refer to different kinds of coping techniques adopted in a specific context (Kamble, 2020).

As previously mentioned under the theory of coping by Lazarus and Folkman (1984), most coping strategies fall into two broad categories, namely problem-focused coping strategy and an emotion-focused coping strategy.

### ***Problem-focused Coping***

Individuals who apply problem-focused coping strategies use strategies to solve problems. Such individuals use these strategies to define the problem, construct alternative solutions according to their costs and benefits, and then act (Kamble, 2020). These coping strategies allow individuals to take control of stressful situations by adapting their relationships with the sources of stress. They also gather information to cope with the stress (Carroll, 2020). Examples of problem-focused coping strategies are taking control of the stress, seeking information or assistance on how to handle the situation, and also to remove oneself from any stressful situation (Altinsoy & Aypay, 2021). There are various types of problem-focused coping that post-graduate students may employ during academic stress. They include the following:

**Active Coping** – Which is characterised by solving problems, seeking information, social support, planning as well as reframing the meaning of a specific problem (Bakracheva, 2018). It involves awareness of an academic-related stressor followed by an attempt to reduce the negative outcome.

**Planning** - involves brainstorming and thinking of employing different strategies to achieve a desired academic goal (Toms et al., 2018).

**Using Instrumental Support** – refers to practical and tangible support from others (Algorani & Gupta, 2022). It is provided to meet an individual's tangible needs.

Another way of employing a problem-focused type of coping can be by using time-management, as most times students find themselves with deadlines for numerous academic activities with a lot to do. Thus, managing one's time can help with implementing and allotting time to different academic tasks in a way that is realistic and can be followed (Carroll, 2020). Time management involves individuals' trying to rectify the situation by directly changing the situation that is causing academic stress.

### ***Emotion-focused Coping***

An emotion-focused coping strategy is a way an individual attempts to control the negative emotional reactions that might arise when one is faced with a particularly stressful situation (Folkman, 2020). It involves handling stress by regulating one's feelings and emotional responses to the problem instead of addressing the problem. It is used in situations where individuals perceive stress as extremely threatening and uncontrollable. The source of stress is also unclear to the individual or there may be a lack of knowledge about how to solve the problem (Crowe & Van Puymbroeck, 2019). The range of emotion-focused strategies is relatively broad and is often categorised into two sub-categories: active emotion-focused coping and avoidant emotion-focused coping. Active emotion-focused coping includes the following coping strategies:

**Positive Reframing** - involves thinking about a negative academic-related or challenging situation or event in a more positive way. Positive reframing helps students see different explanations and perspectives for situations (Helens-Hart, 2018).

**Acceptance** - is the active embracing of subjective experiences, particularly distressing experiences or situations (Ramli et al., 2018). In this case, the individual accepts the thoughts and feelings that come with the experience of distress.

**Religion** – Religious coping refers to the use of religious beliefs or practices to cope with stressful situations (Huang et al., 2020).

**Emotional Support** – refers to an intentional verbal or non-verbal way of showing care and compassion to another individual. This can be in the form of a hug, listening to another individual or showing empathy (Crowe & Van Puymbroeck, 2019).

**Venting** – This is a type of emotion-focused coping strategy that allows individuals to rationalize and validate their fears, worries and concerns to other people (Ben-Zur, 2020).

**Humor** - This is an adaptive ego defence coping strategy the helps individuals relieve the burden of stressful events or situations. By using humor, individuals can cope with stressful situations (Yoon et al., 2018).

Avoidance emotion-focused strategies on the other hand include the following:

**Self-Destruction** – refers to an individual's effort to attend selectively to an emotionally less disturbing aspect of a situation (Stephenson & DeLongis, 2020).

**Behavioral-Detachment** – refers to the ability to mentally disconnect from academic-related work as means to cope with anxiety (Ben-Zur, 2020).

**Self-Blame** – is an emotion-focused coping strategy that involves the attribution that the consequences of a specific event or situation are a result of one's actions, behavior or character (Boyras & Waits, 2018).

**Substance Use** – involves the use of alcohol or drugs to cope with a distressing vent or situation (Zegeye et al., 2018).

**Denial** – Denial refers to the conscious refusal to perceive that a painful or distressing event exists (Ben-Zur, 2020). It is a type of defence mechanism that involves ignoring the reality of a distressing situation to reduce anxiety.

Other emotional-focused coping strategies involve journaling, meditation, engaging in mindfulness activities and the use of drugs and alcohol (Clabaugh et al., 2021). The effectiveness of emotion-focused coping depends on the particular form of the emotion-focused strategy employed.

In general, students who use emotion-focused coping strategies such as stress eating, drinking, and taking drugs, reported poor health outcomes and effects (Chaudhury & Mujawar, 2018). Such strategies are ineffective because they are ignorant of the cause of the problem (Chaudhury & Mujawar, 2018). Emotion-focused coping does not provide long-term solutions to stressful situations and may have negative side effects in the future because it delays dealing with the problem. However, emotion-focused strategies can be beneficial if the individual cannot control the source of the stress.

As per the coping theory, the type of coping strategy employed by an individual depends on what is at stake for the specific individual and what coping strategies can be utilized (Altinsoy & Aypay, 2021). Lazarus and Folkman (2020) acknowledged that both problem-focused and emotion-focused coping strategies can be employed both independently and simultaneously during the experience of academic stress.

Another way that students can employ a problem-focused coping strategy can be by seeking support (asking for an extension for certain deadlines and submissions or seeking help from someone familiar) to get help and manage the experience of stress. Other individuals avoid dealing with the experience of stress altogether (Yoon et al., 2018). In

conclusion, a problem-focused approach to managing stress means that individuals actively try to act and do things in order to address the problem.

### **Academic Stress and Post-graduate Students**

Literature indicates that academic stress among post-graduate students has been studied in diverse university settings (Adomako-Saahene, 2019; Aihie & Ohanaka, 2019; Apriliyani & Maryoto, 2020; Babicka-Wirkus et al., 2021; Chandra, 2020). For the past several years academic stress has been an important issue amongst post-graduate students. Being a post-graduate student, especially in South Africa, can be stressful for many different reasons. In addition to the academic requirements or demands, post-graduate students face novel stressors and challenges such as financial issues, changes in the environment, adjusting to an academic context, relationship problems and adjusting to the new academic environment (Babicka-Wirkus et al., 2021).

According to Ramli et al. (2018), academic stress during post-graduate studies is a result of various issues, including examinations, coursework, research, and thinking about the future after graduation. In this sense, post-graduate students can find themselves in a situation being vulnerable to mental health problems, due to a highly competitive environment (Aihie & Ohanaka, 2019). Excessive levels of academic stress among post-graduate students can lead to an increase in the occurrence of psychological and physical challenges. Challenges like depression, anxiety, nervousness and stress-related disorders, can in turn affect the academic results of students (Sadiq et al., 2019).

Similar to stress, anxiety, according to Reddy (2020), is commonly found among post-graduate students regarding their academic performance, especially when it comes to assignments, taking tests, and examinations. Anxiety as a disorder is seen in about 8% of post-graduate students worldwide. It is reported that anxiety and stress have a considerable

negative effect on students' social, emotional, and academic success (Bartone & Homish, 2020). Test or exam anxiety is also reported to be a major academic problem affecting post-graduate students. In another source, exam anxiety can lead to a post-graduate experience of health-related problems, such as eating disorders, frequent headaches, and stomach or bowel-related problems (Alsulami et al., 2018). According to Ramachandiran and Dhanapala (2018), physical health problems are prominent among post-graduate students who reported high levels of academic stress. Casuso-Holgado (2019), also revealed that students who experience academic stress before examinations showed decreased blood levels of the immune system, which puts them at risk for developing colds and flu. In 2019, academic stress was reported to be one of the leading factors to have impacted academic performance with sore throat coming in second (American Health Association, 2019).

Depression is said to be becoming the most common mental health problem that students experience. Depression reflects an individual's frustration, conflict, anxiety, and pressure within the academic environment (Mahmoud et al., 2012). Barker (2018) revealed most women studying towards their post-graduate studies are at a higher risk of developing depression due to academic stress. Unfortunately, not every post-graduate student who has mental health-related problems as a result of academic stress is willing to seek treatment and support to help manage their feelings.

In addition to dealing with academic stress associated with the above-mentioned factors, many post-graduate students also face financial pressures that add to the physical, and emotional load. To alleviate financial stress, many post-graduate students are forced to take on part-time employment in addition to their studies (Reddy et al., 2018). The need to work has led to some post-graduate students feeling more anxious, and stressed, linking financial problems to their mental health (Bakker & de Vries, 2021).

## **Coping Strategies among Post-Graduate Students**

Research has been done on coping strategies and the differences between employed and unemployed post-graduate students (Chandra, 2020). It was observed that post-graduate students, in particular, have to cope with the demands that arise from fulfilling the roles of being both a student and an employee. Non-working or unemployed post-graduate students have to learn the roles of being an adult, having to change or tweak their personalities to prepare for the working environment w (Chandra, 2020). Studies on gender differences in male and female postgraduate students' strategies have reported that women tend to use more emotion-focused coping strategies than men in an academic setting (Eisenbarth, 2019; Graves et al., 2021). Some factors that affect the severity of academic stress include personal control, belief in the outcome and social support (Agbaria & Mokh, 2021). Active coping, planning and time management are also common factors that affect academic stress (Carroll, 2020). Agbaria and Mokh (2021), found that post-graduate students who perceived themselves as in control of their time reported greater academic achievement, less overload, greater life and work satisfaction as well as fewer academic related somatic symptoms or tensions.

A study aimed at investigating the effect of coping strategies on the academic stress of post-graduate students revealed that problem-focused strategies significantly affect the academic stress level of post-graduate students (Crowe & Van Puymbroeck, 2019). Moreover, students who use problem-focused coping strategies during examinations and submission periods can handle stress better than those who do not. Maintaining a sense of humor and cultivating optimism are emotion-focused coping strategies where the situation does not change, but the individual's perception of the situation does (Yoon et al., 2018).

Further research demonstrates that problem-focused coping leads to better adjustment for postgraduate students and stressful situations in general (Huang et al., 2020). However, a study conducted by Clabaugh et al., (2021), mentioned both problem-focused and emotion-

focused strategies and revealed that post-graduate students often use religious support, avoidance, social support, and positive appraisal to control or reduce the effect of academic stress. A study by Mc Connachie (2019), emphasized the use of emotion-focused strategies and revealed that drinking to cope is a very common phenomenon among post-graduate students. This suggests that interventions may be needed to encourage healthier means of coping.

### **The Relationship between Academic Stress and Coping Strategies**

Individuals who experience academic stress, employ different coping strategies, either to change the nature of the situation and manage it more efficiently or to reduce the situation's negative effect (Gustems-Carnicer et al., 2019). A study done by Evans et al., (2018) found that individuals' personalities may influence their degree of responsivity to the environment and, consequently, the number and types of stressful situations that they may experience. Individuals' personality traits may have an impact on their experience of academic stress and ultimately how they will cope in dealing with academic stress.

A recent study, which focused on post-graduate students' well-being during the Global COVID-19 pandemic, assessed the prevalence and different variables that contribute to academic stress, as well as explore different coping strategies used by post-graduate students (Patias et al., 2021). The study revealed a high prevalence of academic stress amongst post-graduate students. The majority of the respondents expressed high levels of academic stress and the different coping strategies that they employed. This finding was in agreement with the results of other studies conducted among post-graduate students in other countries (Abraham et al., 2019; Alsulami et al., 2018; Apriliyani & Maryoto, 2020).

Effective coping strategies can act as a buffer between students and various academic stressors. In a study by Agbaria and Mokh (2021) emotion-focused coping was the most

commonly utilized strategy and was found to be significantly associated with academic stress. Another study investigating the relationship between academic stress and coping strategies concluded that most post-graduate students utilized emotion-focused coping strategies such as self-blaming, keeping to self, worrying, tension-reduction and avoiding the problem (Agbaria & Mokh, 2021).

A study investigating the relationship between academic stress and coping among different gender groups reported that most of the students used emotional coping strategies, with problem-focused coping significantly better among males than females (Joseph et al., 2021). Within the same study, it was also reported that emotion-focused coping did not vary significantly between both genders. Most of the students preferred sharing their experience of academic stress with family and friends. Additionally, worrying about the future and poor-self-esteem were also found to be directly dependent on their experience of academic stress (Joseph et al., 2021).

Humor as a form of an emotion-focused coping strategy can be an effective means of coping with academic stress, lessening the impact upon moods and emotions among post-graduate students (Ben-Zur, 2020). In this study, humor operated as a moderating variable: students who were unable to produce humor showed a greater relationship between academic stress and mood disturbances than those who were more capable of humor during the experience of academic stress (Evans et al., 2018). A follow-up study found that academic stress commonly appeared among students who were unable to create a funny monologue than among equivalently stressed students who were able to create a funny monologue (Chandra, 2020). The results of these studies provide encouraging support for the hypothesized stress moderator role of humor as a form of emotion-focused coping strategy.

## **Conclusion**

Academic stress is seen as an emerging global phenomenon, one that affects numerous post-graduate students, both locally and internationally. The current chapter focused on a review of literature based on academic stress and coping strategies among post-graduate students. It also focused on placing post-graduate students into context and highlighting ways in which the context impacted their experiences, as related to academic stress and coping strategies based on the endeavours of previous studies. This chapter discussed the existence of academic stress among post-graduate students in general. The chapter also highlighted the type of coping strategies that the students employed and the relationship between academic stress and coping strategies.

Numerous sources contribute towards academic stress during post-graduate studies. These sources include academic workloads, parents' expectations of the students, relationship problems, lack of social support and a competitive academic atmosphere. In general, post-graduate students tend to employ different coping strategies to cope with academic stress. The range of coping strategies is quite broad and is commonly categorized into problem-focused and emotion-focused coping strategies. Thus, the type of coping strategy employed depends on the severity of academic stress.

Literature in the South African context exists, but it is limited, leaving room for more research on the topic specifically on the relationship between academic stress and coping strategies among post-graduate students in a university context. The study aims to address the call for more research and to add to the knowledge base by providing useful information for further research on the topic.

## CHAPTER 3

### Research Design and Methodology

#### Introduction

This chapter includes a detailed explanation of the research methodology, including the research approach, research design, target population, respondents, and sampling methods used. The description of procedures, validity and reliability of the research instruments, the recruitment and data gathering processes, as well as the data analysis process is also explained in detail in the following chapter.

#### Research Design

##### *Quantitative Design*

A quantitative, descriptive correlational survey design was implemented in the study. Firstly, a quantitative design was chosen because Basias and Pollalis (2018), define quantitative research as a systematic collection and analysis of numerical data using statistical procedures. Therefore, a quantitative research design was selected to gather statistical data from a large pool of respondents and investigate and determine the relationship between academic stress and coping strategies amongst post-graduate students at North-West University, in ways that would make qualitative in-depth research impractical. In addition, the quantitative study was conducted online to minimise contact according to the COVID-19 regulations.

##### *Descriptive Design*

The purpose of the descriptive research design was to determine academic stress among post-graduates and to describe its relation to coping strategies (Mohajan, 2018). The

independent variable measured in this study was academic stress while the dependent variable was coping strategies. The design allowed the researcher to determine the relationship between the two variables.

### ***Correlational Design***

A correlational research design was also used in the study. According to Bloomfield and Fisher (2019), correlational research is used to investigate a linear relationship between two or more variables. Furthermore, it is used to determine the type of degree of the relationship. In the current study, a question about the relationship between academic stress and coping amongst North-West University post-graduate students was put forward and redefined. Thus, the correlational research design sought to investigate the relationship between the two variables.

## **Research Methodology**

### ***Target Population***

The target population was post-graduate students at the North-West University. All full-time and part-time post-graduate students studying towards their post-graduate diploma, honours, master's, or PhD were eligible and included in the study.

The following inclusion criteria were established:

- Respondents had to be currently enrolled on a full-time or part-time post-graduate program in any of the eight faculties at the university.
- Respondents had to be competent in English as it was the medium through which data were collected.

- Respondents had to have access to the University Wi-Fi or data to respond to the survey electronically.

### ***Sample and Sampling Technique***

According to Etikan et al. (2016), a sample can be referred to as the number of units of the population to be studied. Such a sample must represent the characteristics of the population. The sample in the current study included post-graduate students. The sampling process in this research was done in a statistically representative manner. A convenient sampling technique was used in selecting post-graduate students to participate in the study. Convenient sampling is a non-probability sampling technique where respondents are selected because of characteristics that the researcher is interested in. A convenient sampling method was found applicable to the study, in that the respondents could respond to the survey at their own pace, time and convenience. The convenient sampling method was used to select post-graduate students based on criteria relevant to the research question. Moreover, the sampling method was also found to be efficient and economical.

### ***Sample Size***

The main aim of the sample size calculation was to determine the number of respondents needed to be included in a research study. The sample size was determined using the simplified survey sample size generating formula.

The simplified survey size-generating formula is presented as follows:

$$n = \frac{(Z\text{-Score})^2 \times SD \times (1-SD)}{\text{Margin}}$$

is the simplified survey sample size generating formula

whereby:

$$n = \text{Sample size}$$

*SD* = Standard Deviation

*Margin*= Total number of post-graduate students

The population of post-graduate students at North-West University was 7420 at the time of the study 2021/2022.

Using the formula, the overall sample size was calculated as

$$n = \frac{(1.97)^2 \times (.5) \times (1 - (.5))}{7420} = 365 \text{ participants}$$

### ***Respondents***

A total of 365 full-time and part-time post-graduate students participated in this study. Of the total 68.2% (n = 249) were females and 31.8% (n = 116) were males. The ages of the respondents ranged between 20 to 69 years of age. An overwhelming 84.9% (n =310) were between the ages of 20 and 29, 11.8% (n= 43) were between the ages of 30 and 39, 2.2% (n=8) were between the ages of 40 and 49, and 0.8% 9 (n = 3) were between the ages of 50 to 59 years. Lastly, 0.3% of 9 (n =1) were 60 years and older.

### ***Data Collection***

A self-administered survey method of data collection was found relevant to use in this study (Basias & Pollalis, 2018). According to Lui and Wronski (2018), survey research is an empirical and logical investigation during which data is collected from a sample of cases systematically and empirically. Survey research also involves the statistical analysis of the findings. The survey was found ideal by the researcher, as respondents could use their own time, space, and pace to complete the survey.

### ***Data Collection Instrument and Psychometric Properties***

Data were collected using Google Forms through a self-report questionnaire. The questionnaire was divided into sections that measured variables considered in the study. Section A focused on the demographic characteristics of the respondents (i.e., age and gender), Section B focused on the academic stress scale, and section C focused on coping strategies (See Appendix A).

#### ***Section A: Biographic Information***

This section requested the demographic characteristics of the respondents such as their age, sex, race, ethnicity, and field of study. (Refer to Appendix A)

#### ***Section B: The Lakaev Academic Stress Response Scale***

The Lakaev Academic Stress Response Scale (LARS) is a 21-item scale used to measure academic stress among university students. The LARS measures stress in the following stress response spheres – psychological, behavioral, cognitive, and affective. Respondents were expected to rate how often they experienced the symptoms on a 5-point Likert scale. The LARS has been used in the South African context, looking at the relationship between academic stress and alcohol use among second-year university students (Mc Connachie, 2019). This study indicated high reliability, with Cronbach's  $\alpha = 0.87$  and interterm reliability scored between 0.63 and 0.92. (Refer to Appendix B).

#### ***Section C: The Brief Coping Orientation to the Problems Experienced Inventory (Brief COPE)***

The Brief-COPE is a 28-item scale used to assess the different ways in which individuals respond to stress on a 4-point Likert scale. The scale is divided into subscales, namely adaptive and coping styles. The Brief-COPE has been standardized and used in a South African context looking at the association between perceived stress, coping styles and

personality in a sample of psychology Honours students (Nel, 2016). The Brief-COPE showed satisfactory reliability and validity with an inter-item consistency ranging from 0.25 to 1.000, and a Cronbach's Alpha of 0.70 indicating consistency among the items. (Refer to Appendix C).

### ***Reliability and Validity of the Measurements***

In order to ensure the reliability and validity of the measuring instruments, both measurements were sent to the supervisor and reviewer. A univariate analysis was implemented in order to show the population characteristics. The independent and dependent variables were interpreted using a nominal statistical technique in order to ensure their validity and reliability components. Construct validity through factor analysis were established in this study. The last part of the analysis was implemented, using a bivariate analysis to test for the relationship between the dependent and independent variables.

### ***Research Procedure***

The researcher obtained permission from the Community Psychosocial Research committee (COMPRES) within the Faculty of Health Sciences, as well as the Health Research Ethics Committee (HREC) and the NWU-Research Data Gatekeeper Committee (RDGC) of the university.

To recruit respondents an online advertisement with an invitation to participate in the research was posted on the Facebook page of the university. The recruitment process took place without the use of coercion, threat, or intimidation. The online advertisement provided a link that respondents had to click on to participate in the research. The link displayed the purpose of the study and an explanation of the aims and objectives of the study, the risks, and the benefits involved. Respondents were allowed to direct any questions via email to the primary researcher and the research independent person. Both the contact details of the

primary researcher and the independent person (research assistant) were included in the advertisement with informed consent.

There were no incentives. However, respondents received R15 airtime vouchers after the collection of data as a token of appreciation. After the completion of the questionnaire, respondents were asked to provide their phone numbers and service provider for the voucher to be uploaded. This information was kept in a secure orderly manner inside a password-protected computer by an independent person who was responsible for distributing the airtime vouchers to the respondents after data collection to ensure anonymity and confidentiality.

### ***Data Analysis***

Statistical analyses were done using the Statistical Package for the Social Sciences (SPSS) Version 25. According to Lebiad (2018), data analysis is the ordering, categorizing, manipulating, and summarizing of data, which are used to answer specific research questions. The process of data analysis in the current study was conducted in an ordered statistical manner, true to quantitative research, and followed the following steps: descriptive statistics to apportion the demographic characteristics of the respondents such as age and gender in terms of percentages, means and standard deviations; correlational regression analysis was used to assess the influence of academic stress on coping strategies.

Analysis for this study consisted of the following steps:

- In addition to descriptive analysis, parametric and non-parametric techniques were applied to the assessment of normality in data.
- Mean scores on the different scales were regarded as continuous and dependent variables. The nominal variables were also considered independent or grouping variables.

- Scale properties, e.g., construct validity through factor analysis were established in this study.
- Correlational analysis was done between the two constructs namely, academic stress and coping strategies.
- Research findings were made available in traditional research format as evidenced in Chapter 4 of the study.

## **Conclusion**

The current chapter provided an in-depth overview of the research approach and methods utilized by the researcher when conducting the study. As was clear throughout the chapter, a quantitative approach was used to understand the relationship between academic stress and coping strategies among post-graduate students at the North-West University. The quantitative nature of the study gave way to the descriptive correlational survey design throughout the remainder of the chapter, through different methods and data-gathering instruments utilized. An online self-administered survey was used to collect data. This method supported the research aims, as it obtained information on academic stress and coping strategies, as well as the relationship between the variables thereof. The results were analyzed using a standard multiple regression analysis methods. Descriptive and inferential statistics were performed during data analysis. The following chapter includes a presentation and a critical discussion of the findings of the study.

## CHAPTER 4

### Results and Discussion

#### Introduction

This chapter provides the research results and a discussion of the results. The current study investigated the relationship between academic stress and coping strategies among North-West University post-graduate students. Based on an international and local literature overview, a positive relationship between academic stress and the use of various coping strategies was expected from the university sample.

The presentation of the results is divided into four sections. The first section presents the demographic characteristics of the study population including their gender, age, marital status, and level of study. The second section determines the existence of academic stress among North-West University students. The third section presents the different coping strategies employed by post-graduate students at the North-West University. The last section examines the hypothesis tested in the study, provides descriptive and inferential statistical results, and includes a discussion on the relationship between academic stress and coping strategies. The results are supported by an integrative literature discussion.

#### Research Findings

##### *Demographic Characteristics*

This section provides the demographic characteristics of the population and the percentage distribution which are presented in Tables 4.1 to 4.6 below with an explanation after each table.

**Table 4.1:***Age*

<b>Age</b>	<b>Frequency</b>	<b>Percentage</b>
<b>20-29</b>	310	84,9
<b>30-39</b>	43	11,8
<b>40-49</b>	8	2,2
<b>50-59</b>	3	0,8
<b>60-69</b>	1	0,3
<b>Total</b>	<b>365</b>	<b>100</b>

A total of 365 post-graduate students participated in this study. The respondents' ages ranged from 20 to 69 years or older. An overwhelming 84.9% (n =310) were between the ages of 20 and 29, 11.8% (n= 43) were between the ages of 30 and 39, 2.2% (n=8) were between the ages of 40 and 49, 0.8% (n = 3) were between the ages of 50 to 59 years. Lastly, 0.3% (n =1) were between the ages of 60 and older.

**Table 4.2:***Gender*

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Male</b>	116	31,8
<b>Female</b>	249	68,2
<b>Total</b>	<b>365</b>	<b>100</b>

The results in Table 4.2 are a representation of the respondents by gender. Of the total, 68.2% (n = 249) were females and 31.8% (n = 116) were males.

**Table 4.3:***Different Ethnic Groups*

<b>Ethnic group</b>	<b>Frequency</b>	<b>Percentage</b>
<b>White students</b>	54	14,8
<b>Black students</b>	295	80,8

<b>Coloured students</b>	11	3,0
<b>Indian/mixed students</b>	5	1,4
<b>Total</b>	<b>365</b>	<b>100</b>

In terms of ethnicity, the majority of the respondents were identified as Black students (80.8%, n = 295) followed by 14.8% (n= 54) White students. The percentages of respondents representing Coloured students (3.0%, n = 11) and Indian/Mixed (1, 4%, n = 5) groups were limited in size.

**Table 4.4:**

*Marital Status*

<b>Marital status</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Single</b>	308	84,4
<b>Cohabiting</b>	12	3,3
<b>Married</b>	41	11,2
<b>Divorced</b>	4	1,1
<b>Total</b>	<b>365</b>	<b>100</b>

In terms of marital status, the majority of post-graduate students who were single at the time of the study contributed the highest percentage (84.4%, n =308) followed by married students (11.2%, n= 41). Students who were cohabiting (3.3 n =12 %) and divorced (1, 1%, n =4) contributed the least percentages distribution compared to other post-graduate students.

**Table 4.5:**

*Faculty*

<b>Faculty</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Health Science</b>	58	15.5
<b>EMS</b>	86	24
<b>Education</b>	45	11.5
<b>Humanities</b>	75	20
<b>Law</b>	17	4,9

<b>Agriculture</b>	80	23,0
<b>Theology</b>	4	1,1
<b>Total</b>	<b>365</b>	<b>100</b>

The table above reveals that most of the students were from the faculty of Economic and Management Sciences (EMS) with a percentage distribution of 24% (n = 86), followed by the faculty of Agricultural Science with 23.0% (n =80). The faculties of Humanities contributed 20% (n =75) and Health Sciences contributed a percentage distribution of 15.5% (n = 58). The faculties of Education (11.5%, n = 45), Law (4.9%, n= 17) and Theology (1.1%, n = 4) contributed the least to the study.

**Table 4.6:**

*Level of study*

<b>Faculty</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Honours</b>	260	71,4
<b>Post-Graduate Diploma</b>	8	2,1
<b>Masters (Course-Work)</b>	24	6,6
<b>Masters (Research)</b>	68	18,6
<b>Doctoral Degree</b>	3	0,8
<b>Post-Doctoral Degree</b>	2	0,5
<b>Total</b>	<b>365</b>	<b>100</b>

According to the above results, 71.4% (n = 260) of respondents were honours students, 18.6% (n = 68) were masters students doing research, 6.6% (n = 24) were masters students doing course work, and 2.1% (n = 8) were students studying towards their post-graduate diploma. According to the above table, doctoral 0.8% (n =3) and post-doctoral 0.5% (n =2) students responded the least in the study.

## Academic Stress

The first objective of the study was to determine the existence of academic stress among post-graduate students at the North-West University. The Academic Stress Scale (ASS) was used to measure this specific objective. The scale consists of four subscales, namely, affective, behavioral, physiological, and cognitive. Each subscale had follow-up statements, to which the students had to respond. Table 4.7 below presents the ASS results and the discussion follows.

**Table 4.7:**

*Academic Stress Scale (ASS)*

	<b>None of the time</b>	<b>Little of the time</b>	<b>Some of the time</b>	<b>Most of the time</b>	<b>All of the time</b>
<b>Affective</b>					
My work built up so much that I felt like crying	7.7%	14%	41.0%	27.1%	10.1%
I felt emotional	-	16.2%	35.5%	32.9%	15.4%
My emotions stopped me from studying	29.6%	26.4%	10.5%	8.5%	25%
I shouted at my family and friends	-	25.8%	15.4%	10.2%	48.6%
I felt emotionally drained	6%	14.2%	32.3%	34.2%	14.3%
<b>Behavioral</b>					
I felt lazy when it came to university work	9.3%	23.3%	37.5%	22.7%	7.2%
I procrastinated on assignments	14%	17.9%	26.4%	31.6%	10.1%
I get easily distracted in class	22.5%	32.1%	22.5%	22.9%	-
I was unable to study	23%	34%	32.9%	10.1%	-
I had trouble concentrating in class	22.8%	36%	27.2%	10.2%	3.8%
I avoided class	-	12.9%	10.4%	14.7%	62%
I used alcohol or drugs	19%	12.9%	10.4%	57.7%	-

I had trouble remembering my notes	21.9%	41.1%	26%	6.8%	4.2%
<b>Physiological</b>					
I couldn't breathe	72.3%	10.7%	13.2%	3.8%	-
My hands got sweaty	66.6%	14%	10.1%	9.3%	-
I had a lot of trouble sleeping	22.2%	20.3%	27.4%	23.8%	6.3%
I experienced a headache	20.3%	24.2%	22.9%	32.6%	-
<b>Cognitive</b>					
I felt overwhelmed by the demands of study	15.3%	10.7%	32.8%	41.2%	-
I felt worried about coping with my studies	7.9%	23%	-	23.9%	45.2%
There was so much going on that I couldn't think straight	15.3%	28.2%	18.6%	32.1%	5.8%
I felt emotionally drained by university	12.4%	23.3%	30.8%	22%	11.5%

According to the transactional model of stress, the experience of academic stress involves a continuous interaction between the students and their environment. Students are seen as active agents who influence the impact of academic stress in emotional, behavioral, social and cognitive ways (Dillard, 2019; Silinda, 2019).

According to the above table, on the **affective** subscale, almost half of the students (41%) reported that their academic work built up to such a degree that they felt like crying some of the time; 32.9% of the students reported feeling emotional most of the time during academic stress; 25% of the students reported that their emotions stopped them from studying all the time. The findings of the research are in line with the literature which revealed that academic stress has a negative impact on post-graduate students (Aihie & Ohanaka, 2019). Jain and Singhai (2017) reported that heavy workloads and the feeling of constantly racing to meet deadlines can be daunting to students. The experience of academic workloads may also

lead to them feeling overwhelmed by the demands of their academic studies (Jain & Singhai, 2017).

In a study conducted by Clabaugh et al. (2021) the inability to access university resources because of lockdown regulations as a result of COVID-19 has also led to the majority of students having emotional breakdowns, due to the online method of teaching and the lack of communication with their supervisors and lecturers. On the other hand, Carusi et al. (2022) reported that the need for students to excel in their studies is one of the greatest causes of academic stress, failure, and breakdown. Respondents (25%) also indicated that emotions them from studying all the time, while 34.2% of the respondents felt emotionally drained most of the time during academic stress. According to Reddy et al. (2018), the experience of negative emotions may ultimately stop students from studying altogether.

Of the respondents, 48.6% reported that they constantly shouted at their family or friends. Akulwar-Tajane et al. (2020), reported that some family members had to deal with unusual social behavior, such as shouting presented by students caused by academic stress. As such, Gustems-Carnicer (2019) stipulated that students tended to lose emotional control to such an extent that they end up shouting at their family members.

The transactional process involves primary and secondary appraisal, which is informed by the post-graduates' initial perception of whether the academic stressor is irrelevant, benign-positive, or stressful to them (Eisenbarth, 2019). Academic stressors perceived by the student as stressful (workload, examinations, deadlines, assignments, and research) are further appraised as challenges or hindrances to the post-graduate students' academic performance and well-being. The primary appraisal process involves determining whether an academic situation is stressful or not (Lazarus & Folkman, 1984).

When an individual considers an academic situation as stressful, it may lead to them reacting with negative emotions that include anger, anxiety, guilt, and frustration. The above percentages on the affective scale may be an indication that the respondents appraised academic stress as a stressful situation or challenge, which interfered with their confidence and ability to overcome academic stress. This ultimately may lead to them feeling overwhelmed, crying, breaking down, and shouting at their friends and or family members. The above findings on the affective subscale are in line with Lazarus's (2000) stance about the primary and secondary appraisal of coping options between the person and the environment.

During the secondary appraisal process of the transactional model of stress, a student forms an impression of their ability to cope and deal with academic stress. This in turn has an impact on the level of academic stress that they may experience. During this process, the students may doubt their ability to cope with academic stress, thus further increasing their chances of experiencing academic stress. It was noted in the findings above that almost half of the respondents procrastinated on their academic work some of the time. Some had trouble concentrating some of the time. More than half of them constantly avoided attending class and more than half of them used substances, alcohol, and other drugs during academic stress.

On the **behavioral** subscale, 22.7% of the students reported that they felt lazy most of the time and 37.5% felt lazy some of the time when it came to their academic work. Alsulami et al. (2018), reported that post-graduate students tended to feel lazy about doing their academic work, especially when experiencing academic stress. Only a few (7.2%) of the respondents in the current study indicated that they felt lazy all the time, while 31.6% of the students procrastinated on their academic work most of the time and 26.4% procrastinated some of the time. The findings are in line with the literature, which revealed that post-graduate students tended to avoid doing their academic work (Abdullah et al., 2020) by

procrastinating or losing interest in their academic work. This statement is supported by Mahlagaume (2020), who did a study that focused on the factors that caused academic stress and its impact on post-graduate students' academic success. The study revealed that an academic workload could lead to unbearable academic distress, which might lead to students procrastinating in doing their academic work.

While 22.9% of the students reported that they became easily distracted in class most of the time, 32.1% indicated that they only became distracted some of the time. These findings are therefore not as significant as the findings by Gustems-Garnicer et al. (2019) who found that most students tended to become easily distracted in class during academic stress. Of the respondents, 27.2% reported that they had trouble concentrating in class some of the time. It was hard for them to concentrate in class when there was an increased workload that they had to complete (Heo & Han, 2018). Respondents in the current study also indicated that they did not have trouble concentrating all the time (3.8%) due to academic stress and 27.2% indicated that they only had trouble concentrating some of the time. In addition, 26% of the students reported that they had trouble remembering their notes during academic stress. Straud and McNaughton-Cassill Styge (2019), reported that academic stress among post-graduate students could affect their ability to learn and concentrate in class.

A study by Vogel (2022), revealed that academic stress may lead to elevated stress hormones that may interfere with the hippocampus area of an individual's brain responsible for memory and concentration. Academic stress may lead to an overstimulation of the hippocampus which may result in the individual forgetting what they studied. During academic stress, individuals have a more difficult time learning and creating short-term memories and turning them into long-term memories.

Over half (62%) of the respondents reported that they constantly avoided attending class during academic stress. Karaman et al., (2019), highlighted that skipping class could be a fast track to increased academic stress, anxiety, and lower academic performance. The reasons for missing class apart from academic stress included, not being in the mood, lecture issues and personal and health issues (Abdullah et al., 2020). Not attending class is regarded as ineffective and may lead to increased levels of academic stress (Harris, 2020).

Of the respondents, 57.7% reported that they used substances, alcohol, and other drugs most of the time to cope with academic stress. According to Mc Connachie (2019), the use of substances, alcohol, and other drugs may be to relieve the tension and the negative feelings that they experience from being academically loaded. Another study revealed that academic stress was found to be a significantly increasing problem amongst post-graduate students, which leads to the consumption of alcohol and other illicit mind-altering substances in an attempt to cope with academic stress.

On the **physiological** subscale, 23.8% of the respondents indicated that most of the time they had trouble sleeping while 27.4% had trouble sleeping some of the time during academic stress. Only a few (6.3%) had trouble sleeping all the time, which seems low. This low percentage contradicts the literature, which revealed that more than sixty percent of university students have disturbed sleep-wake patterns (Prichard, 2020). Academic stress affects the quality of their sleep more so than alcohol or caffeine (Prichard, 2020). On weeknights, 20% of the students in the study by Prichard, indicated that they stayed up all night at least once a month and 35% of them stayed up until the early hours of the morning.

These sleeping patterns, in turn, lead to students avoiding class or falling asleep in class. More literature revealed that only 30% of post-graduate students sleep at least eight hours a night, which is the average requirement for young adults (Herawati & Gayatri, 2019;

Martire et al., 2020). In addition, high levels of academic stress and insufficient sleep can impact students' physical health and well-being (Martire et al., 2020). Moreover, the short-term effects of sleep deprivation may also include decreased cognitive functioning, memory performance, and alertness (Prichard, 2020). Regarding headaches, 32.6% of the respondents in the current study reported that they experienced headaches during academic stress most of the time, while 22.9% had headaches some of the time. The findings are in line with the literature.

According to Rafi (2022), academic stress can lead to migraines. Freeman et al. (2021), mentioned the difference between regular sweat and stress-induced sweat and conducted a study on how academic stress can cause stress-induced sweat. Stress-induced sweat is released in a chemically different way through an individual's apocrine glands (Acevedo et al., 2021). These glands produce a milkier sweat comprised of fatty acids and proteins (Campos et al., 2019). While this type of sweat is initially odorless, it does not evaporate quickly and can impact an individual's confidence. It may also lead to them withdrawing from social situations (Campos et al., 2019). During academic stress, an individual's ability to breathe may also be affected (Priya et al., 2018). The breathing process may be faster or less efficient, which can lead to over-breathing (hyperventilation) and breathlessness (de Arriba Perez et al., 2018). In most cases, the inability to breathe properly during academic stress leads to anxiety or panic attacks (Gowda et al., 2022).

On the **cognitive** subscale, almost half (41.2%) of the respondents reported that most of the time they felt overwhelmed by the demands of their studies and 32.8% felt overwhelmed by demands some of the time. According to Ramli et al. (2018), feeling overwhelmed by academic stress, not only demotivates students to work, but can lead to increased dropout rates. The overwhelming feeling can cause fatigue, an inability to sleep,

and a general feeling of anxiety (Ramli et al., 2018). While 45.2% of the respondents felt worried about coping with their study all the time 23.9% felt worried most of the time.

According to Yang et al. (2019), the constant feeling of worry and tension among students may lead to academic anxiety, which according to (Maajida Aafreen et al., 2018), is characterised by feelings of worry, tension, and dread associated with academic settings or tasks. Most post-graduate students tend to experience academic stress due to their academic demands, working towards the successful completion of their studies, and future goals (Veyis et al., 2019; Yang et al., 2019).

Some of the students (32, 1%) reported that most of the time there was so much going on that they could not think straight. However, only 5.8% constantly experienced this feeling. The inability to think straight is commonly associated with a lack of sleep, academic stress, and overworking (Weber, 2022). In general, 22% of the respondents felt drained by the university most of the time and 30.8% of the respondents reported feeling drained by the university some of the time, and 11.5% reported not feeling drained at all. Research indicated that feeling drained by the demands of study may lead to academic burnout (Veyis et al., 2019; Yusoff et al., 2021) and can also cause real psychosomatic problems such as headaches and insomnia (Veyis et al., 2019). Some common symptoms associated with academic burnout include a feeling of not being able to keep up, and feeling drained and anxious (Teixeira et al., 2021).

From the above findings, it can be concluded that most post-graduate students felt overwhelmed and worried by the demands of their studies. The results are in line with previous literature which revealed that there is an increased concern among post-graduate students who worry whether they passed or did well academically every year, which in most cases results in academic stress (Clabaugh et al., 2021). Abdullah (2020) further reported that

post-graduate students experience academic stress when they think of what they will be able to do in the future, after completing their studies. Most of their thoughts are about whether they will have a positive impact on society or whether they will turn out to be a burden to society.

Under the cognitive subscale, it was noted that almost half of the respondents reported feeling overwhelmed by the demands of their studies, while some of them reported that they felt worried about coping with academic stress most of the time. Almost half reported that there was so much going on that they could not think straight. These cognitive reactions are an indication of the existence of academic stress, which might lead to academic stress being perceived as a threat that might cause future harm in their lives. According to the Transactional Model of Stress, when an individual perceives academic stress as a threat, it may lead to reacting in the above-mentioned cognitive ways, which are an indication of academic stress (Silinda, 2019).

### **Coping Strategies**

The second objective of this study was to identify the different coping strategies employed by post-graduate students at the North-West University. A BRIEF-COPE Inventory was used for this purpose. The BRIEF-COPE Inventory consists of fourteen subscales with two items under each subscale. They are active coping, planning, positive reframing, acceptance, humor, religion, using emotional support, using instrumental support, self-distraction, denial, venting, substance use, behavioral disengagement and self-blame. Students needed to respond to 27 items such as **1** (I have been doing this a lot), **2** (I have been doing this a medium amount), **3** (I have been doing this a little bit) and **4** (I have not been doing this at all). Table 4.8 below summarises the coping strategies used by the respondents.

**Table 4.8:***Coping strategies used by respondents*

<b>Coping strategies</b>	<b>No (%)</b> <b>(None of the time or little of the time)</b>	<b>Yes (+%)</b> <b>(Medium amount or all of the time)</b>
<b>Active coping</b>	33.1% (n =121)	66.9% (n =245)
<b>Planning</b>	27.9% (n = 102)	72.1 % (n =263)
<b>Positive reframing</b>	39.9.% (n =143)	60.1% (n =222)
<b>Acceptance</b>	34.5 % (n =125)	65.5% (n =240)
<b>Humor</b>	53.9% (n =197) z	46.1% (n =168)
<b>Religion</b>	30.1% (n =110)	69.9% (n =245)
<b>Using emotional support</b>	37 % (n =135)	63 % (n = 230)
<b>using instrumental support</b>	41.9% (n = 153)	58.1% (n = 212)
<b>Self-Distraction</b>	49.1 % (n =178)	50.9% (n =186)
<b>Denial</b>	78.5 % (n = 286)	21.5% (n = 79)
<b>Venting</b>	80% (n =292)	20% (n =79)
<b>Substance Use</b>	45.2% (n =165)	54.8% (n =200)
<b>Behavioral disengagement</b>	59.7% (n = 218)	40.3% (n =146)
<b>Self-blame</b>	56.5% (n =206)	43.5 (n =159)

According to the theory of coping (Biggs et al., 2017), post-graduate students may employ a list of coping strategies during academic stress. These coping strategies can be applied through the students' thoughts, emotions, and/or actions. As indicated before, according to this theory, coping is a vast area of study that can be classified into two categories namely problem-focused coping and emotion-focused coping. strategies. Either of these two categories of coping can result in positive or negative outcomes.

### ***Problem-focused Coping Strategies***

According to the above table, **planning** was ranked the highest among the respondents, with 72.1% (n= 263) who reported that they used planning as a coping strategy for a medium amount or all the time and 27.9%, (n=102) indicating that they did not use it at all or for a short time. According to Ben-Zur (2019), the need to plan effectively is commonly a pre-requirement for undertaking post-graduate and further studies. Planning involves thinking of ways how to cope with academic stressors and devising step-by-step methods for how to deal with the academic stressors (Toms et al., 2018). According to Karaman et al. (2019), planning is regarded as an active coping strategy, which allows individuals to schedule future events in an acknowledgement that there would be a future, and if it arrived, they would be able to do the things that they wanted to (Teixeira et al., 2021). It can act as a buffer between students and the various academic stressors affecting them (Karaman et al., 2019). The findings of the research revealed that planning was ranked the highest amongst the various coping strategies employed by post-graduate students at the university. In essence, the findings of the study revealed that post-graduate students are skilled at planning during academic stress, which is an effective coping strategy used to deal with academic stress, especially at the post-graduate level.

**Active coping** was ranked third, with 66.9% (n=240) of the respondents indicating that they took active steps and directions a medium amount and all the time, to deal with academic stress, while 33, 1% (n= 121) of them indicated that they did not or hardly used active coping as a coping strategy. A study conducted by Karaman et al. (2019), discussed the difference between active and passive coping during academic stress and highlighted the role of active coping during academic stress. When dealing with academic stress, students tend to adopt active coping strategies, consider ways to overcome academic stress, and take full advantage of academic stress by learning from it and looking at the brighter side of things

(Barattucci et al., 2021). According to previous research on the use of active coping during academic stress, the results in the population of post-graduate students in other universities indicated a higher level and use of active coping as a coping strategy used during academic stress (Bakracheva, 2018; Ramachandiran & Dhanapal, 2018).

**Seeking instrumental support** was ranked seventh according to Table 4.7 whereby 58.1% (n = 212) of the students reported that they constantly sought instrumental support during academic stress a medium amount of time, all the time while 41.9% (n = 153) of them reported that they seldom did, or not at all. According to Graves et al. (2021), instrumental help-seeking behavior is greatly beneficial in academics. It reflects intrinsic motivation and entails acquiring and increasing an individual's mastery and understanding in an academic context. The process of seeking instrumental help involves referring to lecturers, mentors, classmates, books or problem-solving strategies during an encounter with academic stress (Eisenbarth, 2019). It is regarded as an effective strategy employed by self-regulated students, thus allowing them to succeed in an academic context. Moreover, this kind of behavior subsequently reduces pressure and causes students to anticipate rather than fear academically difficult tasks (Agbaria & Mokh, 2021).

Problem-focused coping strategies are viewed as more effective and favorable when dealing with academic stress (Gustems-Carnicer et al., 2019). Algorani (2022), however, argues that the effectiveness of this specific coping strategy is often determined by the source and severity of academic stress. In essence, problem-focused coping strategies will not work in situations where it is beyond the student's ability to control academic stress (Algorani & Gupta, 2022). This type of strategy is most effective when the source of academic stress is potentially under the student's control. Moreover, it is also suggested by previous research that this particular coping strategy may lead to the best outcome for coping with academic stress (Carroll, 2020; Chaudhury & Mujawar, 2018; Reddy et al., 2018).

### *Emotion-focused Coping Strategies*

To explore the findings of the study in greater detail emotion-focused coping strategies are divided into two sub-categories, namely active emotion-focused and avoidant emotion-focused coping strategies.

#### *Active Emotion-focused Coping Strategies.*

According to Table 4.8, turning to **religion** to cope with academic stress was ranked second with more than half (69.9%, n=240) of the respondents indicating that they tended to turn to religion to find comfort through prayer and meditation a medium amount to all the time, while 33.1% (n= 121) of the respondents indicated that they did not or did turn to religion less frequently. The results corroborate with previous research, which found that religion and spirituality play an important role in the experience of academic stress among post-graduate students (Oduwaiye et al., 2017). Ekwonye (2020) also revealed that religion and spirituality help most post-graduate students find purpose and meaning during their academic studies.

Patias et al. (2021), stated that religion plays a role in students' mental health and well-being, as it reduces the experience of anxiety and mental breakdowns due to academic stress. In addition, Abraham et al. (2019), further stipulated that religion helps students cope with academic stress and further contributes to their overall academic performance during their post-graduate studies. The North-West University is a diverse university with different religious backgrounds, and the setting of the university allows students to practice their own religion and seek comfort through religion to deal with and cope with academic stress.

**Acceptance** as a type of coping strategy was ranked fourth according to the results. According to Table 4.8, it was reported that 65.5% (n=240) of the students indicated that they used acceptance as a coping strategy a medium amount, all the time, while 34.5% (n=125) of

them did not or seldom did. . According to Han et al. (2022), acceptance in academic settings is seen as an adaptive emotional coping strategy. It refers to an individual's ability to accept the reality of an academic stressor and the individual's attempt to deal with the stressor. Acceptance having been ranked high among the respondents might be an indication that they can be more adaptive when coping with academic stress.

**Seeking emotional support** was ranked fifth with 63% (n = 230) of the students reporting that they constantly sought emotional support a medium amount, during academic stress. According to Chandra (2020), seeking emotional support is commonly regarded as an adaptive coping strategy. It can satisfy a student's emotional needs and thus reduce academic stress. According to Trigueros (2020), students experience emotional support by getting moral support, understanding, and sympathy. Emotional support can be given not only by friends and family members but also by mentors and lectures at the university. However, in their study Haung et al (2020), found that most post-graduate students received emotional support from family members. These findings confirm the Theory of Coping theory of coping by Lazarus and Folkman (1984), which suggests that significant others are seen as the primary sources of emotional support because they help students in dealing with academic stress Another study revealed that the large number of post-graduate students seeking emotional support may be attributed to the level and nature of their academic program (Clabaugh et al., 2021).

**Positive reframing** was ranked sixth with 60.1% (n = 222) of the students reporting that they constantly used positive reframing a medium amount of time, during academic stress and 39.9% (n = 143) of them reported that they seldom used it. Positive reframing is considered to be an emotion-focused coping strategy which is aimed at the positive side of things (Le Vigouroux et al., 2021). Positive reframing can help post-graduate students alter and change how they look at the experience of academic stress. It can help relieve significant

amounts of academic stress and create a more positive view of academic stress before making any changes to the circumstances. Once post-graduate students can broaden their perspectives by using positive reframing as a coping strategy they can see and explore more opportunities that may help them feel less stressed.

**Humor** was ranked tenth. Almost half 46.1% (n =168) of the respondents reported that they constantly used humor as a coping strategy a medium amount, all the time. More than half of them (53.9%, n=197) reported that they seldom used humor or did not use humor at all. According to Crowe and Puymbroek (2019), humor can be a mitigating factor in managing academic stress. The author further stated that being humorous could lead to appraising the experience of academic stress as less threatening and can result in better emotional and mental well-being. Melodia (2020), further reported that humor can be used to restructure an academic stressful situation to be appraised positively.

**Venting** as a coping strategy was ranked the lowest with 20% (n =79) of the students reporting that they constantly used venting as a coping strategy for a medium amount of time, while 80% (n=292) of them reported that they used it seldom or not at all. According to Ben-Zur (2020), venting refers to the focus of attention on distressed situations and the expression of feelings that are related to the distress. Although this type of coping strategy can be functional, it can also aggravate academic stress and hinder change if the focus is on it for too long (Crowe & Van Puymbroek, 2019). According to Graves et al. (2021), post-graduate students use venting as a coping strategy, by saying things to let unpleasant feelings escape and express the negative feelings that are caused by academic stress.

### *Avoidant Emotion-focused Strategies.*

The use of **substances, alcohol, or other drugs** was ranked eighth. According to Table 4.8, 54.8% (n= 200) post-graduate students reported that they used substances, alcohol and other drugs as coping strategies a medium amount, constantly and 45.2% (n=165) of them reported that they seldom used substances, alcohol and other drugs or not at all. The experience of academic stress is considered to be a major contributory factor towards the use of substances, alcohol and other drugs amongst university students (Boyras & Waits, 2018; Mc Connachie, 2019). There is also an assumption that post-graduate students consume alcohol and use drugs to deal with academic pressure and the tremendous workload that they have (Le Vigouroux et al., 2021). There are two significant ways in which post-graduate students may approach the use of substances during academic stress (Teixeira et al., 2021). For some, turning to the use of substances may be to escape academic stress and anxiety. Alcohol or other drugs may be used to take the edge off their minds or otherwise avoid confronting other academic stressors (National Academies of Sciences & Medicine, 2021). However, this specific approach may have long-term effects on students by instilling a dangerously positive view of substances or drugs that can quickly develop into an addiction, if left unaddressed (Allen et al., 2022). The continuous use of substances can have an impact on a student's overall health, while counterproductively increasing academic stress (Allen et al., 2022).

Secondly, students may look to other substances to help them perform better in an academic setting (Teixeira et al., 2021). This is a common approach with the use of drugs typically used to treat ADHD in students. However, these types of drugs can be abused by students who believe that extra focus is needed to further one's academic career. Despite the independent effects, these drugs also have several adverse effects such as vomiting, loss of appetite, and insomnia (Zegeye et al., 2018).

**Self-distraction** was ranked ninth. According to Table 4.8, 50.9% (n = 186) of the students reported that they used self-distraction constantly as a form of coping strategy for a medium amount of time. , while 49.1% (n = 178) of the students reported that they used self-distraction seldom or not at all. According to Graves et al. (2022), self-distraction is mostly considered a less effective coping strategy. Self-distraction as a coping strategy may be applied by using one's social networks such as friends or family members. Alternatively, it can be used to distract oneself by engaging in self-rewarding activities such as watching television, shopping or eating (Algorani & Gupta, 2022). Self-distraction coping strategies help students take their minds off things, rather than deal with the actual stressor (Berardi et al., 2019). Reading a book, watching a movie, taking a walk, cooking or playing a game are all forms of self-distraction activities, particularly used by students (Eisenbarth, 2019). Another example of self-distraction can be a student spending time with a friend or family member, by doing so they temporally forget about their experience of academic stress.

**Denial** was ranked thirteenth with 21.5 % (n = 79) of the students reporting that they were constantly in denial about their experience of academic stress for a medium amount of time., and 78.5 % (n = 286) of the students reported that they were seldom or never in denial. According to Ben-Zur (2020), the use of denial as a coping strategy can be useful initially to minimise the experience of academic stress and enable coping. However, denying the reality of academic stress can intensify the experience of academic stress and may lead to difficulty in coping at a later stage (Lo Cricchio et al., 2021).

According to the Transactional Model of Stress (Dillard, 2019), denial occurs in the primary appraisal process. The model suggests that the use of denial as a coping strategy is useful when minimizing stressful situations, thereby facilitating coping (Silinda, 2019). Alternatively, it can be argued that denial only creates additional problems unless the stressor can be favorably ignored. If one denies the existence of a stressful situation, one allows the

situation to become more serious, which makes it difficult for one to cope (Eisenbarth, 2019). In conclusion, the two forms of coping strategies (self-distraction and denial), both require the individual to ignore the experience of academic stress, thereby, leaving the problem unresolved (Rogowska et al., 2021).

**Self-blame** was ranked eleventh with 43.5% (n =159) of the respondents reporting that they constantly used self-blame as a form of a coping strategy for a medium amount of time, while, more than half (56.5%, n =206) of them reported that they seldom used self-blame or did not use it at all. Among post-graduate students, in particular, self-blame occurs in one or two ways. It can either occur behaviorally or in character. Behavioral self-blame relates to modifiable sources such as blaming oneself for not preparing for a test or an exam and then failing, “If only I would have studied, this wouldn’t have happened”. In contrast, character-related self-blame relates to non-modifiable sources such as second-guessing one’s ability to do well academically. An example can be the belief that whatever goes wrong with one’s academic performance is their fault.

**Behavioral Disengagement** was ranked twelfth. Almost half 40.3% (n =146) of the students reported that they constantly used behavioral disengagement as a coping strategy during academic stress for a medium amount, of time. More than half of the respondents (59.7%, n = 218) reported that they used behavioral disengagement seldom or not at all. Similar to self-blame, behavioral disengagement is mostly considered a dysfunctional coping strategy because it is commonly associated with feelings of hopelessness and helplessness (Graves et al., 2021). According to the Theory of Coping theory of coping, behavioral disengagement and self-blame are most likely to occur when students expect poor coping outcomes. The low ranking among post-graduate students may be an indication that they use more adaptive coping strategies as compared to maladaptive coping strategies. The low ranking may also be associated with their level of education.

Among the top ten coping strategies utilized by post-graduate students, three of them are problem-focused coping strategies (planning, active coping, and seeking instrumental support). Four are active emotion-focused coping strategies (positive reframing, acceptance, turning to religion and seeking emotional support), and three are avoidant emotion-focused coping strategies (the use of substances, alcohol and other drugs, self-distraction, and self-blame). The researcher's findings are in line with the literature, which revealed that most post-graduate students used problem-focused coping to manage and cope with academic stress. This is supported by Bountress et al. (2019), who states that postgraduate students may resort to problem-focused coping strategies more when academic stress increases. This may be effective and conducive to their well-being. In addition, more literature demonstrates that problem-focused coping strategies such as active coping, planning, and positive reframing may lead to better adjustment for post-graduate students and stressful events in general (Carroll, 2020; Crowe & Van Puymbroeck, 2019).

The theory of coping by Lazarus and Folkman (1984), suggests that students can either adopt problem-focused or emotion-focused strategies when dealing with academic stress. According to this theory, individuals can master, tolerate, and minimise academic stress. Problem-focused strategies involve the use of specific activities in accomplishing academic tasks. Such coping strategies may be difficult, but, if successful, can result in a real change of circumstance. According to the Theory of Coping, problem-focused strategies in the academic environment are similar to strategies used by students in everyday problem-solving. They involve students identifying academic stress as a problem, considering possible solutions to buffer academic stress, weighing the cost and benefits of the solutions and selecting alternative ways of dealing with academic stress.

Emotion-focused coping, on the other hand, involves the use of activities to feel better about an academically stressful task. These kinds of coping strategies do not alter the nature

of the problem, but rather the effect it has on individuals. In addition, while many stressors elicit both kinds of coping strategies, individuals are more likely to use problem-focused coping when they encounter stressors that they perceive they can control. They will use emotion-focused coping strategies when they are confronted with stressors that they believe are not in their power to change.

### Descriptive and Inferential Statistics

The null hypothesis assumed that there was a significant relationship between academic stress and coping strategies amongst North-West University post-graduate students. A correlational analysis was conducted using a p-value of 0.000 with a 5% interval. The table below shows a p-value of more than 0.02 between the two variables. This is an indication of a significant relationship between academic stress and coping strategies. Thus, the researcher accepts the null hypothesis and rejects the alternate hypothesis.

Table 4.9 below indicates the relationship between academic stress and coping strategies amongst NWU post-graduate students.

**Table 4.9:**

*Relationship between academic stress and coping strategies*

Independent Variables (Coping Strategies)	Academic Stress		Chi-Square P-Value
	No	Yes	
<b>Self-Distraction</b>			
<b>Have been turning to work or other activities to take my mind off things</b>			
Not at all	10 20.0%	40 80.0%	.002
Did it for a little time	9 10.6%	76 89.4%	
Did it for a medium amount of time	3 2.6%	114 97.4%	
Did it a lot	5	92	

	5.2%	94.8%	
<b>Substance Use</b>			
<b>Using alcohol or other drugs to make myself feel better.</b>			
Not at all	20	147	.021
	12.0%	88.0%	
Did it for a little time	4	103	
	3.7%	96.3%	
Did it for a medium amount of time	1	55	
	1.8%	98.2%	
Did it a lot	2	30	
	6.3%	93.8%	
<b>Active Planning</b>			
<b>Taking action to try to make the situation better</b>			
Not at all	21	150	0.021
	12.3%	87.7%	
Did it for a little time	4	88	
	4.3%	95.7%	
Did it for a medium amount of time	2	59	
	3.3%	96.7%	
Did it a lot	1	39	
	2.5%	97.5%	
<b>Venting</b>			
<b>Been saying things to let my unpleasant feelings escape</b>			
Not at all	21	149	0.019
	12.4%	87.6%	
Did it for a little time	5	107	
	4.5%	95.5%	
Did it for a medium amount of time	1	48	
	2.0%	98.0%	
Did it a lot	1	31	
	3.1%	96.9%	
<b>Instrumental Support</b>			
<b>Been getting help and advice from other people.</b>			.018
Not at all	16	100	
	13.8%	86.2%	
Did it for a little time	4	123	
	3.1%	96.9%	
Did it for a medium amount of time	4	64	
	5.9%	94.1%	

Did it a lot	4	50	
	7.4%	92.6%	
<b>Been getting comfort and understanding from other people.</b>			
Not at all	2	25	
	7.4%	92.6%	
Did it for a little time	6	72	.048
	7.7%	92.3%	
Did it for a medium amount of time	2	107	
	1.8%	98.2%	
Did it a lot	18	130	
	12.2%	87.8%	
<b>Positive Reframing</b>			
<b>Been looking for something good in what has been happening.</b>			
Not at all	22	159	
	12.2%	87.8%	
Did it for a little time	2	93	.019
	2.1%	97.9%	
Did it for a medium amount of time	1	50	
	2.0%	98.0%	
Did it a lot	3	34	
	8.1%	91.9%	
<b>Religion</b>			
<b>Been trying to find comfort in my religion or spiritual beliefs.</b>			
Not at all	13	56	
	18.8%	81.2%	
Did it for a little time	8	115	.003
	6.5%	93.5%	
Did it for a medium amount time	5	93	
	5.1%	94.9%	
Did it a lot	2	69	
	2.8%	97.2%	
<b>Instrumental Support</b>			
<b>Been trying to get advice or help from other people about what to do</b>			
Not at all	10	42	.019
	19.2%	80.8%	
Did it for a little time	5	76	
	6.2%	93.8%	
Did it for a medium amount of time	4	89	
	4.3%	95.7%	

Did it a lot	9	128	
	6.6%	93.4%	
<b>Acceptance</b>			
<b>Been learning to live with it.</b>			
Not at all	10	34	.003
	22.7%	77.3%	
Did it for a little time	7	98	
	6.7%	93.3%	
Did it for a medium of time	5	97	
	4.9%	95.1%	
Did it a lot	6	106	
	5.4%	94.6%	

**NB. P-value (0.000) Significant when using 5% interval**

### **Academic Stress and Coping Strategies**

The null hypothesis was aimed at determining the relationship between academic stress and coping strategies among North-West University post-graduate students. The results showed a significant relationship between academic stress and coping. Thus, the null hypothesis was accepted, while the alternate hypothesis was rejected.

According to Abraham (2019), managing academic stress can result in the depletion of a student's psychological and physiological resources needed to cope with academic stress. As such, this may result in increased levels of academic stress. A study conducted by Kamble (2020), revealed that students who did not use coping strategies and skills might suffer greatly from academic stress. Gustems-Carnicer (2019), suggested that coping strategies are mutually exclusive. In essence, the effectiveness and functionality of coping strategies depend on the student's ability to cope with academic stress (Patias et al., 2021).

According to Silinda (2019), coping resources include elements from students' external and internal environment; they remain dormant for the student's response to the advent of an academic stressor. It was noted in the present study that post-graduate students

at the North-West University mostly used emotion-focused coping strategies to manage and cope with academic stress. These strategies included seeking help from others and using drugs and alcohol to make themselves feel better. Accordingly, the nature and type of coping strategies employed by these students might have been determined by prior knowledge, experiences, educational attainment, and socioeconomic status (Silinda, 2019). This theoretical framework also confirms the hypothesis made by the research regarding the relationship between academic stress and coping strategies among post-graduate students at North-West University.

The significant relationship found between academic stress and coping strategies among post-graduate students at the North-West University, confirms both the Transactional Model of Stress and the Theory of Coping by Lazarus and Folkman (2000). According to these theories, when a student is confronted with the experience of academic stress, they go through various stages to deal with this stress. The first stage is known as the appraisal stage of academic stress (Harris, 2020). During this stage, based on the student's previous experience with academic stress, knowledge about oneself, such as their abilities, strength, weaknesses, and knowledge of academic stress are evident (Dillard, 2019; Silinda, 2019).

During this encounter, the student internally determines whether they are in trouble. If the student's experience of academic stress is perceived as harmful or threatening, they then go through the stage of secondary appraisal. Alternatively, if the student's experience of academic stress is perceived as irrelevant or poses no threat, then academic stress does not develop any further and no further coping is required from the student.

According to the findings of the research, it was noted that most students perceived academic stress as harmful and threatening to their well-being, meaning that they had to go through the secondary appraisal process to determine how much control they had over this

stress. Based upon this understanding, the students then employed various coping strategies, both problem-focused and emotion-focused according to the findings of the current study, to cope with academic stress. This is the stage known as coping according to the Theory of Coping (Lazarus, 2000). The hallmarks of coping during this stage include the factors involved in the process of coping as opposed to an individual's personality traits; the existence of academic stress in inducing coping as opposed to the general physiological responses caused by academic stress; lastly, having no reference of the outcome (whether positive or negative) as opposed to the mastery of academic stress.

According to the Theory of Coping the choice of coping strategy employed during academic stress is influenced by the quality and quantity of the resources available to the student. These include resources such as individual knowledge (what they know about academic stress and coping within a university setting) (Biggs et al., 2017), skills, and attitudes (confidence in one's ability to perform a specific behavior) (Stallman, 2020), social resources (having people available with whom the student can exchange information) and societal laws such as policies and laws put in place to help students cope with academic stress (Stallman, 2020).

## **Conclusion**

The basis for this conclusion is the findings of the study, which indicated the existence of academic stress and the various coping strategies employed by post-graduate students at the North-West University, as well as the relationship between academic stress and coping strategies.

The post-graduate students answered the research survey and stated that they experienced different affective, cognitive, behavioral, and physiological symptoms caused by academic stress. The symptoms included things such as feeling overwhelmed by academic

stress, avoiding class, lack of sleep and worrying about their academic workload, to name a few. Most of these experiences were in line with previous literature.

The findings of the study highlighted the various coping strategies employed by post-graduate students at the university. It was noted that most post-graduate students used problem-focused coping strategies as compared to emotion-focused coping strategies.

The results were also in line with the literature which revealed that most post-graduate students tended to use problem-focused coping strategies, as compared to other coping strategies during academic stress. The study answered the research questions and met the aims of the study.

## **Chapter 5**

### **Reflections, Recommendations, and Conclusion**

#### **Introduction**

This chapter serves as the conclusion to the research. It includes a critical reflection on the research process. The results are addressed in terms of the research question, objectives, and the hypothesis tested in the study. This is followed by the research limitation, recommendations, and the researchers' reflections on the study.

#### **Planning and Proposal Phase**

The process of this research study began with a topic brainstorming session, where the researcher thought of a possible research topic to fill in gaps in the literature. In 2020 the researcher was in her first year of a master's degree which was comprised of coursework, conducting research and doing clinical practicals. During the same year, there was an outbreak of the COVID-19 pandemic which put the researcher under a lot of academic stress in terms of the proposed online-teaching method. This made it difficult for the researcher to navigate her way around the changes introduced. Initially, the researcher was interested in finding out about the relationship between academic stress and personality traits among post-graduate students at the North-West University. However, the changes that occurred including the academic stress that the researcher experienced and the sudden outbreak of COVID-19 made it difficult for her to cope.

The whole experience led to her developing a keen interest in researching the relationship between academic stress and coping strategies. The researcher became interested in finding out how other post-graduate students at the North-West University experienced academic stress in general and how they managed to cope with this stress. After the topic

brainstorming session, the researcher and research supervisors progressed to a research proposal paper which was then presented by the researcher to the Psychology Department at the University. During the proposal phase, the researcher encountered a challenge. There was a lack of literature on “the relationship between academic stress and coping strategies among post-graduate students”, especially in the South African context. Most literature focused on international studies and other research done in other university contexts around the world. This, however, indicated that there was a definite gap in the literature that needed to be addressed.

After the proposal was presented to the Department, the research supervisor applied to conduct the research at COMPRES (Community Psychosocial Research Committee). Thereafter, an application for ethical approval was submitted to the Health Research Ethics Committee (HREC). Permission to conduct the research at the university and recruit respondents was obtained from the NWU-Research Data Gatekeeper Committee (RDGC). These application processes were time-consuming, as they occurred over a few months. However, they were very helpful and provided a way forward for the study, adding to the scientific vigour of the study.

The primary researcher is a master’s student who had experience in research and had been formally trained in all the methods of research, data collection and analysis applied in this research which was obtained during her honours in Psychology (2019) and her master’s in clinical psychology coursework in 2020. The researcher also completed the formal ethics training (TREE Training Modules 1, 2 and 3.1 and the SA National Supplement). The training and experience assisted the researcher with gaining knowledge on conducting research.

## **Research Design and Methodology**

A quantitative, descriptive, and correlational survey research design was used in the study. Data were collected through an online self-administered questionnaire which post-graduate students could complete in their own time and at their convenience. The researcher sought to investigate the relationship between academic stress and coping strategies among post-graduate students at. Thus, the quantitative research approach was deemed appropriate to use by the researcher. Quantitative research added value in investigating the two variables and it measured what it was intended to measure.

### ***Data Collection***

Data were collected through an online self-administered survey. To recruit respondents, an online advertisement with an invitation to participate was posted on the student Facebook pages and the E-fundi page of the university, across all three campuses. The advertisement, informed consent, and all the other necessary documents were written in English, which was the medium of communication. The data collection process began with an informed consent that the respondents had to complete, followed by the demographic information section and research instruments.

The respondents could complete the online survey in their own time, at their own pace, and convenience. No time limit or due date was provided. Failure to set a due date and time limit lead to the data collection process being delayed, as it took close to six months to collect. Thus, to manage time and data collection effectively, future research should consider indicating a due date for data collection.

As the respondents used either the University WIFI or their own data to complete the online survey, an incentive of R15 airtime vouchers was sent to them after the successful completion of the survey. Thereafter, respondents were asked to provide their phone numbers

and the name of their service provider. This information was kept by an independent person who was responsible for distributing the vouchers to ensure confidentiality and anonymity. Initially, it was difficult for the researcher to find respondents during the first trimester of the data collection process, but thereafter, more post-graduate students started responding and participated in the research successfully. This was a great motivation for the researcher and reminded her why she wanted to conduct the research in the first place.

### **Aim and Objectives**

The main aim of the study was to investigate the relationship between academic stress and coping strategies among North-West University post-graduate students. To achieve the objectives of the study, the researcher had to administer scales which measured both variables of the study. The use of measuring instruments was very helpful and beneficial to the study, as it enabled the data collection process and helped the researcher in describing and giving meaning to the key concepts that were being investigated. The first section of the survey was inclusive of a biographical section, which allowed the researcher to collect important demographic information such as the respondent's age, gender, ethnicity, and the level and faculty of their post-graduate studies.

The first formulated objective was to determine the existence of academic stress experienced by post-graduate students. To achieve this objective, the researcher administered the Lakaev Academic Stress Response Scale to determine the existence of academic stress experienced by post-graduate students at North-West University. The review of literature in Chapter 2 also revealed that post-graduate students in general are vulnerable to academic stress (Jibril, 2021; Joseph et al., 2021; Wuthrich et al., 2020). The majority of post-graduate students reported that they had experienced academic stress during their post-graduate studies. The researcher believes that the first objective was met.

The second objective was to determine the coping strategies employed by post-graduate students at the North-West University. To achieve this specific objective, the researcher administered the COPE Inventory to identify the different coping strategies employed by post-graduate students who experienced academic stress. This instrument provided the study with sufficient information on the different coping strategies employed by post-graduate students and enabled the researcher to gain favorable results to achieve the second objective of the study.

The third objective was to determine the relationship between academic stress and coping strategies amongst North-West University post-graduate students. During the data analysis process, it was noted that there was a positive relationship between academic stress and coping strategies among North-West University post-graduate students. The results in Chapter 4 are an indication of the relationship between academic stress and coping strategies among post-graduate students at the university. The researcher believes that this objective was also met.

### **Research Question**

The following research question was implemented and redefined: Is there a relationship between academic stress and coping strategies among North-West University post-graduate students? A review of the literature in Chapter 2 revealed that post-graduate students employed different coping strategies (both problem-focused and emotion-focused) when experiencing academic stress. A correlation analysis was done in Chapter 4 and the results revealed that there was a positive relationship between academic stress and coping strategies. The research question was therefore answered.

## **Hypotheses**

The alternative hypothesis was rejected, but the null hypothesis as indicated below was accepted:

*Null Hypothesis: There is a significant relationship between academic stress and coping strategies among North-West University post-graduate students*

The null hypothesis assumed that there was a significant relationship between academic stress and coping strategies among North-West University post-graduate students. A correlational analysis was conducted using a binary logistic regression model. The results revealed that there was a significant relationship between academic stress and coping strategies among North-West University post-graduate students. The researcher accepted the null hypothesis and rejected the alternate hypothesis.

It was insightful and exciting to see the main hypothesis being accepted. This meant that the research study gained insight that would greatly benefit post-graduate students as the population of the study and other universities at large. It was also stimulating to discover what other researchers had already done in investigating the relationship between academic stress and coping strategies.

## **Data Analysis**

The data analysis process in this research was conducted using the SPSS version 25, a program by a statistician. The researcher consulted with an independent statistician to contribute to the validity and reliability of the research study. Although the researcher had previous training in research analysis and statistics, it was beneficial working with a statistician who has advanced training in statistics and worked with the SPSS program

regularly. This helped put the researcher at ease knowing that the research results would be confirmed and done accurately.

Once, the data analysis process was completed, it was exciting to discover the significant relationship between academic stress and coping strategies. Aligning the results with previous literature and the theoretical frameworks was also exciting, as it gave direction to the study, and could also benefit post-graduate students at the North-West University. The results can be used to develop interventions or awareness campaigns on academic stress and provide insightful ways on how students can effectively manage or cope with academic stress.

### **Limitations of the Study**

The self-administered survey, which post-graduate students responded to individually, at their own pace and in their own time might have led to an increased likelihood of the respondents providing inaccurate responses, thus affecting the reliability of the results. Secondly, the number of respondents was not equal in terms of gender as more females responded in the study compared to males. In addition, a sample was selected among post-graduate students at one university only (even though they were at three different campuses), which might have affected the generalisation of the results to other post-graduate students at other universities in South Africa.

### **Contribution of the Study**

The study contributes to the knowledge base about academic stress and coping amongst postgraduate students. This allows students to learn more about academic stress and how they can cope with and manage this stress. The results of the study may bring awareness to the university about academic stress and coping strategies that would be beneficial to the

individuals who read it. Furthermore, the coping strategies used by post-graduate students in this study will help other post-graduate students experiencing academic stress.

The study contributed to the limited literature about academic stress and coping strategies in the South African context.

### **Recommendations**

Academic stress plays an important role in post-graduate students' ability to cope, and as such more indigenous research on the topic is needed to facilitate a true understanding of academic stress and its relationship to coping. There is a need for policies and interventions at universities that regulate the experience of academic stress among post-graduate students and therefore more comprehensive studies are needed. A support group to enable post-graduate students to deal with life challenges along with academic stressors could be beneficial. Such a group could also assist to decrease academic stress, improve resiliency to academic stress, and promote positive coping skills.

It is also the recommendation of the researcher that the university provides students with an opportunity to provide input (through an engagement platform) about the experience of academic stress due to the workload, deadlines, class schedule, program requirements, dissertation, and thesis writing. Therefore, hearing from the student's perspective on what they feel would foster not only a better learning environment that could be conducive to their academic experiences but also their overall well-being.

Another approach is for the Faculty of Health Sciences at the university to derive and facilitate an annual awareness program that deals with academic stress and possible coping strategies for post-graduate students who may be interested. This could help decrease or

prevent their experience of academic stress and improve their level of resilience and coping with this stress.

### **Areas for Future Research**

Future studies could consider more background characteristics that influence academic stress among post-graduate students, variables such as personality traits and the effects of mental illnesses on academic stress and well-being. Researchers can also look into the experience of academic stress and the differences between post-graduate students who study and work part-time as compared to those who do not. Future research could also investigate research that could assist professionals concerned with managing academic stress, to implement interventions that could help reduce the experience of academic stress amongst post-graduate students.

### **Autobiographical Reflection**

Researching at the master's level has been a long and invaluable learning experience, one that requires resilience, patience, and the ability and willingness to learn. In conducting this study, I got to understand the importance of having a mutually respectful working and professional relationship with both of my research supervisors. The feedback and contribution that I received from them both were helpful in terms of increasing the quality of my research and equipping me with the knowledge to conduct similar studies in the future. I strongly believe that without supervision, many research dissertations would lack a lot of knowledge and guidance. Their assistance, feedback, and guidance meant a lot to me and were highly appreciated.

During my research process, I gained some understanding of the nature of research and of the cyclical, sometimes messy and frustrating nature of conducting research. The decision to conduct research looking at the relationship between academic stress and coping

strategies amongst post-graduate students at the North-West North-West University was not easy, because this meant that the research process would be a personal experience for the researcher as she is also a post-graduate student at the university, who had previously experienced academic stress. However, on a personal level, I have demonstrated my interpersonal and communication skills at various stages of conducting this study. There are also, several ways in which I benefited from conducting this research study.

The research experience has increased my level of motivation for studying and making bold plans for my future career. My time management, learning, and writing skills have also greatly improved due to the setting of specific deadlines for submissions. Thus, I had to adopt some principles of time management to complete this study. These principles included setting deadlines for each chapter of the research and above all, dramatically cutting the amount of time that I used for other things that were not beneficial to my academics.

As an individual, I learned to be more patient with myself, to be resilient, and to allow myself to learn and gain knowledge. Conducting his research was challenging and exciting at the same time. It taught me to be brave, to commit, and to complete my research.

## **Conclusion**

The current chapter provided a contextualisation and discussion of the challenges faced by the research during the research process, the disclosure of the limitations of the study, the contribution, and recommendations for future research. The researcher hopes this research study will motivate future post-graduate students to continue research in this topic to encourage modification to policies and interventions within different university contexts, for additional support for students, to help them manage, cope, and alleviate academic stress and promote effective and positive coping strategies and skills. The researcher also anticipates

that more recognition is given to post-graduate students in particular across different university settings.

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## LIST OF APPENDIXES

## Appendix A: Demographic Questionnaire

Dear Participant

The following document includes a short demographic information form for your completion.

Please supply the following demographic information by placing a cross (X) in the appropriate square or by writing down the relevant information.

1. Age:

2. Gender (make a checkmark over your choice):

<input type="checkbox"/> Male	<input type="checkbox"/> Female	<input type="checkbox"/> Other
-------------------------------	---------------------------------	--------------------------------

3. University program

<input type="checkbox"/> Full-time	<input type="checkbox"/> Part-time
------------------------------------	------------------------------------

4. Marital status (make a checkmark over your choice):

<input type="checkbox"/> Single	<input type="checkbox"/> Married	<input type="checkbox"/> Cohabiting	<input type="checkbox"/> Divorced/separated	<input type="checkbox"/> Widowed
---------------------------------	----------------------------------	-------------------------------------	---	----------------------------------

5. Culture: \_\_\_\_\_

6. Ethnicity background \_\_\_\_\_

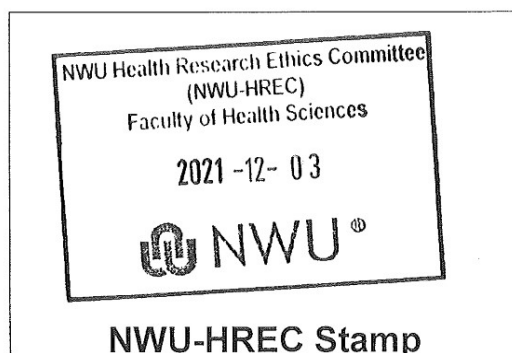
7. Faculty \_\_\_\_\_

8. Level of study \_\_\_\_\_

## Appendix B: Example of an Informed Consent



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### INFORMED CONSENT FORM FOR NORTH-WEST UNIVERSITY POST-GRADUATE STUDENTS

**TITLE OF THE RESEARCH STUDY:** Academic stress and coping strategies among North-West University post-graduate students

**NWU ETHICS NUMBER:** NWU-00245-21-A1

**PRINCIPAL INVESTIGATOR:** Prof Herman Grobler

**POST GRADUATE STUDENT:** Tumisang Modise

**CONTACT NUMBER:** 0606529004

You are being invited to take part in a **research study** that forms part of a **master's study**. Please take some time to read the information presented here, which will explain the details of this study. Please ask the researcher or person explaining the research to you any questions about any part of this study that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research is about and how you might be involved. Also, your participation is **entirely voluntary** and you are free to say no to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part now.

This study has been approved by the **NWU-Health Research Ethics Committee of the Faculty of Health Sciences of the North-West University (NWU-00245-21-A1)**

and will be conducted according to the ethical guidelines and principles of Ethics in Health Research: Principles, Processes and Structures (DoH, 2015) and other international ethical guidelines applicable to this study. It might be necessary for the research ethics committee members or other relevant people to inspect the research records.

#### **What is this research study all about?**

- We plan to quantify, investigate and determine the relationship between academic stress and coping among NWU post-graduate students.
- This study will be conducted using a self-administered online questionnaire which participants can fill it at their own time and convenience. A minimum of 366 participants will be included in this study.

#### **Why have you been invited to participate?**

You have been invited to be part of this research because:

- You are currently enrolled for a full-time or part-time post-graduate programme at the North-West University
- You are competent in English as this is the medium of study at the university
- You have access to the university Wi-Fi or data in order to respond to the research questionnaire online

#### **What will be expected of you?**

- You will be expected to fill in a self-administered questionnaire online. The questionnaire will take approximately 15 to 25 minutes to complete.
- Before completing the questionnaire you will be asked to sign an informed consent form.
- Data collection will commence after you have agreed to the informed consent form and declaration form.

#### **Will you gain anything from taking part in this research?**

- There will be no direct benefits. However, you will gain a R15 airtime voucher immediately after completing the questionnaire.
- The other gains of the study is that the study will benefit the broader community in informing them of the relationship between academic stress and coping among post-graduate students. This will allow the North West University to get possible support programmes in place. This will in turn benefit the student population.

#### **Are there risks involved in you taking part in this research and what will be done to prevent them?**

- The study is a medium risk study and the possibility of risk to you as a participant will be carefully considered.
- The counselling department of the three campuses will be available free of charge should you experience any form of distress or discomfort as a result of the research process.
- There are more gains for you in joining this study than there are risks.

### **How will we protect your confidentiality and who will see your findings?**

- Participation in the study will be completely voluntary with you being allowed a choice to withdraw at any given time. You will not be asked to provide your names and student numbers on the questionnaire in order to ensure confidentiality.
- All information obtained from you as a participant throughout the research process will be kept confidential with all the results being coded before being analysed to ensure anonymity.
- An automated report on your results will be generated after you have completed the questionnaire.
- The data will be stored on the researcher's and supervisors computers, which are password and virus protected.
- After the completion of the study, data will be stored at the Psychology Department, Mafikeng campus and destroyed after five years.

### **How will you know about the results of this research?**

- We will give you the results of this research when the study is completed by a form of a presentation. The date of the results presentation by the primary researcher will be clearly communicated to you during the date of data collection. The presentation will occur through a zoom meeting using a link that will be sent to your personal emails.
- You will be informed of any new relevant findings by the primary researcher through your email.

### **Will you be paid to take part in this study and are there any costs for you?**

To compensate for your time and energy you will receive a R15.00 airtime voucher immediately after completing the questionnaires.

### **Is there anything else that you should know or do?**

- You can contact Tumisang Modise at 0606529004 or email: [tumisangmodise97@gmail.com](mailto:tumisangmodise97@gmail.com) if you have any further questions or have any problems.
- You can also contact the NWU-Health Research Ethics Committee via Mrs Carolien van Zyl at 018 299 1206 or [carolien.vanzyl@nwu.ac.za](mailto:carolien.vanzyl@nwu.ac.za) if you have any concerns that were not answered about the research or if you have complaints about the research.
- You will receive a copy of this information and consent form for your own purposes.

## Declaration by participant

By signing below, I ..... agree to take part in the research study titled:.....

I declare that:

- I have read this information/it was explained to me by a trusted person in a language with which I am fluent and comfortable.
- The research was clearly explained to me.
- I have had a chance to ask questions to both the person getting the consent from me, as well as the researcher and all my questions have been answered.
- I understand that taking part in this study is **voluntary** and I have not been pressurised to take part.
- I may choose to leave the study at any time and will not be handled in a negative way if I do so.
- I may be asked to leave the study before it has finished, if the researcher feels it is in the best interest, or if I do not follow the study plan, as agreed to.

Signed at (*place*) ..... on (*date*) .....  
20....

.....  
**Signature of participant**

.....  
**Signature of witness**

## Declaration by person obtaining consent

I (*name*) ..... declare that:

- I clearly and in detail explained the information in this document to  
.....
- I did/did not use an interpreter.
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I gave him/her time to discuss it with others if he/she wished to do so.

Signed at (*place*) ..... on (*date*) .....  
20....

.....  
**Signature of person obtaining consent**

**Declaration by researcher**

I (*name*) ..... declare that:

- I explained the information in this document to .....  
or I had it explained by ..... who I trained for  
this purpose.
- I did/did not use an interpreter
- I encouraged him/her to ask questions and took adequate time to answer  
them  
or I was available should he/she want to ask any further questions.
- The informed consent was obtained by an independent person.
- I am satisfied that he/she adequately understands all aspects of the  
research, as described above.
- I am satisfied that he/she had time to discuss it with others if he/she wished  
to do so.

Signed at (*place*) ..... on (*date*) .....  
20....

.....  
**Signature of researcher**

## Appendix C: The Lakaev Academic Stress Response Scale

Below are a series of statements that describe how you feel about your current level of performance. Using the following scale, please indicate your level of time that you experience the following to each statement.

(1 = None of the time, 2 = Little of the time, 3 = Some of the time, 4 = Most of the time, 5 = All of the time)

Factor	Duration				
	None of the time	Little of the time	Some of the time	Most of the time	All if the time
<b>1. AFFECTIVE</b>					
a) My work built up so much I felt like crying	1	2	3	4	5
b) I felt emotional	1	2	3	4	5
c) My emotions stopped me from studying	1	2	3	4	5
d) I yelled at my family or friends	1	2	3	4	5
e) I felt emotionally drained		2	3	4	5
<b>2. BEHAVIORAL</b>					
a) I felt lazy when it comes to university work	1	2	3	4	5
b) I procrastinated on assignments	1	2	3	4	5
c) I get easily distracted in class	1	2	3	4	5
d) I was unable to study	1	2	3	4	5
e) I had trouble concentrating in class	1	2	3	4	5
f) I avoided class	1	2	3	4	5

g) I used alcohol or drugs	1	2	3	4	5
h) I had trouble remembering my notes	1	2	3	4	5
<b>3. PHYSIOLOGICAL</b>					
a) I can't breath	1	2	3	4	5
b) I have difficulty eating	1	2	3	4	5
c) My hands were sweaty	1	2	3	4	5
d) I had a lot of trouble sleeping	1	2	3	4	5
e) I have a headache	1	2	3	4	5
<b>4. COGNITIVE</b>					
a) I felt overwhelmed by the demands of study	1	2	3	4	5
b) I felt worried about	1	2	3	4	5
c) There is so much going on I can't think straight	1	2	3	4	5
d) I felt emotionally drained by university	1	2	3	4	5

## Appendix D: The Brief COPE Inventory

Please answer the following items of the BRIEF COPE Scale:

These items deal with ways you've been coping with the stress in your life since you found out you were going to have to have this operation. There are many ways to try to deal with problems. These items ask what you've been doing to cope with academic stress. Please indicate how much or how frequently do you cope with academic stress.

**1. I've been turning to work or other activities to take my mind off things.**

- I haven't been doing this at all
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

**2. I've been concentrating my efforts on doing something about the situation I'm in.**

- I haven't been doing this at all
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

**3. I've been saying to myself "this isn't real."**

- I haven't been doing this at all
- I've been doing this a little bit
- I've been doing this a medium amount

I've been doing this a lot

**4. I've been using alcohol or other drugs to make myself feel better.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**5. I've been getting emotional support from others.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**6. I've been giving up trying to deal with it.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**7. I've been taking action to try to make the situation better.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**8. I've been refusing to believe that it has happened.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**9. I've been saying things to let my unpleasant feelings escape.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**10. I've been getting help and advice from other people.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**11. I've been using alcohol or other drugs to help me get through it.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**12. I've been trying to see it in a different light, to make it seem more positive.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**13. I've been criticizing myself.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**14. I've been trying to come up with a strategy about what to do.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**15. I've been getting comfort and understanding from someone.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**16. I've been giving up the attempt to cope.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**17. I've been looking for something good in what is happening.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**18. I've been making jokes about it.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**19. I've been doing something to think about it less, such as going to movies,**

**watching TV, reading, daydreaming, sleeping, or shopping.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**20. I've been accepting the reality of the fact that it has happened.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**21. I've been expressing my negative feelings.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**22. I've been trying to find comfort in my religion or spiritual beliefs.**

I haven't been doing this at all

I've been doing this a little bit

I've been doing this a medium amount

I've been doing this a lot

**23. I've been trying to get advice or help from other people about what to do**

- I haven't been doing this at all
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

**24. I've been learning to live with it.**

- I haven't been doing this at all
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

**25. I've been thinking hard about what steps to take.**

- I haven't been doing this at all
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

**26. I've been blaming myself for things that happened.**

- I haven't been doing this at all
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

**27. I've been praying or meditating.**

- I haven't been doing this at all
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this a lot

**28. I've been making fun of the situation.**

- I haven't been doing this at all
- I've been doing this a little bit
- I've been doing this a medium amount
- I've been doing this

## Appendix E: Advertisement

**YOU ARE INVITED  
TO  
PARTICIPATE  
IN A RESEARCH  
STUDY!**

*We plan to learn about and provide detailed information on the relationship between academic stress and coping among North-West university post-graduate students.*

**You can participate if:**

- You are currently enrolled for a full-time or part-time post-graduate program.
- You can speak and understand English.
- Have access to the university WIFI or data in order to complete the online questionnaire

**If you decide to participate you will be expected to complete and online questionnaire. The link will be provided to you.**

**R15 Airtime vouchers will be provided after data collection.**

Made with PosterMyWall.com

## Appendix F: RDGC Approval



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**Research Data Gatekeeper Committee**

### NWU RDGC PERMISSION GRANTED / DENIED LETTER

Based on the documentation provided by the researcher specified below, on 22/11/2021 the North-West University (NWU) Research Data Gatekeeper Committee (NWU-RDGC) hereby **grants permission** for the specific project (as indicated below) to be conducted at the NWU:

<b><u>Project title:</u> Academic stress and coping strategies among North-West University post-graduate students.</b>	
<b><u>Project leader:</u> Prof HB Grobler</b>	
<b><u>Researcher/Project Team:</u> T Modise</b>	
<b><u>Ethics reference no:</u> NWU-00245-21-S1</b>	
<b><u>NWU RDGC reference no:</u> NWU-GK-21-076</b>	
<b><u>Specific Conditions:</u></b>	
<b><u>Approval date:</u> 22/11/2021</b>	<b><u>Expiry date:</u> 22/11/2022</b>

#### General Conditions of Approval:

- The NWU-RDGC will not take the responsibility to recruit research participants or to gather data on behalf of the researcher. This committee can therefore not guarantee the participation of our relevant stakeholders.
- Any changes to the research protocol within the permission period (for a maximum of 1 year) must be communicated to the NWU-RDGC. Failure to do so will lead to withdrawal of the permission.
- The NWU-RDGC should be provided with a report or document in which the results of said project are disseminated.
- Due to the COVID-19 pandemics the Committee would like to advise the researcher to practice the necessary caution and adhere to the National Covid-19 Guidelines when conducting research with participants.

Please note that under no circumstances will any personal information of possible research subjects be provided to the researcher by the NWU RDGC. The NWU complies with the Promotion of Access to Information Act 2 of 2000 (PAIA) as well as the Protection of Personal Information Act 4 of 2013 (POPI). For an application to access such information please contact Ms Annamari De Kock (018 285 2771) for the relevant enquiry form or more information on how the NWU complies with PAIA and POPI.

The NWU RDGC would like to remain at your service as scientist and researcher, and wishes you well with your project. Please do not hesitate to contact the NWU RDGC for any further enquiries or requests for assistance. Yours sincerely

Prof Jeffrey Mphahlele  
Chairperson NWU Research Data Gatekeeper Committee

## Appendix G Ethical Approval



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**Health Sciences Ethics Office for Research,  
Training and Support**

**North-West University Health Research Ethics  
Committee (NWU-HREC)**  
Tel: 018 299-1206  
Email: [Ethics-HRECApply@nwu.ac.za](mailto:Ethics-HRECApply@nwu.ac.za)

21 September 2021

To whom it may concern

**APPROVAL OF THE RESEARCH STUDY FROM THE NORTH-WEST  
UNIVERSITY HEALTH RESEARCH ETHICS COMMITTEE (NWU-HREC) OF  
THE FACULTY OF HEALTH SCIENCES**

**Ethics number: NWU-00245-21-S1**

Kindly use the ethics reference number provided above in all future correspondence or documents submitted to the administrative assistant of the North-West University Health Research Ethics Committee (NWU-HREC).

**Study title: Academic stress and coping strategies among North-West University post-graduate students**

**Study leader: Prof HB Grobler**

**Student: T Modise - 27549143**

**Application type: Single study**

**Risk level: Medium**

You are kindly informed that this application was reviewed at the meeting of the North-West University Health Research Ethics Committee (NWU-HREC), Faculty of Health Sciences, North-West University, held on 05/08/2021. Following review of the application, it has been decided that the study is approved. Approval in this letter means that **final ethics approval** was indeed granted for the **research methodology and the ethical aspects** of this study and that the NWU-HREC has **no further ethical concerns** relating to the research ethics process, except for the outstanding documentation indicated below, which must be provided to the NWU-HREC by the researcher. It is important to mention that this letter indicates that there are no further ethical concerns that exist, regarding the execution of the research. A final ethics letter will be issued upon the receipt of the following documentation:

- a. A copy of the approval letter from you as the NWU-Research Data Gatekeeper Committee (NWU-RDGC), indicating that the study can proceed.

The mentioned document, as indicated above, should be submitted to [Ethics-HRECProcess@nwu.ac.za](mailto:Ethics-HRECProcess@nwu.ac.za) by the researcher, for review before the ethics approval certificate can be provided. This approval is provided for a year, after which continuation of the study is dependent on receipt of an annual (or as otherwise stipulated) monitoring report and the concomitant issuing of a letter of continuation for another year.

**Please note:** Due to the nature of the study i.e. (online collection of quantitative data from postgraduate students), this study will be able to proceed during the current alert level, following receipt of the approval letter. No additional COVID-19 restrictions have been placed on the study except that the researcher must ensure that before proceeding with the study that all research team members have reviewed the North-West University COVID-19 Occupational Health and Safety Standard Operating Procedure.


If you have any questions or need further assistance, please contact the Faculty of Health Sciences Ethics Office for Research, Training and Support at [Ethics-HRECApply@nwu.ac.za](mailto:Ethics-HRECApply@nwu.ac.za).

Yours sincerely

Chairperson: NWU-HREC

Current details: (25239522) G:\My Drive\9. Research and Postgraduate Education\9.1.5.3 Letters Templates\9.1.5.3.8\_Gatekeepers\_Letter\_HREC.docx  
30 April 2018  
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## Appendix H: Proof of turn it in Submission




## Digital Receipt

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Character count:	<b>97,321</b>
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## Appendix I: Language Editing Certificate



DR MAUREEN LILIAN KLOS  
PROFESSIONAL EDITOR  
BA; STD; BEd (*cum laude*); MEd (*cum laude*); DEd  
Registered with the SAPEG (reg. no. KLO004)  
maureenklos@gmail.com

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## EDITOR'S DECLARATION

I,

DR MAUREEN LILIAN KLOS,

Being the holder of the following qualifications:

BA; STD; BEd (*cum laude*); MEd (*cum laude*); DEd

Hereby certify that I am the English language editor of the following document:

THE RELATIONSHIP BETWEEN ACADEMIC STRESS AND COPING STRATEGIES  
AMONG NORTH-WEST UNIVERSITY POST-GRADUATE STUDENTS

by

T Modise

I hereby certify that I have edited the language, formatting and referencing in the above-mentioned document in their entirety. However, I assume no responsibility or liability for any post-editing changes, errors or omissions.

17 November 2022

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