Role of resilience and related coping in the adjustment of first year psychology students at the University of KwaZulu-Natal, Pietermaritzburg campus

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Declaration

I hereby declare that this dissertation, *Role of resilience and related coping in the adjustment of first year psychology students at the University of KwaZulu-Natal, Pietermaritzburg campus* is my own original work. All citations, references and borrowed texts have been duly acknowledged. This research has not previously been submitted to any other institution for degree or examination purposes.

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Contents

Abstract

The transition to university is often a challenging process that requires students to adapt to new social and academic stresses whilst balancing the changing roles within their families, friends, academic work, leisure and often a part-time job. The ability to deal with stress in a transition regardless of challenges and still exhibit positive outcomes is crucial in order to achieve academic success along with positive mental health. The aim of the current study was to explore the role of resilience and related coping styles of first year university students' ability to adjust to university life. A total of 142 first year students attending the University of KwaZulu-Natal in Pietermaritzburg participated in the study. Data was collected using questionnaires: The demographic information form, Resilience scale for adults (RSA), Adolescent coping scale (ACS) and Student adaption to college questionnaire (SACQ). To test the data, hierarchical multiple regression analyses were conducted composed of two models: model one: positive adjustment, model two: social adjustment. The first model outlined resilience as significant predictor for students' adjustment at university. The second model outlined gender, diversion coping styles and resilience as significant predictors for social adjustment. It is recommended that more religious activities should be encouraged as students rely on religious beliefs to combat daily stressors.

Key words: Higher Education, First Year Students, Student Adjustment, Perceived Stress, Coping Styles, Resilience, Social Support

Chapter One

1. Background and rationale for the study

1.1 Introduction

There has been an increased concern by South African universities as students are generally unprepared for higher education (Wilson-Strydom, 2011). The South African government has expressed great concern for the poor graduation and retention rates as well as high dropout rates (Sommer, 2013). Along with the National Plan for Higher Education (2001) and National Development Commission (2011), the dropout rate for first-time students entering university range between 0-25% per annum. Higher Education of South Africa (HESA) reported that 35% of first-year students withdraw from university after their first year (Sapa, 2008). Likewise, Breier and Mabizela (2008) stated that on average only 15% of students completed their degrees in the appointed time; 30% drop out after the first year and an additional 20% drop-out after their second or third year. In 2015, the Department of Education released a report showing a drastic increase in the dropout rate which amounted to 47.9 % of students not completing their first year (Gumede, 2017). This report drew attention to South Africa's universities that face an unmanageable problem such as low levels of success and the poor graduation rates (Zyl, 2016). Letseka and Maile (2008), have proclaimed that South African Universities have the lowest university graduation rates in the world thanks to issues such as poor schooling systems (Rogan & Reynolds, 2015) and socio-economic status having the most impact on students being grossly underprepared for university (Zyl, 2016).

University attendance can be a positive experience that offers great opportunities for adolescent development (Tao, Dong, Pratt, Hunsberger, & Pancer, 2000) as well as the opportunity to define and further their careers (Wangeri, Kimani, & Mutweleli, 2012) and improve the competitiveness of the international market and enhance the socio-economic status of the country (Department of Science and Technology, 2012; National Development Commission, 2011). Yet, this experience can be neither enjoyable nor academically successful for a number of students (Kantanis, 2000).

The first year of university can be viewed as a stressful adjustment to unfamiliar expectations, beliefs and attitudes along with multiple stresses of a new social situation (Sennet, 2000). The reality for numerous students is that the transition from high school to institution of higher

education is followed by many unfamiliar and demanding encounters (Cossy, 2014). This may result in students having fears and negative expectations about university life and education (Wangeri et al., 2012). Kashani and Priesmeyer (as cited in Sennet, 2000) reported that first year students encounter adjustment difficulties to a greater extent than those in other academic years, including more disturbances in appetite, feelings of worthlessness, lack of attentiveness, depression and suicidal tendencies. Therefore, the shift from school to higher education can cause stress that can negatively influence academic performance of students (Morosanu, Handley, Donovan, 2010).

Currently, South Africa's youth is confronted with a multi-faceted work environment that requires highly specialized skills, and as a result students are expected to spend a prolonged period in higher education institutions acquiring expert skills, educational experiences, and professional training (Boyde & Bee, as cited in Julia & Veni, 2012). The multicultural context of South Africa provides a broad set of social, economic and cultural backgrounds which many students are to navigate. Fraser and Killen (2005) state that when a diverse group of students are combined, an unequal level of preparedness for university exists. The major disparity between socioeconomic status and class is a challenge that students face at a first-year level, for example, in high school, one attends the high school one can afford; on the other hand, when entering higher education institution like a university, there are various kinds of students from different socioeconomic and school backgrounds that may play a role in their preparedness. There is also the expectation that students at university should succeed academically. For students to succeed academically they are required to complete all their course work and graduate in the proposed time. Students are also expected to adjust to the university environment and culture, but also manage their academic lifestyle and identify themselves with the institution. Yet, most students entering university today share different experiences and, as a result, they do not fit with the university culture (Jones, Coetzee, Bailey, & Wickham, 2008). Therefore, when these two sets of cultures intersect (Mandew, 2003; Stephen, 2003) heightened levels of stress and ineffective coping strategies may impact the student negatively resulting in academic failure or student dropout. The role of resilience in positive adjustment is also critical and has been outlined by Rahat & Ilhan (2015). They have stated that possessing resilient attributes (optimism, self-respect, and focus of control) influences positive adjustment all through one's transition into university life. The ability to bounce back and thrive after a being confronted with a stressful event creates positivity in an individuals' life.

The current study focuses on the role of resilience and related coping mechanisms on the students' ability to adjust to university from a psychological perspective. This information is considered essential in helping students adjust to university life and thus perform better academically. It could also be used to inform current and future student support and development programmes.

1.2 Research Aim

The purpose of study was to explore the role of resilience and coping skills in the adjustment of first year students to a new university environment particularly at the University of KwaZulu-Natal (Pietermaritzburg).

1.3 Research Objectives

- To assess the factor structure and psychometric properties of the measures.
- To understand the level of adjustment to university life by first-year psychology university students.
- To determine coping strategies used by first-year psychology university students.
- To understand the level of resilience of first-year psychology university students.
- Assess demographic group differences of adjustment, coping and resilience of first-year psychology university students.
- Assess the association between resilience, coping and adjustment of first year students
- To determine the predictive power of resilience and coping on adjustment.

1.4 Ethical Consideration

Ethical clearance for this research paper was attained from The Humanities and Social Sciences Ethics Committee of the University of KwaZulu-Natal (Protocol reference number: HSS/1224/016M). Ethical principles of informed consent were adhered to by consideration of voluntary participation, right to withdraw from the study, anonymity and confidentiality.

1.5 Structure of the dissertation

Chapter one provides a general introduction to the entire study. It consist of the background information and the rationale of the study. This includes the aims, objectives and ethical considerations

Chapter two presents a review of literature relevant to the study. It looks into the background of South Africa's higher education, student adjustment coping strategies of student, resilient attitudes of students and the theoretical framework used.

Chapter three focuses on the methods used in the research. It provides a detailed description of the components of the methodology as well the ethical procedures.

Chapter four presents the results of the study. This section outlines the key findings.

Chapter five provides a summation of the findings explaining the role of resilience and related coping styles have on student adjustment. This section also provides the conclusion, recommendations and limitations which are based on the findings of the study.

Chapter Two

2. Literature review

2.1 Introduction

This chapter provides an overview of the literature associated with the history of higher education in South Africa, its transformation and the challenges that exist. This chapter also provides insight into the role of resilience and related coping strategies in the adjustment of first-year psychology students to university life.

2.2 Brief background on South African higher education

Formerly, higher education reflected the 'geopolitical imagination of apartheid planner' that was an era associated with segregation, being racially lopsided and having funds unevenly distributed (Jansen, 2004). This meant that Higher Education met the interests of the elite minority (Mouton, Louw, & Strydom, 2013) that had access to higher education while disadvantaged individuals were educated through Christian missionaries limiting their educational and intellectual development. Correspondingly the level of education between tertiary, primary and secondary education was very similar (Agar, 1990). Universities were based on different ethnic groups in their homelands e.g. Zululand was designated to Zulu and Swazi people, Western Cape designated to Coloured people, Westville designated to Indian people (Metcalfe, 2008). This was essentially the product of the White apartheid government's perception of race, which had moulded the higher education policy framework during the 1980s (Bunting, nd), which consequently led to protests against apartheid education, financial exclusions, lack of infrastructure and facilities (Metcalfe, 2008).

By 1994, South Africa's higher education system was uneven and unorganized. A critical strategy for South Africa to increase participation in higher education meant addressing the skills shortage, high unemployment rates and poverty (Jones et al., 2008) therefore, education was seen as an instrument of societal transformation (Mouton et al., 2013). As a result of the apartheid administration, educational segregation governed the majority of students presently enrolling in higher education institutions as they stem from socioeconomic upbringings that are deemed to be poor, tend to be students who are first-generation students with an elevated risk of breaking off their studies early (Strydom et al., 2010).

Major restructuring had to be implemented within the institutional landscape on principles of equity, human rights, democracy and sustainable development (Ramdass, nd). The government appointed several policy initiatives and legislation (Kisten, 2002) to expedite transformation focused on eradicating the disparities of apartheid (Govinder, Zondo, & Makgoba, 2013). Since 1994, policy programs have been aimed at improving the quality of education to all South Africans as well as to advance the economic and social needs of the new state and society (Bozalek & Boughey, 2012)**.** The higher education sector adopted a definitive shape and character that aligned policy discourse with the demands of international economic competitiveness and the enhanced range of market forces (Fataar, 2003)**.**

The National Plan for Higher Education spoke to the need for equity and equality within higher education (Moosa, 2009) however, Apartheid's legacy has left South Africa with many under-resourced schools and under-qualified teachers, particularly in historically disadvantaged African and rural communities, bringing about a deficiency of resources in these schools. The historical context of the South African Higher Education is a necessary point of reference to recognize the ways in which colonialism and apartheid ideology has shaped the character, development, and provisions of Higher Education to all South Africans, resulting in high dropout rates and difficulties in adjustment to higher education institutions.

2.3 The transition from School to University

The South African school structure has created a platform whereby many scholars find it difficult to succeed in higher education (Nel, Troskie-de Bruin, & Bitzer, 2009). Studies have indicated that students have become increasingly un-prepared for higher education (Foxcroft & Stumpf, 2005). As a result, disparities which are ever present in the South African schooling structures have become worse, and the challenging transitional phase between secondary and tertiary phase has also escalated (Miji, 2002). Several factors influence poor school-university transition (Nel, Troskie-de Bruin, & Bitzer, 2009). These consist of disparities in the school system, impractical insights and beliefs, poor academic adaption, poor social and emotional adaptation, insufficient cultural adaptation and demanding financial circumstances (Fraser & Killen, 2003; Tait, van Eeden, & Tait, 2002).

Although access to higher education is no longer based on racial grounds, it requires applicants to achieve a certain minimum requirement in order to gain access to a field of study (Koen et

al., 2012). This implies that applicants must achieve relatively good results in their matric exams to enter a higher education institution of their choice. However, the majority of the population in South Africa are previously disadvantaged, and, regardless of a more unbiased distribution of educational investment, plenty of students still perform poorly academically. The failure to provide learners with the necessary literacy and numeracy skills results in learners being grossly underprepared for university (National Planning Commission, 2011). Wilson-Strydom (2011) argues that allowing students from disadvantaged backgrounds to have access to university without creating provisions to increase the probability of success is actually preserving social injustice. Consequently, without the support in place to aid success, students ultimately drop out of university or are academically excluded, without a qualification (Wilson-Strydom, 2011).

2.4 Adolescents in transition

Attending university after school is often seen as a natural process for all students, however, in South Africa, many students entering university are first generation students (Pascarella & Terenzini, 1991). Huysamen (2000), states that students whose parents did not attend university are usually underprepared and may lack knowledge, skills and self-efficacy. Particularly, the transition from adolescence to early adulthood, are years of profound change (Arnett, 2000) which allows an individual to gain power in all aspects of life. Transitional phases are also periods of heightened risk such as the transition into university life (Newman & Blackburn, 2002) particularly where the environment is known for its lifestyle shift that may affect many students (LaBrie, Ehret, Hummer, & Prenovost, 2012). Some students adjust to this environment while others struggle.

First-year students are emerging into a stage of adulthood where they are leaving the dependency of childhood and adolescence, but have not yet entered the enduring responsibilities of an adult (Arnett, 2000). Crede and Niehorster (2012) argues that being a first-year student is stressful as they are required to navigate a new social environment, familiarize themselves with new institutions, progess into respectable students of the university community with all different kinds of responsabilities (e.g. adminster own laundry, and finances, come to terms with the separation from family and friends and establish career making decision skills). It is critical for students to engage their environment particularly at

university as this will promote student learning and improve engagement with the institution and lecturers (Krause & Coates, 2008).

Student engagement is an important aspect in the adjustment of students to university life as it draws attention to the degree that students are participating in events in higher education found to correlate with academic achievements (Krause & Coates, 2008). According to Trowler (2010), student commitment can be characterised by the following description:

> 'as a relationship amongst time, determination and ancillary appropriate resources devoted mutually through students and their establishments anticipated with enhancing the experience of students and to develop educational results and developing the performance of students, as well as the prestige of the institute'. (p. 1)

The act of being involved improves the basis of skills and traits, which is vital to living a productive and satisfying life at university (Carini, Kuh, & Klein, 2006). According to Shulman (2002), students who engage in academic activities at university are continuously learning and developing personally. Therefore, the development of student engagement emerges from the dynamic interaction between students, institutional activities and the environment where students can establish the foundations of success.

First-year university students have to go through a process of adjustment, which includes adapting to emotional, cognitive, social or academic demands, which can bring about considerable strain and feelings of helplessness (Sennet, 2000). Often, the first year of university is a stressful adjustment process with unfamiliar expectations, principles, and behaviours that have the tendency of being demanding, like most new environments (Sennet, 2000). Consequently, a failure to adjust and adapt to the new university environment, socially or academically, could lead to failure to complete studies at the institution, which is critical in supporting the entry into the workplace (Arnett, 2000).

2.5 Adjustment to University

Adjustment can be described as an interactive process whereby people maintain equilibrium amid numerous challenges experienced at a particular point in time (Baker & Siryk, 1984). The fundamental facet of human development is the ability to adapt to stress and adversity (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Chirag (2012) uses the following analogy to further explain the process of adjustment: Human beings natural persona

is instinctively social, and as a result, desires to be social and stay within society as one and adapt to the values of society. People therefore cannot be happy if they are not able to adjust socially. Therefore when people struggle to adjust within a social environment they tend to experience emotional tension, awkwardness, and agitation.

Adjustment to university refers to stress and coping behaviour which examines the extent to which individuals are capable of successfully adapting to the many challenges faced at their first year of university in particular (Credé & Niehorster, 2012; Sennet, 2000). The process of successful adjustment by first year students to a university level is critical for their success (Adel Al-khatib, Awamleh, & Samawi, 2012; Sibanyoni & Pillay, 2014). The university environment is remarkably distinctive from that of high school (Mudhovozi, 2012) as the transition to university includes the move to a bigger university arrangement; interactions with fellow students who come from various geographical and occasionally from ethnically diverse upbringings as well as the strong emphasis on accomplishment (Santrock as cited in Mutumbara & Veni, 2012). With increased freedom brings challenges, as students need to make their own decision and good choices, for example, choosing a major for a degree or whether they should be attending class regularly are important choices that may impact academic outcomes (Graber & Brooks-Gunn, 1996). The transition from school to university may possibly be the cause of stress and difficulties that can negatively influence academic performance (Morosanu et al., 2010).

In addition, the transition to university life is an essential development phase that occurs at the same time as students are emerging into adulthood, an adjustment and discovery phase that comes about between the age of 18 and 25 years old (Arnett, 2000). Today, university students face many challenges and adaptation demands as they prepare to transition from home life to campus life (Howard, Schiraldi, Pineda, & Campanella, 2006)**.** There has been considerable change and people generally make their transitions in a competitive environment consisting of competition and individualism (Wangeri et al., 2012)**.** This experience is different for each individual and, therefore, not all transitions into university life are effortless as they are confronted with countless new interpersonal, social, and academic stresses (Baker, 2003) in interaction with intrapersonal aspects such as demographic characteristics, personality, and intelligence and support structures.

For university students, adjustment is multifaceted i.e. academic, social, personal-emotional and institutional (Baker & Siryk, 1984). According to Tinajero, Martinez-Lopez, Rodriquez, Guisande, and Paramo (2014), each one embodies particular challenges.

Academic Adjustment

Baker and Siryk (1984) states that academic adjustment exhibits the degree to which students have adjusted to their educational stresses. It also assesses how well students are able to deal with the academic demands of the academic world (Beyers & Goossens, 2002). This is demonstrated by students attitudes towards their studies, commitment to their study material, and aptitude in relation to studying and academic achievement. This implies that students who are motivated to their studies and want to study have a greater chance of success as they are intrinsically motivated.

Social Adjustment

Social adjustment is the extent to which students have asserted themselves into the social structures of university residencies and the broader university, by participating in university activities and socializing and making friends instead of enduring hardship with loneliness or missing of family. Creating new friendship are an fundamental means of advancing and strengthening their eslf esteem. It can be assumed that a loss of friendship and support offered poses a potential distress (Prout, 1993). Nel et al. (2009) argue that friendship is an important support structure for the transitional phase, as well as social integration. The family is an important sphere of influence for acquiring social, emotional, and physical support (Dubas & Petersen, 1996). Departing the parental home is perceived as a natural developmental process of late adolescence and acts as a pivotal indicator for the transition to adulthood (Dubas & Petersen, 1996). Aside from enrolling in an institution, students typically move away from their home, friends, and family to settle into a new place and lifestyle (Clark, 2005). Being away from the families for what is most likely the first time (Rahat & Ilhan, 2016) could be viewed as either a loss of support or an opportunity for growth.

Personal – Emotional Adjustment

Personal–emotional adjustment can be defined as the degree to which students encounter distress and discomfort to the university environment. This sphere signifies whether the student experiences general psychological distress or present somatic symptoms of distress (Beyers & Goossens, 2002). Low personal–emotional adjustment can inhibit students from exploring

effective help seeking behaviour immediately upon being confronted with academic adversity (Crede & Niehorster, 2012).

Institutional Attachment

This sphere refers to the degree to which students develop emotionally and associate with university culture. Sommer (2013) states that academic and social integration of students impacts the level of commitment to the university. According to Bean (1985), students whose values, norms and beliefs are congruent with that of the institutions' will likely fit in better. Therefore, the higher the level of integration at university, the higher the level of commitment they have. Adjustment therefore implies the connection between the individual and the environment. In understanding the transition, the characteristics of the environment and of individuals is important (Tao et al., 2000).

Students often state emotional reasons when they withdraw from university (Pritchard, Wilson, & Yamnitz, 2007). Accordingly, African students in South Africa who attend historically white universities often have incongruence regarding norms, values and beliefs to the university, as these come from disadvantaged backgrounds due to apartheid (Adan & Felner, 1995). In this instance, it could be assumed that many underprivileged students have attended underprivileged high schools making them less academically prepared. Bringing about, poor adjustment to the university environment.

In spite of South Africa's transformation to redress past inequalities, many South Africans haven't experienced transformation in their personal economic status with many potential students still being marginalized by their socioeconomic status (SES) (van Vuuren, 2014). Stress from socioeconomic status has the possibility of jeopardizing student growth and sense of trust, safety, and security (Dass-Brailsford, 2005). Poverty limits access to basic necessities such as food, shelter, and housing but also correlates positively with poor academic performance. A successful adaptation to university is evident through positive outcomes such as continuing in the university academic programme and progress successfully and experiencing psychological well-being (Julia & Veni, 2012). However, a failure to adjust to a new university environment, whether it be socially or academically, could lead to heightened stress levels and poor academic progress.

2.6 Stress and Coping Styles of Students

Stress is a part of life, for both adults and adolescents, but in unknown circumstances, individuals tend to experience heightened stress levels that often leave them unable to act effectively. DeBerard, Spielmans and Julka (2004) state that University students report high levels of stress which adversely influences their academic performance and makes them susceptible to stress-related health issues. It is important to note that as stress increases, students must adopt a healthy approach to coping with stressors in a new environment (Fisher & Hood, 1987; Acharya, Prakash, Saxena, & Nigam, 2013). Compas et al. (2001) states that successful adjustment to stress comprises of individuals managing their emotions, thinking positively, controlling their behaviour to decrease the causes of stress.

Today, young adults are confronted with an array of stress-related issues such family disputes, academic and societal constraints. These issues promote the likelihood of emotional, social and cognitive challenges in youth such as underachieving at university, public misconduct, personal problems and depression (Frydenberg, et al., 2004). Students also have balance the demands of university, develop social relationships as well as manage their daily requirements. Moreover, the academic workload requires students to deal with midterms and finals, plus the underlying pressure to complete assignments (Hudd, et al., 2000). As stated by Straub (as cited in Smith, 2008), the transition to university life may be related to a number of stressors that involves adjusting by means of coping.

Coping is a function of the situation and the characteristics of the individual, their understanding of the situation and coping intentions. The individual brings different biological, personality and other personal and family characteristics to the appraisal process and reactions to the stressors (Frydenberg, 2004). Coping involves the strategies and approaches that individuals utilize to handle stressors in their lives (Opotow & Deutsch, 1999). In modern society, individuals face many challenges, such as the pressures of daily living in the age of social media, ups and downs in family dynamics and the difficulties experienced in relationships (Frydenberg, 2004).

In situations where students experience high levels of stress they are likely to choose different ways of coping e.g. seeking social support, counselling (Brayn, 2014). Positive coping mechanisms need to be utilized by individuals to deal with stressors. These positive strategies may assist them in coping with the changing and challenging environment during the transition

process (Lawrence, Ashford, & Dent, 2006). Positive factors can also be identified as resources which aid students to overcome risk however, these resources are external to the students such as family support, mentorship from adults, or community organizations that support youth development.

Tao et al., (2000) states that positive coping styles, can be defined by approach-oriented coping, pursuing positive reasoning is associated to less emotional and behaviour problems and can predict positive academic and personal/emotional adjustment. In contrast, a negative coping style, such as avoidance and emotion-focused coping, has been identified as being associated with higher levels of dysfunctional difficulties (Tao et al., 2000).

According to Chia and Low (2015), students' coping mechanisms when confronting stressful circumstances can be linked to their personality characteristics (Li, 2008). There is 'a critical difference between trait-oriented and the process-oriented approaches. Process-oriented approach is the importance applied to the psychological and environmental framework in which coping' occurs (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986, p. 992). The trait-oriented approach assumes that coping is mostly a characteristic of individuals and differences in the stressful situation are insignificant (Folkman et al., 1986). Whereas the context is critical in the process-oriented approach as coping is evaluated as a reaction to the psychological and environmental stresses of particular stressful experiences (Folkman et al., 1986).

However, stress may also bring about negative emotional responses for instance, fear, anger, guilt, and shame (Lazarus & Folkman, 1987). The most common stressors that university students face are academic workload, pressure to complete tasks and deadlines (Farhan & Khan, 2015). von Stumm, Hell, and Chamorro-Premuzic (2011) state that stressors can either motivate or jeopardise the educational journey of students. While students experience stress in their personal, social and academic lives, the impact vary in relation to the intensity of stress, types of stress experienced and how well they cope with the stressors (Ramasubramanian, 2016). Students who are stressed tend to direct their energy away from studying with the result that their academic performance and psycho-social development may be compromised (Compas & Hammen, 1994; KovACS, 1997). Consequently, not all students are able to adjust to the undergraduate experience successfully (Pritchard, Wilson, & Yamnitz, 2007).

Protective factors are traits of an individual or characteristics of the environment that diminishes the effects of risk factors (Braveman, 2001). These factors reside within the individual, such as competence, coping skills, and self-efficacy. Coping examines the person's mental and behavioural efforts to cope with (reduce, minimize, master, or tolerate) the internal and external stresses of the person-environment transaction that is evaluated as challenging or greater than the person's resources' (Folkman & Lazarus, 1985).

The use of coping strategies protects individuals from potentially damaging effects of stress and helps them become more resilient (Malkoç & Yalçin, 2015). Throughout an individual's life, they are exposed to various aspects of stress that often results in either a positive or negative effect, however, if individuals overcome such events effectively and maintain their physical and psychological health despite challenging circumstances, they can be identified as being resilient (Malkoç & Yalçin, 2015). According to Kaner and Bayraki (as cited in Malkoç & Yalçin, 2015), individuals can use adaptive coping strategies and turn stressful situations into learning and developmental opportunities. According to Ramasubramanian (2016), several researchers have requested the incorporation of mindfulness, academic buoyancy, and resilience as stress reducing tools for students.

2.7 Role of resilience

Resilience refers to positive outcomes regardless of stressors to adaptation (Masten, 2001). It has also been defined as one’s capacity to manage risk (Martin & Marsh, 2009) and maintain healthy adjustment when faced with a significant risk (Masten & Obradovic, 2006). A resilient child demonstrates positive adaptation in settings where one might experience unusual levels of stress and avoidant coping skills to follow (Newman & Blackburn, 2002). Resilience includes two elements: (a) being exposed to considerable amount of stressors or risks, and (b) displaying competence and having the desire for positive adjustment (Braveman, 2001).

In the academic context, "resilience" makes reference to an individual's ability to cope with academic challenges that may hinder their academic development (van Vuuren, 2014). Resilient students have the ability to manage their actions and emotions in an academic setting but they also have the ability to overcome negative experiences by utilizing their positive emotions (van Vuuren, 2014). A vital requirement of resilience is the occurrence of both risks and promotive factors that either help produce a positive result or, alternatively, lessen or avert

a negative result (Fergus & Zimmerman, 2005). Therefore, the response to the stressor presented during the course of their three year degree will either create a positive learning experiences or an unsuccessful experience (Holdsworth, Turner, & Scott-Young, 2018).

Students who manage to succeed despite social barriers and challenges and are able to cope and adapt to different situations are seen as resilient (Cabera & Padilla, 2004). Padilla (2009) suggests that internal factors such as motivation and self-esteem, as well as external factors such as support from family and university, play a vital role in resilience and one's ability to adapt. On a similar note, Clauss-Ehlers, Yeng and Chen (2006), argue that cultural factors, as well as ethnic identity, have an influence on one's ability to be resilient.

Shilpa and Srimathi (2015) states that resilience acts as a stress management technique that builds positive emotions and coping strategies to assist university students to successfully deal with stressors but also succeed and confront aversive circumstances (Connor & Davidson, 2003). A resilient student is more prepared to endure with stress and adversity, deal with transformation and to bounce back much faster from distressing events (Newman & Blackburn, 2002).

2.8 Relationship between resilience, coping styles and adjustment

It can be seen from the above analysis that the relationship between resilience, coping style and adjustment is the cornerstone of a students' success in university. University adjustment is multi-dimensional which requires a positive mind-set when advancing to university. This helps to reduce the pressure of the adjustment process (Rahat & Ilhan, 2015). Rahat and Ilhan (2015) state that resilient attributes determine the nature of a student's transition to university. Seligman, Schulman, and Tryon (2007) argued earlier that resilient attributes and effective coping styles helps reduce symptoms of depression and anxiety as well as improve the students' well-being therefore allowing the student to excel in their academic environment (as cited in Chen, 2016). However, very little research has been conducted on understanding the role resilience and coping styles has on the adjustment of first year students' to a new university environment, particularly, in the South Africa context. More importantly, no published empirical study has linked resilience, coping styles, and adjustment.

2.9 Theoretical framework

Understanding the factors that influence students' adjustment to university life could assist students in making the transition less stressful and more manageable. Two theories on student adjustment are highlighted below, Schlossberg Theory of Transition and The Transactional Model of Stress.

Schlossberg Transition Theory

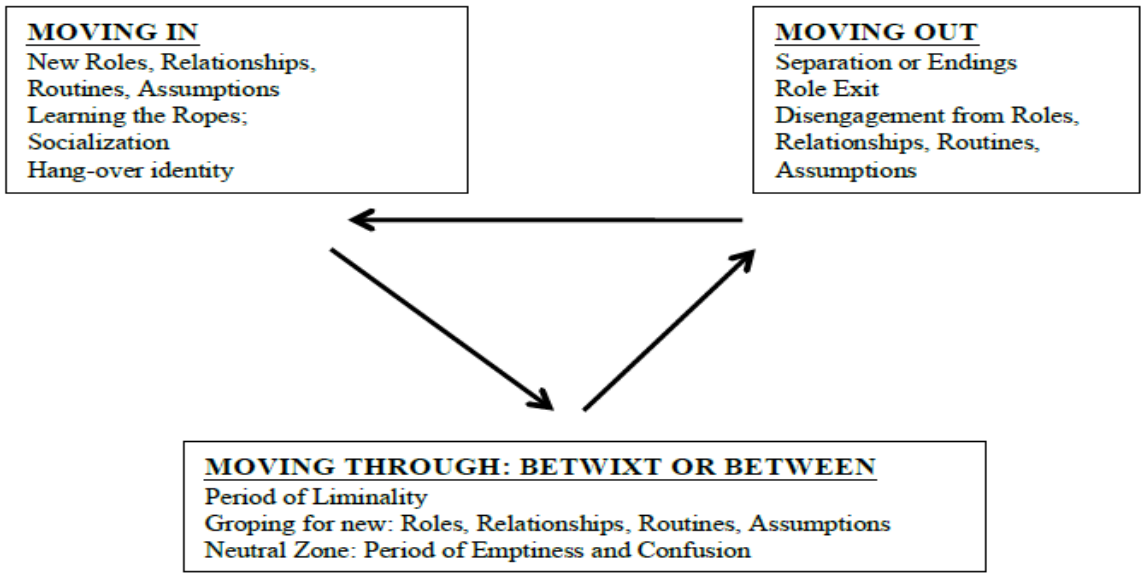
The model of Schlossberg's transition theory (Schlossberg, 1981), is the frame of reference in understanding and conceptualizing the demands and coping strategies used by individuals going through a transitional process. Schlossberg developed the transition theory (1981) specifically for adult transitions, however, it has been applied in literature for student transition to university.

Schlossberg (1981) describes a transition as a complicated process which resulted in her developing a model that lists and displays the number of variables that affect the result of transition. Schlossberg (1981) identifies three major factors that influence a transition, the first factor is the characteristics of the transition such as entering university for the first time. Secondly, the qualities of the pre- and post-transition environments. The third factor is the characteristics of the individual undergoing the transition. An appraisal of the transition by the individual is critical as it focuses on how a student thinks, feels and copes in the transition (Lemmens, 2010). If the positive event outweighs the negative event, then the transition will be less difficult.

The theory outlines the importance of identifying the transitions as either anticipated, unanticipated, or a non-event (an event that did not happen). Schlossberg (1981) outlines that an anticipated transition is a planned transition that is frequently self-initiated and accompanied with planned decisions such as graduation from university (Schlossberg, 2011). Unanticipated transitions are described as unplanned and unforeseeable events such as a student unexpectedly losing their financial support and then do not have financial security to enrol at university. This type of transition does not allow the individual to prepare and often the individual does not have the resources to make the transition (Cossy, 2014). Thirdly, a non-event transition is a change that is scheduled to occur but did not materialize yet, such as future graduation (Cossy, 2014).

Anderson, Goodman and Schlossberg (2011) suggested that students experience three distinct phases when students are in transition: moving in, moving through, and moving out (see figure 1). The first stage of a transition is moving in. This consists of entering a new transition such as entering university for the first time. This requires the student to master new skills, fulfil new responsibilities, make difficult decisions and form new relationships. Furthermore, Students have to develop their academic skills such as essay writing, as well as learn the rules and regulations of the university (Drury, Francis, & Chapman, n.d; Ryan, 2010). Moving through, is the second stage of a transition, whereby students have to keep going regardless of challenges and setbacks. This stage entails the student to sharpen their academic skills and time management skills, deal with personal crises and discover their identity within the university (Drury et al., n.d). At the same time, students have to cope with the changing roles within their families, balance academics, leisure and often part-time jobs (Drury et al., n.d). Moving out, is the end of transitions and the start of the next challenge, for instance, graduation and employment. At this stage, students are examining their move (Chickering & Mason, 1994). This follows a process whereby students will be graduating from the university but also having a sense of their next phase and therefore will begin a new chapter in their life by moving in to the workplace and starting another new transition process.

Figure 1.
Schlossberg's Integrative Model of the Transition Process
(Schlossberg, Waters, & Goodman, 1995, p. 44)



Each transition is a process that requires a range of coping skills that will determine whether a student will successfully transition to university. Schlossberg (1981) classified four major factors that impact an individual's ability to deal with a transition as described below in figure 2: situation, self, support, and strategies known as the 4S system (see figure 2). One's effectiveness in coping with the transition is determined by the individual's resources in these four areas (Evans, Forney, Guido, Patton, & Renn, 2010).

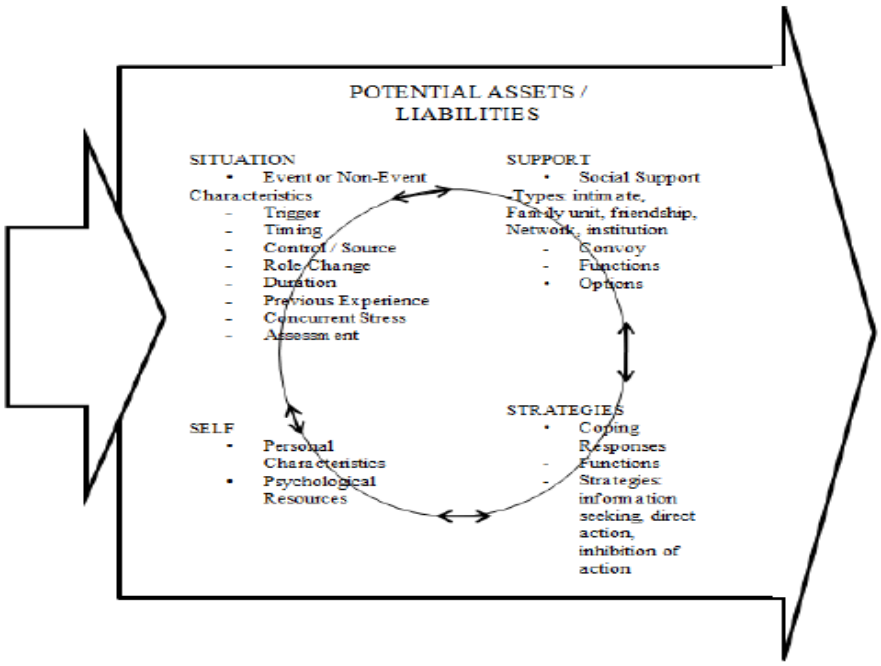
The Situation is the student's examination of the situation in transition. This refers to the type of transition (anticipated or unanticipated). For first-time university students this transition could be anticipated or unanticipated. Regardless the transition, the circumstance in which the event occurs may affect their transitional process, for instance, losing social support by moving away from home into a new unfamiliar environment or becoming ill resulting in a difficult transition (Schlossberg, 2011). The student has to decide on the specific type of transition? How to perceive the transition, Where are they in the transition, And are there other stressors or transitions occurring simultaneously (Pella- Shuster, 2016). Schlossberg suggests that a student's situation during a transition depends on the following factors: the trigger that sets the transition in motion, role change, duration of the transition, timing of the transition, the control the student has over the transition and the experience with a previous transition.

The Self, refers to a student's approach to life which are affected by personal characteristics (including age, gender, demographics, such as socioeconomic status) and psychological resources (self-concept and self-efficacy), that impact the perception of the transition (Schlossberg, 2011). Each and every students comes to university with individual experiences that have some bearing on their career (Ryan, 2010). Chickering and Schlossberg (2002) argued that people with high levels of self-confidence tend to have a better probability of transitioning successfully as they are deemed to have a strong sense of personal competence.

Support refers to Social Support. These are the resources that are accessible to the individual in transition. This is often needed to handle stress, may include, intimate relationships, family, friends, co-workers, and communities (Schlossberg, 2011). The support a student experiences throughout a transition can be the most important element to success (Ryan, 2010). It can be said that the more support a student receives the more likely they are to experience an effortless transition to higher education.

Figure 2

Schlossberg's Coping Resources – The Four S's, (Schlossberg et al., 1995, p. 48)



Finally, Strategies refers to coping strategies that are implemented to avoid stress but also how to respond to stress. Coping mechanisms and strategies that complete a successful transition varies between each student (Ryan, 2010). Schlossberg (2011) states that students who are flexible draw on a variety of coping mechanisms to deal with the transition to university. Therefore, it can be said that students will choose coping mechanisms that best fit their circumstances during the transitions phase.

The outcome of a transition may not always be positive, but neither is it negative (Schlossberg, 1981). Regardless of where an individual is in the transition process or the type of transition, each individual copes with it in a different way relying on the resources available. With this in mind, it is crucial for first year university students to be engaged during their experience (Tinto, 2006).

Schlossberg theory of transition provides a dynamic understanding on how students experience a transition. This theory provides clear framework to the study on how students adapt to a new culture and new life experiences especially during their transition process i.e. the three transitional phases: Moving in, moving through and moving out. The 4 S system aids student's to cope with the transition by providing a more manageable strategy. It also examines the student's individual and social factors of the transition. Therefore, understanding how a student makes their way through a transition and how they cope with a transition is critical.

The Transactional Model of stress and coping

The transactional model of stress is a framework for evaluating stressful encounters as a person-environment transaction (Lazarus & Folkman, 1984) (see figure 3 below). This transaction implies that a person and the environment are linked in mutual relationships (Lazarus & Folkman, 1984). Stress can be seen as a mix of environmental demands and individual resources (Aldwin, 1994). Thus, describing individuals as interacting with their environments (Lewis & Frydenberg, 2004).

The theory recommends two processes, particularly, cognitive appraisal and coping, which are analysed as integral mediators of stressful person-environment relationships and of their current and long-term outcomes (Folkman, Lazarus, Gruen, & DeLongis, 1986). Cognitive appraisal is a process whereby the individual gauges whether a specific encounter with the environment is applicable to their well-being. This focuses on evaluating if a situation is harmful, threating, or challenging (Lazarus & Folkman, 1984). When individuals are incapable of finding personal resources to cope with the stressors they consider it harmful and threating. There are two types of cognitive appraisal: primary and secondary. Primary appraisal is where an individual assesses whether he or she is at risk. This process assists the person to evaluate the relevance of the event, whether it be, positive, or negative (Tuna, 2003). In secondary appraisal, the individual assesses if anything can be done to overcome or prevent harm or to improve the prospects for benefit (Folkman et al., 1986). An individual assesses the coping methods available to them by focusing on the question "what can I do?" (Folkman & Lazarus, 1985).

The relationship between primary and secondary appraisal operates interdependently (Folkman & Lazarus, 1985). If relevant coping resources for dealing with the risk are sufficient, the degree of risk is reduced. In comparison, if coping resources are not adequate to satisfy the environmental stresses, a non-threatening situation may develop into a threatening situation (Folkman & Lazarus, 1985).

Coping can be characterized as follows:

Problem-focused (coping with the situation, e.g. hard working, resolving the situation), emotion-focused (referring to others, e.g. pursuing social support, fitting in with friends) and non-productive strategies, (e.g. self-blame, worry) (Frydenberg & Lewis, 1993). Coping is not viewed as a personality trait or style that remains constant throughout the situation (Mitchell,

2004). Instead, coping is viewed as a series of strategies that are accessible and selected to match-specific situations (Mitchell, 2004).

Coping has two major functions: managing the crisis that is creating the affliction (problem-focused coping) and regulating emotion (emotion-focused coping). Problem-focused coping attempts to focus on finding a solution to turn around a stressful situation into a healthier situation. Emotion-focused coping focuses on changing the interpretation of the stressful situation into a non-threatening one (Lazarus, 1993). Folkman and Lazarus (1985) confirmed that both types of coping, problem and emotion-focused, are used in three stressful situations, specifically, before a final exam, after the exam, and when the grades were announced.

The overall judgment is constructed on one's beliefs and goals and the individual's outlook regarding several characteristics of the stressful encounter. For example, if there has not been a solution to the problem creating distress, the outcome can be assessed satisfactorily if the demands of the encounter are accomplished as well as could be anticipated. Despite the fact the issue producing distress is solved an outcome can be considered negative if the resolution is conflicting with other values and goals, less than what the person thought could be achieved, or creates added distress in the one's social environment (Folkman et al., 1986).

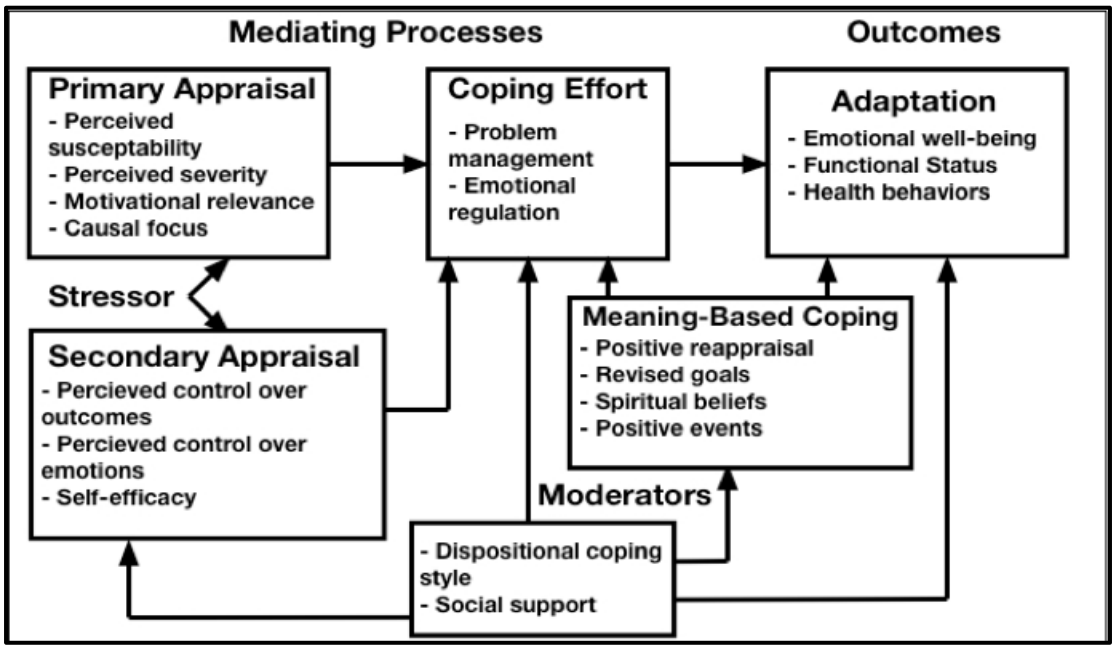
Cognitive appraisal and coping are transactional variables that examines the environment and individual as a transaction and not individually (Folkman et al., 1986). An individual's cognitive appraisal of the situation is influential in coping selections.

It is apparent that stress is part and parcel of life. The transactional theory of stress and coping plays a critical role in explaining how students appraise the processes of coping with stressful events particularly the stress of transitioning to first year. Since this stressful experience is influenced by person-environment transactions. These transactions depend on the impact of external stressors such as loss of friendship. This theory is particularly useful in explaining how students deal with the stress of adapting to their first year of university and the type of coping efforts they use when making the transition to university.

Figure 3

Diagram of transactional model of stress and coping

(IB Notes, 2014)



2.10 Conclusion

The review of the literature presented information on issues that tend to occur when students transition from high school to university. It explored how South Africa's history has shaped higher education and access to higher education institutions. It also explored the coping methods used by student in order to manage their life. It was noted that student's distress will diminish once they have applied effective coping measures to adjust to university in addition students are able to overcome risk with the aim of being successful in all aspects of their social, personal and university life. It was interesting to note that positive social support were a key finding in most studies. This suggested that students need a healthy and supportive social environment that can provide stability for students in transition.

The theoretical framework provided sufficient information that identified how students cope whilst transitioning to university. It suggested that once students are able to understand the means of coping, they become better equipped to employ a range of productive coping strategies that will aid in the reduction of stress and moving through transitional phases with ease. Consequently, developing of personal agency is an important component in students against stress and anxiety, and preparing them with life management skills (Frydenberg, 2004).

Chapter Three

3. Methodology

3.1 Introduction

This section describes the methods applied in this study in terms of the research design, namely, a cross-sectional quantitative method followed by the sampling procedures, thereafter, an explanation on the research instruments utilised and a comprehensive analysis of the data collection and techniques that were followed along with the statistical techniques utilised to answer the research questions.

3.2 Research Design

A quantitiatve approach was used for the study. The research design accords with post-postivitism. Postpositivism analyses the causes that impact outcomes, such as concerns assesed in research (Creswell, 2003). Postpositivism emerged from a positivistic stance. According to Lincoln and Guba (2000) positivists identifies an objective reality, postpositivists accepts an objective reality. Creswell (2003) further explains quantitative research as an investigation that employs post-positivistic claims for furthering knowledge, applying strategies of analysis, and gather data on predetermined instruments that produce statistical data. Burns and Grove (1993) and Grove (1993) defines quantitative research as a formal, objective, systematic process to describe and test relationships and examine cause and effect interactions among variables

The present study employed a cross-sectional survey design in which a self-administered questionnaire was used to assess first year students' levels of adjustment, coping strategies used and level of resilience. This design is used to report on a certain population at a particular point in period (Visser, Krosnick, & Lavrakas, 2000).

3.3 Sampling

This research paper utilised a non-probability convenience sampling technique. Convenience sampling is based on selecting individuals that are available at a particular time (Sekaran, 2003). This type of sampling is suitable as it is aimed at allowing the researcher to gather data from students who are readily available. nable. Although, this method of sampling is easy, relatively cost effective and convenient, it has its limitations such as selecting a sample that is not representative of the population (Neuman , 2006).

The sampling strategy was used to select 142 first year students at the University of KwaZulu-Natal, Pietermaritzburg campus in the Discipline of Psychology, School of Applied Human Sciences. Students were approached on the day of data collection. Students selected were Psychology level one students of which the overwhelming majority are in their first year of study at University. However, several students were in their second year taking psychology level one and will then be referred to as first year students. The details will be discussed in the procedure section below.

3.4 Research instruments

The study employed a quantitative self-report survey to answer the research questions. In light of research questions and a thorough review of the literature, a demographic questionnaire and three major instruments were utilised: The Resilience Scale for Adults (RSA), Adolescent Coping Scale and The Student Adaption to College Questionnaire were included. A semantic differential based scale was used in the Resilience Scale for Adults as each item had a positive and a negative attribute at each end of the scale continuum. A Likert-based scale was used for the other two instruments i.e. the Adolescent Coping Scale 'use a great deal' to 'use very little' and the Student Adaption to College Questionnaire e.g. 'applies to me' and 'doesn't apply to me'. The scales used in the present study will be discussed below.

Demographic instrument

The demographic inventory was developed by the researcher to collect demographic information about the participants' designed at identifying age, gender, race, marital status, year of study and socio-economic status.

Resilience Scale for Adults (RSA)

The instrument adopted was the Resilience Scale for Adults developed by Oddgeir Friborg, Odin Hjemdal, Jan H. Rosenvinge, and Monica Martinussen (2003) This instrument is a 33-item self report scale, designed to measure protective resilience factors among adults. The scale uses a 5-point semantic differential scale format, in which each item has two opposite attributes at each end of the scale continuum. Positive and negative attributes are found on both ends of the scale, half the items are reversed scored to reduce response bias.. The questionnaire comprised six aspects of resilience measuring protective factors i.e. *Perception of Self,*

Planned Future, Social Competence, Structured Style, Family and Social Resources (Friborg et al., 2003). Higher scores indicate higher levels of resilience.

The reliability and validity of the RSA has been found satisfactory in numerous studies (Friborg et al., 2003). The RSA has demonstrated good internal consistency, the Cronbach's alpha for the total RSA score was .88 and varied between .56 and .79 for the subscale sum scores in the study of Hjemdal et al., (2015). In a South African study conducted by Cowden, Meyer-Weitz, and Asante (2016) the reported Cronbach's alpha for total resilience was (0.89), *Perception of Self (0.70), Social Competence (0.77), Family Cohesion (0.81), and Social Resources (0.81)* were found to be adequately strong. Dageid and Gronlie (2015) reported a good overall reliability (α = .81). It can thus be argued that the RSA is suitable for the South African context.

Adolescent Coping scale (ACS)

The second instrument adopted was the Adolescent Coping Scale (ACS) developed by Frydenberg and Lewis (1993) and measures the coping strategies used by young people when faced with challenges and or stressors. Adolescent Coping Scale is a 79 item, 18 factor self-report questionnaire developed to measure the three areas of coping (productive coping, reference to others and non-productive coping. Due to time constraints in the class setting in which data was collected, the instrument was adapted by selecting only one item from the 18 conceptual areas of coping (Frydenberg and Lewis, 2000) rated on a 5-point Likert scale (1 = used very little; 5 = used a great deal). Sample of items include: I work at solving the problem to the best of my ability; and 2) I have no way of dealing with the situation. For the full instrument, acceptable Cronbach's alpha co-efficient ranged from 0.54 to 0.85 (Frydenberg and Lewis 1996; Plucker 1997). An acceptable reliability co-efficient of 0.65 has been reported for the ACS in South Africa (Hutchinson et al., 2007).

Frydenberg and Lewis (2000) reported acceptable Cronbach's alpha coefficients ranging from 0.54 to 0.85 in a study with different young people, and also reported a median of 0.70. Hutchinson, Yarnal, Staffordson, and Kerstetter (2007) stated that the ACS was used in South African research studies with a reported Cronbach's alpha co-efficient of 0.65. Okafor (2014) reported Cronbach's alpha of 0.71 for Productive coping scale and a mean inter-item correlation of r=.240 and a Cronbach's alpha 0.54 for Non-productive coping scale and a mean inter-item correlation of r=.227. This was considered sufficient for scales which have ten items

or less (Briggs & Cheek, 1986). It should be noted that Okafor (2014) also used only 18 items among a South African study sample.

The Student Adaption to College Questionnaire (SACQ)

The third instrument adopted was the Student Adaption to College Questionnaire. The SACQ was developed by Robert W. Baker and Bohdan Siryk in 1989. This instrument evaluates and provides a measure for the success of students' adjustment in the academic, social, and personal-emotional domains, along with measuring the rapport established between the student and the institution, which form the subscales of the questionnaire (Barends, 2004).

The SACQ is a 67-item questionnaire designed to measure the effectiveness of student adjustment to the university environment. The instrument measures the effectiveness of adjusting in the academic, social and personal-emotional domains, as well as attachment (Sennett, 2000). A Likert-type scale is used to assess how well each of the statements applies to the respondent, which ranges from 1 (*doesn't apply to me at all*) to 9 (*applies very closely to me*).

Baker and Siryk (1989) states that for reliability, the alpha coefficient for the full-scale ranges from 0.92 to 0.95, Academic Adjustment .81 to .90, Social Adjustment .83 to .91, Personal-Emotional Adjustment .77 to .86, and Goal Commitment-Institutional Attachment .85 to .91. In a South Africa study conducted by Sennett, Finchilescu, Gibson, and Strauss (2003) the Cronbach's alphas for the full scale and 4 subscales were in keeping with the alpha coefficients derived from the normative data, suggesting an adequate internal reliability: Full Scale Adjustment =.92; Academic Adjustment =.84; Social Adjustment =.83; Personal Emotional Adjustment =.81; Institutional Attachment =.81. The higher scores on this scale indicate that the person is well adjusted, while the lower scores indicate adjustment problems.

Academic Adjustment involves the student's ability to cope in a demanding academic environment inherent to the university experience. Baker and Siryk (1984) states this subscale states that lower scores are related to lower academic results at the first year level of undergraduate study, a lack of discipline, uncertainty and poorly selected goals, and a likelihood of inaccurate analysis of the self.

Social adjustment is associated with the student's ability to deal with the interpersonal and societal demands at university. The subscale reveals that lower scores are related to heightened social anxiety and avoidance, increased feelings of loneliness, lack of social support, diminished social self-confidence and self-image, and lack of involvement in social activities within the environment of the university (Baker & Siryk, 1984).

Personal-Emotional Adjustment measures student's intrapsychic state during adjustment stage and is correlated to psychological distress and related physical outcomes. Lower scores on this subscale are linked to the likelihood of using campus psychological facilities, limited coping resources, and a greater amount of emotional distress, anxiety and depression (Baker & Siryk, 1984).

Goal Commitment-Institutional Attachment pertains to the student's extent of commitment to educational-institutional goals and the amount of attachment or affiliation to their institution. It therefore suggests the nature of the relationship that is formulated between the student and the institution. Lower scores on this subscale contributes to a higher probability of the student dropping out from university and less satisfaction with the general university experience (Baker & Siryk, 1984).

The standardized mean of 50 is mainly appropriate to US samples but less so for different populations. However, the SACQ has been utilized in many cross-cultural contexts including South Africa (Sennett et al., 2003; Davidowitz & Schreiber, 2008). (Sennett et al., 2003) (Davidowitz & Schreiber, 2008). The Cronbach alphas for the full scale and four subscales ranged from 0.81 to 0.92 (Sennett et al., 2003) and is considered adequate for the South African context.

3.5 Data Collection and Procedures

Prior to collecting data, the study adhered to all ethical procedures as outlined by The Humanities and Social Sciences Ethics Committee of the University of KwaZulu-Natal. Gatekeeper's permission was approved by the office of the Registrar to execute research among students of UKZN, Pietermaritzburg. Permission was obtained from the Dean and Head School of Applied Human Sciences and the Academic Leader for Psychology on the Pietermaritzburg campus. Ethical approval for the study was acquired from The Humanities and Social Sciences

Ethics Committee of the University of KwaZulu-Natal (protocol reference number is HSS/1224/016M).

The researcher approached the lecturer for permission to administer the questionnaire to students during their lecture period. However, this was an impossible task as the University experienced a period of disruptive strikes which prompted the university to cancel all lectures and therefore prompted the researcher to approach students individually to request permission to participate in the study. Students were approached by the researcher to request their assistance to participate in the study. Prior to obtaining written informed consent, participants were informed about the aim and objectives of the study, ethical principles were discussed specifically voluntary participation, anonymity of their information, confidentiality in the study and their right to withdraw from the study at any time with no negative consequence to them. Students who volunteered were presented with an informed consent document to sign in which the aims and objectives were clearly stated along with the ethical principles, as outlined above. The researcher distributed and collected the questionnaire after the students completed the research instruments. The data collection was completed within 20 to 30 minutes.

3.6 Data Analysis

Data analysis was performed using the Statistical Package for Social Science (SPSS) version 24 for analyses. The quality of data was assured by running frequencies for each item to inspect the quality of date being captured. Once data was cleaned, descriptive analysis was executed to summarize the data and to assess the central tendency of responses.

Frequencies were reported for the demographic characteristics of the students. Demographic information was recorded to improve the response rate: Race groups were therefore categorized as such: African (1), Indian (2), White and Coloured were recorded into one group called Other (3); Year of study was recoded into first year (1), second, third and fourth year were recorded into one group called Other (2); Housing was categorized as university residence (1) off campus (2), living with parents (3) and other (4), and later recoded to living off campus with others or on UKZN residences (university residence, off campus and other) (1) and living with parents (3). Parental graduation was also recorded to parents who didn't attend university (1) and both parents, mother only and father only were recorded into one group, parents who attended (2).

Exploratory Factor Analysis (EFA) was carry out on measures RSA, ACS and SACQ with the aim to identify the factor structure of the instruments and determine the number of factors that were suitable for the data gathered (Pallant, 2011). Factor analysis is a statistical method used as a data reduction technique. It is also used to reduce a large number of related variables to a more controllable set in order to use the variables in additional analyses for example, multiple regression (Pallant 2011). Principle Component Analysis (PCA) was used in this study. According to Pallant (2011) this analysis reduces the original variables into smaller linear sequences retaining the variance in the variables being utilized. Bartlett's test of Sphericity was statistically significant at $p < .05$ and the Kaiser-Meyer-Olkin values were above .6. Factors were determined with the analysis of the scree plots and eigenvalue of 1.0 or more. The factors were rotated using the Varimax method which reduces the number of variables that have a high factor loading. However, in cases where there is multiple factor loading, items with the highest loadings are given to a factor.

The descriptive statistics were computed to assess the normality of the scale distributions. The scale reliability was measured by assessing the inter-item reliability using Cronbach's alpha. Internal consistency is an appraisal of the homogeneity of items of the scale (Ferketich, 1991). Normality of the scales were further investigated by using the Explore function of SPSS, the outliers in each measurement were illustrated, and the Q-Q plot and Boxplot were used in detecting normality. The outliers were removed to improve the normality of the distribution.
The scales were constructed by summing the relevant items after the necessary recoding was done where appropriate.

Both non-parametric and parametric analyses techniques were carried out to determine the mean score difference on the scales across the difference demographic groups. The Non-parametric Mann – Whitney test was performed on the ACS subscale Goal directed. The ACS subscale Diversion and Non-Productive used a parametric *t*-tests. Independent sample *t*-tests were used to determine mean score difference on RSA, ACS and SACQ among gender and age groups. One-way ANOVA was employed to assess group differences (race) on the mean scores of the RSA, ACS and SACQ. The difference between the groups was calculated using eta-square, this effect size statistic is regularly used (Pallant, 2011). Eta-square ranges from 0 to 1 and explains a portion of the variance in the DV that is linked to the IV.
Pearson correlation coefficients and, Spearman's correlation coefficients, were also conducted to investigate the linear relationship between RSA, ACS, SACQ and their respective subscales.

These tests (r or rho) explains the strength and direction of the relationship among a set of variables and in this case among SACQ, RSA and ACS. Therefore, the relationship between SACQ, RSA, and ACS were calculated to establish whether the relationship is statistically significant. A correlation coefficient of 0.3 was applied for moderate satisfactory significant relationship level, and 0.5 for a strong relationship (Cohen, 1988).

A multiple regression hierarchical regression test was used to assess the predictors (IV:gender, race, RSA, non-productive,goal directed and diversion) on SACQ. This analysis is built on correlation; however, it is more complex as it investigates the interrelationship between a set of variables (Pallant, 2011). The statistical significance level p-value of ≤ 0.05 was generally applied (Pallant, 2011). The hierarchical multiple regression analysis was conducted in two steps. Measures that had an association with the dependent variable was used to predict the levels of student adjustment (SACQ). A set of variables are entered in stages, with all independent variable being measured based on the prediction power of the dependent variable subsequent to previous variables that have been controlled (Pallant, 2011). This allows the researcher to choose the sequence of variables constructed on a logical or theoretical context (Jeong & Jung Jung, 2016). Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, and homoscedasticity.

3.7 Chapter Summary

In this chapter, all the required methodological techniques for the research study were outlined. First, the cross-sectional quantitative survey research design was outlined and linked to the post-positivism (paradigm) followed by the sampling procedure. The research instruments and their inter-item reliability confidents were presented to state their reliability and validity for its use among a South African study sample. This was followed by the data collection procedures and analysis directed at answering the research questions.

Chapter Four

4. Results

4.1 Introduction

This chapter presents the descriptive statistics as well as the results of the inferential statistics. First, the demographic characteristics of the sample are presented, followed by the psychometric properties of the research measurements: RSA, ACS and SACQ. The Pearson's and Spearman's correlation coefficients results are then presented that were conducted to investigate the relationships between the measurements used. Finally, the results of the hierarchal multiple regression analyses are presented. These were conducted to assess the prediction value of the independent variables (selected demographic variable, ACS subscales and RSA) on the dependent variables (SACQ and SACQ subscales).

4.2 Socio-demographic characteristics of the sample

The table below depicts the characteristic of sample. A total of 142 first year psychology students were recruited for this study, 72 were males (50.7%) and 70 females (49.3). The greater percentage of the students were between 18-24 years old (98.6 %), while 1.4 % of the students were above 24 years old. The racial demographic sample was recorded into the three groups with the majority of students being Indian (51.4 %) and African (26.7 %) and the smallest groups Coloured (10.6%) and White (8.5%) were recoded into one, namely Other (19.2 %). Of the sample 69.2 % of the students are living off campus with family, 28.1 % of the students are living off campus with others or on UKZN residences. Parental graduation was recoded into two groups, parents who didn't attend university (45.8%) and parents who have attended (54.2%). This comprised of both parents (26.8%) or mother only (21.6%) or father only (4.9%).

Table 1

Demography of participants

Characteristic	N	%
Gender		
Male	72	50.7
Female	70	49.3
Age		
Age group		
18-24 years	140	98.6
24- + years	2	1.4
Race		
African	39	27.5
Indian	75	52.8
Other	28	19.7
Year of study		
First year	121	82.9
Other	21	14.8
Residence		
With parents	101	71.1
Off campus or res	41	28.9
Parental graduation		
No	65	45.8
Yes, both or mother only or father only	77	54.2

4.3 Factor Structure and Psychometric properties of the measures

Resilience Scale for Adults

Data suitability for factor analysis for the Resilience Scale for Adults (RSA) confirmed using the Kaiser-Meyer- Olkin (KMO) value of .812 and the Bartlett's Test of Sphericity value of <.001. Item loading was too complex and across factors with some loadings high on all factors. The RSA demonstrated good internal consistency and reliability having the Cronbach's alpha reliability coefficient for total resilience α = .880 with a mean inter-item correlation *of r* = .185. The subscales were not included due to the complexity of data that was presented thus only the full scale was used (see table 2 below).

Table 2

Factor loading of RSA

	Component								
	1	2	3	4	5	6	7	8	9	10
RSA1	.49		.50							
RSA2	.39		.53							
RSA3	.35						.33		.47	
RSA4	.37				.35		.50			
RSA5	.35			-.42	.43					
RSA6	.32	-.39	.37							
RSA7	.59				-.40					
RSA8	.65									
RSA10	.59	-.37		.34						
RSA11	.70	-.32								
RSA12	.31	.46		.44						
RSA13	.38	.50								-.31
RSA14	.69									
RSA15	.66									
RSA16	.41					-.47		.41		
RSA17	.46					-.31			.42	
RSA18	.30			.36		.41				
RSA19	.47			.31			-.36		-.32	
RSA20	.39	.33								
RSA21	.39	.36			-.36					.43
RSA22	.47									
RSA23	.44		.43					-.36		
RSA24		.35			.47					
RSA25		.46			-.33					.41
RSA26	.61		-.34							
RSA27	.48		-.33			-.31				
RSA28	.70		-.30							
RSA29	.45							.48		
RSA30		.34		-.40			.33		-.36	
RSA31	.47									
RSA32	.47			-.49						
RSA33	.60	-.41								

a. 10 components extracted.

Adolescent Coping Scale (ACS)

The result of factor analysis conducted on the 18 items of Adolescent Coping scale (ACS) was acceptable using the Kaiser-Meyer- Olkin (KMO) value of .679 and the Bartlett's Test of Sphericity value of <.001. The factor structure extracted six items with eigenvalues over 1 and the explained 58.546% of the total variance. Most items were loaded complexly, and the decision was taken to include three factors and remove productive coping as complex loading presented itself (see table 3 below). Thus, Non-productive coping (4 items) remained, Goal directed coping (2 items) and Diversion (7 items) were created based on the factor loading structure. The variance explained 18.342% for factor one, 11.86% for factor two and 9.029% for factor three (see diagram 1 below).

The internal consistency reliability of Non-productive Coping (NProdC) was α = .629 and a mean inter-item correlation of r = .298, Goal Directed Coping (GDirC) had a Cronbach's alpha of α = .638 and a mean inter-item correlation of r = .469, while Diversion (DivC) had a Cronbach's alpha of α = .749 and a mean inter-item correlation of r = .299. Briggs and Cheek (1986) stated that consideration ought to be given to the mean inter-item correlation when scales have less than 10 items. The scales can therefore be considered adequate based on the mean inter-item correlation co-efficient.

Diagram 1

Scree plot of factor loading of ACS

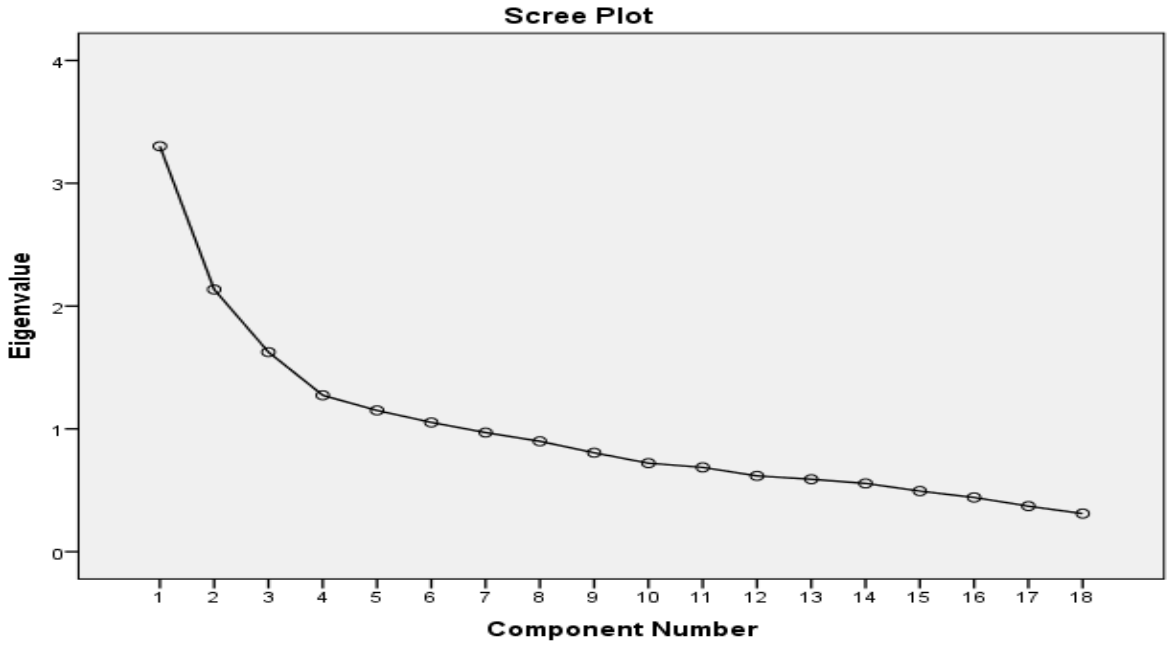


Table 3

Factor loading of ACS

	Component					
	1	2	3	4	5	6
ACS5			.57	-.42		
ACS6	.53					
ACS7	.65					
ACS8	.67				-.37	
ACS9		.41				.48
ACS10		.66				
ACS11		.73				
ACS12		.74				
ACS13		.32			.70	
ACS14	.63					
ACS2	.69					
ACS16	.41					-.63
ACS17	.58					
ACS18	.46			-.39		-.33
ACS1			.54			
ACS2	.36	-.30	.37	.47	.45	
ACS3	.38		.49	.4		
ACS4	.39			.46		

a. 6 components extracted.

Student Adaption to College Questionnaire (SACQ)

Factor analysis was conducted on the SACQ. The factor structure extracted twenty components with eigenvalues over 1 and the explained 72.075% of the total variance were extracted in which only three components were exercised. Factor loading was greater on the first three components and only these are presented in the table below. The variance explained 18.898% for factor one, 8.118% for factor two and 5.232% for factor 3 (see diagram 2 below).

Resulting in, the development of three subscales, positive general adjustment, negative adjustment and social adjustment. Cronbach's alphas for the Full Scale and 3 subscales suggested adequate internal reliability: Full Scale SACQ = .853; Positive Adjustment (PosAdj) =.845; Social Adjustment (SocAdj) = .519; Negative Adjustment (NegAdj) = .799.

Diagram 2

Scree plot of factor loading of SACQ

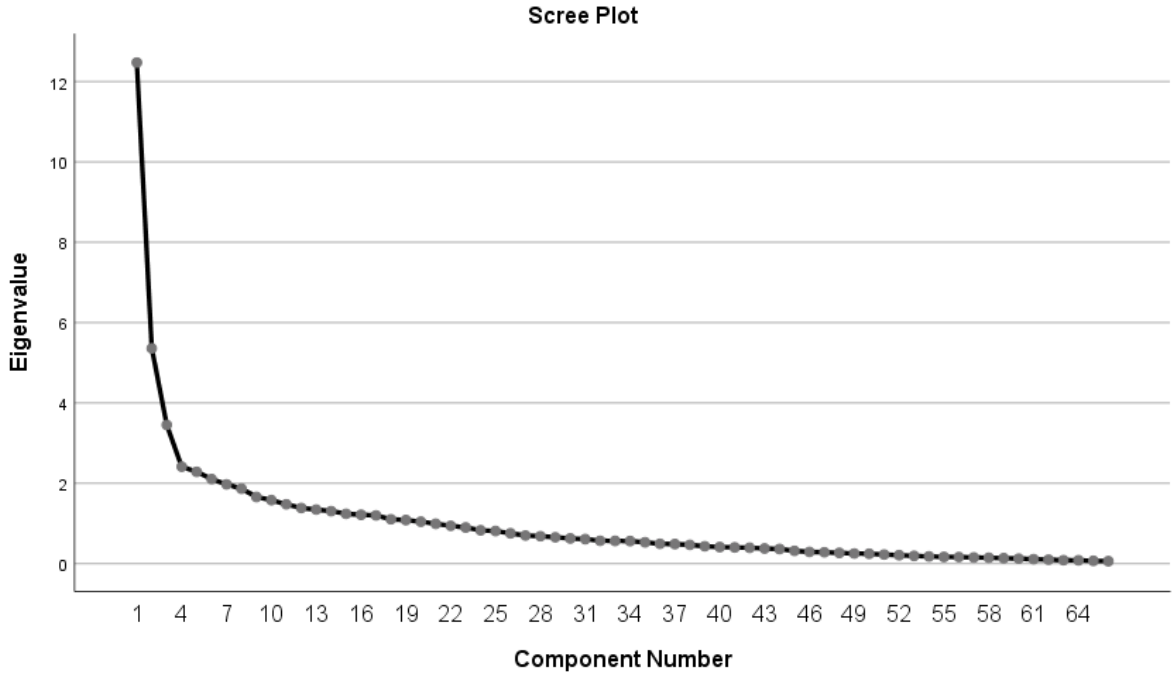


Table 4

Factor loading of SACQ

	Component		
	1	2	3
SACQ60	.70		. -34
SACQ5r	.71		
SACQ67r	.68		
SACQ47r	.68		
SACQ65r	.67	-.34	
SACQ15r	.64	-.32	
SACQ1r	.62		
SACQ54r	.61		
SACQ61	.61		
SACQ23	.60	-.31	
SACQ32	.59		
SACQ37r	.59		
SACQ63r	.58	-.36	
SACQ16r	.56		
SACQ9r	.56		
SACQ19r	.56		
SACQ66r	.55		
SACQ50r	.55	-.34	
SACQ42	.54		
SACQ21	.52		
SACQ4r	.50		
SACQ3r	.49		

SACQ10r	-.48		
SACQ53r	.47		
SACQ56	.47		
SACQ24r	.47		
SACQ34	.46		
SACQ31	.45		
SACQ59	.44		
SACQ36r	.44		
SACQ22	.42		
SACQ13r	.42		
SACQ55r	.41		.38
SACQ51	.41		
SACQ41	.4	.39	
SACQ7	.37	.33	
SACQ58	.32		
SACQ39		.61	
SACQ29		.57	.30
SACQ40		.57	
SACQ45		.52	
SACQ25		.48	
SACQ38	.31	.46	
SACQ28		.46	
SACQ64	.44	.44	
SACQ2		.42	.31
SACQ52		.42	
SACQ17		.38	
SACQ30r			.57
SACQ14r			.53
SACQ46r			.52
SACQ8r			.52
SACQ27r			.47
SACQ62r	.33		
SACQ44r	.39		
SACQ57			
SACQ43r	.33		
SACQ33r			
SACQ48	.33		
SACQ26r	-.33		
SACQ20		.32	
SACQ6		.38	
SACQ18r	.34	-.31	
SACQ49		.36	
SACQ12	.36	.40	
SACQ35			

a. 3 components extracted.

4.4 Descriptive statistics of the measures used (RSA, ACS and SACQ)

Table 5 displays the descriptive of the measures obtained after removing the outliers, showing an acceptable level of normality as suggested by Tabachninck and Fidell (2013). The table displays the descriptive for parametric measures and a nonparametric measures. Goal directed is part of the adolescent coping subscale and due to its skewness was used as a nonparametric measure.

Table 5

Descriptives of measures

	N	***Min***	***Max***	***Mean***	***SD***	***Skewness***	***Kurtosis***	***α***
RSA	142	85	164	117.78	18.14	.40	-.57	.88
ACS								
NProdC	141	4	20	10.20	3.67	.13	-.71	.63
DivC	141	9	35	25.06	6.28	-.59	.24	.75
GDirC	142	2	10	8.01	2.01	-.1.01	.21	.64
SACQ	72	244	447	351.32	42.12	.16	-.06	.85
PosAdj	138	72	218	149.81	29.14	-.26	-.40	.85
SocAdj	140	3	27	13.94	5.72	-.14	.63	.52
NegAdj	128	46	120	80.57	16.15	.017	-.49	.80

Note. RSA= Resilience Scale for Adults, ACS= Adolescent Coping Scale, NProdC = Non- Productive Coping, DivC=Diversion Coping, GDirC=Goal Directive Coping PosAdj= Positive Adjustment, SocAdj= Social Adjustment, NegAdj= Negative Adjustment.

4.5 Differences between demographic groups on mean scores of measures

The study examined whether a difference in mean scores between different gender and race groups occurred on the RSA, ACS (Diversion Coping Scale, Non-Productive Scale and Goal Directive Scale), and SACQ (Positive Adjustment, Negative Adjustment and Social Adjustment) scales. The results from the independent-sample *t*-test and one way analysis of variance (ANOVA) are presented below.

4.5.1 Gender Group differences on RSA, AC Diversion, AC non-productive, AC goal direction, SACQ and respective subscales

The t-test results as depicted in table 6 below showed no statistical difference between the mean scores of the gender groups (males and females) on the measures of resilience i.e. RSA, coping styles i.e. ACS diversion, goal directed and non-productive and adjustment i.e. the SACQ, namely the positive, and negative adjustment subscales. Males and females therefore scored very similar on these measures.

As shown in table 6, there is no significant difference between gender groups (male and females) on resilience. The mean scores for males (M = 117.89 SD = 18.13) and females (M = 117.89, SD = 18.4); (t = -.06, p = .95) with males and females showing a comparable mean scores on resilience. There was also no significant difference in mean scores on the coping scales i.e. AC diversion and AC non-productive coping between males and females as these mean scores were similar. The Mann Whitney U-Test revealed no significant difference among gender groups on the Goal directed coping between males (*Md = 9, n = 71)* and females (*Md = 9, n = 70), U = 2475.500, z = -.04, p = .97, r = .003.* The effect size according to Cohen's (1988) criteria is considered a small effect size.

Similarly, the t-test results demonstrated no significant difference in mean gender scores (male and females) on the SACQ full scale with males (M = 349.1, SD = 41.99) and females (M = 350.8 SD = 37.88); (t=.-172, p = .86) scoring very similar. Also the SACQ subscales, positive adjustment, and negative adjustment did not reach significance. Positive adjustment showed females (M = 130.1, SD = 22.09) and males (M = 130.0, SD = 24.38); (t = -.474, p = .981) had the same mean scores. Despite females (M = 81.75, SD = 16.50) showing slightly higher mean scores on negative adjustment than males (M = 79.31 SD = 15.30; (t = -.858, p = .393) they were also not statistically different. However, a significant difference between the gender groups for social adjustment was found with males having a higher mean score (M = 19.49, SD = 5.3) than females (M = 16.68, SD = 7.0); (t = 2.53, p = .012).

Table 6

Gender difference on RSA, ACS (DivC, NProdC, and GDirC) and SACQ (PosAdj, SocAdj, and NegAdj)

									95%	Of CI
Measures	*gender*	*Mean*	*S. D*	*T-value*	*df*	*R*	*p*	*Mean diff*	LL	UL
RSA	Male	117.70	18.13	-.06	139	.00	.95	-.18	3.08	-6.26
	Females	117.89	18.4							
DivC	Male	24.85	6.55	-.37	139	.00	.71	-.40	-2.50	1.71
	Females	25.24	6.07							
NProdC	Male	10.6	3.77	1.25	138	.01	.22	.77	-.45	2.00
	Female	9.83	3.56							
GDirC	Males	9				.003				
	Females	9								
SACQ	Male	349.1	41.99	. -	67	.00	.864	-1.68	-	17.90
	Female	350.8	37.88	172					21.32	
PosAdj	Male	130.1	22.09	.474	128	.00	.981	-.099	-8.16	7.96
	Females	130.0	24.38							
SocAdj	Males	19.49	5.3	2.53	127	.04	.012*	2.80	.61	4.99
	Females	16.68	7.0							
NegaAdj	Males	79.31	15.30	-.858	123	.01	.393	-2.44	-8.07	3.19
	Females	81.75	16.50							

*Note. CI= confidence interval; LL= lower limit; UL= upper limit * Significance at the 0.05 level, non-prod = non- productive coping, posAdj= positive adjustment, SocAdj= social adjustment, and negaAdj= negative Adjustment*

4.5.2 Race Group differences on RSA, ACS (DivC, NProdC, GDirC and SACQ (PosAdj, SocAdj, and NegAdj)

A one-way between–groups analysis of variance (ANOVA) was conducted to explore the mean score difference between the race groups [African; Indian and others (White and Coloured)] on the RSA, ACS and SACQ scales (see table 7). The one-way ANOVA results showed there is a statistically significant difference in the mean scores for the three groups on the RSA, ACS (DivC, NProdC, GDirC) and SACQ (PosAdj, SocAdj, and NegAdj)

Table 7

ANOVA results for RSA, ACS (DivC, NProdC, GDirC and SACQ (PosAdj, SocAdj, and NegAdj)

								95%	Of CI
Measures	*Race*	*Mean*	*S. D*	*ANOVA*	*df*	*F*	*r*	LB	UB
RSA	African	106.8	14.89	.00*	2	12.61	.15	101.9	111.6
	Indian	123.5	18.27					119.3	127.8
	Other	118.0	15.42					112.1	124.0
DivC	African	26.10	4.73	.00*	2	5.95	.08	24.57	27.64
	Indian	25.82	6.28					24.37	27.28
	other	21.50	7.15					18.73	24.27
NProdC	African	10.00	3.50	.22	2	1.56	.02	8.85	11.15
	Indian	10.68	3.36					9.90	11.45
	Other	9.29	4.55					7.52	11.05
GDirC	African	8.00	1.96	1.00	2	2.40	.03		
	Indian	7.74	2.18						
	other	8.71	1.49						
SACQ	African	360.7	45.59	.39	2	.95	.02	341.9	379.5
	Indian	346.5	40.98					332.1	360.8
	Other	345.9	37.86					323.0	368.8
PosAdj	African	143.8	28.63	.03	2	3.61	.05	134.5	153.1
	Indian	156	28.18					149.4	162.7
	Other	141.8	29.13					130.1	153.6
SocAdj	African	13.56	5.2	.88	2	.13	.001	11.87	15.24
	Indian	14.13	6.1					12.71	15.55
	Other	13.94	5.7					11.82	16.10
NegaAdj	African	84.62	16.66	.15	2	1.91	.000	79.06	90.17
	Indian	78.12	16.56					74.16	82.24
	Other	80.73	13.28					75.30	86.52

*Note. CI= confidence interval; LB= lower bound; UB= upper bound * Significance at the 0.05 level, non-prod = non- productive coping, posAdj= positive adjustment, SocAdj= social adjustment, adjustment and negaAdj= negative Adjustment*

A one way between group analysis of variance was conducted to explore the mean score differences on the levels of resilience among race groups, as measured by the Resilience of Adults Scale (RSA). Regardless of achieving statistical significance in mean scores between groups, the effect size was relatively small. The effect size, calculated using eta squared, was .15. Post hoc comparisons using the Tukey HSD test indicated that the mean score for group 1: African (*M* = 106.8, *SD* = 14.89) was significantly lower than group 2: Indian (*M* = 123.5, *SD* = 18.27) and group 3: Other [Whites and Coloured students] (*M* = 118.0, *SD* = 15.42).

The results of the one-way analysis of variance regarding race group differences on coping as measured by the Adolescent coping scale (ACS) showed that there was a statistical significant

difference at p <.05 in AC Diversion scores among the three groups F = 5.95, p = .003. The effect size, calculated using eta squared, Ac Diversion was .08. Post hoc comparisons using the Tukey HSD test indicated that the mean score for AC Diversion group 1 = African (M = 26.10, SD = 4.73) and group 2 = Indian (M = 25.82, SD = 6.28) was significantly different from group 3 = White and Coloured (M = 21.50, SD = 7.15). African and then Indian students obtained higher mean scores, showing that diversion is a common way of coping with stressors among these groups. Whereas AC Non-productive coping showed no significant difference for the three groups F = 1.56 p =.*215*. The effect size calculated using eta squared, Ac Non-Productive was .02. This was also confirmed in the post hoc comparisons using the Tukey HSD test indicated that the mean score for AC non-productive were quite small, group 1 (M = 10.00, SD = 3.50), group 2 (M = 10.68, SD = 3.36) and group 3 (M = 9.29, SD = 4.55).The Kruskal-Wallis Test revealed no significant difference in goal directed coping between the three different race groups (group1: African, n = 39; group2: Indian, n = 74; group3: Other n = 28) X^2(2, n=141) = 3.60, p =.165. Group 2 (Indian) recorded a lower median score (Md = 7.74) than the other two groups, which both recorded median values of 8.0.

A one-way analysis of variance pertaining to race group differences on the levels of adjustment as measured by the Student Adaption to College Questionnaire (SACQ) and respective subscales showed the following: As depicted in table 7 above, there was no statistical significant difference for the full scale p <.05 in (F = .95, p = .390), social adjustment subscale (F = .13 p = .882) and negative adjustment subscale F = 1.91, p = .152). There was a statistical significant difference in positive adjustment (F = 3.61, p = .03) between the three race groups. For *Positive Adjustment*, group 1=African (M = 143.8, SD = 28.63) and group 3 = Other (M =141.8, SD = 29.13) was significantly different from group 2, Indian (M = 156, SD = 28.18). The effect size, calculated using eta squared, was .05. Indian students showed the highest level of positive adjustment with much lower mean scores among African and White and Coloured students.

Post hoc comparisons using the Tukey HSD test indicated that the mean score for *SACQ*, group 2, Indian (M = 346.5, SD = 40.98), group 3, Other (M = 345.9, SD = 37.86) were significantly different from group 1, African (M = 360.72, SD = 45.59), despite not reaching statistical significance p = .39. The effect size was calculated using eta squared, .02. African students showed the highest level of adjustment with comparable mean scores among Indian, White and Coloured students.

Social Adjustment, group 1, African (*M* = 13.56, *SD* = 5.2), group 3, other (*M* = 13.94, *SD* = 5.7) was significantly different from group 2, Indian (*M* = 14.13, *SD* = 6.1). Indian students showed a higher level of social adjustment with comparable means among African, White and Coloured student. *Negative Adjustment*, group 2, Indian (*M* = 78.12, *SD* = 16.56), group 3, other (*M* = 80.73, *SD* = 13.28) was significantly different from group 1, African (*M* = 84.62, *SD* = 16.66). African students showed the highest level of negative adjustment with much lower mean scores than Indian, White and Coloured students.

4.6 Correlations between measures

The results of the Pearson's and Spearman's correlation coefficients that were conducted to determine the strength and relationships between RSA, AC, and SACQ subscales are presented below.

4.6.1 Correlation between RSA, DivC, NProdC, SACQ and SACQ subscales

The relationships between the scales and respective sub-scales presented in table 5 showed the following results. Non-productive coping and Resilience showed a small negative relationship (*r* = -.167) which was statistically significantly (0.048>0.05) explaining 2.8% of shared variance, implying that as resilience level increases the use of non-productive coping decreases.

The three SACQ subscales Positive adjustment (*r* = -.045), social relationship (*r* = -.076) and negative adjustment (*r* = .091) showed no correlation with ACS non-productive coping indicating that there is no relationship between positive adjustment, social adjustment, negative adjustment and non-productive coping.

There was a small positive correlation between diversion and resilience (*r* = 0.243) which was statistically significant (.004>0.05) with a shared variance of 6% implying that when resilience levels increase, the use of diversion coping also increases. A small positive correlation between diversion and positive adjustment (*r* = .150), which was statistically significant with a shared variance of 2.5%, suggested that as the levels of positive adjustment increases, the use of diversion coping decreases. The diversion and Social adjustment had a small positive correlation (*r* = .192), a shared variance of 3.7%, implying that as diversion coping increases, the levels of academic adjustment increase.

Diversion showed a small negative correlation with negative adjustment (r = -.131) explaining 3.7% of the shared variance, suggesting that as negative adjustment levels increases the use of diversion coping decreases. ACS diversion and gender had no correlation (r = .029), the shared variance of 0.84%, indicating that diversion coping had no relationship with negative adjustment.

Resilience had a small negative correlation with negative adjustment (r = -.108). This explained 1.2% of shared variance, implying that as resilience increases, negative adjustment decreases. There was a small significant positive correlation between resilience and social adjustment (r = .256) which was statistically significant. This correlation explained 6% of shared variance, suggesting that as resilience increase, social adjustment increases. A medium positive correlation was found between resilience and positive adjustment (r = .370) which was statistically significant. This relationship explained 13% of shared variance implying that as resilience increase, positive adjustment increases.

Table 8

Pearson's correlation coefficients between RSA, AC diversion, AC non-productive, SACQ subscales

	PA	SA	NA	ACSN	ACSD	ACSG	RSA	Sex	A-race1	I-race2	O-race3
PA	1	.111	.14	-.05	.15	-.06	.37**	.04	-.22**	-.22**	.14
SA		1	.01	-.08	.19*	.01	.26**	-.19*	-.04	-.04	-.00
NA			1	.09	-.13	-.00	-.11	.08	.15	.15	-.01
ACSN				1	.05	-.06	-.17*	-.10	-.13	-.13	.12
ACSD					1	.24**	.24**	.03	-.13	-.13	.28**
ACSG						1	.10	.01	.14	.14	-.18*
RSA							1	.01	-.33**	-.33**	-.01
Sex								1	-.00	-.00	.06
A-race1									1	1.0**	-.52**
I-race2										1	-.52**
0-race3											1

Note. ***. Correlation is significant at the 0.01 level. *. Correlation is significant at the 0.05 level PA=Positive Adjustment, SA=Social Adjustment, NA=Negative Adjustment, ACSN = Non- Productive Coping, ACSD=Diversion Coping, ACSG=Goal Direct Coping, RSA=Resilience Scale for Adults, A-race=African, I-race2= Indian, O-race3=other*

4.6.2 Correlation between AC goal direct, RSA and, SACQ and SACQ subscales

Spearman's rho coefficient was conducted on the Adolescent Coping Scale subscale, goal directed coping to determine its relationship to the resilience (RSA), and adjustment (SACQ and related subscales). The Spearman's correlation coefficient found a small positive correlation between goal directed coping and resilience (rho = .131) which was not significant. This explained 1.7% of the shared variance implying that, as resilience increases the use of goal direct coping increases. No correlation was found between goal directive coping and positive adjustment (rho= -.082), negative adjustment (rho = .052) and social adjustment (rho = -.006).

Table 9

Spearman's rho correlation between RSA, AC goal directed, SACQ and SACQ subscales

	PA	SA	NA	AC SN	AC SD	AC SG	RSA	sex	A-race1	I-race2	O-race3
PA	1.00	.11	.15	-.07	.17*	-.08	.34**	.04	-.22**	-.22**	.14
SA		1.00	.04	-.08	.19*	.05	.22*	-.18*	-.03	-.03	.00
NA			1.00	.12	-.14	-.01	-.19	.05	.14	.14	-.01
ACSP				1.00	.05	-.02	-.19*	-.09	-.12	-.12	.13
ACSD					1.00	.20*	.26**	.03	-.14	-.14	.25**
ACSG						1.00	.13	.00	.10	.10	-.16
RSA							1.00	.01	-.32**	-.32**	-.04
Sex								1.00	-.00	-.00	.06
A-race1									1.00	1**	-.52**
I-race2										1.00	-.52**
O-race3											1.00

Note. ***. Correlation is significant at the 0.01 level. *. Correlation is significant at the 0.05 level PA=Positive Adjustment, SA=Social Adjustment, NA=Negative Adjustment, ACSN = Non- Productive Coping, ACSD=Diversion Coping, ACSG=Goal Direct Coping, RSA=Resilience Scale for Adults, A-race=African, I-race2= Indian, O-race3=other*

4.7 Best predictors for Student Adjustment

Hierarchical regression models were fitted to determine how well other variables (gender, race, adolescent coping and resilience) predict the participants' level of adjustment to university life i.e. positive adjustment, negative adjustment and social adjustment. Table 10 displays the outcomes of the hierarchical multiple regression models that were fitted.

Table 10

Hierarchical Regression Model for the Best Predictor of Positive Adjustment

Variables	R	$\mathbf{R^2}$	$\mathbf{R^2}$ **change**	B	S. E	$\boldsymbol{\beta}$	t
Model 1	**.23**	**.05**	**.05**	164.69	19.10	-.21	8.62
race2				-12.29	5.77		-2.13
race3				1.78	7.24	.02	.25
Model 2	**.40**	**.16**	**.11**	72.04	29.21	-.05	2.47
race2				-3.16	6.03		-.52
race3				7.41	7.45	.10	.99
RSA				.55	.15	.34	3.65
DivC.				.13	.41	.03	.31
SocAdj				.10	.43	.02	.24

Note. *Statistical significance: *p < .05; **p < .01; ***p < .001, RSA= Resilience Scale for Adult , SocAdj= social adjustment, race3 (other, African and Indian), race2 (Indian, African and Other)*

The first hierarchical multiple regression model (positive adjustment), two predictors were entered in Step 1: race 2, race 3. This model was statistically significant F (2,133) =3.549; p < .05 and explained 5.1% of the variance in positive adjustment. In step 2, after the entry of the adolescent coping scale subscale (diversion), the resilience scale and social adjustment, the model added to the total variance which explained 15.8 % of the model (R^2 Change =.158, (F (5,130) = 4.886; p < .001. The Resilience Scale for Adults was the only measure that was statistically significant ($\beta = .341, p < 001$) in the final model.

Table 11

Hierarchical Regression Model of Social Adjustment

IV	R	$\boldsymbol{R^2}$	$\boldsymbol{R^2}$ **change**	B	S. E	$\boldsymbol{\beta}$	t
Model1	**.19**	**.04**	**.04**	17.10	1.50	-.19	11.46
Gender				-2.17	.95		-2.28
Model2	**.35**	**.12**	**.09**	5.76	3.49	-.20	1.65
Gender				-2.23	.92	.22	-2.44
RSA				.07	.03	.14	2.68
DivC				.13	.08		1.73

Note*. Statistical significance: *p < .05; **p < .01; ***p < .001, IV Independent Variables*

The second hierarchical multiple regression model (Social Adjustment), one predictor was entered in step one: Gender. This model was statistically significant F (1,138) =5.201; $p < .05$ and explained 3.6 % of the variance in social adjustment. The introduction of the Resilience Scale for Adults and Adolescent Coping Subscales (Diversion) into the model (Step two) added an additional 12.2% of variance in Social Adjustment, (R^2 Change = .102; F (3, 136) = 6.279; $p < .001$). In the final model all the measures entered were statistically significant namely; Gender ($\beta = -.191, p < 001$), Resilience ($\beta = .222, p < 001$) and Adolescent Coping Subscales (diversion) ($\beta = .143, p < 001$).

4.8 Chapter summary

The results of this study were presented using various statistical techniques to explore the data. Factor analysis was used to determine data suitability which aided in determining which items can be used in the three scales. The inter-item reliability tests were used to determine the psychometric properties of each measure. Descriptive statistics showed an acceptable level of normality. A non-parametric Mann Whitney U Test was used to determine if gender had any significance on goal directive coping styles, which yielded no significance.

The mean score difference on gender showed no statistical difference with RSA, ACS diversion, and non-productive, SACQ, positive and negative adjustment. Whereas mean differences regarding race group yielded statistical significant difference across RSA, ACS (diversion) and SACQ (positive adjustment).

The correlation analysis (Pearson and Spearman's Rho correlation) was conducted to determine the strength and direction of the association between the measures. Positive and social adjustment had a positive relationship with resilience and ACS diversion.

Two hierarchical multiple regression models were used to investigate the best predictors (demographics and ACS subscales and RSA) for student adjustment. The Adolescent Coping Scale Subscales (Diversion) and Resilience were the best predictors for positive and social adjustment. The first hierarchical multiple regression model (positive adjustment) outlined resilience as the best predictor for student adjustment. The second hierarchical multiple regression model (social adjustment) showed resilience, gender and diversion as the best predictors for student adjustment.

Chapter Five

5. Discussion and Conclusions

5.1 Introduction

In this chapter the results of the study will be discussed in relation to previous studies and the theoretical frameworks. The factor structure and psychometric properties of the measures will first be explained accompanied by the association between the measures. The relationships between resilience, related coping styles and their implication to student adjustment are discussed, followed by the demographic mean score differences between on the RSA, ACS and SACQ. Then mean score difference among demographic groups relating to RSA, ACS and SACQ are presented. Lastly, the predictors of student adjustment are discussed.

5.2 Socio-demographic background of the students in the study

The participants in the study consisted of both male and female with more male participants in the study. The majority of students were of Indian decent aged between 18-24 years. The race distribution did not reflect the demographics of the University of KwaZulu-Natal. According to Ukzn@ A Glance (2017) the race distribution at University of KwaZulu- Natal in 2016 was: African 55%, Indian 24%, White 12%, Coloured 3% and other 4%. Whereas the age is common for first year university students. Most of the students lived with their parents who had either both or a single parent who had attended a university. These findings suggest that students with parents who have attended tertiary institutions have a noticeable advantage over first-generation students in understanding the culture and ethnic diversity of higher education not to mention its role in personal growth and socio-economic fulfilment. However, Murray (2014) found that most students who attend the University of KwaZulu -Natal were second generation students implying that these students had possibly more support than those who are first generation university students. Soria and Stebleton (2012) stated that first-generation students are likely to encounter more challenges in navigating through university and becoming involved in their academic journey and fulfilment.

5.3 Psychometric properties of the measures

The research study was designed to explore resilience and coping styles in relation to student adjustment among first year university students. The factor structure and psychometric properties of the measures Resilience Scale for Adults (RSA), The Adolescent Coping Scale (ACS) And Student Adaption to College Questionnaire (SACQ) are discussed.

The factor analysis conducted on the items of the Resilience Scale of Adults indicated a complex factor loading with high item loadings across the factors. This underlined the decision to use the total scale only. This differs from the original six-factor model of the 33-item RSA scale. However, the total RSA in this study showed a high inter-item reliability coefficient indicating a Cronbach's alpha $\alpha = 0.88$. This result was similar to the original scale that obtained an alpha coefficient of 0.88 (Hjemdal, Friborg, Stiles, Rosenvinge, & Martinussen, 2006). A South African study administered by Dageid and Gronlie (2015) reported a Cronbach's alpha of 0.81, among South Africans living with HIV/AIDS. In their study, it was reported that not all subscales were replicated and had failed to completely replicate the factor structures of original scale recommended by Friborg et al. (2006). It was also reported by Dageid and Gronlie (2015) that low sample size and cultural differences affect people's meaning to statements across cultures. The study by Cowden et al. (2016) reported a Cronbach's alpha of 0.81 among South African tennis players. They also reported that not all subscales were replicated.

The principal component analysis of the Adolescent coping scale (ACS) indicated that three factors was a best fit for the data and were labelled according to their factor loading: non-productive coping styles, diversion and goal directed coping. Frydenberg and Lewis (1997) in a sample of 168 also reported three factors namely: productive coping, reference to others and non-productive coping. The Cronbach's alpha reliability coefficient for the sub-scales was considered satisfactory, similarly to that of $\alpha = .638$ and a mean inter-item r=.469 and Diversion had a Cronbach's alpha of $\alpha = .749$ and mean inter-item r=.299. The mean inter-item correlation coefficient was considered satisfactory for scales with items less than 10 (Briggs & Cheek, 1986).

Factor analysis was conducted with the items of the SACQ scale to determine data suitability and twenty components were extracted, of which only three were exercised. These factors were named according to the factor loading. The SACQ differed from the original scale as the present study only used three factors instead of the original four factors. Sennett et al., (2003) reported adequate internal reliability with Cronbach alpha for the full scale and subscales ranging from 0.81 to 0.92.

5.4 Demographic group differences relating to Resilience, Coping and Adjustment to University life. ACS and SACQ

In this study, male and female students reported similar levels of resilience. This finding was inconsistent with studies that indicated gender differences with male participants scoring higher than female participants in the Norwegian sample while females scored higher than males in the Brazilian study (Hjemdal, Roazzi, Dias, & Friborg, 2015) The study revealed that gender may not account for any differences among students as both males and females show similar levels of resilience.

It was interesting to note that no gender differences were found on the all AC subscales both males and females scored similarly. This finding was inconsistent with a study by Okafar (2014) that found male students to be more inclined to use negative coping strategies such as alcohol use as a means to combat stress. Whereas, Frydenberg (2004) draws attention to females being more likely to depend on others, think positively, and making use of tension-reducing strategies (Frydenberg, 2004). According to Verma, Singh Balhara, and Gupta (2011) males and females are more likely to react to stress differently depending on the type of stressors they encounter.

With regards to adjustment to university, no significant difference between gender groups were found for positive adjustment, and negative adjustment, as they have similar levels of adjustment on these sub-scales. On a similar note, in an earlier study of Leong, Bonz, and Zachar (1997) also found no statistically significant gender differences between adjustment levels to university using the SACQ. This finding in the present study could be a result of a few influences particularly, the changing roles of women in society as woman now have more educational opportunities that are available to them. This was also consistent with Nel, Govender, and Tom (2016) who found that both male and females experience both positive and negative adjustment in their first year of university.

With regards to racial difference, the findings on race groups demonstrated that Indians reported higher levels of resilicence than the other race groups. One view, expressed by Harakraj (2005) is that practices of spirituality, religion as well family (including extended family in Indian cultures, who share the responsibility of child care), schools and community

are important in developing resilience. Harakraj (2005) explains that culture plays a positive role in supporting Indian youth to tap into their resilience.

African students reported engaging more in diversion coping strategies to deal with stressors implying they seek social support, seek spiritual help, and wishful thinking. This could be a result of the Ubuntu spirit and African connectedness (Okafor, 2014). Because of this fundamental connection, individuals easily find support when confronted with hardship, and therefore can draw on this as a coping strategy (Oyserman & Lee, 2008).

The different race groups engaged similarly with non-productive coping styles i.e. not coping and ignoring the problem. Furthermore, goal directed coping i.e. task-orientated coping strategies were also similar across the gender groups. The present study found no racial difference amongst student adjustment, positive adjustment, negative adjustment, and social adjustment as they showed similar levels of adjustment. However, racial differences were present in positive adjustment with Indian students showing higher levels of adjustment. The Hindu culture is highly integrated into all aspects of life resulting in students using religious beliefs to manage their stress through university (Harakraj, 2005). As discussed previously, Hinduism plays a key role in student's growth as they depend on social support and rely heavily on their cultural beliefs to progress through life's difficulties.

5.5 Relationship between resilience, related coping styles and student adjustment

Griffith, Dubow, & Ippolito (2000) found that the use of avoidance coping styles were notably evident in the transition period as the use of avoidance coping strategies were assoicated with the inability to cope (Frydenberg & Lewis, 1999). The present study found that resilience had a negative association with non productive coping styles. This indicated that resilient students are less likely to engage in non-productive activities such as self-blame, ignore the problem, tension reduction and not coping. These coping strategies are largely negative and ignore the problem. Studies show that resilience is negatively associated with psychological distress and the inability to cope (Moghaddam & Moradizadeh , 2015; McGillivary & Pidgeon, 2015; Pidgeon, Rowe, Stapleton, Magyar, & Lo, 2014).

The most interesting finding was the positive association between Resilience and Diversion Coping Styles. This demonstrated that resilient students aremore likely to use measures of diversion when confronted with stressors at univesity. Diversion coping strategies are largely positive as it focuses on problem solving while attempting to remain physically active and socially active. This encompasses the following: seeking to belong, wishful thinking, social action, seeking spiritual help, focusing on the positive, seeking a relaxing diversion and physical recreation. Studies show that resilience has a positive relationship with effective coping strategies (Moghaddam & Moradizadeh (2015); (McGillivary & Pidgeon, 2015) (Swanson, Valiente, Lemery-Chalfant, Bradley, & Eggum-Wilkens, 2014). Taking this into account, it can be said that resilience plays an important role in positive and adaptive ways of coping with stressful events (Dyer & McGuinness, 1996).

A positive association was found betweent resilience and a goal direct coping style i.e. working hard and focusing on the poblem. This indicates that as resilience levels increases, students are more likely to adopt goal direct coping when faced with stressors at univesity. It seems that student who use goal directed coping are slightly more resilient. Goal direct coping is linked with task-oriented coping which is highly positive as they are active attempts to deal with stress that can reduce high levels of life stress, high scores on task-oriented coping will give rise to lower levels of psychological distress (Beasley, Thompson, & Davidson, 2003). Students' academic outcomes are clearly defined as students adopt goal directed coping strategies to take direct action to reduce the amount of stress they experience (Kariv & Heiman, 2005) as students become more successful at university so does their performance and commitent to university (McKenzie & Schweitzer, 2001).

The present study found a postive association between resilience and positive adjustment. Positive adjustment embodies a series of qualites across all domains of student adjustment: academic adjustment, social adjustment, personal-emotional adjustment and instituational adjustment (Baker & Siryk, 1984). This draws all the positive aspects of adjustment that indicates that students are motivated to study and be present in univesity, are up to date with academics, attend class regularly, are satisified with their unviersity environment, satisfied with their academic performace, are adjusting well to the social demands of university by making new friends and participating in social activities. It also implies that students intend to complete their studies. This positive associaton indicates that resilient students are more likely to adjust well into university. Leary and DeRosier (2012) states that students demonstrate different

levels of resilience whilst transitioning to university. These findings suggest that student's ability to maintain a positive outlook on their future promotes resilience in challenging moments by a safeguarding against stressors and maintaining motivation to accomplish their goals. Therefore, resilience stems from personal growth that depends on postive well-being in spite of life challenges (Moleli, 2005).

Social adjustment and resilience are important driving factors for student adjustment. A positve relationship was found indicating that students with higher levels of resilience are more likely to adjust into a social environment. Social adjustment embodies the social aspects of univerity such as social participation, social environment and social ties to friends and family. It is proposed by Wiks (2008) that social support is percieved to be supportive however, a study by Zaleski, Levey-Thors, and Schiaffino (1998) noted that not all social support is beneficial to students adjustment into university and it can cause unnecessary stress-related issues such as, negative life satisfaction that makes the student less adaptive.

The negative adjustment had a negative relationship with resilience, stating that students with higher levels of resilience are less likely to adjust into their environment. Negative adjustment comprises of the negative characteristics of academic adjustment, and personal adjustment. This suggests that students who do not work hard, tend not to be motivated to study, find academic work difficult, are unable to concentrate during exams, has trouble coping with university stress, has difficulty controlling emotions, has finanical stress, and regular headaches and trouble sleeping.The use of avoidance coping as a coping strategy incorporates eluding both negative emotions and determining solutions to problems, with the intention that it will disappear by itself (Hee Lee, et al., 2017).

Students's successful adjustment to university life as reflected in the positive adjustment scale, is reported in this study to be linked to diversion coping. This suggests that students with higher levels of adjustment are more likely to use coping strategies linked to problem solving that emphasizes positive ways of dealing with stressors e.g. those who use diversion coping styles are slighlty more adjusted than students who use non-productive coping (Frydenberg, 2004).

On the other hand those students who showed negative adjustment engaged in less diversion coping strategies. Negative association was found between negative adjusment and diversion. Therefore, students who use diversion coping styles are slighlty more adjusted academically

and perform fairly well in their tests and assignments. Frydenberg (2008) argues that once students draw on diversion coping strategies to manage stress they are more likely to encounter positive psychological well-being than those who use non-productive coping strategies.

The results of the study indicated a positive association was found between social adjustment and diversion. This suggests that as diversion coping styles increases, students are more likely to adjust into a social environment. This is an indiation that students who use diversion coping styles are found to be more socially adjusted into their environment. Thus, university students need a variety of social support to cope with stress triggering factors that face university students (Rahat & Ilhan, 2016).

5.6 Predictors of Positive and Social Student Adjustment

The university experience is dynamic as it bring intense competition, bigger classes, different teaching methods, intense volume of work and much more demanding than school due to the advanced nature of higher education (Mudhovozi, 2012). In this study it was found that resilience had a significant relationship with positive adjustment. As disscussed earlier, resilience prepares students with the ability to adapt and deal with stressors distinctive to university and avert psychological distress (Stallman, 2010). It is a widely held view that resilience arises from the positive use of stress to support mental abilities (Newman and Blackburn, 2002). This implies that when students are resilient they are better able to harness social and personal resources to overcome the stressors.

In higher education, possesing a positive outlook during stressful periods is an extremely important attribute as it cares for a students' mental health needs (Hartley, 2012). Similarly, Tusaie and Dyer (2004) points out that students use personal strengths to foster resilience and operate above average. In the same way, McGillivary and Pidgeon (2015) claims that an association between resilience, positive social and personal well-being boosts positive mental health and adjustment to university. Fredrickson (2004) argues that resilience and healthy well being needs to be constantly cultivated by students through broadening their momentary thought – action repertiores and building eduring personal resources. This ensures positive emotions are contanstly available to help students move forward and ensure optimal functioning.

It can therefore be said that resilience plays a significant role in academic success (Martin, 2002) as it is evident in the transitional phase where a great deal of stress is present (Beasley et al., 2003). Rutter (1987) suggests that students have to navigate through academic setbacks, stress and academic pressures (Martin, 2002) which are viewed as risks (Wiks, 2008). It has been stated by Friborg et al. (2003) that resilience influences healthy adjustment to life stresses. Tusaie and Dyer (2004) further supports this argument stating that students who deal with adversity are considered resilient and capable to maneuver through life stresses with ease unlike students who are not resilient. It can be concluded that a resilient attitude enables us to prepare for adversity, change and personal growth during the course of our lives (Barends, 2004). Munro & Pooley (2009) states that resilience has a significant effect on university adjustment not only does it prepare students to cope with academic stress but resilience is perceived as protective factor that is linked with successful university adjustment (Khawaja & Stallman, 2011).

Diversion coping strategies was found to be significant predictor of social adjustment. The data suggested that students are entering a transition as soon as they have made a concise decision to attend unviersity making this tranisition anticipated (Schlossberg, 2011). The students in the present study are currently in a transition rendering their way out of moving in and into moving through. The moving through phase will continue till graduation where they will enter moving out and finally, begin another transition to employment. This requires students to apply adaptive coping strategies so that they are able to transition in this instance students are applying diversion coping strategies. These coping strategies are highly important in the transition phase.

This study found that first year students engage in more activities that relate to diversion (i.e. physical recreation, seeking to belong, seeking relaxing diversions, improving relationships, wishful thinking, seeking spiritual help) to cope with stressors that present itself at university. Wiks (2008) further asserts that students who are extremely resilient display more adaptive coping skills and regularly transform stressors into opportunities for learning and development. Studies have shown that problem-focused coping (diversion coping) is more likely to reduce depressive symptoms (Pritchard, Wilson, & Yamnitz, 2007). The present study found that students use diversion coping strategies to navigate through university stress. As students adapt to their surroundings, their stress levels reduce over time, helping students adjust (Friedlander, Ried, Shupak, & Cribbie, 2007). The university environment is extremely challenging resulting

in students requiring using numerous coping strategies to assist in making students' lives less stressful (Tuna, 2003).

The data from the current study reveals that student's level of resilience and adaptive coping strategies are linked with successful adjustment to university. Students who fit in socially and academically to the institutional beliefs of the university are more adaptive at university (Waller, 2009). As a result, gaining a positive sense of success and support from parents and social networks, helps to develop a positive mindset. Therefore, social support can be viewed as a powerful protective factor when experiencing several forms of stress (Werner & Smith, 1992). With this in mind, the understanding of social support perceived by students have been positively linked with health-promoting behaviours such as exercise, heathly diet, and avoiding depencdency on illegal substances (Hubbard, Muhlenkamp, & Brown, 1984; Martinelli, 1999). On the other hand, research has found that withdrawing from social support can bring about adverse affects on life satisfaction (Mori, 2000). As a result, an important characteristic of resilience is social suport, and by developing resilience more, caring and supportive relationships are established (Mampane, 2014).

5.7 Study Limitations

- There are several limitations to this research project that warrant discussion. Firstly, the sample size was limited as the university experienced a series of disruptions due to student strikes. The sample size was considerably small due the strikes on campus and therefore the results cannot be generalized to the larger population of university students.
- The length of the questionnaires distributed to the respondents could have had an adverse effect on the accuracy of the data reported. The number of questions respondents had to answer included: a demographic questionnaire (8 items); RSA (33 items); ACS (18 items) and SACQ (67 items), in the order mentioned. It is presumable that fatigue or loss of interest caused by the length of the instrument could have influenced the accuracy of their responses. This may be apparent in the poor response rate of the respondents on the SACQ, which was placed at the end of the questionnaire. Respondents did state that upon seeing the length of the questionnaires that followed, they became despondent.

- The SACQ norms were based on data from one of the universities in North America and there are no norms available for South Africa, however, the instrument has been used in studies on diverse populations, including South Africa. However the factor loadings did not correspond to the original measure and more exploration in this regard is required.

5.8 Recommendations

- Future research on resilience, coping and student adjustment to university should be further explored in a larger sample using shorter instruments as the length of the questionnaires did raise some issues.
- Counselling centres provide assistance in dealing with stressors that affect students. All students should seek assistance from counsellors if unable to meet the demands of university.
- Students should be assigned an academic tutor, counsellor or an advisor that will guide and assist throughout the semester. This will result in identifying academic weakness and help the student gain academic success.
- Getting involved in campus. It is important students are encouraged to join programmes that meet their needs such as sports and recreational clubs. This is a brilliant way to meet friends and engage in other activities other than a lecture theatre. This also helps students release stress and help them deal with stressors of everyday challenges. White and coloured students seemed less inactive and should be encourage to engage in extramural activities at university.
- More religious activities should be encourage at university as it seems that many students, particularly Indian and African students, rely on their religion to combat daily stressors.

5.9 Conclusion

The present study argues that most students who are entering a transitional phase especially into university, very often perceive this as a stressful life event. The study explored the role of resilience and coping styles on student adjustment. It was identified in literature that students are often faced with many demanding situations that require positive coping styles and resilience to overcome the challenges the university environment may present.

Studies show that individual resources such as psychosocial factors and health behaviours as well as school background provide useful information in understanding how students are better able to cope with the university transition. It has been revealed that most students were second generation university students which provided students with social support, positive coping styles, positive resilient behaviour, resulting in successful adjustment.

The study pointed out that male and female students didn't differ in the way they use their coping mechanism to handle stress or level of resilience or level of adjustment to university. They shared comparable mean scores with all measures used.

The study revealed that Indian students drew on their culture to navigate through university stress and tap into their resilience. This was also evident amongst African students as the use the spirit of *Ubuntu* and African connectedness when confronted with hardship during their university experience.

The theoretical framework outlined that students were in the moving through phase of a transition. That identified students on how to sharpen their academic skills and time management skills, deal with personal crisis's and discover their identity within the university (Drury et al., n.d). In addition students have to cope with the changing roles within their families, balance academics, leisure and often a part-time job (Drury et al., n.d). Social support seemed to be the main theme in both theories and literature indicating that social support is key for overall adjustment as it promotes resilience and help students maintain healthy coping styles.

Resilience and Diversion coping styles where identified as significant predictors for student adjustment as this was evident in all studies that explored their significance. It was also identified that in order to be successful through difficult challenges such as transitioning to university, students have to use positive adaptive coping styles as this promotes resilient attributes in students producing success academically, socially and personally.

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Appendix 1

School of
Psychology

24 March 2017

RE: Participation in research project: Role of resilience and related coping in the adjustment of first year psychology students at University of KwaZulu-Natal, Pietermaritzburg campus

Dear Participant

My name is, Jade Larissa Maharaj, I am a Health Promotion Master student registered with the School of Psychology, Howard Campus, University of KwaZulu-Natal in Durban. My supervisor is Prof A Meyer-Weitz, in the School of Applied Human Sciences, Discipline of Psychology at the University of KwaZulu-Natal. I intend doing a study understanding the role of resilience and related coping in the adjustment of first year psychology students at University of KwaZulu-Natal, Pietermaritzburg campus.

You are being invited to be considered in participating in the above-mentioned research project. The aim and purpose of this research is to asses group differences of adjustment, coping and resilience of first year psychology university students, asses the association between adjustment, resilience and coping, to understand the level of adjustment to university life by first year psychology university students, to determine coping strategies used by first year psychology university students and to understand the level of resilience of first year psychology university students. The data for this research project will be obtained through the use of questionnaires. Therefore, I kindly request your permission to complete the survey, which will not take more than 30 minutes of your time.

If you are willing to participate in this project, kindly sign the consent form. Kindly ensure that you fill the consent form and return if willing to participate. The questionnaire is to be

completed anonymously and confidentiality. No participant should feel coerced in any way and should feel free to withdraw from the study if necessary. The participants' identity as well as their responses will be kept strictly confidential and anonymous. The study poses no foreseeable physical, psychological, or emotional harm to the participants.

Please Note.

- Your confidentiality and anonymity are guaranteed as your information will not be linked to you in person but reported only at a group level.
- It will take about 20 to 30 minutes to complete the questionnaire.
- Any information given by you cannot be used against you, and the collected data will be used for research purposes only.
- Data will be stored in secure storage and destroyed after 5 years in the Discipline of Psychology.
- You have a choice to participate, not participate or stop participating in the research. You will not be penalized for taking such an action.
- Your involvement is purely for academic purposes only, and there are no financial benefits involved.

Your agreement to this study will be highly appreciated. Please do not hesitate to contact myself or my supervisor for further information or clarification. You may also contact the Research Office of UKZN should you need further clarification on the study. Below is the contact details of Mr. P. Mohun at the Humanities and Social Science Research Ethics Committee of the University of KwaZulu-Natal.

Thank you

Yours sincerely

Jade Maharaj

Contact details

Jade Maharaj

0834211179

Email:jm41968@gmail.com

Supervisor

Prof. Anna Meyer-Weitz

SAHS, Psychology

Howard College

University of KwaZulu-Natal

E-mail: meyerweitza@ukzn.ac.za

Tel: 031 2607618

Humanities and Social Science Research Ethics Committee of the University of KwaZulu-Natal.

Mr. P. Mohun

HSSREC Research Office,

Tel: 031 260 4557 E-mail: mohunp@ukzn.ac.za

✂==========

PARTICIPANT DECLARATION

I …… (Full names of participant) hereby confirm that I understand the contents of this document and the nature of this research project, and consent to participating in this study.

I am fully aware that the information I provide will be confidential and anonymous, that participation is voluntary and that I can withdraw my consent to participate at any point without any negative consequences.

_____ _____
Signature of Respondent Date

_____ _____
Signature of Researcher Date

Instruction

Most importantly I would like to say thank you for willing to participate in this research dissertation. This questionnaire has four parts: a demographic questionnaire, Adolescent coping scale (ACS), the Resilience Scale for Adults (RSA), and The Student Adaption to College Scale (SACQ) in which you are requested to follow the instructions carefully in each section as they are different in nature. Thank you for your time and valuable information.

Section A

Please provide your answer in the given space (circle on the number of your choice)

1. Gender?

Male	1
Female	2

2. Age?

18 to 24	1	40-60	3
25 to39	2	60 plus	4

3. Race

African	1	Coloured	4
Indian	2	Others	5
White	3		

4. Year of study?

First year	1
Second year	2
Third year	3
Fourth year	4

5. What's your marital status?

Single	1	Divorced	3
Married	2		

6. Which of the following best describes where you live?

Urban	1
Rural	2

7. Which best describes your where you currently live?

Residence hall	1	Living at home with family	3

Off-campus housing	2	Other	4

8. Did either of your parents graduate from college?

No	1	Yes, mother only	4
Yes, both parents	2	I don’t know	5
Yes, father only	3		

Section B

Instructions: Please circle the number that best describes how do you cope with university challenges?

	Used very little	Used some times	Used often	Used a great deal	Doesn't apply
1. Talk to other people for help	1	2	3	4	5
2. Work at solving the problem to the best of my ability	1	2	3	4	5
3. Work hard	1	2	3	4	5
4. Worry about what is happening	1	2	3	4	5
5. Spend more time with boy/girl friend	1	2	3	4	5
6. Improve my relationship with others	1	2	3	4	5
7. Hope for the best	1	2	3	4	5
8. Join with other people who have the same concern	1	2	3	4	5
9. Make myself feel better by taking alcohol, cigarettes or drugs	1	2	3	4	5
10. I have no way of dealing with the situation	1	2	3	4	5
11. See myself as being at fault	1	2	3	4	5
12. Ignore the problem	1	2	3	4	5
13. Keep my feelings to myself	1	2	3	4	5
14. Pray for help and guidance	1	2	3	4	5
15. Look at the bright side of things and think of all that is good	1	2	3	4	5
16. Discuss my problem with qualified people	1	2	3	4	5
17. Relax with book, music, TV or video games	1	2	3	4	5
18. Keep fit and healthy	1	2	3	4	5

Section C

Instructions: Please circle the number that best describes you. Think of how you usually are, or how you have been the last month, how you think and feel about yourself, and about important people surrounding you.

1. When something unforeseen happens	I often feel bewildered	1	2	3	4	5	I always find a solution
2. My plans for the future are	difficult to accomplish	1	2	3	4	5	possible to accomplish
3. I enjoy being	together with other people	1	2	3	4	5	by myself
4. My family's understanding of what is important in life is	quite different	1	2	3	4	5	very similar
5. I can discuss personal issues with	no one	1	2	3	4	5	friends/family members
6. I am at my best when I	have a goal to strive for	1	2	3	4	5	can take one day at a time
7. My personal problems	I know how to solve	1	2	3	4	5	I cannot find any solutions for
8. I feel my future looks	very promising	1	2	3	4	5	uncertain
9. To be flexible in social settings	is not important to me	1	2	3	4	5	is really important to me
10. I feel	very happy with my family	1	2	3	4	5	very unhappy with my family
11. Those who are good at encouraging me are	some close friends/family members	1	2	3	4	5	no one
12. When I start on new things/projects	I rarely plan ahead, just get on with it	1	2	3	4	5	I prefer to have a plan
13. My judgments and decisions	I often doubt	1	2	3	4	5	I trust completely
14. My goals	I know how to accomplish	1	2	3	4	5	I am unsure how to accomplish
15. New friendships are something	I make easily	1	2	3	4	5	I have difficulty making
16. My family is characterized by	disconnection	1	2	3	4	5	healthy cohesion
17. The bonds among my friends are	weak	1	2	3	4	5	strong
18. I am good at	organizing my time	1	2	3	4	5	wasting my time
19. Belief in myself	gets me through difficult periods	1	2	3	4	5	is of little help in difficult periods
20. My goals for the future are	unclear	1	2	3	4	5	well thought through
21. Meeting new people is	difficult for me	1	2	3	4	5	something I am good at

22. In difficult periods my family	keeps a positive outlook on the future	1	2	3	4	5	views the future as gloomy
23. When a family member experiences a crisis/emergency	I am informed right away	1	2	3	4	5	it takes quite a while before I am told
24. Rules and regular routine	are absent in my everyday life	1	2	3	4	5	are a part of my everyday life
25. In difficult periods I have a tendency to	view everything as gloomy	1	2	3	4	5	find something good that help me survive/prosper
26. When I am with others	I easily laugh	1	2	3	4	5	I seldom laugh
27. Facing other people, our family acts	unsupportive of one another	1	2	3	4	5	loyal towards one another
28. I get support from	friends/family members	1	2	3	4	5	no one
29. Events in my life that I cannot influence	I manage to come to terms with	1	2	3	4	5	are a constant source of worry/concern
30. For me, thinking of good topics for conversation is	difficult	1	2	3	4	5	easy
31. In my family we like to	do things together	1	2	3	4	5	do things on our own
32. When needed, I have	no one who can help me	1	2	3	4	5	always someone who can help me
33. My close friends/family members	appreciate my qualities	1	2	3	4	5	dislike my qualities

Section D

Instructions: The 67 statements on this questionnaire describes university experiences. Read each one and decide how well it applies to you at the present time (within the past few days) for each statement, circle the number that best represents how closely the statements applies to you. Select only one statement.

	Applies very closely to me ←								**→ Doesn't apply to me at all**
Read the statements below and circle the most appropriate option	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1. I feel that I fit in well as part of the university environment	1	2	3	4	5	6	7	8	9
2. I have been feeling anxious lately	1	2	3	4	5	6	7	8	9
3. I have been keeping up to date on my academic work	1	2	3	4	5	6	7	8	9
4. I am meeting as many people, and making as many friends as I would like at university	1	2	3	4	5	6	7	8	9
5. I know why I'm in university and what I want out of it	1	2	3	4	5	6	7	8	9
6. I am finding academic work at university difficult	1	2	3	4	5	6	7	8	9
7. Lately, I have been feeling blue and moody a lot	1	2	3	4	5	6	7	8	9
8. I am very involved with social activities in university	1	2	3	4	5	6	7	8	9
9. I am adjusting well to university	1	2	3	4	5	6	7	8	9
10. I have not been performing well during examinations	1	2	3	4	5	6	7	8	9
11. I have felt tired most of the time lately	1	2	3	4	5	6	7	8	9
12. Being on my own, taking responsibility for myself, has not been easy	1	2	3	4	5	6	7	8	9
13. I am satisfied with the level at which I am performing academically	1	2	3	4	5	6	7	8	9
14. I have had informal, personal contact with university professors	1	2	3	4	5	6	7	8	9
15. I am happy now about my decision to go to university	1	2	3	4	5	6	7	8	9
16. I am happy now about my decision to attend this university in particular	1	2	3	4	5	6	7	8	9
17. I'm not working as hard as I should at my course work	1	2	3	4	5	6	7	8	9
18. I have several close social ties at university	1	2	3	4	5	6	7	8	9
19. My academic goals and purpose are well defined	1	2	3	4	5	6	7	8	9
20. I haven't been able to control my emotions very well lately	1	2	3	4	5	6	7	8	9
21. I'm not really smart enough for the academic work I am expected to be doing now	1	2	3	4	5	6	7	8	9

22. Being away from home is a source of difficulty for me now	1	2	3	4	5	6	7	8	9
23. Getting a university degree is very important for me	1	2	3	4	5	6	7	8	9
24. My appetite has been good lately	1	2	3	4	5	6	7	8	9
25. I haven't been very efficient in the use of study time lately	1	2	3	4	5	6	7	8	9
26. I enjoy living in university residence(please leave blank if you do not live in any university residence)	1	2	3	4	5	6	7	8	9
27. I enjoy writing essays for courses	1	2	3	4	5	6	7	8	9
28. I have been having a lot of headaches lately	1	2	3	4	5	6	7	8	9
29. I really haven't had much motivation for studying lately	1	2	3	4	5	6	7	8	9
30. I am satisfied with the extracurricular activities available at university	1	2	3	4	5	6	7	8	9
31. I've given a lot of thought lately to whether I should ask for help from the counselling service centre or from a psychologist outside of university	1	2	3	4	5	6	7	8	9
32. Lately, I been having doubts regarding the value of university education	1	2	3	4	5	6	7	8	9
33. I am getting along very well with my roommate(s) at university(please leave blank if you do not have roommates)	1	2	3	4	5	6	7	8	9
34. I wish I were at another university	1	2	3	4	5	6	7	8	9
35. I've gained or lost too much weight lately	1	2	3	4	5	6	7	8	9
36. I am satisfied with the number and variety of courses	1	2	3	4	5	6	7	8	9
37. I feel that I have enough social skills to get along well in a university setting.	1	2	3	4	5	6	7	8	9
38. I have been getting angry too easily lately	1	2	3	4	5	6	7	8	9
39. Recently, I have had trouble concentrating when I try to study	1	2	3	4	5	6	7	8	9
40. I haven't been sleeping well	1	2	3	4	5	6	7	8	9
41. I'm not doing well enough academically for the amount of work I put in	1	2	3	4	5	6	7	8	9
42. I am having difficulty feeling at ease with other people at university	1	2	3	4	5	6	7	8	9
43. I'm satisfied with the quality of courses available	1	2	3	4	5	6	7	8	9
44. I am attending classes regularly	1	2	3	4	5	6	7	8	9
45. Sometimes my thinking gets confused easily	1	2	3	4	5	6	7	8	9
46. I am satisfied with the extent to which I am participating in social activities at university	1	2	3	4	5	6	7	8	9
47. I expect to stay at this university for a bachelor's degree	1	2	3	4	5	6	7	8	9
48. I haven't been mixing to well with the opposite sex lately	1	2	3	4	5	6	7	8	9
49. I worry a lot about my university expenses	1	2	3	4	5	6	7	8	9
50. I am enjoying my academic world at university	1	2	3	4	5	6	7	8	9

51. I have been feeling lonely a lot at college lately	1	2	3	4	5	6	7	8	9
52. I am having a lot of trouble getting started on assignments	1	2	3	4	5	6	7	8	9
53. I feel I have good control over my life situation at university	1	2	3	4	5	6	7	8	9
54. I am satisfied with my program of courses for this semester	1	2	3	4	5	6	7	8	9
55. I have been feeling healthy	1	2	3	4	5	6	7	8	9
56. I feel I am very different from other students at university in ways that I don't like	1	2	3	4	5	6	7	8	9
57. I would rather be home than here	1	2	3	4	5	6	7	8	9
58. Most of the things I am interested in are not related to my course work	1	2	3	4	5	6	7	8	9
59. Lately, I have been giving a lot of thought to transferring to another university	1	2	3	4	5	6	7	8	9
60. Lately I have been giving a lot of thought to dropping out of university altogether or for good	1	2	3	4	5	6	7	8	9
61. I find myself giving considerable thought to taking time off from university and completing at a later stage	1	2	3	4	5	6	7	8	9
62. I am very satisfied with the professors I have	1	2	3	4	5	6	7	8	9
63. I have some good friends at university that I can talk to about my problem	1	2	3	4	5	6	7	8	9
64. I am experiencing a lot of difficulty coping with stresses imposed upon me by the university	1	2	3	4	5	6	7	8	9
65. I am quite satisfied with my social life at university	1	2	3	4	5	6	7	8	9
66. I'm quite satisfied with my academic status	1	2	3	4	5	6	7	8	9
67. I feel confident I can handle the future challenges at university	1	2	3	4	5	6	7	8	9

Appendix 2

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

8 June 2016

Dear Jade Larissa Maharaj,

Re: Research study entitled "Role of resilience and related coping in the adjustment of first year psychology students at the University of KwaZulu-Natal"

Thank you for discussing your proposed research study with me. On condition that the Registrar of the University of KwaZulu-Natal provides gatekeeper's approval and you obtain ethical clearance from the Human and Social Sciences Research Ethics Committee, you are in principle granted permission to invite Psychology 102 students on the Pietermaritzburg campus to participate in your study by responding to a questionnaire.

Once gatekeepers approval and ethical clearance approval has been provided for your study, please liaise with me so that I can facilitate a suitable time for you to address the students.

Sincerely

Nicholas Munro, PhD
Lecturer and Module Coordinator: Psychology 102
Discipline of Psychology, School of Applied Human Sciences
University of KwaZulu-Natal, Pietermaritzburg Campus

cc: Prof Kevin Durrheim

Academic Leader: School of Applied Human Sciences
University of KwaZulu-Natal, Pietermaritzburg Campus

School of Applied Human Sciences
Postal Address: Private Bag X01, Scottsville, Pietermaritzburg 3209, South Africa
Telephone: +27 (0)33 260 5166 **Facsimile:** +27 (0)33 260 5363 **Email:** munron@ukzn.ac.za **Website:** psychology.ukzn.ac.za

Appendix 3

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

15 June 2016

Ms Jade Larissa Maharaj (SN 209522646)
School of Applied Sciences
College of Humanities
Howard College Campus
UKZN
Email: jm41968@gmail.com

Dear Ms Maharaj

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:

"Role of resilience and related coping in the adjustment of first year psychology students at University of KwaZulu-Natal, Pietermaritzburg campus".

It is noted that you will be constituting your sample by handing out questionnaires to first year students on the Pietermaritzburg campus.

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

- 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.

Data collected must be treated with due confidentiality and anonymity.

Yours sincerely

MR SS MOKOENA
REGISTRAR

Appendix 4

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

24 August 2016

Ms Jade Larissa Maharaj 209522646
School of Applied Human Sciences
Howard College Campus

Dear Ms Maharaj

Protocol reference number: HSS/1224/016M
Project Title: Role of resilience and related coping in the adjustment of first year psychology students at University of KwaZulu-Natal, Pietermaritzburg Campus

Full Approval – Expedited Application

In response to your application received 5 August 2016, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has 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

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Dr Shenuka Singh (Chair)
Humanities & Social Sciences Research Ethics Committee

/pm

Cc Supervisor: Prof Anna Meyer-Weitz
Cc Academic Leader Research: Dr Jean Steyn
Cc School Administrator: Ms Ayanda Ntuli

Humanities & Social Sciences Research Ethics Committee
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Website: www.ukzn.ac.za

1910 - 2010
100 YEARS OF ACADEMIC EXCELLENCE
Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville