Perceived Academic Stress and Coping Strategies among First Year Psychology Students at a tertiary institution

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Declaration

I, Jarryd Wesley Colborne, declare that:

1. The research reported in this dissertation, except where otherwise indicated, is my original work.
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Abstract

Stress can be understood as a complex interplay between external forces of the environment (known as stressors) and the perceived ability of individuals to adapt to them. Unhealthy amounts of stress have a systemic effect in the sense that it can have multiple effects on an individual's biological, psychological, and sociocultural functioning. Coping can be defined as a cognitive and behavioural response to alleviate the physical, emotional and psychological burden associated with various stress. This study aimed at exploring the variables of perceived academic stress and coping strategies amongst an undergraduate psychology student population, as well as the relationship between the variables. Findings illustrated a high level of perceived academic stress in the sample, with no specific gender and age differences. It was also found that the sample made use of adaptive coping techniques more often, with a higher level amongst male participants as compared to females. In terms of correlational analyses, a weak negative relationship was found between perceived academic stress and maladaptive coping. It is hoped that the present study will offer further insight into how the undergraduate population perceives academic stress and how they ultimately cope. The findings of this study may be of use to student counselling centres at higher education institutions and help guide future initiatives aimed at enhancing students' wellbeing.

Table of Contents

Chapter One: Introduction

As the demands of living in a modern world continuously change and develop, an emotional state known as stress, which is viewed as a reaction to these demands, has become more recognized in various domains (Contrada & Baum, 2011). The process of defining stress is a challenging one as there are different experiences of stress, and differences in the perception of stress among different populations (Anisman, 2015; Resick, 2001). Stress can therefore be understood as a complex interplay between external forces of the environment (known as stressors) and the perceived ability of individuals to adapt to them (Anisman, 2015).

Stressors can vary from person to person and have differing effects, although, the type of stress experienced can fit into two categories, acute or chronic stress (Driskell & Salas, 1996). Consideration of the specific effects of unhealthy stress on an individual is challenging due to the variations in the impact of stress on each individual, as well as the various multidimensional effects that have been established thus far (Aldwin & Glimer, 2013; Anisman, 2015; Kaplan et al., 2012; Thoits, 2010). It can therefore be concluded that unhealthy amounts of stress have a systemic effect in the sense that it can have multiple effects on an individual's biological, psychological and sociocultural functioning (Aldwin & Glimer, 2013; Anisman, 2015; Kaplan et al., 2012; Thoits, 2010).

Academic stress can be understood as the types of stressors experienced in relation to the context of being a student in an educational setting (Agolla & Ongori, 2009). Academic stress can lead to negative outcomes for an individual in various domains of functioning (Mehfooz & Haider, 2017; Rajasekar, 2013).

One of the mechanisms that individuals use to manage this stress is coping (Snyder, 1999). Coping can be defined as a cognitive and behavioural response to alleviate the physical, emotional and psychological burden associated with various stressors (Snyder, 1999). The response of coping is carried out through coping strategies which are the specific responses utilized by individuals to reduce the burden of stressors (Snyder, 1999).

Literature on academic stress and its relationship with other related variables in the South African context is either dated or aimed at establishing the presence of stress in only certain environments. Minimal studies are available on academic stress, with more focus on the effects of work related stress, and limited information on academic stress. The central aim of the present study is therefore to explore the relationship between perceived academic stress and coping strategies in a sample of first year students. The present study will be guided by the theoretical framework of Lazarus and Folkman (1984), who proposed the transactional model of stress and coping. It is hoped that the findings of the present study will inform intervention efforts of tertiary institutions and mental health practitioners who work with students.

1.1. Research Objectives

The objectives of the study are the following:

- To ascertain the level of perceived academic stress in a sample of first year psychology students
- To explore the types of coping strategies that are utilized by the sample
- To explore the relationship between coping strategies and academic stress in the sample.

1.2 Study hypotheses:

The present study entertained two hypotheses:

- There is a significant negative relationship between adaptive coping and perceived academic stress and
- There is a significant positive relationship between maladaptive coping and perceived academic stress

1.3. Organisation of the study

- Chapter one has presented the introduction, theoretical framework and research objectives.
- Chapter two presents the relevant literature pertaining to the constructs of perceived academic stress and coping as well as the interactions between the constructs and other factors.
- Chapter three presents the methodology utilized by the present study and includes information pertaining to the sample, instruments utilized, data analysis procedure, and ethical considerations.
- Chapter four presents the findings of the present study, which includes descriptive and inferential analyses that pertain to the research objectives.
- Chapter five presents the discussion of the findings from the present study in relation to the relevant literature. The implications and limitations of the study are also discussed.
- Chapter six presents a summary of findings of the present study, as well as conclusions and recommendations for future studies.

Chapter Two: Literature Review

This chapter provides a review of the related literature pertaining to perceived academic stress and coping strategies. Firstly, the construct of stress is explored, with a focus on academic stress. Academic stress and its interaction with other variables are also explored. Thereafter, the construct of coping is discussed with a focus on types of coping. Furthermore, coping and its interaction with other variables are also explored. Literature on the relationship between the constructs (perceived academic stress and coping) is also discussed. The South African context in relation to the constructs is also explored. Finally, a rationale for the present study is also presented.

2.1. Theories of Stress

Early conceptualizations of stress focused on a physiological perspective as discussed by Cannon (1914) and Selye (1984), who postulated that stress is a physiological response that is coordinated by the sympathetic nervous system and the hypothalamus, further involving the pituitary and adrenal glands and the secretion of catecholamines and corticosteroids. Over time, theorists such as Mason (1971) contrasted Selye's theory of General Adaptation and suggested that stress responses should be attributed to the type of stressor that an individual is dealing with. A common thread between these physiological based theories of stress is the absence of conceptualization from a psychological perspective (Sinha, 2015). Cannon (1914) focused on the theory that organisms maintain threshold levels and that the typical fight-or-flight response associated with stress would not activate if the stressor did not exceed the threshold level.

Cannon (1914) and Selye (1984) commonly agreed that a stressor has to be conceptualized as a threat in order for the fight-or-flight response to be activated, however, no further explanation was provided as to how this process occurred. A shortfall of this perspective is that it does not account for the variation in the manner in which individuals react toward a stressor (O'Brien, 2014; Sinha, 2015).

The concept of psychological factors being involved in the process of conceptualizing stress was expanded on by Lazarus and Folkman (1984), with a model they have termed the Transactional Model of stress. This model suggests that stress can be conceptualized as an individual's cognitive interpretation of a stressor (Lazarus & Folkman, 1984).

Furthermore, this model emphasizes how stressful events are perceived by an individual, as opposed to focusing on the stressor itself (Lazarus & Folkman, 1984). Lazarus and Folkman (1984) suggest that stress is not only limited to an environmental stimulus or a psychological response, but is a relationship between environmental demands and the ability to deal with them. During the process of conceptualizing a stressor, an individual is said to undergo two key processes, *psychological appraisal* and *coping* respectively (Lazarus & Folkman, 1984). During primary psychological appraisal, an individual is tasked with determining whether a stressor is positive or negative, harmful or safe as well as many other conceptualizing details (Lazarus & Folkman, 1984). During secondary appraisal, an individual is then tasked with determining whether he/she is able to process the stressor and ultimately how he/she will cope (Lazarus & Folkman, 1984).

2.2. Perceived Academic Stress

Agolla and Ongori (2009) state that academic stress can be understood as the stressors experienced in relation to the context of being a student in an educational setting. To further analyse this phenomenon, Bisht (1980) distinguishes academic stress from other phenomena that is related to academic stressors. Firstly, Bisht (1980) discusses the concept of academic frustration, which is a state that an individual experiences when faced with obstacles or interruptions to academic goals. Also on this spectrum is academic anxiety, which can be understood as the trepidation that an individual experiences toward damages or interruptions to academic goals (Bisht, 1980). Lastly, Bisht (1980) discusses academic pressure, which can be understood as a state whereby a student encounters high demands of time and energy to achieve his/her academic goals.

Whilst there are studies available on academic stress, there has been more focus on the effects of work related stress (Bataineh, 2013; Heikkilä et al., 2013; Hoven et al., 2015; Jungwee, 2007; Kivimäki & Kawachi, 2015; Yu et al., 2015). Studies that have explored academic stress commonly have focused on identifying academic related stressors, with results indicating the following generally experienced stressors: challenging adjustment from school to university, increased load of coursework and assessment requirements, differing requirements for each course, increased competitiveness, failing courses, increased financial requirements, poor relationships with other students and staff members, administrative duties, larger class sizes, expectations placed upon them, and general changes in overall lifestyle (Awino & Agolla, 2008; Bedewy & Gabriel, 2015; Fairbrother & Warn, 2003; Misra & Castillo, 2004a; Wadhwa, 2017).

When looking at general stressors that are chronic in nature, it is understood that there are causative factors that are biologically and psychologically injurious in that it may encumber a person's ability to engage in effective behaviour (Schneiderman et al., 2005).

Literature has shown that academic stress can possibly have the following consequences: (a) it can hinder the progression of success in terms of various positive educational goals (Mehfooz & Haider, 2017; Murff, 2005; Wadhwa, 2017), (b) it can have a negative impact on psychological wellbeing, e.g. perpetuating depression, and insomnia (Lin & Qinghai, 1995; Mehfooz & Haider, 2017; Singh, 2011), (c) it can lead to dishonesty when completing academic requirements, e.g. cheating (Lin & Qinghai, 1995; Wadhwa, 2017), (d) it can lead to engagement of risky behaviours, e.g. the use of substances such as alcohol (Singh, 2011; Wadhwa, 2017), (e) it can be a risk factor in developing other physical health issues (Rajasekar, 2013), and (f) it can cause distraction, which could prevent concentration on academic requirements (Wadhwa, 2017).

2.2.1. Perceived Academic Stress: Age and level of study

As discussed by Sinha (2015), academic stress has been established in many educational contexts and not limited to tertiary students. The various states that exist on the spectrum of academic stress such as anxiety and burnout are also common amongst younger students in high school (Sinha, 2015). It has been established that the transition from each level of education to the next possesses its own contextual demands that can exacerbate the experience of academic stress (Sinha, 2015).

Not only does the academic pressure increase with academic progression, but other mediating factors such as increased school size, increased workload, higher

occurrences of peer pressure and future career decision making come into play (Sinha, 2015).

Joubert (2015) conducted a study among a high school population in South Africa, which illustrated a negative correlation between procrastination and academic achievement. Globally, many studies have been carried out that illustrate a presence of academic stress among high school students (Chen & Glaude, 2017; Ghatol, 2017; Hussain et al., 2008; O'Callaghan, 2014; Prabu, 2015; Reddy et al., 2018). However, these studies have also illustrated that there are various factors that contribute to the presence of academic stress in students.

In terms of the student population in undergraduate college environments, both global and the limited South African literature has also established the presence of academic stress of varying severity in different contexts (Bernstein & Chemaly, 2017; Chun et al., 2016; Clinciu, 2013; Geng & Midford, 2015; Mason, 2017; Misra & Castillo, 2004a; Mudhovozi, 2012; Robotham & Julian, 2006; Wyatt et al., 2017). Furthermore, it has been observed that higher levels of academic stress seem to be more prevalent among the undergraduate first year student population (Chun et al., 2016; Geng & Midford, 2015; Wyatt et al., 2017). However, this may not be reflective of all student populations, as Patil et al. (2016) established that the presence of academic stress was higher in final year students (as compared to first and second year students) who were completing a M.B.B.S medical degree. Similarly, Govender et al. (2015) also found the presence of academic stress to be higher between second to fourth year students completing a degree in occupational therapy.

Past studies that measured the level of perceived academic stress amongst undergraduate students (from various faculties and levels of study) have also found the presence of perceived academic stress within respective samples (Böke et al.,

2019; Joma'a & Thabet, 2015; Kwaah & Essilfie, 2017; Mudhovozi, 2011; Talwar et al., 2018; Turashvili & Japaridze, 2013).

2.2.2. Perceived Academic Stress and Gender

As observed in literature, many variables and contextual factors have been identified to have a role in influencing the experience of stress. The effect of gender on academic stress seems to be heavily influenced by other factors such as gender role stereotypes and expectations, political ideologies and cultural influences (Misra & Castillo, 2004b). For example, Misra and Castillo (2004b) established that women experienced a higher degree of academic stress as compared to males. This finding was further expanded on with women indicating that they included more social and familial activities in their schedules, ultimately making less time available for their academic work (Misra & Castillo, 2004b). Similarly, Bhansali and Trivedi (2017), Diniz et al. (2018), and Misigo (2015) established that female students reported higher levels of academic stress as compared to males. Contrastingly, Joma'a and Thabet's (2015) study conducted with undergraduate students (N=399) indicated a higher level of perceived academic stress amongst male participants.

However, the literature indicates conflicting findings, with other studies illustrating no significant differences in the experience of academic stress amongst male and female students (Busari, 2012; Hussain et al., 2008; Kania, 2014; Kwaah & Essilfie, 2017; Mallach, 1996). Furthermore, Madhyastha et al. (2014) observed that a common difference in relation to gender and academic stress was that of the choice of coping strategies used to deal with the academic stress.

2.2.3. Perceived Academic Stress and other factors

Socioeconomic status has been identified as another factor that can impact academic stress, however, the lack of uniform literature on the topic makes it difficult to conclude on the implications of socioeconomic status on academic stress (Cedeño, Martínez-Arias, & Bueno, 2016). Some studies have established that students with a lower socioeconomic status have shown weaker academic performance, thus impacting the experience of academic stress (Akhtar, 2012; Cedeño et al., 2016; Kiang et al., 2013; Onyancha et al., 2015). Onyancha et al. (2015) concurrently illustrated that the socioeconomic status of a student's parents has an impact on the student's academic performance, whereby children from lower socioeconomic backgrounds were found to perform more poorly as compared to students with better socioeconomic backgrounds. In terms of the student population in schools, Hussain et al. (2008) established that the presence of academic stress was higher amongst public school students as compared to private school students. In contrast, Prabu's (2015) study findings indicated a higher presence of academic stress among private school students.

Other studies have established that there are no significant differences between the experience of academic stress in public and private schools (Ghosh, 2016). Cedeño et al. (2016) suggests that students from a lower socioeconomic background have the ability to perform better academically when provided with the relevant and appropriate resources and interventions. Another factor identified as a contributor to academic stress is that of parents' expectations of their children in terms of academic achievement (Nagle & Sharma, 2018).

Studies have shown that students experience higher levels of academic stress when they have parents who place high expectations place on them in terms of

academic achievement (Ma et al., 2018; Nagle & Sharma, 2018; Nguyen, 2015; Priya, 2010; Singh, 2014; Su, 2012).

In contrast, parental involvement in their child's academic life may also have positive effects, with some students showing better academic performance when having parents who were actively involved in their academic life (LeBrun-Martin, 2011; Mahuro et al., 2016; Mante et al., 2015; Sapungan & Sapungan, 2014).

2.3. Developmental Context

According to Levinson (1986), the developmental timeframe known as young adulthood is the period between adolescence and late adulthood, encompassing the age group of 18 to 25 years. During this developmental period there are significant developments, especially in terms of progressing actively towards an established identity (Stillion & McDowell, 2015). Based on one's culture, individuals may find themselves leaving the family home to enter into university or a work environment, with rapid growth in his/her occupational world (Levinson, 1986).

Furthermore, Erikson (1968) stated that the development of interpersonal relationships also becomes an important feature of young adulthood as individuals work toward the goal of finding a life partner and a sense of stability. Whilst adolescence is an expansively researched developmental period, it is important to also explore the challenges associated with the transition into young adulthood as it may aid in further understanding mental health challenges faced by young adults (Arnett, 1999; Buchanan & Holmbeck, 1998).

2.4. Coping Strategies

There have been many attempts historically at trying to provide a comprehensive working definition of coping that captures the various theoretical perspectives of the construct of coping (Snyder, 1999).

Coping can be generally understood as a cognitive and behavioural response to alleviating the physical, emotional, and psychological burden' associated with various life stressors, and day-to-day challenges (Lazarus & Folkman, 1984; Snyder, 1999). Coping strategies can therefore be understood as the specific responses utilized by individuals to reduce physical and psychological burden of stressors (Snyder, 1999). The effectiveness of these coping strategies can be evaluated by individuals according to the effectiveness in immediate alleviation of the consequences of stressors, as well as the perceived long term benefit of contributing to positive outcomes (Lazarus & Folkman, 1984; Snyder, 1999). The manner in which an individual deals with a stressor plays a role in determining his/her capacity for future experiences and healthy adjustment (Lazarus & Folkman, 1984; Frydenberg, 2004).

Lazarus and Folkman's (1984) transactional model of stress and coping indicated that the process of an individual's response to stress is known as coping, which is composed of a cognitive and behavioural interaction. Specific coping responses are postulated by past researchers, and build upon the transactional model of stress and coping (Su et al., 2015). This includes responses such as: *adaptive coping, maladaptive coping, emotion-focused coping, problem-focused coping,* and *dysfunctional coping* (Carver et al., 1989; Meyer 2001; Su et al., 2015).

Carver et al. (1989) proposed that coping could either be regarded as adaptive/functional, or maladaptive/dysfunctional, depending on context and the stressor itself. Active coping is typically conceptualized as adaptive and avoidant

coping as maladaptive (Carver et al., 1989). Adaptive coping has been commonly associated with desirable outcomes for an individual and a healthy way to manage stress (Carver et al., 1989; Carver et al., 1993; Meyer, 2001). Specific responses that contribute to adaptive coping are: *emotional support, positive reframing, acceptance, religion, humour, active coping, planning,* and *use of instrumental support* (Meyer, 2001). Maladaptive coping has been linked to undesirable outcomes for an individual, such as mental health challenges and higher level of perceived stress (Carver et al., 1989; Carver et al., 1993; Meyer, 2001). Specific responses that contribute to maladaptive coping are: *venting, denial, substance use, behavioural disengagement, self-distraction,* and *self-blame* (Meyer, 2001).

In an effort to acknowledge individual differences it is important to understand that coping strategies are significantly influenced by ethnic, cultural and socioeconomic factors and learned behaviour (Radman et al., 2011). The extant literature has illustrated that coping strategies are context-specific and can therefore be mediated by various factors such as age, gender, race, religion and socioeconomic status (Radman et al., 2011).

Measures aimed at evaluating coping have evolved from general to more specific measures (Greenaway et al., 2014). This ensures that coping can be measured according to specific stressful situations as opposed to coping with stress in general (Greenaway et al., 2014). Context-specific measures commonly used in research include the Miller Behavioural Style Scale (1987), the Mainz Coping Inventory (1993), the Coping Inventory for Stressful Situations (1990), and the COPE Inventory (1989) (Greenaway et al., 2014). The abovementioned measures have been widely used in coping based research with adequate levels of psychometric validity and reliability being found (Greenaway et al., 2014), with the COPE inventory being more

commonly utilized (Greenaway et al., 2014).

2.4.1. Coping: Age and level of study

Coping strategies may be viewed in relation to lifespan developmental theories, however it is important to note that there is a lack of evidence for determining whether age differences in coping strategies are related to intrinsic developmental processes or particularly to age differences in the kind of stressors experienced (Felton & Revenson, 1983).

With specific focus on the student population, Folkman and Lazarus (1985) proposed that when faced with negative events, students deal with coping in three stages: (1) primarily appraising the situation, which is realization of the threat, (2) secondary appraisal which involves exploring the potential responses that can be utilized, and (3) coping which involves the application of a coping strategy. Within the above stages, there are two types of coping strategies that can be utilized (adaptive, and maladaptive coping strategies) (Carver et al., 1989; Lazarus & Folkman, 1985; Meyer, 2001).

When exploring the coping strategies of school-going adolescents, it has been found that various types of coping mechanisms were utilized by adolescents during the different stages of coping, and that they had cognizance of strategies that were considered helpful vs. unhelpful (Ryan, 1989). Similarly, Thenga et al. (2015) established that the frequent coping strategies used by secondary school learners were a mix of both positive and negative, and adaptive and maladaptive.

Mullis and Chapman (2000) explored coping strategies in adolescence in relation to self-esteem and found that adolescents with a lower self-esteem used more avoidant coping strategies as compared to those with a higher self-esteem.

Aldwin et al. (1996) and Richaud and Sacchi (2005) found that age determines how a stressor is conceptualized, which also has implications for how the stressor is dealt with. Overall, there seems to be a tendency among younger individuals to use avoidant coping strategies as compared to older individuals who tend to use more problem solving related coping (Richaud & Sacchi, 2005). Past studies have indicated that the undergraduate population makes more use of negative coping techniques, such as avoidance and substance use (Böke et al., 2019; Joma'a & Thabet, 2015). In contrast, some undergraduate populations have been found to make more use of positive coping techniques (Govender et al., 2015; Kwaah & Essilfie, 2017). Religious based coping techniques have also been indicated as a prominent coping response amongst undergraduates (Joma'a & Thabet, 2015; Kwaah & Essilfie, 2017; Turashvili & Japaridze, 2013). Seeking support from others (both instrumental and emotional) also appears to be a commonly utilized coping response (Mudhovozi, 2011; Talwar et al., 2018).

2.4.2. Coping and Gender

Findings from research analysing the relationship between coping strategies and gender should be approached with caution, as there are social and political factors that play a role in the conceptualization of the relationship between the variables (Rosario et al., 1988). For example, Eisler et al. (1988) indicate that differences in coping strategies' between genders can be attributed to the subscription to certain gender and cultural role stereotypes. Females are in many cultures socialized into submissiveness and dependency, and males into aggressiveness and assertiveness, hence more maladaptive coping styles have been stereotypically attributed to females (Eisler et al., 1988). Nonetheless, the literature has illustrated that across the life span, females tend to use more active and adaptive coping strategies as compared to males

who use more avoidant and maladaptive coping strategies (Dakhli et al, 2013; Kelly et al, 2008; Madhyastha, 2014; Monteir et al., 2014; Mullis & Chapman, 2000; Thenga et al., 2015). This finding may be explained by the predominant evidence that females make more use of social and emotional support as compared to males (Kelly et al., 2008; Madhyastha, 2014; Mullis & Chapman, 2000; Santacana et al., 2008; Thenga et al., 2015). In contrast, other studies have indicated no statistically significant gender differences in types of coping (Joma'a & Thabet, 2015; Kwaah & Essilfie, 2017). Santacana et al's. (2012) study indicated that a predominant coping style cannot be fully attributed to a specific gender; and that differences exist between genders in terms of conceptualizing a stressor, therefore impacting how it is dealt with.

2.5. Perceived Academic Stress and Coping

In terms of coping strategies, literature has illustrated that positive coping encompasses adaptive, approach-based, emotion-focused and problem-focused techniques (Su et al., 2015). Positive coping strategies include meditation or prayer, sleep, listening to music, watching television, talking to family, exercise and pursuing hobbies (Pariat et al. 2014). Garber (2017) emphasizes exercise as a possible coping mechanism arguing that it could be useful in similar populations to the one covered in his study. Negative coping encompasses maladaptive, avoidant and dysfunctional techniques (Su et al., 2015). Negative coping includes spending more time on social media, drug use, smoking tobacco, and drinking alcohol. Furthermore, self-blame has also been identified as a negative coping mechanism used by students (Bamuhair et al., 2015; Garber, 2017; Govender et al., 2015).

Literature on perceived academic stress and coping strategies has indicated

that both emotion-focused and problem-solving coping styles were present in various samples, encompassed by a mix of positive and negative coping techniques (Crego et al., 2016; Devonport & Lane, 2006; Dwyer & Cummings, 2001; Esia-Donkoh, et al., 2011; Krypel & Henderson-King, 2010; Nel & Roomaney, 2015; Radman et al., 2011). A study conducted by Esia-Donkoh et al. (2001) indicated that their sample (N=400) of mixed undergraduate students reported higher use of positive coping, especially techniques related to planning and social support. Literature on the topic illustrates a high level of the use of positive coping techniques in relation to perceived academic stress (Devonport & Lane, 2006; Kwaah & Essilfie, 2017; Talwar et al., 2018; Turashvili & Japaridze, 2013).

Kwaah and Essilfie (2017), and Turashvili and Japaridze (2013) similarly found that religion was endorsed as a coping strategy within their respective samples. Devonport and Lane (2006), and Talwar et al. (2018) similarly found that their respective samples indicated more usage of the specific coping techniques of seeking instrumental, emotional, and social support from others. In terms of more specifically undergraduate populations, Radman et al. (2011) study found that a sample of medical school students (N= 376) utilized more active coping strategies as opposed to avoidant ones. Similarly, Mudhovozi (2011) found that third year social science students indicated higher levels of positive coping techniques, in the form of emotion-focused coping. A local study conducted by Govender et al. (2015) that explored academic stress and coping amongst undergraduate Occupational Therapy students indicated a high level of problem-focused coping (N= 99). In terms of literature on coping strategies that are considered negative, Dwyer and Cummings' (2001) study established that students with higher levels of academic stress studying toward a degree in education made more use of avoidant coping styles. In line with these

findings, Joma'a and Thabet (2015) noted a larger presence of the use of avoidance-focused coping within their sample of mixed undergraduate students (N= 399). Böke et al. (2019) conducted a study that explored the interaction between perceived academic stress and negative coping, in a sample of mixed undergraduate students (N= 5917). The findings indicated that the majority of students used substances as a coping strategy for academic stress.

Dwyer and Cummings (2001) questions whether the use of avoidant coping strategies themselves contribute more to the overall experience of academic stress. Struthers et al., (2000) expanded on this by establishing that students who used more problem-focused coping strategies (as opposed to emotion-focused coping) tended to have better outcomes in terms of academic performance and motivation. In contrast, Krypel and Henderson-King (2010) found that both emotion-focused and problem solving coping strategies had their own respective benefits. Students who used emotion-focused coping held the view that it was satisfying their psychological needs by enabling the growth of social connections, enabling a sense of autonomy and ultimately enhancing their self-awareness (Krypel & Henderson-King, 2010). These students were also more likely to view their education as a key to their future, especially in terms of building their careers and gaining further knowledge. Problem-focused coping was linked to the view that education was about self-development, especially because students viewed this as an opportunity to develop a sense of agency and growth of personal skills (Krypel & Henderson-King, 2010). Furthermore, these students tended to view academic stress not as overwhelming, but an opportunity for further growth.

2.5.1. Perceived academic stress and coping amongst students studying in the field of Psychology

The experience of academic stress is one that exists on a spectrum within various educational domains and levels (Agolla & Ongori, 2009). Limited literature is available in regard to perceived academic stress and coping amongst undergraduate psychology students (El-Ghoroury et al., 2012; Nel & Roomaney, 2015). However, McKinzie et al. (2006) and Pillay and Budhoo (2011) found that almost one-half of psychology undergraduate students consider leaving their academic program due to high levels of stress, especially in regard to academic stressors. Literature has indicated that undergraduate psychology students have often utilized negative coping (such as substance use), with the presence of suicidal ideation in some individuals being noted (Mahmoud et al., 2012; Pillay & Budhoo, 2011).

It has been postulated that individuals studying within the field of psychology are more likely to maintain a good level of functioning in relation to their physical and mental health when faced with stressors (Gerber & Hoelson, 2011; Kuyken et al., 2003). However, in a study conducted by Jordaan et al. (2007), results indicated that high levels of distress were present within the graduate psychology sample of the study, this despite the sample reporting higher levels of adaptive coping. Findings further indicated that graduate psychologists also made use of maladaptive coping (Jordaan et al., 2007). Jordaan et al's (2007) study also highlighted that more than half of the sample reported the experience of mild depression and high levels of anxiety.

As discussed by Nel and Roomaney (2015), the theory that individuals within the field of psychology are better equipped to utilize positive coping may not be entirely accurate due to conflicting findings in literature. This has encouraged more

research into stress and coping amongst psychology students and professionals (El-Ghoroury et al., 2012).

Nel and Roomaney (2015) also conducted a local study that explored differences in coping amongst psychology and non-psychology undergraduate students (N= 90). The authors had hypothesized that psychology students would have more developed coping styles, and would have developed more skills around the appraisal of stressors and effective ways of dealing with stressors (Nel & Roomaney, 2015). Their findings, however, showed high levels of perceived academic stress in the sample (Nel & Roomaney, 2015). Furthermore, they found no significant differences in the way that the sample utilized coping strategies, although the overall sample endorsed more adaptive coping strategies. Additionally, it was found that psychology students utilized the coping technique of seeking emotional support more often as compared to non-psychology students (Nel & Roomaney, 2015).

Mudhovozi (2011) explored perceived academic stress and coping in a sample of third-year undergraduate Psychology and Human Resources students (N= 73) and also found high levels of academic stress in the sample, and a majority of adaptive coping in the form of seeking support from others.

Furman et al. (2018) explored perceived academic stress and coping in a sample of first-year undergraduate Psychology students in a private tertiary program, and whilst they found high levels of academic stress, they also found more endorsement of maladaptive coping in the sample. Furman et al's. (2018) findings as compared to that of Mudhovozi (2011), and Nel and Roomaney' (2015) illustrates that knowledge of psychological theory does not necessarily guarantee the implementation of that knowledge when students are faced with academic stress.

2.5.2. Relationships between perceived academic stress and coping

The literature has indicated mixed findings with respect to the relationship between perceived academic stress and coping. Böke et al. (2019) found a significant positive relationship between perceived academic stress and unhealthy coping. This finding was attributed to the lack of strategies offered to students in an effort to educate them about the benefits of healthier coping strategies (Böke et al., 2019). Similarly, Furman et al's. (2018) study found a significant positive correlation between perceived academic stress and maladaptive coping strategies within their sample of first year undergraduate psychology students (N= 140). Furthermore, Furman et al. (2018) found no significant relationship between perceived academic stress and adaptive coping. Joseph et al. (2020) conducted a study with 400 undergraduate medical students, and found a significant positive relationship between perceived academic stress and passive-emotional and passive-problem coping styles amongst their sample. Similar to Furman et al. (2018), no significant relationship was found between perceived academic stress and active coping (Joseph et al., 2020). In terms of significant associations with adaptive coping, Talwar et al. (2018) found a strong positive correlation between perceived academic stress and seeking support from others, in their sample of cognitive science undergraduate students (N= 86). These varied findings suggest that that the nature and direction of the relationship between perceived academic stress and coping is not consistent and may be influenced by ethnic, cultural and socioeconomic factors, and learned behaviour (Radman et al., 2011).

2.6. Theoretical Framework

The present study entails exploring two constructs, *perceived academic stress* and *coping*. The transactional model of stress captures the constructs according to the theoretical framework put forth by Lazarus and Folkman (1984). The model conceptualizes stress as a result of transactions between an individual and his/her environment and includes a complex interplay of multiple systems (cognitive, physiological, affective, psychological, and neurological) (Lazarus & Folkman, 1984).

The process of an individual's response to stress is known as coping, which is a cognitive and behavioural response that aims at alleviating stress (Lazarus & Folkman, 1984). Literature has shown that the model has been expanded on, with specific coping responses being postulated (Su et al., 2015). This included responses such as: *adaptive coping, maladaptive coping, emotion-focused coping, problem-focused coping,* and *Dysfunctional coping* (Carver et al., 1989; Meyer 2001; Su et al., 2015). The present study will utilize the coping response model postulated by Meyer (2001). Adaptive coping is composed of 8 responses (*emotional support, positive reframing, acceptance, religion, humour, active coping, planning,* and *use of instrumental support*), and maladaptive coping is composed of 6 responses (*venting, denial, substance use, behavioural disengagement, self-distraction,* and *self-blame*).

2.6. Rationale

Literature on academic stress and its relationship with other related variables in the South African context is either dated, or aimed at only establishing the presence of stress in certain environments (El-Ghoroury et al., 2012; Nel & Roomaney, 2015; Sinha, 2015). Literature on perceived academic stress and coping strategies amongst

the specific population of undergraduate Psychology students is limited (Nel & Roomaney, 2015). However, it has been established that more than half of psychology students in academic programmes consider leaving their program before graduating due to high levels of stress, especially stressors related to academic functioning (McKinzie et al., 2006; Pillay & Budhoo, 2011). The population of undergraduate Psychology students is of interest in the present study due to literature indicating high levels of unhealthy coping within this population (Pillay & Budhoo, 2011). This is different from the ideology that individuals within the field of psychology should be able to cope with stress in a healthier way (Gerber & Hoelson, 2011; Kuyken et al., 2003). The present study aims at exploring the variables within a local sample of the undergraduate Psychology student population.

Exploration of the variables involved in the present study will add to the body of knowledge regarding student difficulty in coping with the demands of tertiary study. Findings from the study may provide awareness of the specific difficulties first year Psychology students experience with the transition to university. Furthermore, the findings could possibly help tertiary institutions' management, administration and student-counselling centres to provide appropriate and relevant counselling services for students.

Chapter Three: Research Methodology

The primary aim of the present study was to explore the relationship between perceived academic stress and coping strategies in an undergraduate psychology student population. This chapter provides an overview of the research methodology for the present study. Outlined in this chapter are the research aims, details pertaining to the sample and instruments used for measurement of the constructs. Following this, the research procedure and data analysis process is outlined. Ethical considerations for the present study are also discussed.

3.1. Research Paradigm

Quantitative methods involve the numerical and mathematical approach to quantify individuals' experiences, opinions and other defined variables (McIntyre, 2005). The aim is to support or refute hypotheses that centre defined variables. Quantitative techniques quantify phenomena in order to derive numerical results (McIntyre, 2005). This includes the use of questionnaires and surveys aimed toward a larger sample (McIntyre, 2005). Data derived from quantitative methods may allow for comparison to similar data sets in different populations in a more objective manner (McIntyre, 2005).

Qualitative methods involve exploratory research in an in-depth approach, aimed toward smaller sample sizes (McIntyre, 2005). The aim is not to quantify data, but rather to obtain subjective understanding from participants that guide the research process (McIntyre, 2005). Qualitative techniques include interviews, group discussions, and other observations to derive data (McIntyre, 2005).

In order to effectively address the research objectives for this study, a

quantitative, experimental, and cross-sectional survey design was utilized. The hypotheses entertained were that adaptive coping strategies would be negatively correlated with perceived academic stress and maladaptive coping strategies would be positively correlated with perceived academic stress. A correlational design was therefore predominantly utilized, to measure the strength of the relationships between these variables. The research study was guided by the coping strategies theoretical framework of Lazarus and Folkman (1985).

3.2. Sample

The sample was drawn from the population of undergraduate first year Psychology students at the University of KwaZulu-Natal during the period of July 2018 until July 2020. This sample was chosen, as many of these students were away from home for the first time and were required to adjust to a new environment. For the majority, it was also the first time that they have registered at an institution of higher learning, thus their coping experiences will be pertinent to the study topic. A sample of 256 students was recruited for this study. The sample composed of both male and female participants, in the 18 to 36 year old age range.

3.2.1. Sampling technique

The technique used to select the participants was nonprobability (purposive) sampling. Nonprobability purposive sampling is utilized to produce a sample that can be assumed to be representative of the population being explored (McIntyre, 2005; Newell & Burnard, 2011). In the present study, the undergraduate Psychology students were recruited as a representation of the local population of undergraduate Psychology students. An advantage of this sampling technique is that it is convenient for researchers that have limited resources and time constraints (Newell & Burnard,

2011). A disadvantage of this sampling technique is that researcher bias may become a challenge, due to the researcher making generalized assumptions when recruiting participants (Newell & Burnard, 2011). However, when guided by a clear theoretical framework and ethical adherence, this disadvantage is minimized (Newell & Burnard, 2011).

3.3. Instruments

The main method utilized to collect data for this research study was questionnaires. The advantage of using questionnaires is that it is useful when working with larger sample sizes for the purpose of analysing data and it also aids in objectivity (McIntyre, 2005). Furthermore, the use of questionnaires is the most affordable data collection option due to the only cost being attributed to printing (McIntyre, 2005). Another advantage of utilizing questionnaires is that participants are allowed to answer sensitive questions in a more anonymous manner (McIntyre, 2005). The instruments that were utilized in this study are as follows:

3.3.1. Biographical/Demographic Questionnaire

The researcher created this short questionnaire to gather relevant demographic information pertinent to each participant. Data in this questionnaire included age and gender (Appendix A).

3.3.2. Perception of Academic Stress Scale (PAS)

The Perception of Academic Stress Scale (PAS) (Appendix B), developed by Bedewy and Gabriel (2015), was developed to quantify perceived sources of academic stress, specifically within the university student population.

Furthermore, the PAS enables researchers to explore the relationship between perceived academic stress and its impact on the wellbeing and performance of university students (Bedewy & Gabriel, 2015).

The PAS composes of 18 items, across a 5-point Likert scale, with a score range between 1 (strongly disagree) to 5 (strongly agree). A score of 2.5 (5/2) is the middle point of the five-point scale, a mean score below 2.5 indicates that most participants tend to either disagree or strongly disagree with the statement. Mean scores in the range of 2.5 and 3.4 indicate that participants tend to be neutral about the statements of the construct. All mean scores equal or above 3.5 indicate that participants tend to either agree or strongly agree with the statements of the construct (Bedewy & Gabriel, 2015).

The items assess four areas of perception in university students, namely: the pressure to perform, the perception of workload and examinations, self-perceptions, and time constraints (Bedewy & Gabriel, 2015). Sample items included *"I am confident that I will be a successful student"*, *"The size of the curriculum (workload) is excessive",* and *"I have enough time to relax after work"* (Bedewy & Gabriel, 2015). Five items of the instrument are reversed scored (e.g.: item 3 *"I can make academic decisions easily."*). Items are summed to provide a possible total score of 90, with higher scores indicating higher levels of stress (Bedewy & Gabriel, 2015). Scores that range between 53 and below indicate low levels of stress, whilst scores between the ranges of 54 – 90 indicate high levels of stress (Chung et al., 2020).

Bedewy and Gabriel (2015) found that the PAS had a Cronbach's alpha of .70. Similarly, Fisher and Pidgeon (2018) study found a significant Cronbach's alpha value ($\alpha = .89$). The Cronbach's alpha coefficient for the present study was .82.

3.3.3. Coping Strategies: Brief COPE Inventory

The Brief COPE Inventory (Appendix C) was derived from the original COPE Inventory developed by Carver, Scheier, and Weintraub (1989), to assess a wide range of an individual's coping strategies. Literature illustrated that the original COPE Inventory composed of many items (60 items), and contributed to participants not completing the inventory, or taking long amounts of time to complete (Carver, 1997; Krypel and Henderson- King, 2010).

The Brief COPE is aimed at assessing the different ways in which people respond to stressors (Carver, 1997). It composes of 28 items, across a 4-point Likert scale (*1 = I haven't been doing this at all, 2 = I've been doing this a little bit; 3 = I've been doing this a medium amount; and 4 = I've been doing this a lot*). A mean score value of ≥ 2 indicates more use of the coping strategy. Sample items included *"I've been concentrating my efforts on doing something about the situation I'm in", "I've been getting help and advice from other people"*, and *"I've been giving up the attempt to cope"*. Carver (1997) established 14 factors of the instrument, namely: *Self-distraction, active coping, denial, substance use, emotional support, instrumental support, behavioural disengagement, venting, positive reframing, planning, humour, acceptance, religion,* and *self-blame.* Carver (1997) recommends analysing obtained data according to the fit of the sample being studied, and that the 14 factors can be analysed according to a model that does not compromise the validity and reliability of the instrument. This recommendation has been practically illustrated by past studies that have combined the factors into subscales according to the characteristics of their respective studies (Garcia et al., 2015; Meyer, 2001; Monzani et al., 2015; Prado et al., 2004; Su et al., 2015).

The model conceptualized by Meyer (2001) will be used in the present study to analyse coping strategies of the sample, according to two subscales (*Adaptive,* and *Maladaptive*). Carver et al. (1989) provided a theoretical basis for the model developed by Meyer (2001). Similarly, Nel and Roomaney (2015) utilized the Meyer (2001) model for conceptualizing coping within their study. Adaptive coping is composed of 8 factors (*emotional support, positive reframing, acceptance, religion, humour, active coping, planning,* and *use of instrumental support*), and maladaptive coping is composed of the remaining 6 factors (*venting, denial, substance use, behavioural disengagement, self-distraction,* and *self-blame*).

The items of each subscale were summed to arrive at a total score. The sub scale with a total higher mean score value will be captured as the predominant style of coping for the sample.

Psychometric properties of the Brief COPE have demonstrated universally sufficient internal stability, concurrent validity and test-re-test reliability (Carver, 1997). There is evidence of the instrument being utilized in the South African context; Kotze, et al. (2013) found a Cronbach's alpha value of .63 in a sample of HIV positive women and Meyer (2001) study recorded a Cronbach's alpha value of .81 for the adaptive subscale, and .57 for the maladaptive subscale. The findings of the present study indicated a Cronbach's alpha value of .90 for the adaptive subscale and .73 for the maladaptive subscale.

3.4. Research procedure

The research study was granted ethical clearance by the Humanities and Social Sciences Research Ethics Committee at UKZN (ethical clearance number:

HSS/0429/018M). Permission to recruit participants for the research was obtained from the Registrar at UKZN.

Academic staff involved with first year Psychology students were approached and briefed about the present study in terms of its aims and objectives, as well as the research procedure. Permission was granted to approach students for recruitment to possibly partake in the study. Convenient dates and times were discussed, and the researcher approached students after lecture/tutorial timeslots and explained the objective of meeting with them, as well as a brief explanation of the research study. Students were asked if they would like to participate in the research study and those who weren't interested were given the option to leave. More information was given to participants on the research process, and their questions were answered.

The concept of confidentiality and anonymity was explained to participants, as well as the right to withdraw from the study at any time without any consequences. An informed consent form was handed to the participant to be completed and signed. This process was carried out on a one-on-one basis with participants. Thereafter, the data collection process was initiated. The participants were handed a questionnaire packet compromising of the biographical questionnaire and the two instruments associated with this study (PAS, and Brief COPE). This process took roughly 30 minutes to complete. Once the questionnaires were completed, the participant was thanked for their valued time and input.

The researcher discussed that the results from the research would be made available to participants on the notice board in the Psychology Department. An opportunity for any further questions was granted before concluding the process. Provision was made that participants could communicate any distress to the primary researcher and follow-up counselling at the Centre of Applied Psychology would be

made available. None of the participants indicated any distress during the data collection process.

3.5. Data Analysis

Collected data was captured on Microsoft Excel, and imported into the Statistical Package for Social Sciences (SPSS version 27) for analysis. The analyses included both descriptive and inferential statistics.

Descriptive statistics can be understood as a representation of numbers and/or graphs that summarize a set of collected sample data (Wilson & MacLean, 2011). Descriptive statistics are important to use, as it aids in summarizing large amounts of sample data (Wilson & MacLean, 2011). Descriptive measures that were used in this study include frequency tables, means and standard deviations as well as distribution analyses. These measures of central tendency assisted in the analysis of the general characteristics of the sample with regard to academic stress and coping strategies.

In order to further explore academic stress and coping in the present study sample, a two-way ANOVA was conducted to explore gender and age differences on mean scores of perceived academic stress. A two-way MANOVA was conducted to explore gender and age differences on mean scores of the adaptive and maladaptive coping subscales. The level of significance adhered to in the research study was $p < 0.05$.

Inferential statistics can be understood as a set of methods that are used to reach conclusions about populations, based on samples and probability (Wilson & MacLean, 2011). The main inferential statistical technique that was utilized is the Pearson's Product-Moment Correlation Coefficient (Wilson & MacLean, 2011).

This calculation explored the relationship between perceived academic stress and coping strategies (according to scores on the PAS scale, and Brief COPE). This calculation is advantageous when researching relationships between variables, as the product of the calculation provides a statistical representation of the strength of the relationship (Thomas, 2003).

3.6. Ethical Considerations

It is important to acknowledge and adhere to certain ethical principles in social research studies (Babbie, 2011). This authenticates a study, as well as prevents harm to the population (Babbie, 2011; Israel & Hay, 2006; Mertens & Ginsberg, 2009). Throughout this study, the many components reflect an ethical awareness and application. The Humanities and Social Sciences Research Ethics Committee at UKZN scrutinized the project and granted ethical approval to proceed with the study (approval number: HSS/0429/018M). Furthermore, to ensure ethical adherence throughout the research process, a qualified psychologist supervised the study.

The participants were informed from the outset that their participation was completely voluntary and they neither were coerced into nor rewarded for participation. The participants were informed about the nature and process of the study so they could make an informed decision about participating. Thereafter, participants provided consent by signing a consent form.

As a part of the consent process, the principles of confidentiality and anonymity were applied to all participants. The participants were made aware of their right to withdraw from the study at any time, with no negative consequences for those who withdrew. Provision was made for participants to communicate any distress to the primary researcher (in person or via email), and follow-up counselling at the

Centre of Applied Psychology would be made available. None of the participants indicated any distress during the data collection process. The study did not make use of deception in its design and remained transparent in terms of the aims. Participants were not required to divulge their names or contact details on the questionnaire booklet. Participants indicated only gender and age for the purposes of statistical analyses. Data presented in the research report will be presented as aggregated data only.

Chapter Four: Results

This chapter covers the analyses of data. The present study investigated the relationship between perceived academic stress and coping strategies amongst first-year undergraduate psychology students. A quantitative method was utilized to recruit 256 participants and the obtained data was analyzed on IBM SPSS version 27. The research objectives of the present study were to explore the level of perceived academic stress in a sample of first year psychology students, as well as to explore the types of coping strategies that are utilized by the sample, and finally to explore the relationship between academic stress and coping strategies in the sample. The central hypotheses entertained were that adaptive coping strategies would be negatively associated with perceived academic stress and maladaptive coping strategies would be positively associated with perceived academic stress.

This chapter provides the demographic characteristics of the sample followed by descriptive statistics for constructs involved in the present study. Central tendency measures will explore the data from the PAS and Brief-COPE. Thereafter, a two-way between-groups analysis of variance (ANOVA) will be presented to explore age and gender differences in the experience of perceived academic stress according to the PAS. A two-way MANOVA will also be presented to explore age and gender differences in the types of coping strategies utilized. Lastly, a Pearson-moment correlation analysis was used to explore the relationship between perceived academic stress and adaptive and maladaptive coping within the sample.

4.1. Demographic characteristics of the sample

The demographic characteristics of the sample are presented in Table 1.

Table 1

Demographic Characteristics of Sample

	Total N = (256) n (%)	Female n = (206) n (%)	Male n = (50) n (%)
Age Group			
18 - 21	213 (83.2)	176 (68.8)	37 (14.5)
22 and Over	43 (16.8)	30 (11.6)	13 (5.1)

4.2. Psychometric properties of the PAS measure

The construct of perceived academic stress was measured using the Perception of Academic Stress Scale (Bedewy & Gabriel, 2015). As can be seen in Table 2, the Cronbach's alpha coefficient of the PAS in the present study is above 0.7, indicating good internal consistency (Pallant, 2011).

Table 2

Descriptive Statistics for the PAS (N=256)

	Coefficient alpha	*M*	*SD*
Perceived Academic Stress	.82**	55.8	9.55

** Cronbach's Alpha Coefficient significant at ($p < .05$)

The inter-item correlations of the PAS ranged from .12 to .87, indicating that the items measure the same underlying construct (Pallant, 2011).

4.2.1. Distribution of scores for PAS

As can be seen below in Table 3, the distribution of scores for the PAS is presented. According to the parameters discussed by Kim (2013), the scores for the

present study's scale were within the range of normal distribution (absolute skew value < 3; absolute kurtosis value < 10).

The distribution of scores on PAS was further examined using *z*-scores. It has been established that conventional estimates of the normality of data (Shapiro Wilk and Kolmogorov-Smirnov tests) can be unreliable when analysing data in a larger sample, whereas the evaluation of *z*-scores for skewness and kurtosis statistics seem to provide more reliable estimates (Kim, 2013). As outlined by Kim (2013), the process for obtaining such *z*-values composes of dividing the absolute value of skewness and kurtosis statistics by the associated standard error. For medium samples ($50 \geq n \leq 300$): absolute *z*-values for either skewness or kurtosis larger than 3.29 or smaller than -3.29 indicate that the data differ significantly ($p < .05$) from what would be expected under the normal curve. The present study had 256 participants, therefore normality of scores distributions was assumed if z-values for both skewness and kurtosis were ≤ 3.29.

Table 3

Distribution of Scores for the PAS (N = 256)

	Skewness			Kurtosis		
Construct	Statistic	Std. Error	Z-Value	Statistic	Std. Error	Z-Value
Perceived Academic Stress	-0.230	0.152	-1.513	-0.103	0.303	-0.339

An inspection of relevant *z*-values (as seen in Table 3) indicates that the score distribution for the PAS did not differ significantly from what would be expected under the normal curve.

4.3. Psychometric properties of the Brief-COPE

The construct of coping was measured using the Brief-COPE Inventory (Carver, 1997). As can be seen in Table 4, the Cronbach's alpha coefficient of the Brief-COPE subscales in the present study is above 0.7, indicating good internal consistency (Pallant, 2011).

Table 4

Descriptive Statistics of the Brief-COPE (N=256)

	Coefficient alpha	*M*	*SD*
Maladaptive Coping	.73**	22.45	5.05
Adaptive Coping	.90**	35.04	8.74

** Cronbach's Alpha Coefficient significant at ($p < .05$)

The inter-item correlations of the Maladaptive Coping subscale ranged from .11 to .71, indicating that the items measure the same underlying construct (Pallant, 2011). Similarly, the inter-item correlations of the Adaptive Coping subscale ranged from .18 to .70.

4.3.1. Distribution of scores for the Brief-COPE

The distribution of subscale scores for the Brief-COPE is presented in Table 5. According to the parameters discussed by Kim (2013), the scores for the subscales were within the range of normal distribution (absolute skew value < 3; absolute kurtosis value < 10). Following Kim's (2013) parameters, relevant z-scores for the measure are also presented.

Table 5

Distribution of Scores for the Brief- COPE (N = 256)

	Skewness			Kurtosis		
Construct	Statistic	Std. Error	Z-Value	Statistic	Std. Error	Z-Value
Maladaptive Coping	0.710	0.152	4.67*	1.239	0.303	4.08*
Adaptive Coping	-0.378	0.152	-2.48	-0.397	0.303	-1.31

*Differs significantly from what would be expected under the normal curve ($p < .001$)

The *z*-values relevant to the Brief-COPE indicates that: (a) score distributions for the Adaptive subscale did not differ significantly from what would be expected under the normal curve, but that (b) score distributions for the Maladaptive subscale differed significantly from what would be expected under the normal curve ($z > 3.29$).

This indicated that the data required transformation in order to achieve normality and to meet the assumptions of the later analyses in the present study.

4.4. Linear Square Root Transformation of measures

In order to further normalize the data for the Adaptive subscale and to normalize the data for the Maladaptive subscale, a linear square root transformation was conducted on data for the Brief-COPE. An inspection of the values (Table 6) indicated that the absolute skewness and kurtosis scores were further normalised after conducting the linear transformation, and relevant z-values now fell within the parameters ($-3.29 > z < 3.29$).

Table 6

Distribution of Transformed Scores of Brief-COPE: Linear Square Root transformation (N = 256)

	Skewness			Kurtosis		
Measure	Statistic	Std. Error	Z-Value	Statistic	Std. Error	Z-Value
Maladaptive Coping	0.300	0.152	1.97	0.560	0.303	1.84
Adaptive Coping	-0.202	0.152	-1.32	-0.577	0.303	-1.90

In order to continue exploration of the relationships between the variables, the linear transformation was also applied to scores on the PAS.

As seen in Table 7, the absolute skewness and kurtosis values and relevant z-scores remained for the PAS within the parameters discussed by Kim (2013).

Table 7

Distribution of Transformed Scores of PAS: Linear Square Root Transformation (N = 256)

	Skewness			Kurtosis		
Measure	Statistic	Std. Error	Z-Value	Statistic	Std. Error	Z-Value
Perceived Academic Stress	-0.430	0.152	-1.513	-0.103	0.303	-0.339

The overall square root transformation further normalized the data in the present study and will subsequently be used for further analyses reported in this study.

4.5. Perceived academic stress in the sample

Central tendency measures were used for the descriptive analysis of perceived academic stress in the sample. The extent of perceived academic stress in the sample (N=256) is presented in Table 8. The results presented indicate that the majority of the sample (61.7%) experienced high levels of perceived academic stress. The results further indicate that 50.4% of the sample within the 18 – 21 years old age range

experienced high levels of perceived academic stress, as compared to the 32.8% who experienced low levels. Within the 22 years old and over age range, 11.3% of the sample experienced high levels of perceived academic stress, whereas 5.5% experienced low levels.

Table 8

Perceived Academic Stress in the sample

Perceived Academic Stress	Total N = (256) n (%)	Female n = (206) n (%)	Male n = (50) n (%)
Low	98 (38.3)	81 (31.6)	17 (6.6)
High	158 (61.7)	125 (48.8)	33 (12.9)

The mean value for the overall measure indicated a high level of perceived academic stress across the sample (M= 55.87, SD= 9.55). Further exploration of the distribution of mean values on the PAS indicated higher values across: item 17 "*Examination times are very stressful to me*" (M= 4.44, SD= 0.92), item 18 "*Even if I pass my exams, am worried about getting a job*" (M= 4.36, SD= 1.02), item 5, which was reverse scored "*I have enough time to relax after work*" (M=4.30, SD= 0.97), item 16 "*Examination time is short to complete the answers*" (M= 4.18, SD= 1.10), item 7 "*I fear failing courses this year*" (M= 4.13, SD= 1.21), and item 15 "*The examination questions are usually difficult*" (M=4.07, SD= 1.07). The majority of items that contributed toward high levels of perceived academic stress seem to focus on examinations.

4.5.1. Gender and age differences in scores on perceived academic stress

A two-way between-groups analysis of variance (ANOVA) was conducted to explore age and gender differences in the experience of perceived academic stress, according to the PAS.

The independent variables of age and gender were entered, followed by the dependent variable of level of perceived academic stress. The sample was categorized into the following age groups accordingly: Group 1: 18 – 21 years, and Group 2: 22 years and over. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance, covariance matrices, and multicollinearity, with no serious violations noted. Pallant (2011) reports that the significance levels need to be less than or equal to .05 to find out whether the interaction is significant. No post-hoc tests were conducted due to each variable consisting of less than three levels.

No statistically significant differences were found between age groups and the experience of perceived academic stress, F (1,252) = 2.108, p = .15; partial eta squared = .008. Similarly, no statistically significant differences were found between gender and the experience of perceived academic stress, F (1, 252) = .420, p = .52; partial eta squared = .002.

The analysis of the interaction effect between age group and gender on the experience of perceived academic stress yielded no statistically significant differences, F (1, 252) = .004, p = .94; partial eta squared = .000.

4.6. Coping strategies utilized by the sample

Central tendency measures were used for the descriptive analysis of coping strategies in the sample. The results, presented in Table 9, indicate that adaptive coping strategies were utilized more often by the sample. Exploration of the mean values on the Adaptive coping subscale indicated higher values across: item 17 "*I've been looking for something good in what is happening*" (M= 3.15, SD= 1.02), item 7 "*I've been taking action to try to make the situation better*" (M= 3.08, SD= 0.96), and item 25 "*I've been thinking hard about what steps to take*" (M= 3.07. SD= 1.07). The item with the lowest mean was item 28 "*I've been making fun of the situation*" (M= 1.76, SD= 0.95)

Table 9

Coping strategies in the sample

Brief-COPE	Total N = 256 Mean (SD)	Female n = 206 Mean (SD)	Male n = 50 Mean (SD)	Age (18 – 20) n = 213 Mean (SD)	Age (22 and over) n = 43 Mean (SD)
Adaptive Coping	2.78 (0.65)	2.85 (0.62)	2.51 (0.72)	2.76 (0.66)	2.93 (0.61)
Maladaptive Coping	1.73 (0.42)	1.75 (0.41)	1.65 (0.49)	1.73 (0.43)	1.78 (0.40)

In terms of Maladaptive coping strategies, the most endorsed item by the sample was item 19 "*I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping*" (M= 3.03, SD= 0.89). The item with the lowest mean was item 4 "*I've been using alcohol or other drugs to make myself feel better*" (M= 1.24, SD= 0.61)..

4.6.1. Gender and age differences in coping strategies

A two-way between-groups multivariate analysis of variance (MANOVA) was conducted to explore age and gender differences in the use of coping strategies according to the Brief-COPE. Independent variables were captured as age and gender, and the dependent variables as adaptive and maladaptive coping. The sample was categorized into the following age groups accordingly: Group 1: 18 – 21 years, and Group 2: 22 years and over.

Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance, covariance matrices, and multicollinearity, with no serious violations noted. Pallant (2011) reports that the significance levels need to be less than or equal to .05 to find out whether the interaction is significant.

There were no statistically significant differences found between the age groups on scores of the Brief-COPE subscales (adaptive and maladaptive), F (2, 251) = 2.684, p = .07; Wilks' Lambda = .98; partial eta squared = .021. When the dependent variables were analyzed separately using a Bonferroni adjusted level of .25, a significant age effect was found on scores for adaptive coping, F (1, 252) = 5.337, p = .02; partial eta squared = .021. An investigation of mean scores on the subscale indicated that participants in the 18 – 21 year old age range reported slightly higher levels of adaptive coping (M = 4.40, SD = 1.21) as compared to participants aged 22 and over (M = 4.07, SD = 1.23). No statistically significant age group differences were found for scores on the maladaptive coping subscale (p = .30).

Statistically gender significant differences were found on the Brief-COPE subscales. F (2, 251) =4.895, p = .01; Wilks' Lambda = .96; partial eta squared = .038. When the dependent variables were analyzed separately using a Bonferroni

adjusted level of .25, a significant gender difference was found on the adaptive coping subscale, F (1, 252) = 5.387, p = .02; partial eta squared = .021. An investigation of mean scores on the subscale indicated that male participants reported slightly higher levels of adaptive coping (M = 4.83, SD = 1.24) as compared to female participants (M = 4.23, SD = 1.18).

Similarly, a significant difference was found between gender and maladaptive coping, F (1, 252) = 7.596, p = .01; partial eta squared = .029. Mean scores on the subscale indicated that female participants reported higher levels of maladaptive coping (M = 4.74, SD = 0.50) as compared to male participants (M = 4.54, SD = 0.59).

The results of the between-subject effects (age and gender on coping) indicated no statistically significant differences F (2, 251) =1.625, p = .20; Wilks' Lambda = .99; partial eta squared = .013. The dependent variables were further investigated using a Bonferroni adjusted level of .25, with no significant differences found on the adaptive subscale (p = .32), or the maladaptive subscale (p = .28).

4.7. Correlations between perceived academic stress and coping strategies

A Pearson's Product-Moment Correlation analysis was conducted to analyse the relationship between perceived academic stress (PAS) and the Brief-COPE subscales (Adaptive and Maladaptive coping). Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity and homoscedasticity.

The strength of these relationships was determined using the parameters set out by Cohen (1998) (as cited in Pallant, 2011): small: r = .10 to .29; medium: r = .30

to .49; large: r = .50 to 1.0. The results of the Pearson's product-moment correlation are outlined in Table 10 below.

Table 10

Correlations between PAS and the Brief-COPE Subscales

Variable	Correlations 1	2	3
1. PAS	-		
2. Adaptive Coping	0.096	-	
3. Maladaptive coping	- 0.296**	-0.350**	-

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

As can be seen in Table 10, no relationship was found between PAS and adaptive coping. A weak negative relationship was indicated between PAS and maladaptive coping.

Chapter Five: Discussion

The primary research aim of the present study was to explore the relationship between perceived academic stress and coping in a sample of undergraduate first year psychology students. The demographic variables inclusive in the study were age and gender. The research objectives of the present study focused on firstly establishing the level of perceived academic stress in the sample, and secondly, the coping strategies utilized by the sample. Thereafter, the hypotheses explored were that adaptive coping strategies would be negatively correlated with perceived academic stress and maladaptive coping strategies would be positively correlated with perceived academic stress. The main findings of the present study are expanded on below in relation to prior literature on the topic.

5.1. Perceived academic stress in the sample

The instrument utilized to measure the construct (PAS) showed a significant level of reliability and normality. The findings illustrate that participants tend to experience a high level of perceived academic stress (61.7%), as opposed to the 38.3% who reported experiencing low levels of perceived academic stress. This finding collaborates that of previous studies that have found varying levels of academic stress within undergraduate populations (Bernstein & Chemaly, 2017; Chun *et al.*, 2016; Clinciu, 2013; Geng & Midford, 2015; Mason, 2017; Misra & Castillo, 2004a; Mudhovozi, 2012; Robotham & Julian, 2006; Wyatt *et al.*, 2017). It also supports Bisht (1980) discussion of academic stress existing on a spectrum with varying severities according to specific contexts.

The findings in the present study show that the majority of students reported higher levels of academic stress in regard to examinations. Items: 15, 16, 17, and 18 of the Brief COPE relate to examination related stress and had overall higher mean values. Batineh (2013), Păduraru (2019), and Pascoe *et al.* (2020) have also established that examination related stress is a major form of academic stress experienced by the samples of their studies respectively. In terms of local literature, the present study findings are similar with Govender et al. (2015), and Mudhovozi (2011), who also found that participants reported higher levels of academic stress due to examinations in respective studies.

Item 18 of PAS scale states that "Even if I pass my exams, I am worried about getting a job". Participants strongly endorsed this statement.. This concurs with findings from other studies that explored sources of academic related stress (Agolla & Ongori, 2009; Owusu & Essel, 2017; Pascoe *et al.,* 2020). De Witte (2005), and Shoss (2017) discuss the negative impacts of the global experience of job insecurity increasing over time and concluded that it contributes to the experience of stress at various levels of an individual's professional journey.

5.1.1. Perceived Academic Stress and Age/Level of Study

The present study focused specifically on first year undergraduate psychology students. The findings indicated a high presence of perceived academic stress within the sample. In terms of academic progression, Sinha (2015) indicated that higher levels of academic stress are present in first year undergraduate students, and attributed this to the transition from high school to college and the increased workload and demands associated with tertiary studies. Past studies have indicated a high presence of perceived academic stress amongst undergraduate students (Böke et al.,

2019; Joma'a & Thabet, 2015; Kwaah & Essilfie, 2017; Mudhovozi, 2011; Talwar et al., 2018; Turashvili & Japaridze, 2013). Similar to the findings of the present study, Chun *et al.* (2016), Geng and Midford (2015), and Wyatt *et al.* (2017) have observed high concentrations of academic stress amongst first year students.

On the other hand, literature indicates that there are higher concentrations of academic stress associated with higher levels of study, e.g. amongst fourth year students (Patil *et al.,* 2016; Govender *et al.,* 2015; Mudhovozi, 2011). This contrasting finding may be attributed to the higher level of academic requirements (e.g. more continuous assessments and more extensive examinations) that are required in latter levels of respective academic programmes (Patil et al., 2016). Pascoe, et al. (2020) concluded that academic stress exists across various student populations at varying levels.

5.1.2. Perceived Academic Stress and Gender

The analysis of gender differences on scores of the perceived academic stress scale indicated no significant gender effect in the present sample. These results are in accordance with some studies that have found no significant gender effect on perceived academic stress within diverse populations (Busari, 2012; Hussain *et al.,* 2008; Kania, 2014; Kwaah & Essilfie, 2017; Mallach, 1996).

However, other studies have found that females reported higher levels of academic stress as compared to males (Bhansali & Trivedi, 2017; Diniz *et al.* 2018; Misigo, 2015; Misra & Castillo, 2004b). Furthermore, Misra and Castillo (2004b) found that females attributed their high levels of academic stress to challenges in time management, with more social and family commitments.

Gender differences must however be interpreted with caution, as academic stress is influenced by other factors such as gender role stereotypes and expectations, political ideologies and cultural influences (Misra & Castillo, 2004b).

5.2. Types of coping strategies utilized by the sample

The coping strategies utilized by the present study's sample of students, both male (19.5%) and female (80.5%) were further explored. Coping was measured according to two broad strategies, *adaptive* and *maladaptive* styles (Meyer, 2001). Adaptive coping is a process of actively attempting to solve a stressor by utilizing available strategies, whereas maladaptive coping refers to the effort to avoid the emotions and consequences associated with the stressor (Carver, 1997).

The findings of the present study indicate that the majority of students used *adaptive coping* strategies to cope with academic stress, which included active coping, emotional support, use of informational support, planning and acceptance. A smaller percentage of the students used *maladaptive* focused coping, which included self-distraction, and venting. The findings of the present study in regard to adaptive coping present a shift in the perception that undergraduate students use mainly maladaptive coping strategies (Radman et al., 2011).

Similar to the findings in the present study, Radman et al., (2011) found that that the majority of their sample of students used planning, acceptance and positive reframing as the main coping strategies in relation to academic stress. A common theme of adaptive coping in the form of problem solving (planning, acceptance and positive reinterpretation) was observed in the findings of the present study, which is similar to observations from past studies (Esia-Donkoh et al., 2011; Radman et al., 2011; Struthers et al., 2000). Similar to the findings of Esia-Donkoh et al. (2011),

Radman et al. (2001), and Struthers et al. (2000), the present study illustrated high levels of perceived academic stress in the sample despite the presence of higher levels of adaptive coping. This may be indicative that the coping strategies used by the present study' sample are not contributing to the effective management of perceived academic stress.

The role of religion and spirituality in terms of coping with academic stress has been highlighted in other studies (Pariat et al., 2014; Radman et al., 2011). The findings of the present study show that students chose religion as a major coping strategy. Pariat et al. (2014) and Radman et al's., (2011) respective findings illustrate that religion and spirituality represent a significant way of coping for undergraduate students, especially within contexts that endorse this strategy of coping. In accordance with the results from the present study, Nel and Roomaney (2015) also identified seeking emotional and instrumental support as a major coping strategy used by students when dealing with stress.

The maladaptive strategy of venting was found as a significant coping mechanism for students in the present study. Crego et al. (2016) reported a significant positive relationship between academic stress and venting as a form of coping, which contributed to students developing a negative outlook for the future. Dwyer and Cummings (2001) found that the majority of their sample used avoidant coping to manage academic stress. The categorization of venting as a maladaptive form of coping illustrates different perceptions across studies (Crego et al., 2016; Tuncay et al., 2008). Tuncay et al. (2008) illustrate that venting can contribute to the effective management of stress in certain populations.

The findings of the present study indicate that the majority of the sample did not endorse the maladaptive coping strategy of substance use. This is similar to the

findings of Pariat et al. (2014) who found a weak relationship between academic stress and substance use within their sample. Literature has shown that the impact of academic stress may put certain students at higher risk of using substances as a means of coping (Pascoe et al., 2020; Singh, 2011, Wadhwa, 2017). However, the use of substances as a social activity amongst student populations has also been well documented and may contribute to alleviating stress amongst students (Nel & Roomaney, 2015).

The findings of the present study confirm those of other studies; that student populations do not have dominant forms of coping, and may rather utilize a mix of coping strategies (Aihie and Ohanaka, 2019; Khan, 2013; Krypel and Henderson-King, 2010; Mason, 2017).

5.2.1. Coping and Gender

The findings of the present study indicate that both male and female students utilize more adaptive than maladaptive coping strategies in response to perceived academic stress. The results further indicate significant gender differences whereby male students indicated utilizing adaptive coping strategies slightly more when compared to female students.

This is in contrast to the majority of studies that have found that females used more active and adaptive coping strategies as compared to male students who use more avoidant and maladaptive coping strategies (Dakhli et al., 2013; Joseph et al., 2020; Kelly et al., 2008; Madhyastha, 2014; Monteir et al., 2014; Theng et al., 2015). The contrasting finding of the present study may be accounted for by Santacana et al's. (2012) conclusion that a specific coping style cannot be attributed to a specific gender, and that differences exist between genders in terms of conceptualizing a

stressor, ultimately impacting how it is dealt with. As with perceived academic stress, gender differences in terms of coping must be interpreted with caution to account for the various gender and cultural roles and norms according to each specific context (Eisler et al., 1988; Misra & Castillo, 2004B).

5.3. Relationship between perceived academic stress and coping strategies

The present study explored perceived academic stress and coping specifically amongst first-year undergraduate Psychology students. The findings indicate that the present study sample experienced high levels of perceived academic stress, which concurs with the findings of previous studies (Furman et al., 2018; Jordaan et al., 2007; Mudhovozi, 2011; Nel & Roomaney, 2015).

In regard to coping strategies, the findings of the present study indicate that the sample utilized more adaptive than maladaptive coping strategies. This finding is in accordance with Jordaan et al. (2007), and Nel and Roomaney's (2015) findings that indicated the same amongst respective samples. The present findings are similar to that of Jordaan et al. (2007), Mudhovozi (2011), and Nel and Roomaney (2015), who found high levels of perceived academic stress in their respective samples despite the presence of adaptive coping strategies being endorsed. This reflects that the adaptive coping strategies being used are not contributing to the reduction of perceived academic stress. To account for the presence of some students utilizing maladaptive coping strategies, it is suggested that the knowledge of psychological theory may not ensure implementation of that knowledge in reality, hence resulting in the use of maladaptive coping (Nel & Roomaney, 2015).

The main objective of the present study was to explore the relationship between perceived academic stress and coping strategies. The findings indicated no

significant relationship between perceived academic stress and adaptive coping. The null hypothesis was therefore confirmed. This is in concurrence with the findings of other studies (Furman et al., 2018; Joseph et al., 2020; Talwar et al., 2018) that found no significant relationship between perceived academic stress and adaptive based coping strategies. As discussed by Radman et al. (2011), coping strategies are not utilized in a rigid way, and could explain the variation in the way that an individual chooses to cope in response to a specific stressor.

The findings of the present study also indicated a significant weak negative relationship between perceived academic stress and the use of maladaptive coping, again refuting the hypothesis. The finding is corroborated by Dwyer and Cummings (2001) who found that the majority of their sample used avoidant coping to manage academic stress. However, it contradicts the findings of other studies (Böke et al. 2019; Furman et al. 2018), which found a significant positive relationship between perceived academic stress and maladaptive coping. This finding could possibly be explained by the context of the sample. Pillay and Budhoo (2011) propose that South African students experience a variety of adverse experiences, which may enable a higher level of resilience. This may explain why the present study sample's use of maladaptive coping strategies did not impact their academic stress negatively. It is also important to acknowledge that ethnic, cultural and socioeconomic factors, and learned behaviour influence how an individual copes, and may explain the variability across different populations (Radman et al., 2011).

5.6. Implications of the Study

The author hypothesized that there would be a significant negative relationship between adaptive coping and perceived academic stress, and a significant

positive relationship between perceived academic stress and maladaptive coping; however, the findings did not confirm the study hypotheses. The findings of the present study in regard to the use of adaptive coping present a shift in the perception that undergraduate students mainly use maladaptive coping strategies. The findings indicated that although the sample used adaptive coping strategies, this did not impact their perceived academic stress, instead the use of maladaptive coping appears to have a positive effect on academic stress. The findings indicate that although students are attempting to deal with their stress in adaptive ways, these efforts are not always successful and have possibly led to the use of less adaptive ways of coping. These findings suggest that more investigation needs to be done by higher education institution personnel on why traditional adaptive coping strategies are not working and what other interventions can be used to assist students to manage academic stress.

In line with preventative measures to address academic stress, it is hoped that stress management becomes a topic that is acknowledged and emphasized on during orientation programmes for first year students. These programmes can bring awareness about academic stress and provide students with ways of managing potential academic stressors.

The findings of the present study may be of use to university student counselling centres available for students, and help guide future initiatives aimed at enhancing students' wellbeing. This includes enhancing present initiatives that have maintained and/or improved the resilience of the students. Furthermore, creating other possible sources that can moderate the negative effects of academic stressors, such as religious groups, support groups, and extracurricular activities may help further.

5.6. Limitations of the Study

It is acknowledged that the present study has limitations. The sample size may have been a limitation, as the study only recruited 256 participants. Thus, a generalization about the entire population cannot be made, because the sample did not represent the entire population (McIntyre, 2005). Furthermore, the data was collected from a single university and within a single faculty, therefore not accessing the perspectives of students within different departments and tertiary settings. The majority of participants were female (80,5%), which is not reflective of general student populations and contexts in South Africa.

Self-report as a means of collecting subjective data is a commonly used method in social science research, and was utilized in the present study (Reis, 2012). However, it is acknowledged that self-report may introduce potential bias in participants' responses due to social desirability and possible limited ability to accurately remember their experiences.

The impact of academic stress and coping strategies on actual academic performance would have been a useful addition to the study objectives. However it was beyond the scope of this study and it is recommended that this association be given future research attention. Measuring students' achievement levels (module and examination performance) would be beneficial in understanding the impact of perceived academic stress and coping strategies on academic performance.

Lastly, the cross-sectional design of the study could not account for any possible changes in participants' perspectives due to natural maturation and skill enhancement changes over time.

Despite these limitations, the present study contributes to the understanding of perceived academic stress and coping strategies within first year undergraduate students in a tertiary context.

Chapter Six: Summary, recommendations, and conclusion

6.1. Summary of findings

The findings of the present study are noteworthy Firstly, it was found that the majority of the sample indicated high levels of perceived academic stress. Higher mean score values were found for scale items specifically related to examinations. No statistically significant age and gender differences were found in relation to perceived academic stress.

Secondly, results indicated that the sample utilized adaptive coping strategies more than maladaptive coping strategies. Higher mean score values were found among coping strategies relating to positive reframing and planning. It was found that the 18 – 21 year old age range utilized adaptive coping more than the 22 and over age range. Furthermore, it was found that male participants indicated utilizing adaptive coping more than female participants.

Lastly, in terms of the relationship between the constructs, neither of the study hypotheses was confirmed. No relationship between perceived academic stress and adaptive coping was found and a weak negative relationship was found between perceived academic stress and maladaptive coping.

6.2. Recommendations

Future research should aim at including students from other departments within a tertiary environment, as this may provide more accurate reflections of how undergraduate students perceive academic stress and their respective coping strategies.

The impact of academic stress and coping strategies on actual academic performance would be a useful addition to future study objectives. Measuring students' achievement levels (module and examination performance) would be beneficial in understanding the impact of perceived academic stress and coping strategies on academic performance.

To account for possible response bias in terms of participants attempting to maintain social desirability, a measure that explores social desirability levels should be included to complement overall results.

The impact of sociocultural influences on how stressors are perceived and managed can be researched more to provide more accurate context specific conclusions.

Lastly, future studies should aim at considering the influence of other variables on perceived academic stress and coping, this may include marital status, religious and spiritual beliefs, and perception of self-efficacy.

6.3. Conclusion

Academic stress has been identified as a commonly experienced phenomenon amongst student populations. Coping strategies are a way of managing academic stress. This study was conducted to explore the relationship between perceived academic stress and coping strategies amongst an undergraduate first year Psychology student population. The variables were also explored independently for further interpretation.

According to the findings, there was a significant presence of academic stress in the sample and the majority of students reported the use of adaptive coping strategies to deal with academic stress. The most commonly identified coping

strategies included: self-distraction, active coping, and environmental support, use of informational support, venting, planning, acceptance, and religion. Gender differences were found between male and female students when coping with academic stress, with male students utilizing more adaptive based coping strategies as compared to female students. The findings indicated that although the sample used adaptive coping strategies, this did not impact their perceived academic stress, instead the use of maladaptive coping appears to have a positive effect on academic stress. The findings reflect that students are attempting to manage their perceived academic stress in adaptive ways; however, these efforts are not always successful and have possibly led to the use of less adaptive ways of coping

It is hoped that this study can provide further insight into the challenges experienced by first year undergraduate students progressing through their academic career. This will possibly assist in providing future valuable information for various interventions aimed at enhancing students' wellbeing.

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Appendix A: Biographical Questionnaire

Biographical Questionnaire

It would be appreciated if you could take some time to complete this questionnaire. All information given will be treated as **strictly confidential** and will only be reported on when collated e.g. 40% of the research participants were female. Please tick, or fill out answers where applicable.

1. **What is your age?**

   ☐

2. **What is your gender?**

   Male ☐ Female ☐

End

Appendix B: Perception of Academic Stress (PAS) Scale

Perceptions of Academic Stress (PAS) Scale

Please complete the following personal information; the survey will be anonymous and used for research purposes only.

Age:	**Race:**
Sex:	**Level of Study:**

These items deal with the general factors associated with academic stresses.

Please rate your perception about the following statements in contributing to academic stresses

Ratings are as follows: 1 = Strongly disagree to 5 = Strongly agree

Statement	1	2	3	4	5
1. Am confident that I will be a successful student					
2. Am confident that I will be a successful in my future career					
3. I can make academic decisions easily					
4. The time allocated to classes and academic work is enough					
5. I have enough time to relax after work					

Please rate your perception about the following statements contributing to Academic Stresses

Ratings are as follows: 1 = Strongly agree to 5 = Strongly disagree

Statement	1	2	3	4	5
6. My teachers are critical of my academic performance					
7. I fear failing courses this year					

8. I think that my worry about examinations is weakness of character					
9. Teachers have unrealistic expectations of me					
10. The size of the curriculum (workload) is excessive					
11. I believe that the amount of work assignment is too much					
12. Am unable to catch up if getting behind the work					
13. The unrealistic expectations of my parents stresses me out					
14. Competition with my peers for grades is quite intense					
15. The examination questions are usually difficult					
16. Examination time is short to complete the answers					
17. Examination times are very stressful to me out					
18. Even if I pass my exams, am worried about getting a job					

Source: (Bedewy and Gabriel, 2015)

End

Appendix C: Brief COPE Inventory

BRIEF COPE SURVEY

Please complete the following personal information; the survey will be anonymous and used for research purposes only.

Age:	**Race:**
Sex:	**Level of Study:**

These items deal with ways you've been coping with the stress in your life. There are many ways to try to deal with problems. These items ask what you've been doing to cope. Obviously, different people deal with things in different ways, but I'm interested in how you've tried to deal with it. Each item says something about a particular way of coping.

I want to know to what extent you've been doing what the item says. How much or how frequently. Don›t answer on the basis of whether it seems to be working or not—just whether or not you›re doing it.

Use these response choices. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can. Mark the individual block that is most true for you with and X.

1 = I haven't been doing this at all

2 = I've been doing this a little bit

3 = I've been doing this a medium amount

4 = I've been doing this a lot

Questions items	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
1. I've been turning to work or other activities to take my mind off things.				
2. I've been concentrating my efforts on doing something about the situation I'm in				

3. I've been saying to myself "this isn't real."				
4. I've been using alcohol or other drugs to make myself feel better.				
5. I've been getting emotional support from others.				
6. I've been giving up trying to deal with it.				
7. I've been taking action to try to make the situation better.				
8. I've been refusing to believe that it has happened.				
9. I've been saying things to let my unpleasant feelings escape.				
10. I've been getting help and advice from other people.				
11. I've been using alcohol or other drugs to help me get through it.				
12. I've been trying to see it in a different light, to make it seem more positive.				
13. I've been criticizing myself.				
14. I've been trying to come up with a strategy about what to do.				
15. I've been getting comfort and understanding from someone.				
16. I've been giving up the attempt to cope.				
17. I've been looking for something good in what is happening.				

18. I've been making jokes about it.				
19. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.				
20. I've been accepting the reality of the fact that it has happened.				
21. I've been expressing my negative feelings				
22. I've been trying to find comfort in my religion or spiritual beliefs.				
23. I've been trying to get advice or help from other people about what to do.				
24. I've been learning to live with it.				
25. I've been thinking hard about what steps to take.				
26. I've been blaming myself for things that happened.				
27. I've been praying or meditating.				
28. I've been making fun of the situation				

Source: (Carver,1997)

End

Appendix D: Informed Consent Form (English)

UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE (HSSREC)

APPLICATION FOR ETHICS APPROVAL
For research with human participants

INFORMED CONSENT

Information Sheet and Consent to Participate in Research

Date: _____

Dear student,

My name is Jarryd Colborne, from UKZN Howard College, currently completing my Masters Degree in Clinical Psychology.

You are being invited to consider participating in a study that involves research. The aim and purpose of this research is to explore the relationship between academic stress and types of coping. The study is expected to enrol approximately 150 first year psychology students. It will involve answering questions in the form of questionnaires. The duration of your participation if you choose to participate in the study is expected to be approximately 30 minutes.

If participation in the research potentially causes any risks or discomforts, the researcher will then do de-briefing, and if necessary a referral to the UKZN Psychology Clinic will be made. We hope that the study will become a possible source of information for future researchers and students. All information obtained will remain confidential. The information from the questionnaires will be used for research papers only. Participants' identities will not be revealed, and will remain anonymous in any papers resulting from this project.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number_____).

In the event of any problems, or concerns/questions you may make further contact with the researcher at 210502217@stu.ukzn.ac.za, or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION
Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557- Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

CONSENT

I have been informed about the study being conducted by Jarryd Colborne.

I understand the purpose and procedures of the study.

I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without any consequences.

I understand that all information obtained will be stored safely and securely.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher.

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION
Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557 - Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

_____	_____
Signature of Participant	**Date**
_____	_____
Signature of Witness (Where applicable)	**Date**
_____	_____
Signature of Translator (Where applicable)	**Date**

Appendix E: Informed Consent Form (IsiZulu)

IKOMIDI LEZENQUBONHLE KWEZOCWANINGO LEKOLISHI LEZESINTU ESIKOLENI SEZIFUNDO NGENHLALO YOMPHAKATHI (HSSREC)

ISICELO SOKUGUNYAZWA NGOKWEZENQUBONHLE
Okocwaningo olusebenza ngabantu

OKUKULEKELELA EKWAKHIWENI KWEFOMU LOKUVUMA

Usuku: _____

Umfundi othandekayo,

Igama lami nguJarryd Colborne, ovela e-UKZN Howard College, okwamanje egcwalisa iMasters Degree yami eMtholampilo Psychology.

Uyamenywa ukuba ucabangele ukuhlanganyela ekucwaningweni okubandakanya ucwaningo. Inhloso nenhloso yalolu cwaningo ukuhlola ubuhlobo phakathi kokucindezeleka kokufunda kanye nezinhlobo zokubhekana nazo. Ucwaningo kulindeleke ukuthi lubhalise abafundi abangaba ngu-150 bokuqala kwengqondo ngonyaka wokuqala. Kuzobandakanya ukuphendula imibuzo ngendlela yama-questionnaires. Ubude bokubamba iqhaza kwakho uma ukhetha ukuhlanganyela kulolu cwaningo kulindeleke ukuthi kube cishe imizuzu engu-30.

Uma ukubamba iqhaza ocwaningweni kungabangela noma yiziphi izingozi noma ukuphazamiseka, umcwaningi uzobe esebenzisa imininingwane, futhi uma kunesidingo sokudluliselwa ku-KZN Clinic Psychology. Sithemba ukuthi lolu cwaningo luzoba ngumthombo wolwazi wocwaningi nabafundi abazayo. Lonke ulwazi olufunyenwe luzohlala luyimfihlo. Ulwazi oluvela kumbuzo luzosetshenziselwa amaphepha okucwaninga kuphela. Ubunikazi bomhlanganyeli ngeke buvezwe, futhi ngeke buze bukwaziwe kunoma yimaphi amaphepha avela kule phrojekthi.

Lolu cwaningo luye lwabuyekezwa ngokomthetho futhi luvunyiwe yiKomiti Yezokuziphatha EzokuHlaliswa Kwezezizwe ze-UKZN kanye nezomphakathi (inombolo yokugunyazwa_____).

Uma kwenzeka kunoma yiziphi izinkinga, noma ukukhathazeka / imibuzo ungase uthintane naye nomcwaningi ku 210502217@stu.ukzn.ac.za, noma iKomiti yeKomiti Yokuziphatha Yokucwaninga Yabantu E-UKZN, imininingwane yokuxhumana kanje

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION
Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557- Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

OKUKULEKELELA EKWAKHIWENI

- Ngiye ngaziswa mayelana nesifundo esenziwa nguJarryd Colborne.
- Ngiyaqonda injongo nezinqubo zesifundo.
- Nginikezwe ithuba lokuphendula imibuzo mayelana nokufunda futhi ngibe nezimpendulo kokwaneliseka kwami.
- Ngimemezela ukuthi ukubamba iqhaza kwami kulolu cwaningo kuphelele ngokuzithandela nokuthi ngizohoxisa nganoma isiphi isikhathi ngaphandle kwemiphumela.
- Ngiyaqonda ukuthi yonke imininingwane etholakalayo izogcinwa ngokuphepha nangokuphepha.
- Uma ngineminye imibuzo / ukukhathazeka noma imibuzo ehlobene nesifundo ngiyaqonda ukuthi ngingathintana nomcwaningi.
- Uma nginemibuzo noma ukukhathazeka ngamalungelo ami njengomhlanganyeli wokutadisha, noma uma ngikhathazekile ngesici sesifundo noma abacwaningi ngingaxhumana nabo:

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_____	_____
Ukusayina kobambe iqhaza	**Usuku**
_____	_____
Ukusayina Kowufakazi (Uma kunesidingo)	**Usuku**
_____	_____
Signature of Translator (Uma kunesidingo)	**Usuku**

Appendix F: Permission to recruit participants from the UKZN Registrar

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

11 May 2018

Mr Jarryd Colborne (SN 210502217)
School of Applied Human Sciences
College of Humanities
UKZN
Email: jarryd.colborne@gmail.com

Dear Mr Jarryd Colborne

RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper's permission is hereby granted for you to conduct research at the University of KwaZulu-Natal (UKZN) towards your postgraduate studies, provided Ethical clearance has been obtained. We note the title of your research project is:

"Perceived Academic Stress and Coping Strategies among First Year Psychology Students at a tertiary institution."

It is noted that you will be constituting your sample by handing out questionnaires to first year Psychology Students in the School of Applied Sciences from the College of Humanities at UKZN.

Please ensure that the following appears on your notice/questionnaire:

- Ethical clearance number;
- Research title and details of the research, the researcher and the supervisor;
- Consent form is attached to the notice/questionnaire and to be signed by user before he/she fills in questionnaire;
- gatekeepers approval by the Registrar.

You are not authorized to contact staff and students using 'Microsoft Outlook' address book. Identity numbers and email addresses of individuals are not a matter of public record and are protected according to Section 14 of the South African Constitution, as well as the Protection of Public Information Act. For the release of such information over to yourself for research purposes, the University of KwaZulu-Natal will need express consent from the relevant data subjects. Data collected must be treated with due confidentiality and anonymity.

Yours sincerely

[redacted]

MR SS MOKOENA
REGISTRAR

Office of the Registrar
Postal Address: Private Bag X54001, Durban, South Africa
Telephone: +27 (0) 31 260 8005/2206 **Facsimile:** +27 (0) 31 260 7824/2204 **Email:** registrar@ukzn.ac.za
Website: www.ukzn.ac.za

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Appendix G: Ethics Approval Letter

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

13 August 2018

Mr Jarryd W Colborne 210502217
School of Applied Human Sciences – Psychology
Howard College Campus

Dear Mr Colborne

Protocol reference number: HSS/0429/018M
Project title: Perceived Academic Stress and Coping Strategies among First Year Psychology Students at a Tertiary Institution.

Full Approval – Full Committee Reviewed Application

With regards to your response received on 20 July 2018 to our letter of 09 Juy 2018, the Humanities and Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL.**

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

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

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

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

Yours faithfully

[redacted]
.....
Dr Shamila Naidoo (Deputy Chair)

/px

cc Supervisor: Dr Sarojini Naidoo
cc Academic Leader Research: Dr Maud Mthembu
cc School Administrator: Ms Ayanda Ntuli

Humanities & Social Sciences Research Ethics Committee
Professor Shenuka Singh (Chair)/Dr Shamila Naidoo (Deputy Chair)
Westville Campus, Govan Mbeki Building
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Telephone: +27 (0) 31 260 3587/8350/4557 **Facsimile:** +27 (0) 31 260 4609 **Email:** ximbap@ukzn.ac.za / snymanm@ukzn.ac.za / mohunp@ukzn.ac.za
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