

# **Psychosocial Predictors of Academic Success amongst First-Year Students**

**by**

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**Submitted in partial fulfilment of the requirements for the degree of Master of Arts in  
Counselling Psychology**

**in the Department of Psychology**

**Faculty of Humanities**

**University of Pretoria**

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**April 2022**

## **Ethics Statement**

The author, whose names appear on the title page of this dissertation, has obtained, for the researched described in this work, the applicable research ethics approval.

The author declares that she has observed the ethical standards required in terms of the University of Pretoria's Code of ethics for researchers and the Policy guidelines for possible research.

## Acknowledgements

I would like to acknowledge and extend my gratitude to the following parties who have been instrumental in getting this mini dissertation to completion:

- To my respondents, for taking time to participate in this research.
- To my supervisor, for your guidance throughout this project and for sharing your vast knowledge of research.
- To my husband, thank you for your constant reassuring presence.
- To my parents, for your prayers that have sustained me this far.
- To the Research on Socio-Economic Policy, for the financial support and passionate encouragement.
- Finally, I would like to thank God Almighty for your promises and “Yes” and Amen

## Abstract

First-year university students face significant change and adjustment to a variety of academic and social demands that may impact their academic experience and success. The monitoring of student progress and post-enrolment predictive variables of academic success is necessary as academic success at university is associated with better employment opportunities and impacts institutional efficacy reports. Due to limited research on the psychosocial predictors of academic success among first year South African university students, the aim of the study was to investigate the relationships between academic success and help-seeking, academic motivation, self-esteem, perceived stress, and adjustment, as psychosocial predictors of academic success, among first-time first-year students in the Faculty of Humanities at a South African university. This study employed a quantitative, non-experimental, correlational study to test these relationships and data was gathered via an online survey. The study found that respondents had positive attitudes towards psychological and academic help seeking and that their self-esteem was within the normal range. Additionally, the respondents were extrinsically motivated, experienced moderate levels of perceived stress and had low levels of adjustment. Results from the binary logistic regression found that none of the psychosocial variables (help-seeking, academic motivation, self-esteem, perceived stress, and adjustment) could predict academic success. The limitations of this study prompt future studies on this topic.

*Keywords:* Academic success, help seeking academic motivation, self-esteem, perceived stress, adjustment, first-year, higher education institutions

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# CHAPTER 1

## INTRODUCTION TO THE STUDY

### 1.1 Introduction

This dissertation is a report of a study investigating the psychosocial predicting variables of academic success among first-time first-year students at a South African higher education institution. This first chapter provides a background to the study, specifies the problem statement, purpose of the study, population, and context of the study, and presents an outline of the significance of the study. The chapter concludes by providing definitions of key terms and an overview of the subsequent chapters.

### 1.2 Background of the Study

Higher education institutions in South Africa have been characterised by low participation, low graduation rates and high dropout rates among first-year students (Fisher & Scott, 2011; Jacobs & Pretorius, 2016; Matsolo et al., 2018; Otu & Mkhize, 2018). The high dropout rates among first-year students have been particularly concerning and necessitate urgent investigation of the predictive variables of academic success in the first year of higher education. There has been consensus in literature that the first year of higher education can be particularly challenging for students due to the institutional, academic, and social demands placed on them which ultimately impact their academic success (Swanepoel & Van Heerden, 2018). Some of the challenges experienced by first-time first-year students that may impact their academic success include, adapting to new teaching approaches, increased workload, developing interpersonal relationships, separation from support systems and increased stress (Hassel & Ridout, 2018; Jacobs & Pretorius, 2016; Van Der Merwe et al., 2020). As a result, higher education institutions have placed the academic success of first-year students as a

great priority and the first year of higher education as a key area for intervention. The first year in higher education has been identified as a critical transition period for students that forms a basis for students' higher education and subsequently their career success. Furthermore, it socialises students into new modes of learning that are imperative to their success in higher education.

The academic success of first-year students has significant repercussions for higher education institutions, individuals, and the economy. For higher education institutions, the academic success of their students impacts institutional efficacy reports, reputation, and finances (Ayuk & Jacobs, 2018; DHET, 2016; Reddy et al., 2016). Higher education institutions are expected by society and the government to provide evidence of their effectiveness, and this is reflected in students' throughput rates. For the individual, academic failure may cause social stigma, mental health issues and negative labour market outcomes (Bantjes et al., 2020). In the case of the economy, academic failure of students causes a delay and shortage of graduating professionals to occupy scarce jobs in South Africa (Reddy et al., 2016). South Africa has a high rate of unemployment (30.1%), with youth making up a large percentage of the unemployed, accounting for 63.3% of the unemployed population (Statistics South Africa, 2020). Unemployment among the youth is attributed to a variety of reasons, including the lack of skills and inadequate education (Van Broekhuizen, 2016). Therefore, increasing academic success in first year and subsequently graduation rates is imperative and higher education institutions are well placed to ensure the delivery of quality education and a skilled workforce across diverse careers. As a result, higher learning institutions have become increasingly concerned with developing strategies to ensure student success and academic success in the first year provides an area for early identification.

It is broadly acknowledged that a host of factors influence the academic success of first-year students. These factors include individual, social and institutional characteristics.

Only a few studies in South Africa have looked at the psychosocial factors that influence academic success (Petersen et al., 2009; Petersen et al., 2010, Sommer & Dumont, 2011).

This constitutes a significant knowledge gap in the field of higher education, as determining which psychosocial factors influence academic success will make a significant contribution to understanding academic success in the first year of higher education.

### **1.3 Problem Statement**

Theoretically, low graduation and high dropout rates impact how we conceptualize academic success as traditional measures have predominately described the concept in terms of completion of courses and grade point average, suggesting that low graduation and high dropout rates are associated with academic failure (York et al., 2015). The term ‘academic success’ has been defined in ambiguous ways. This is due to the various perspectives and application of the term in literature. A dominant conceptualization of academic success, however, is that it refers to the acquisition of knowledge and skills demonstrated by the completion of a qualification or course (York et al., 2015). This conceptualization impacts how we perceive students who have dropped out and who are struggling to graduate. Furthermore, it impacts the ability of higher education institutions to accurately assess whether these students have attained learning objectives. Practically, low graduation and high dropout rates caution higher education institutions to perhaps reconsider the variables being used in the selection criteria during enrolment. Entrance into these institutions is determined by students’ performance during their matric year. However, studies have found that matric results do not necessarily predict success in tertiary education and that in fact, there is a large gap between content taught in high school versus university (Burger, 2017; Naidoo & McKay, 2018; Spaul, 2013; Van Rooy & Coetzee-Van Rooy, 2015).

Higher education confronts first-year students with the challenge of adjusting to a new environment and with new academic and role demands (Swanepoel & Van Heerden, 2018). The monitoring of student progress and post-enrolment predictive variables of academic success particularly among first-year students is thus important. Low participation, low graduation and high dropout rates also form part of the statistics that reflect institutional performance and therefore impact institutional efficacy reports (Ayuk & Jacobs, 2018; DHET, 2016; Reddy et al., 2016). Higher education institutions have a desire to perform efficiently and desirably. Institutional efficacy is also reflected in the effective use of resources. There is funding and other allocated resources invested in developing the quality of education that need to be accounted for. Low graduation and high dropout rates may result in wasted resources, unused resources or even a higher demand for resources. On a broader scale, these rates impact the economy due to the shortage of graduating professionals to occupy scarce jobs in South Africa (Reddy et al., 2016). The above theoretical and practical impact highlights the need to investigate the predictive variables of academic success. To better the success rate of higher education institutions in South Africa, Matsolo et al. (2018) suggests that effort should be put into identifying contributing variables to high dropout rates.

#### **1.4 Purpose of the Study**

Responding to the need to identify predictive variables of academic success, the purpose of this study was to investigate the predictive variables of academic success. More specifically, the researcher wanted to test the relationship between psychosocial variables and academic success. Although there are various psychosocial variables that may contribute to academic success, the psychosocial variables used in this study are based on the meta-analysis conducted by Robbins et al. (2004). The variables used in the current study include help seeking, academic motivation and self-esteem, perceived stress and adjustment. The

researcher wanted to determine the strength of the relationship between each factor and academic success.

### **1.5 Population and Context of the Study**

The study focused on first-year students particularly because of the transition from secondary school to university, which can present students with significant change and adjustment to a variety of demands presented by university. that may impact their academic experience and progress (Brooker et al., 2017). Additionally, the focus on first-year students was to encourage tertiary institutions to monitor and address academic success at a tertiary grass root level. Developmentally, students entering the university context are typically between the ages of 18-25 years old (Van Der Zanden et al., 2019). These are years “characterised by identity exploration, individual responsibility, independent decision making, and separation-individuation” (Van Der Zanden et al., 2019, p. 3). Students entering tertiary face several tasks, including increased responsibility for their own learning and academic development, which entails knowledge acquisition, interaction with the tertiary environment and course content. By looking specifically at this group, the researcher wanted to investigate their academic success in the first year to gain early insight as to which psychosocial variables, if any, do higher education institutions need to monitor and strengthen to ensure the delivery of skilled and knowledgeable students to enter professional programmes or a skilled workforce.

The context of the study is a South African higher education institution located in Gauteng, with a specific focus on the Faculty of Humanities. The Faculty of Humanities provides a wide range of study fields that fulfil an important role in human development, communicative and interactional behaviour and in responding to globalisation and the societal and environmental challenges of South Africa. Although the relevance of the

Humanities in South Africa has been previously questioned particularly regarding their framework in response to the changing societal, academic, technological and job market changes, the field of Humanities is well placed for the production of transformative research and the output of seasoned professionals in vital developmental areas such as social transformation (i.e. sociology), communication (i.e. speech-audiology and language studies) and human development (i.e. psychology) (Long & Foster, 2013; Prinsloo, 2016; Van der Merwe, 2004).

### **1.6 Significance of the Study**

Only a few studies in South Africa have looked at the relationship between the psychosocial variables mentioned in this study and academic success (Petersen et al., 2009; Petersen et al., 2010; Sommer & Dumont, 2011). Investigating the relationship between psychosocial variables and academic success presents several possibilities. First, it can bring awareness to the first-year academic experience and progress. Secondly, it can help administrators in assessing the effectiveness of initiatives put in place to help students adjust to tertiary. Additionally, results from the study can inform lecturers' approach in their pursuit to facilitate learning and to foster a more effective learning environment. The outcome of this study could encourage students to access their human capital and social resources and further help them to actualise their full academic potential. Lastly, the study will allow higher education policy makers to reflect on the current state of academic success. From the results of the study, policy makers can possibly identify gaps in the implementation of their policies and establish conditions that are necessary for academic success, which will help them target and develop the areas where there are gaps.

## 1.7 Research Question

The aim of the study was to investigate the psychosocial predictors of academic success among first-time first year students. The research question guiding the study was: What are the relationships between academic success and help-seeking, academic motivation, self-esteem, perceived stress, and adjustment, as psychosocial predictors of academic success, among first-time first-year students at a South African university?

## 1.8 Operationalisation of Terms

This sub-section consists of the operationalisation of key concepts used in this study including academic success, help seeking, academic motivation, self-esteem, perceived stress and adjustment.

### 1.8.1 Academic success

Academic success is concept that has been surrounded by ambiguity. Academic success has been predominately defined in relation to academic achievement and grade point average (York et al., 2015; Warden & Myers, 2017; Zajda & Rust, 2016). In the current study, academic success is used to refer to sufficient mastery of one's field of study as indicated by successful completion of, and passing of academic modules forming part of the programme registered for. Thus, academic success will be indicated by either a pass or fail (i.e., a mark of  $\geq 50\%$  or  $< 50\%$ , respectively) obtained by each participant at the end of an academic year (subject to module assessment criteria).



### ***1.8.2 Help seeking***

Help seeking behaviours vary and depend on one's perceptions, personality, belief system and social norms. Help seeking has been defined as a psychosocial form of health behaviour displayed through seeking external help (Tomczyk et al., 2020). In this study, help seeking refers to the act of asking for assistance when faced with an academic or psychological problem within the academic context and having a positive attitude towards help seeking.

### ***1.8.3 Academic Motivation***

Academic motivation has been covered extensively in research (Caruth, 2018; Jach & Trolian, 2020; Petersen et al., 2009; Vallerand et al., 1992; Trolian et al., 2016; Van Soom & Donche, 2014; Van Staden & Ellis, 2017). Several conceptual perspectives have been proposed to define academic motivation, however for the current study, academic motivation refers to the internal or external drive one possesses to accomplish academic outcomes.

### ***1.8.4 Self-esteem***

Self-esteem is a widely used concept. In the context of this study, self-esteem refers to an individual's negative or positive attitudes towards themselves (Ciccarelli & White, 2015).

### ***1.8.5 Perceived stress***

Perceived stress refers to the extent to which individuals perceive situations and demands placed on them as stressful or exceeding their ability to cope (Lee et al., 2016).

### ***1.8.6 Adjustment***

Adjustment refers to the extent to which one has adapted to the university context, how well they deal with the social, academic, and personal demands that they are presented with and the degree to which they identify with and are committed to the university (Chavoshi et al., 2017). Adjustment to university is reflected in students' involvement in campus activities, the quality of their social life and how they cope with the academic demands placed on them (Baker & Siryk, 1989).

### **1.9 Thesis structure**

This research is presented in five chapters. The current chapter provided a brief background into the research topic, highlighting the higher education context as an important context of study and the need for a high output of competent professionals from this context. This was followed by a discussion of the problem statement, purpose of the study, population and context of the study and emphasis on the significance of the study. Definitions of key terms were provided, and the chapter concludes by giving a brief structure of the thesis.

Chapter 2 presents a literature review on the research topic, including the conceptualisation of academic success, the challenges in the South African higher education landscape and qualities of students transitioning from high school to higher education institutions. This is followed by an outline of three commonly used theoretical perspectives to explain academic success and student integration in higher education institutions. The chapter also presents pre-enrolment and post-enrolment variables that contribute to academic success, and a discussion of some individual and institutional variables that influence academic success and student retention rates. The chapter concludes with literature on psychosocial variables contributing to academic success of South African university students and the need

for the development of South African frameworks of measuring tertiary students' experiences and academic success.

Chapter 3 outlines the methodology employed in this study including the research design, sampling, measures utilized, procedures of data collection, and ethical considerations adhered to. The chapter concludes with the impact of COVID-19 regulations of data collection.

Chapter 4 presents the statistical findings and analysis of the study in relation to the research question.

Chapter 5 concludes the dissertation by providing a discussion of the main results in context of the research question, limitations of the study, proposed recommendations for future research and the conclusion. The following chapter comprises of a review of literature related to the study topic.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Introduction

The following chapter provides literature on the conceptualisation of academic success and some of the challenges in the South African higher education landscape. The chapter proceeds to discuss characteristics of the transitioning student and some of the pre-enrolment and post-enrolment variables that contribute to academic success. This is followed by a brief discussion of institutional and personal variables that influence academic success and student retention rates, as well as a presentation of the limited research on psychosocial predictors of academic success and the need for the development of South African frameworks of measuring tertiary students' experiences and academic success. The chapter concludes with three theoretical perspectives on academic success, outlining some of the ways in which students integrate into the higher learning environment and some perspectives on understanding student retention and attrition.

#### 2.2 The Conceptualisation of Academic Success

Academic success at its most basic level is generally understood as the final grade at the end of an academic year. It is however a concept that has been and continues to be surrounded by a range of definitions, measures, and theoretical stances (York et al., 2015). Academic success has been defined predominately in relation to academic achievement (York et al., 2015; Zajda & Rust, 2016). However, a number of researchers encourage the adoption of a multi-domain view that considers variables such as the graduate skills acquired (e.g., critical thinking), persistence and an academic self-concept (Schreiber & Yo, 2016; Van Rooij et al., 2017). Scott (2018) defines academic success as sufficiently mastering one's field of learning that is often demonstrated by the successful completion of studies. Kuh et al.

(2006) defined academic success as “academic achievement, engagement in educationally purposeful activities, satisfaction, acquisition of desired knowledge, skills and competencies, persistence, attainment of educational outcomes, and post-college performance. Attainment of educational goals does not only affect the individual but is furthermore associated with better labour market opportunities (Reddy et al., 2016). This is because individuals with higher education have more employment opportunities than those with only secondary schooling (Ali & Jalal, 2018). The South African economy is not yet in a position where it can effectively “create opportunities for those who are relatively unskilled” (Chibba & Luiz, 2011, p. 311). Education plays an imperative role in poverty reduction and enhancing the economy. For these reasons, education has been one of the main areas of focus in government (Reddy et al., 2016). The Department of Higher Education’s mission has been to enhance the quality of the education system.

The factors in the above-mentioned definition for academic success, namely “academic achievement, engagement in educationally purposeful activities, satisfaction, acquisition of desired knowledge, skills and competencies, persistence, attainment of educational outcomes, and post-college performance” (Kuh et al., 2006, p. 5) can be linked to chosen variables of the current study. These variables are help seeking, academic motivation, self-esteem, perceived stress, and adjustment. Academic achievement can be linked to respondents’ successful completion and pass of academic modules forming part of the programme they are registered for at the end of the academic year. Engagement in educationally purposeful activities is reflected in whether a student passes or not. In addition (and not primarily), engagement in educationally purposive activities might be reflected in help-seeking and adjustment. These variables investigate the extent at which students have adapted to the university context, their engagement in campus activities, and their willingness to ask for assistance when faced with academic or psychological challenges within the

academic context, as well as their attitudes towards help seeking. Persistence has been previously linked to motivation models and vice versa (Burrus et al., 2013; Robbins et al., 2004; Roland et al., 2016). The current study investigated the academic motivation students possess, which informs how students accomplish academic outcomes and how they persist in their studies. Skills and competencies are reflected in the respondents' negative or positive attitudes towards themselves (self-esteem) and the extent to which they perceive situations and demands placed on them as stressful or exceeding their ability to cope (perceived stress) (Ciccarelli & White, 2015; Lee et al., 2016). By including these variables, it can be argued that the current study adopts a multi-domain view of academic success that can help researchers and higher education institutions to go beyond only observing academic performance to understand students' progress in these institutions. However, academic success in this study refers to sufficient mastery of one's field of study as indicated by successful completion of, and passing of academic modules forming part of the programme registered for. Thus, academic success will be indicated by either a pass or fail (i.e., a mark of  $\geq 50\%$  or  $< 50\%$ , respectively) obtained by each participant at the end of an academic year (subject to module assessment criteria).

### **2.3 Access and Equity in the South African Context**

As previously stated in Chapter 1, the context of this study is a South African higher education institution located in Gauteng. The South African higher education context has a unique history and continues to be an area of debate and development. This sub-section consists of a discussion of the transformation of South Africa's higher education system in relation to access and equity, followed by a brief discussion of the mismatch between graduate output and skills demand in the labour market.

### ***2.3.1 Access and Equity in the South African Education Context***

Historically, the education system was fragmented based on race, ethnicity, resources and location. This led to a segregated, inequitable, and low-quality education for black people. After apartheid, the new government recognized the need for higher education institutions to redress past inequities (Mzangwa, 2019; Scott & Ivala, 2019). This redress was attempted through equity by promoting participation from disadvantaged groups and adopting policies such as the White Paper on Education and Training (DoE, 1995b), White Paper 2 on Education (DoE, 1996b), The Higher Education Act (South Africa, 1997a), and the National Plan for Higher Education (DoE, 2001). These policies would widen access to higher education for all South Africans, introduce change in university structures and teaching practices by eradicating existing forms of unfair discrimination and establishing a multi-constituency representation in the Council of Higher Education and providing adequate training for university staff (Mzangwa, 2019; Seepe, 2017; Sehoole & Adeyemo, 2016; Van Broekhuizen, 2016). Funding policies were also established to review university funding formulas and to establish new funding practices. This is because, issues such as socio-economic status and poor schooling had placed non-white individuals at an educational disadvantage. Priority was given to developing ways in which to rectify the fragmented education system with a more integrated system (Van Broekhuizen, 2016). This development proved challenging and debates around the feasibility of changing curricula and reaching consensus on policies arose. A focus was on social inclusion, and one of the ways in which this would be accomplished was through equity (Sehoole & Adeyemo, 2016).

Higher education institutions in South Africa have undergone a unique transition in terms of equity of access (Van Broekhuizen, 2016). Over the years, strategies have been put in place to address past inequalities in higher education institutions that hindered academic success. There is an increase in the enrolment and integration of previously disadvantaged

students and higher education institutions are now recognised as racially and culturally diverse contexts (Matsolo et al., 2018; Matsepe et al., 2020). Equitable access has also allowed for an increase in the enrolment of first-generation students (Pather et al., 2017). Increased access to higher education has offered diverse groups of people from differing socio-economic backgrounds a chance at higher education, however, the lack of finances has impacted participation rates of potential students (Mngomezulu et al., 2017). Higher education institutions have attempted to respond to economically disadvantaged students by providing financial assistance such as merit awards which are normally awarded to disadvantaged students with high academic grades (McKay et al., 2018). The Department of Education has attempted to respond by announcing an increase in the National Student Financial Aid Scheme (NSFAS) budget in 2016 and by recommending a new differentiated funding model to support economically disadvantaged students (NSFAS, 2017). This is because finances are a major stressor that can impact students' academic success (Matsolo et al., 2018). Despite this, having funding does not warrant students' success at university as there have been many cases where students perform poorly academically despite having adequate funding and vice versa. It is acknowledged however, that having funding may yield better academic performance by alleviating financial stress (Naidoo & McKay, 2018).

### ***2.3.2 The Mismatch between Higher Education Supply and Skill Demand in The Labour Market***

After the increase in equity for all students and the integration of previously disadvantaged students in higher education institutions, the higher education system still has areas that are a work in progress and areas of concern. Some of the areas of concern include the enrolment and graduation patterns of Science, Technology, Engineering and Mathematics (STEM) graduates, which suggest that there is a mismatch between skills offered in higher



education institutions and skills needed in the world of work (Reddy et al., 2016). There is also a demand for graduates in the teaching, medical, engineering and management positions due to the versatile skills these positions require. It is suggested that higher education institutions need to respond to the market demand. This includes enrolment in and completion of courses that fall within South Africa's scarce skills. Much assessment by the government of South Africa will be required to increase the enrolment and completion patterns of relevant and scarce qualifications. This includes assessing the type, quality, and quantity of skills that students attain in higher education institutions. With its focus on the academic success of first-time first-year students in the Faculty of Humanities, the current study does not focus on STEM graduates. However, the study is highlighting an important faculty or university departments that are responsible for the production of transformative research, social transformation and human development (Long & Foster, 2013; Prinsloo, 2016; Van der Merwe, 2004).

It can be argued that academic success in higher education does not guarantee employment or success in the work environment, however research has found that higher education increases ones' chances of employment and is associated with individual benefits such as a higher earning potential, higher quality of life, career adaptability, better working conditions and better health (Harry et al., 2018). It is therefore imperative to monitor the academic development of students in the higher education institution. Sosibo and Katiya (2015) recommend the early identification of at-risk students and addressing retention. This is supported by Sandoval-Palis et al. (2020) who recommend early identification and monitoring of at-risk students, and the development of functional strategies to improve students' output and throughput rates.

The above discussion highlights the important role that higher education institutions play in the global economy and the larger society. There is a need for these institutions to place a

higher investment in the tracing of academic success and the effective address of attrition rates. This is an achievable task although it may require change at various levels such as adapting policy, addressing poor high school outcomes, assessing input of lecturers, and looking into institutional practices (Harry et al., 2018; Reddy et al., 2016; Tewari & Ilesanmi, 2020).

By investigating psychosocial predictors of academic success among first-year students at a higher education context, the results of the study can assist in the development of functional strategies to improve students' output and throughput rates. This is because the variables being investigated provide insight into possible areas of development in the current higher education system. Help seeking and adjustment can help inform higher education institutions about students' first year experience and their engagement with institutional demands and resources, while academic motivation, self-esteem and perceived stress can assist in identifying intrapersonal and interpersonal variables that need to be strengthened to help students persist in their studies. By focusing on the higher education context, the current study is highlighting a context that contributes largely to the output of competent professionals (Reddy et al., 2016).

## **2.4 The Transitioning Student**

The transition from high school to tertiary can be quite a complex process. The first-year experience demands a mind shift as students are challenged to think critically, enhance their academic writing skills, and adapt to new teaching approaches (Jacobs & Pretorius, 2016). Additionally, first-year students have an increased independence and a greater responsibility for their own learning as compared to high school students (Jacobs & Pretorius, 2016). Class attendance is less monitored and there is far less individual attention compared to the high school environment and often poor student-lecturer relationships (O'Brien &

Verma, 2018). Students might experience anxiety and stress because of the academic demands and increased responsibility (Hassel & Ridout, 2018). Others may experience self-doubt, uncertainty in their career choice and other psychological problems. In a study to examine resilience and coping among undergraduate students at a South African university, Van Der Merwe et al. (2020) found that the students experienced high levels of academic stress, which led to lower resilience in their studies.

In addition to adapting to academic demands, first-year students are faced with having to adapt to the university social context. The transition also requires students to develop new interpersonal relationships as distance may be a barrier to their existing relationships, leading to changed relationships (Brooker et al., 2017; Nel et al., 2016). Failure to develop new relationships may lead to isolation and anxiety. Due to the tertiary context being a highly stressful environment, having a support system helps in the adjustment process (Nel et al., 2016). In their study, Van Der Merwe et al. (2020) found that students did not utilise effective coping mechanisms and required social support to cope. Students living on campus are often expected to share a living space with other students whom they have no prior relationship with (Xulu-Gama, 2019). This can be a threatening experience to those who lack social skills. Other students succumb to peer pressure and the increased freedom associated with being at university may lead to experimentation with alcohol, drugs, and other risky behaviours (Chinneck et al., 2018; Govender et al., 2015). Based on the discussion above, first-year students are a unique group of study due to their transition and integration into the higher education institution which may leave them psychosocially vulnerable hence the focus on psychosocial variables in the current study. Psychosocial vulnerability refers to being susceptible to psychological and social harm as a result of the challenges or adversaries that one has previously experienced (Van Breda, 2017). First-time first year students possess

varying degrees of vulnerability, which may cause psychosocial problems when experiencing stressful conditions in the higher education context.

## **2.5 Pre-enrolment Variables Contributing to Academic Success**

In the past, the standard practice was to use cognitive variables, more specifically intelligence, to determine academic success (Bahrami & Bahrami, 2015). The high school grade point average, and school exiting distinctions were believed to contribute to academic success in higher education institutions (Van Rooij et al., 2018). High school grade point average and distinctions obtained are the quantifiable outcomes that bursaries and sponsors mostly rely on when considering funding a student. This is done with the belief that intelligence as indicated by students' high school performance will result in academic success. Although intelligence has shown to be a significant factor, IQ alone has been found to be a minor contributing factor (Bahrami & Bahrami, 2015).

An array of variables play a role in predicting academic success. Research investigating the predictors of academic success in higher education has however focused largely on pre-enrolment variables. Matric results have often been used as a predictor of academic success (Mabizela et al., 2020). This is due to the opinion that high school performance is an indication of students' cognitive ability. Growing research, however, has shown that matric results are not a true reflection of what predicts academic success at higher education (Naidoo & McKay, 2018; Van Rooy & Coetzee-Van Rooy, 2015).

Students enter the higher education context with what some researchers call under-preparedness (Lombard, 2020). Therefore, mastery on high school content does not necessarily warrant mastery over tertiary content. First-year lecturers can help students grasp and master tertiary content by teaching their academic knowledge and experience in a practical and explicit manner (Steenkamp et al., 2015). Admission into higher education

institutions “is controlled by the minimum requirements stipulated in national legislation, but equally importantly by the right of higher education institutions – enshrined in the Higher Education Act (South Africa, 1997a) – to individually set their own entrance criteria” (p. 25). Myburgh (2019) suggests that institutions adopt and make use of various assessment and evaluation processes during the admission phase to determine student-institution suitability. The assumption is that there is a gap between secondary schooling and higher education in the first year, which puts students at risk of academic failure. This study focuses on first-year students, to investigate their academic success and psychosocial variables. Investigating the strength with which, for example, adjustment, predicts academic success, relative to other variables, will clarify the importance of adjustment as a facilitator of academic success, relative to other psychosocial variables.

Other pre-enrolment variables include age, quality of secondary school, first generation status (related to being the first in the family to attend university) and socioeconomic status (SES) (Matsolo et al., 2018). The quality of secondary schooling in South Africa has been a national concern. Among the variables impacting the quality of schooling are the attrition and the shortage of teachers, lack of intrinsic motivation of teachers and the lack of resources and necessary facilities (Chetty & Pather, 2015; Reis et al., 2019). Higher education courses have an increased workload, difficulty and a more complex criteria for assessment as compared to high school. The quality of secondary education impacts how students entering higher education institutions cope with these academic courses, by equipping students with the foundational knowledge and skills that will prepare them for higher education studies and demands (Reis et al., 2019). Some of the skills that prepare students for higher education include, time management, identification of priorities, problem solving and conceptual thinking.

## 2.6 Post-enrolment Variables Contributing to Academic Success

While a number of higher education institutions in South Africa have used matric results and the student's background, such as age and quality of secondary school to determine entrance into university, growing literature suggests that a focus on post-enrolment experiences is more influential in predicting academic success as compared to pre-enrolment variables (Burger, 2017; Mapuranga et al., 2015). There are many post-enrolment variables that contribute to academic success.

Research guided by positive psychology has found hope, resilience, optimism, and other psychological resources to have a positive relationship with academic achievement (Cilliers & Flotman, 2016; Hammill et al., 2020; Kotzé & Niemann, 2013). Hope is believed to drive goal-directed type of thinking and agency. This type of thinking is believed to yield better academic performance, due to commitment to attaining academic goals, despite academic overload. High levels of optimism as a post-enrolment factor increase students' positive expectations of academic outcomes and may yield better reactions to academic demands during the first year (Kotzé & Niemann, 2013).

Coping strategies have also been found to impact academic success as they impact how first-time, first-year students adjust to a new academic and social environment. First-year students who adopt or display a proactive coping style to first-year demands may be able to recognise potential stressors, and thereby resolve problems at an earlier stage by accumulating resources and a problem-solving stance to academic demands (Dlamini et al., 2020; Van Der Merwe et al., 2020).

Following a longitudinal study, Astin (1975) recognised two main predictive variables for academic success, namely, personal variables and environment variables. Personal variables included academic and familial background, educational aspirations, study habits, expectations about higher education institutions, age, and marital status. Environmental

variables included residence, academic environment, employment, and characteristics of the higher education institution.

The psychological wellbeing of students has also been found to impact their overall ability to function and consequently, their academic success. Some of the psychological challenges faced by first-year students are loneliness, separation from support systems, isolation, increased stress, anxiety, and identity issues. Mental healthcare utilisation among first-year students in South Africa has been found to be low despite availability of mental health resources. Due to the lack of psychological help-seeking among first-year students, these psychological challenges may inhibit students in attaining their educational goals (Bantjes et al., 2020).

The current study focuses on post-enrolment variables namely, help seeking, academic motivation, self-esteem, perceived stress, and adjustment.

## **2.7 Individual and Institutional Variables that Influence**

Student retention behaviour in higher education institutions has been observed and used to understand variables that enable students to persist and ultimately succeed in higher education institutions. The term “retention” is defined as students’ continued study or persistence until the successful completion of their studies (Velliari, 2020). There are various individual and institutional variables that influence student retention behaviour. The following sub-sections outline some of these variables.

### **2.7.1 Individual Variables**

Among the individual characteristics that influence student retention, are career aspiration and self-knowledge. Career aspiration and self-knowledge focus on the role of students in their own academic success. Students who lack self-knowledge and insight on

their career aspirations have been found to experience difficulties integrating into the university environment (Jacobs & Pretorius, 2016). A study by Abe and Chikoko (2020) found that among variables influencing students' career choices and aspirations were family and career interest. Additionally, after high school, the next generally accepted logical step is to go to university. A large number of students enrol for a variety of courses without having a clear set out career plan (Duguet et al., 2016). Others pursue courses due to the financial gain in careers within that field despite incongruence to their aspirations (Duguet et al., 2016).

Uleanya et al. (2019) recommend career guidance in schools to assist students in making right career choices. Students end up making uncertain decisions that are not congruent with their aspirations, values, and personalities. Poor career choice has been found to impact students' continued study until successful completion of their courses. Another individual contributing factor to student retention is students' inability to delay gratification. Among many other things, the higher education context stresses self-discipline. A lack of commitment to academic goals places students at a higher risk of attrition. (Duguet et al., 2016). The individual variables in our study are help seeking, academic motivation, self-esteem, perceived stress, and adjustment.

### ***2.7.2 Institutional Variables***

The context of this study is a historically White higher education institution. While legislative policies have been put in place to increase equality, equity, transform the post-apartheid higher education system, historically white higher education institutions seem to still hold institutional cultures that impact marginalised students' sense of belonging, their university experience and ultimately their academic success (Thomas & Maree, 2022). Another common institutional characteristic that has been found to influence student retention is the ethos of the educational setting. The ethos of the educational setting focuses



on those aspects that are within the institutions' control and on the role of the higher education institutions in the academic success of students. The way in which institutions operate academically, socially, and administratively has an impact on retention and attrition rates. This includes how module content is presented and structured and the level of engagement and support provided. Pather et al. (2017) believe that support programmes at higher education institutions have an imperative role in the engagement and adjustment of students and consequently, the retention rates. Understanding retention behaviour can strengthen our understanding of the predictive variables of academic success at the various levels (individual and institutional). Furthermore, it can help inform current strategies, programmes and interventions used in higher education institutions to help students persevere in their studies. This is because low retention behaviour can be damaging for higher education institutions. Although the psychosocial variables in this study are not within the institution's control, they are telling of how students experience, interact and perceive the educational setting.

## **2.8 Psychosocial Variables Contributing to Academic Success of South African University Students**

There have been studies conducted to investigate different psychosocial variables that contribute to academic success in South African higher education institutions. Self-efficacy has been found to have a positive relationship with the academic success of university students (Naidoo & Govender, 2020; Ramnarain & Ramaila, 2017; Thomas & Maree, 2022). Mokhothu and Callaghan (2018) found that sociocultural adaptation had a significantly positive relationship with the academic performance of international students in the context of a large South African university. This supports studies that have shown adjustment to influence academic success (McGhie, 2017; Nel et al., 2016; Schreiber & Yu, 2016). Self-

motivation and self-esteem have also been found to significantly impact academic success of university students (Jama, 2016; Ravhuhali et al., 2019; Van Zyl et al., 2020). Dube and Mlotshwa (2018) found that parental involvement in education, good and supportive relationships between educators and students fostered better academic success among nursing students. In their study on undergraduate students at a historically Black and a historically White South African public higher education institution, Thomas and Maree (2022) identified 10 individual variables contributing to the academic success of undergraduate students. These were: academic self-efficacy, peer relationships, parental engagement and support, motivation, time management, adjustment, emotional wellbeing, lack of information, socio-economic status, and language proficiency.

The current study fills a gap in research on psychosocial predictors of academic success in higher education by focusing on a group of psychosocial variables instead of individual variables. There are but only a few studies in South Africa that have been conducted to determine the relationships between help seeking, academic motivation, self-esteem, perceived stress, adjustment, and academic success (Malefo, 2000; Petersen et al., 2009; Petersen et al., 2010; Sommer & Dumont, 2011). The current study adds to the limited research on these specific variables.

## **2.9 Help seeking, Academic Motivation, Self-Esteem, Perceived Stress, Adjustment as Psychosocial Predictive Variables of Academic Success**

There is no universal framework that captures all the variables that predict academic success. Robbins et al. (2004) conducted a meta-analysis on 109 studies to examine the relationship between psychosocial and study skill variables of college achievement and persistence. Robbins et al. (2004) reviewed Tinto's student integration model, Bean's theory on student attrition and psychological theories of motivation. These are three of the most

dominant education persistence models. Based on these three models, nine constructs were categorised: 1) achievement motivation, 2) academic goals, 3) institutional commitment, 4) perceived social support, 5) social involvement, 6) academic self-efficacy, 7) general self-concept, 8) academic-related skills, and 9) contextual influences. From the meta-analysis, Robbins et al. (2004) found that academic self-efficacy ( $r = .378$ ,  $\rho = .496$ ) and academic motivation ( $r = .257$ ,  $\rho = .303$ ) were the highest predictors of college achievement and persistence, followed by academic goals ( $r = .155$ ,  $\rho = .179$ ), academic related skills ( $r = .129$ ,  $\rho = .159$ ) and social involvement ( $r = .124$ ,  $\rho = .141$ ). Using this meta-analysis, Petersen et al. (2009) proposed a model which suggests that students' help seeking, academic motivation and self-esteem, perceived stress, academic workload, and adjustment have an effect on their academic success. Furthermore, the authors found that adjustment mediates the other variables mentioned above.

Petersen et al. (2009) tested the model on 194 first year disadvantaged university students and found that intrinsic motivation, self-esteem, perceived stress, and academic overload were significant predictors of adjustment. Furthermore, the authors found that adjustment, extrinsic motivation, and academic overload were predictive variables of academic achievement. Overall, the psychosocial variables explained adjustment more than they did academic achievement. This model was utilised in my study by looking at the relationships between help seeking, academic motivation, self-esteem, perceived stress, adjustment, and academic success as discussed below.

### ***2.9.1 Help seeking***

Help seeking can be understood as the act of asking for assistance when faced with a physical or emotional problem (Sommer & Dumont, 2011). Stressors during the first year are not limited to academics but may be located in other areas of the individual's life such as

interpersonal relationships, identity and health. The necessity for higher education institutions to have student psychological services cannot be stressed enough. Despite the documented benefit of these university psychological services in helping students with significant stressors, these services remain underutilised due to stigma, lack of knowledge about counselling and about the existence of these services, concerns about confidentiality, mistrust in others and perceived autonomy (Bantjes et al., 2020; Kamunyu et al., 2016). Other sources for academic help include lecturers, tutors, and librarians (Hassel & Ridout, 2018; Petersen et al., 2020). Roxa and Marquis (2019) highlight the positive impact that academic interaction with academic staff can have on facilitating learning. Although there is limited research in South Africa on the specific impact of the lecturer-student relationship or interaction on academic success, Segabutla (2015), stresses the need for lecturers to create a context for dialogical interaction. There is a need for the provision of clear and accessible support from lecturers. In essence, help seeking looks at students' willingness to ask for assistance when faced with academic or psychological challenges and their utilization of institutional resources (i.e., lecturers, student counselling services).

Help-seeking also involves having insight into the problem or problem area and awareness of help options available, a willingness to actively seek and receive help and commitment to developing identified areas needing help (Umarani, 2020). Stigma is one of the most reported barriers to help seeking, even more for psychological help seeking. Petersen et al. (2010) did not find a significant correlation between help-seeking and academic performance in the third year. Lourens and Fourie-Malherbe (2017) have reported a tendency by students to not seek help even in university environments where free psychotherapy was offered. This tendency alludes to implications for academic success. Astatke (2018) conducted a study in which she found that students with positive help seeking attitudes and behaviour were more likely to achieve higher academic performance. As a

result, I have resolved to include help-seeking as a predictor. It was important for this study to investigate whether help seeking is a significant factor in academic success in the first year to instil help seeking earlier in their academic pursuit. Duguet et al. 2016) advocate for student support practices and services in higher education institutions to help facilitate academic support. One of the ways to assist in the academic help-seeking is to make students aware of existing campus resources.

### ***2.9.2 Academic Motivation***

Academic motivation has been covered extensively in research (Caruth, 2018; Jach & Trolan, 2020; Petersen et al., 2009; Vallerand et al., 1992; Trolan et al., 2016; Van Soom & Donche, 2014; Van Staden & Ellis, 2017). Academic motivation can be described as the drive to accomplish academic outcomes. It has been found to impact class attendance, attitudes towards assignments and involvement in learning activities. It is important that students entering the university context understand their motivation to study. Abundant literature suggests that motivation has positive contribution towards academic success (Kryshko et al., 2020; Ryan & Deci, 2020; Tokan & Imakulata, 2019). Although this is the case, academic motivation is a complex and contextual phenomenon. Students can have different types, levels, and intensity of motivation (Ryan & Deci, 2020). Literature investigating the relationship between motivation and academic success has viewed motivation through the lenses of the self-determination theory. Within this theory, three types of motivation that are distinguished in this current study included intrinsic motivation, extrinsic motivation and amotivation.

Intrinsically motivated students are those who are likely to perform tasks or activities due to the satisfaction derived from the participation (Ryan & Deci, 2020). It has been found that students who are intrinsically motivated are more likely to perform more effectively.

This because of their ability to initiate and explore strategies towards academic tasks (Sommer & Dumont, 2011). This type of motivation is reflected in students' interest in the course material and not just the exam content.

Extrinsically motivated students are those who are likely to perform tasks or activities as a means to an end or with a goal, outcome or reward in mind (Orvis et al., 2018). In contrast to intrinsic motivation, students who are extrinsically motivated perform activities due to external sources of influence such tangible and intangible incentives (e.g., good marks), avoidance of punishment (e.g., losing a bursary) and socialisation (e.g., validation from parents or lecturers) (Orvis et al., 2018). Extrinsically motivated students are often hard on themselves, strive for the approval of others and rarely extend their knowledge beyond the basic content taught. On the lowest spectrum of motivation is amotivation. In simple terms it refers to students who are not motivated at all. Amotivated students are those students who fall on neither of two types of motivations and who may experience feelings of incompetence, a lack of purpose and that they cannot attain positive or desired results (Stover et al., 2014). Amotivation is observed in the lack of intention in behaviour. Amotivated students are those who fail to recognize the impact of their behaviour on their academic outcomes.

Both intrinsic and extrinsic motivation seem to have a place in academic success. Motivation has been shown to have a positive effect on students' academic success (Sikhwari, 2014). Literature supports the notion that academic motivation has a positive impact on academic success (Almalki, 2019). Students with lower levels of motivation are more likely to drop out or take longer to complete their courses (Bardach et al., 2020). Based on the above discussion, it is assumed that motivation regardless of the type of motivation, does play role in academic success. The current study will help determine whether this remains true among first-year, South African students.

### 2.9.3 Self-Esteem

A number of studies have found a significant relationship between self-esteem and academic success (Ahmed, 2019; Arshad et al., 2015; Gezu et al., 2020; Maropamabi, 2014; Seabi, 2011). Self-esteem refers to how individuals evaluate themselves and their negative or positive attitudes towards themselves (Ciccarelli & White, 2015). According to Maslow's hierarchy of needs, one of the psychosocial needs that motivate human action is self-esteem. Self-esteem is necessary for self-actualisation to occur. Research has indicated a significant correlation between self-esteem and academic success (Arshad et al., 2015; Maropamabi, 2014). There is a possibility, however, that self-esteem could result from the experience of tertiary education, which leads to a lack of clarity in terms of the relationship between self-esteem and academic success. Furthermore, because of the multidimensionality of self-esteem, it is possible that only certain aspects of self-esteem predict academic success. For example, a student may have social self-esteem and not academic self-esteem. Other components of self-esteem, which were originally grouped by O'Brien & Epstein (1988) in their Multidimensional Self-Esteem Inventory (MSEI) include competence, body image, personal power, and likability. Due to this multidimensionality of self-esteem and because the researcher was not interested in a domain specific self-esteem, this study looked at global self-esteem (*overall negative versus positive attitude towards oneself*). Self-esteem has been viewed as a motive that drives behaviour. It is a construct often used interchangeably with self-efficacy due to the high correlation between the two constructs (Chen et al., 2004). Self-esteem "is distinguishable from the concept of self-efficacy because, whereas self-efficacy is a relatively malleable, task-specific belief" (Chen et al., 2004, p. 376), self-esteem refers to how individuals feel about themselves despite performance. Self-esteem is developed through

the social interactions with our environment and fluctuates as we interact. It has been associated with better academic, social, and personal outcomes.

#### ***2.9.4 Perceived Stress***

Perceived stress refers to how individuals view situations as stressful. Several environmental and personal variables affect the stress levels of first year students. These include role demands, demanding coursework, being away from home, social support and developing new identities (Keat Lau et al., 2018). It was therefore an important factor to look into as it will inform the degree to which individuals perceive situations as stressful affect academic success. The transactional model of stress and coping by Lazarus and Folkman (1984) views stress as a cognitive process in which an individual assesses their interaction with their environment and whether the demands placed are threatening to oneself. This process is defined as the primary appraisal. Individuals also assess their resources to cope with stressful demands or combat the perceived stress (Silinda, 2018).

This appraisal process is important as it shapes how individuals perceive situations and how they cope with these situations (Lazarus & Folkman, 1984). There are individual differences in whether the same event is perceived as stressful or not and individual differences in how individuals respond to these events. In other words, some students may experience high levels of stress with regards to an academic experience, whereas others may not perceive the same academic experience as stressful. In a survey conducted to analyse perceived stress among first-year students at a South African university, Mason (2017) found that academic stress was prevalent among these students. Additionally, the students employed ineffective coping strategies. Respondents from the study were stressed about their academic work overload, finances, spirituality, and the curriculum. In a cross-sectional analytical study conducted on clinical students, Bhayat and Madiba (2017), found that perceived stress led to



contemplation about changing courses and the most common perceived stressor was the fear of failing and exams. Perceived stress can cause an increase in students' academic performance or cause them to become ineffective such as adopting avoidant coping strategies. Another component to Lazarus and Folkman's (1984) model is coping strategies. They suggest that when demands replenish adaptive resources, students need to adopt a problem-solving stance to cope. The styles of coping among students vary. Du Plessis (2020) found that among maladaptive coping strategies for perceived stressors were alcohol, avoidance coping and overeating.

### ***2.9.5 Adjustment***

A considerable amount of research has demonstrated the relationship between adjustment to university and academic achievement (Alasbool & Fateel, 2019; AlDababseh et al., 2017; Fateel, 2019; Sommer & Dumont, 2011; Van Rooij et al., 2017). Higher education institutions provide a unique platform for interaction with diverse groups and individuals. It is however a context that confronts students with a new institutional culture and unfamiliar settings. The transition from school to university requires students to adjust to the academic, social, personal-emotional, and institutional demands of the university experience (Baker & Siryk, 1999). Failure to cope with the new institutional environment may lead to low academic performance, social distress, a lesser degree of psychological wellbeing and low satisfaction with the higher education experience. Jacobs and Pretorius (2016) identify students' lack of self-knowledge and lack of insight on their career aspirations as contributing variables to university adjustment. The Astin's student involvement theory holds that students learn by becoming involved in their environment and that the degree of their active involvement in the various aspects of the academic experience plays a role in academic

success (Astin, 1984). These various aspects include actively studying, interacting with lecturers, and interacting with the university environment including campus activities.

According to Jordaan (2016), student support systems are well placed to address first-year experience effects. The higher education institution selected in this study has such a programme, the STARS Mentorship Programme that offers new students the opportunity to have mentors (usually senior students) to assist them in adapting to the university life and academic demands through emotional and social support. This programme is suitable for students for students who are struggling to adjust (Wilken, 2019). Therefore, how students adjust to this academic and social environment could possibly impact their academic success. Field et al. (2014) stress the importance for aspiring professionals to interact with and adjust to unfamiliar and diverse contexts early on in their academic training as a way of building competence. It would therefore be interesting to see whether there is a relationship between adjustment to university and competence, which would be demonstrated in our dependent variable, academic success.

## **2.10 The Issue of Consensus on Predictors of Academic Success**

Consensus on the predictors of academic success has not yet been reached. In fact, after three years of study on the 194 first-year disadvantaged university students, Petersen et al. (2010) extended the study on the same sample and concluded that academic performance at the end of the first year was an additional predictor of academic performance two years later. The few studies in South Africa that have looked at the relationship between the psychosocial variables mentioned in this study and academic success (Petersen et al., 2009; Petersen et al., 2010, Sommer & Dumont, 2011) have recommended that further research into the determinants of academic performance and on university experiences be conducted among especially disadvantaged students to facilitate intervention. This stresses the need to

monitor first-year progress or academic success. Reaching consensus could assist in the development of South African frameworks of measuring tertiary students' experiences and academic success.

## **2.11 Theoretical Perspectives on Academic Success**

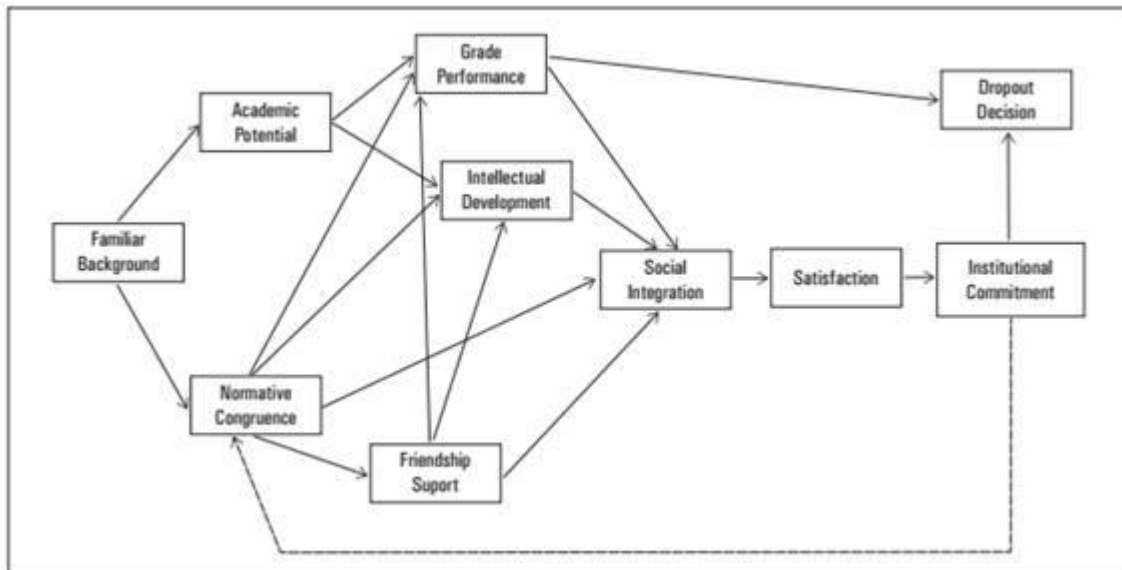
There are several theories that have been utilised to explain academic success and student retention. This section focuses on three dominant models that have been utilised, each which highlight the importance of students' academic and social integration in the higher education context.

### ***2.11.1 Spady's Model of Student Departure***

Among the frequently used models to explain student retention, is Spady's (1970) model of student departure. Spady (1970) proposed that academic potential, normative congruence, grade performance, intellectual development and friendship support influence students' integration and satisfaction in higher education institutions (see Figure 1). In turn, students' integration into the higher education institution and their satisfaction with the institution influence their decision to drop out or persevere.

**Figure 1**

*Spady's Model of the Dropout Process*



*Note:* Theoretically Based Model of the Undergraduate Dropout Process retrieved from Spady (1971, p. 39)

According to Spady (1971), students enter higher education institutions with “a definite pattern of dispositions, interests, expectations, goals, and values shaped by their family background and high school experiences” (p. 38), which influence how they interact in the higher institution context. This interaction determines students’ assimilation and ultimately their retention in the higher education institution, and whether they experience satisfaction with the university environment and commitment to the institution.

To investigate the adequacy of the theoretical model in explaining the undergraduate dropout process, Spady (1971) applied the model to longitudinal data that was gathered from first-year students at the College of the University of Chicago in 1965. Spady (1971) found that academic potential had a minimal impact on institutional commitment. Commitment to the institution was largely generated as result of exposure to course content, interaction with faculty members and university opportunities aimed at developing students’ interest.

Additionally, attitudes towards learning played a major role in students' institutional commitment. From this investigation, Spady (1971) concluded that for academic success to occur, modification to reward structures in the higher education institution needs to occur. Spady (1971) further suggested that attention needs to be drawn to the gender differences in retention behaviour. Grade performance was a primary determinant of dropping out among male respondents in the longitudinal study, while general commitment to the institution was a strong determinant of the decision to drop out among female participants.

In the current study, results indicating a significantly positive relationship between academic success and adjustment as well as attitudes towards learning would highlight the relevance of Spady's (1970) model in understanding academic success in the current higher education context.

### ***2.11.2 Astin's Student Involvement Theory***

In his student involvement theory, Astin (1984) stresses that learning and successful integration occurs when students become involved in their academic environment. He stressed that for learning and growth to occur, students need to invest both physical and psychological energy into their academic experience. He furthermore stressed that the extent of involvement varies with each student and has both quantitative and qualitative features. Ultimately, students' development was a result of the extent and quality of their involvement in their academic environment. Finally, Astin (1984) highlighted that student involvement is the responsibility of both the student and the institution. When institutions invest in effective educational policies and programs that inspire student involvement, students integrate into the tertiary environment and persevere.

From Astin's (1984) theory of student involvement, we can gather that academic success requires intervention at two levels: the individual and the institution. The variables

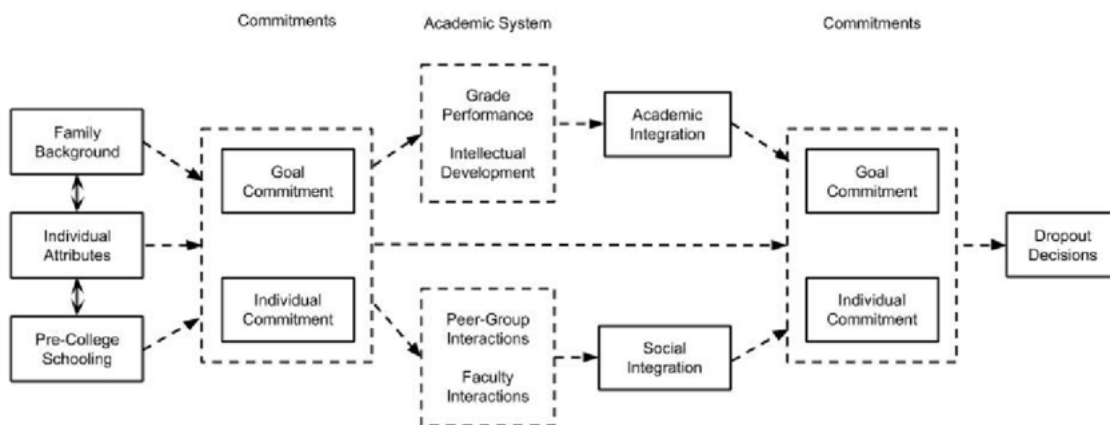
(help seeking, academic motivation, self-esteem, perceived stress, and adjustment) being investigated in the current study, along with the relationships between them, bring awareness to the first-year academic experience (in Astin’s terms, students’ integration, and involvement in the academic context), including their involvement in institutional practices. Additionally, these psychosocial variables provide insight into the individual variables that play a role in helping students persist in their studies.

### 2.11.3 Tinto’s Integration Theory

Tinto’s integration theory (1975) is a widely used theory to understand retention behaviour among university students. Tinto’s integration theory (see Figure 2) explains that retention in higher education is highly influenced by students’ integration into the university context both at an academic and social level.

**Figure 2**

*Tinto’s Student Integration Model*



*Note.* Tinto’s Student integration depicting a longitudinal process of interactions between the individual and the academic and social systems of university.

This integration is influenced by interactions of the student with the university's academic and social systems. Tinto (1987) included three stages to explain the integration process. The first stage of the integration process is characterised by separation. Students leave their existing system or community comprising of their family, friends, school and home environment with its own values, interactional patterns, and norms. This stage is followed by the transitional stage where students enter the higher learning context (academic system as shown by Figure 2) and are confronted with a new environment with a new set of norms, demands and interactional styles. Students may struggle to integrate at this stage and often must find ways to cope with the stresses of this unfamiliar environment. In the third and last stage of incorporation, students are expected to have integrated or become functional members of the higher education context. The successful resolution of each stage can result in successful integration, and the unsuccessful resolution of each stage might lead to dropping out. Tinto (1993) added external commitments and intentions as variables that influenced academic success. These two variables influence students' commitment to their educational goals and to their institution. Tinto's student integration theory provides a perspective to how the respondents of the current study adjusted to higher education institution and the academic and social demands placed on them. The theory is significant to the current study because it highlights the importance of students' pre-enrolment variables while also stressing the importance of post-enrolment variables such as student experiences, how students cope with stress within the higher learning environment and internal variables (e.g., goal and individual commitment). These post-enrolment variables are reflected in the variables being investigated in the current study (adjustment, self-esteem, perceived stress).

## **2.12 Summary of the Chapter**

This chapter provided literature on the conceptualisation of academic success, including how the current study adopted a multi-view perspective on academic success. This

was followed by a discussion of some of the challenges in the South African higher education landscape and the current mismatch between graduate output and skills demand in the labour marketplace. The chapter proceeded to discuss characteristics of the transitioning student and provided a presentation of some of the pre-enrolment and post-enrolment variables that contribute to academic success, as well as institutional and personal variables that influence academic success and student retention rates. This was followed by a presentation of the limited research on psychosocial predictors of academic success in South African higher education institutions and the need for the development of South African frameworks of measuring tertiary students' experiences and academic success. The chapter concluded with a discussion of three theoretical perspectives on academic success, outlining some of the ways in which students integrate into the higher learning environment and some perspectives on understanding retention and dropping out of students. The next chapter discusses the research methodology that was used in this study.



## CHAPTER 3

### METHODOLOGY

#### 3.1 Introduction

This chapter discusses the research methodology that was used in the study. The chapter begins by reiterating the research aim and research question. This is followed by a discussion of the quantitative methodology that was adopted in this study. The chapter moves on to outline the specific research design, sampling and recruitment methods employed, and the various measures that were used for data collection. Thereafter, the researcher outlines the data collection procedures carried out in the current study, followed by a discussion of how the data was analysed. The chapter concludes with a presentation of the ethical considerations that underpinned this study.

#### 3.2 Research Aim

The aim of the study was to investigate the psychosocial predictors of academic success. More specifically, to test the relationship between help seeking, academic motivation, self-esteem, perceived stress, adjustment, and academic success. The research question guiding the study was: What are the relationships between academic success and help-seeking, academic motivation, self-esteem, perceived stress, and adjustment, as psychosocial predictors of academic success, among first-time first-year students at a South African university?

#### 3.3 Methodology

This study employed a quantitative approach to test the nature of the relationships between help seeking, academic motivation, self-esteem, perceived stress, adjustment, and academic success.

Quantitative research is an analytical approach to research that involves gathering numerical data to explain a particular phenomenon (Mertler, 2016). This methodology focuses on those aspects of social behaviour that are quantifiable rather than exploring the subjective meanings of those aspects. In addition, results from quantitative research can be generalised to populations as data collection ideally involves a larger random sample (Creswell & Creswell, 2018). Furthermore, data collection and analysis are done using reliable quantifiable measurements, limiting the chances of subjectivity and error. Lastly, the use of quantitative measures for data collection and analysis is less time consuming as compared to qualitative data collection. Quantitative methodology was employed in this study because the goal of the study is to describe and predict possible relationships between help seeking, academic motivation, self-esteem, perceived stress, adjustment, and academic success.

A non-experimental research design was employed in the current study. Non-experimental research designs are a broad category of research designs in which variables are not manipulated. Non-experimental designs may allow broad trends to be determined and for hypotheses to be proved or disproved (Bordens & Abbott, 2018). This research design was appropriate for the current study as the research did not involve any manipulation by the researcher and instead the variables were investigated as they naturally occur.

More specifically a correlational research design was used in this study. A correlational research study seeks to understand the statistical relationships between variables without manipulating the variables (Creswell & Creswell, 2018). Establishing that a correlational relationship exists between two or more variables can help us make predictions about one variable based on another. As the present study was interested in investigating the relationships between help seeking, academic motivation, self-esteem, perceived stress,

adjustment and academic success, the use of a correlational research design was useful to help identify and describe the relationships among the variables.

### **3.4 Sampling and Recruitment**

The sample was drawn from the population of first-time first year students registered in the Faculty of Humanities at the University of Pretoria in 2020. The sample size was 49. The sampling method used in this study was purposive homogenous sampling. Purposive sampling is a non-probability sampling method which involves the researcher choosing a specific sample based on the characteristics of the population and purpose of the study (Babbie, 2014). Homogenous sampling is a type of purposive sampling that focuses on respondents who share a specific characteristic (Etikan et al., 2016). Respondents had to be first-time first-year students in the year 2020 attending tertiary for the first time in the Faculty of Humanities.

Respondents were recruited by means of sending an invitation poster to the first-year module co-ordinators (who are also lecturers) in the Department of Sociology, Department of Speech-Language Pathology and Audiology, and the Department of Psychology. The first-year module co-ordinators in these departments posted the invitation for participation under their ClickUp modules. This invitation disclosed the purpose of the study, the inclusion criteria, voluntary nature of participation and a Qualtrics link directing prospective respondents to an information and consent page and questionnaires on an online platform.

### **3.5 Data Collection**

Data was collected via Qualtrics, an easy-to-use online survey software that captures respondents' responses and is safeguarded by a strong security password that can only be accessed by the researcher and the supervisor. Online surveys are a relatively cost-effective

alternative to physically administered surveys (Regmi et al., 2017). Furthermore, due to the COVID-19 pandemic and the regulations of social distancing at the time of data collection, students became a hard-to-reach population. Qualtrics was useful in helping to access and collecting data from this hard-to-reach population. It is, however, acknowledged that a lack of computer or internet access may have limited or disadvantaged some first-year students from participating in the current study. Data was collected from October 2020 to November 2020. Due to low participation data was also collected from March 2021 to May 2021 from second-year students in 2021 who were first-time first year students in 2020. The respondents gave responses relating to their experiences in 2020.

### **3.6 Data Collection Instruments**

After obtaining informed consent, respondents were directed to self-report questionnaires set out on the Qualtrics platform (Appendix G-L). More specifically, these questionnaires were a demographic questionnaire, the Attitudes Toward Seeking Professional Psychological Help-Short Form (ATSPPH-S), Academic Motivation Scale, Rosenberg Self-Esteem Scale, Perceived Stress Scale, and the Student Adaptation to College Questionnaire. The Qualtrics link led respondents to all the scales. The scales are made publicly available by the developers. A detailed description of each instrument is found below.

#### ***3.6.1 Demographic Questionnaire***

The demographic questionnaire (Appendix G) was necessary to help determine the demographic profile of the respondents and their general perception of university thus far. Respondents were asked to fill in a demographic questionnaire which captured their age, gender, race, home language, socioeconomic status (SES), current year of study, the factor (family, few/no other institutions offering their study course, bursary obligations or self-

choice) that influenced their choice to study at this specific university and their current department of study. Next, the questionnaire asked respondents to rate the degree to which they are happy at their university, opinion on whether courses are treated equally, satisfaction with how the university runs its affairs and facilities, and their opinion on whether the university provides adequate academic, psychological and financial support. These were stand-alone items on the demographic questionnaire. University facilities refer to the amenities, supporting utility infrastructures and places provided by the institution to enhance student success, while university affairs refer to the support and services offered as well as how the university runs its academic programmes. Determining the characteristics of the research respondents was important to help inform whether the respondents were a representative sample of the target population as this impacts the generalizability of the results from the study. Additionally, the education system was historically fragmented based on variables such ethnicity and SES versus now where higher education institutions are now recognised as racially and culturally diverse contexts (Matsepe et al., 2020; Matsolo, et al., 2018). Therefore, determining the demographic profile was helpful in giving some insight on the diversity of our sample, especially in a historically white university. The estimated time to complete this measure was 2 minutes.

### ***3.6.2 Attitudes Toward Seeking Professional Psychological Help-Short Form***

Help seeking in the academic setting was assessed using an adaption of Attitudes Toward Seeking Professional Psychological Help-Short Form (Appendix H) (Fischer & Farina, 1995). This measure looks at attitude towards seeking psychological help and help from others who are more knowledgeable. The estimated time to complete this measure was 1 minute.

This instrument consists of 6 statements which help determine whether the students sought assistance or would seek help when confronted with challenges. Responses are rated on a 3-point Likert scale (0= *disagree* to 3 = *agree*). The scale consists of positively worded items (e.g., “If I were experiencing a serious emotional crisis at this point in my life, I would be confident that I could find relief in psychological services”) and negatively worded items (e.g., “The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts”). Items 2, 3, 5 and 6 are reverse scored (3 = *disagree* to 0 = *agree*). The total possible score is 18. Higher scores on the ATSPPH-S indicate more positive attitudes towards help seeking. The ATSPPH-S has been shown to have reliability with a Cronbach’s alpha coefficient of 0.70 and even higher coefficients in samples of college students (Ang et al., 2007; Fischer & Farina, 1995; Li et al., 2016). Cronbach’s alpha indicated fairly low internal consistency for the ATSPPH-S ( $\alpha = 0.577$ ). Ideally, the internal consistency should be above 0.70, although Pallant (2020) holds that it is common to find quite low Cronbach values in scales with a few number of items.

### ***3.6.3 Academic Motivation Scale***

The Academic Motivation Scale (AMS-C) (Vallerand et al., 1992) was employed to measure academic motivation. It is an instrument that consists of 7 subscales with 28 items in which 12 of the items measure intrinsic motivation, while 12 measure extrinsic motivation and 4 measure amotivation. The subscales are intrinsic motivation-to know, intrinsic motivation toward accomplishment, intrinsic motivation to experience stimulation, extrinsic motivation identified regulation, extrinsic motivation introjected regulation, extrinsic motivation external regulation and amotivation. Each subscale contains 4 items where responses are rated on a 7 Likert scale (1= *does not correspond at all* to 7 = *corresponds exactly*). Respondents were asked to indicate to what extent each of the 28 items (e.g., “Item

10: Because eventually it will enable me to enter the job market in a field that I like”) presently corresponds to their reasons for enrolling in university. The total possible score on each subscale is 28 with higher scores indicating high levels of motivation. This measure has been previously used on university students. Furthermore, it has demonstrated good reliability across all 7 subscales with Cronbach’s alphas of 0.62-0.91 and is therefore a reliable tool to assess academic motivation (Cokley et al., 2001; Vallerand et al., 1992). In their study, Kapp et al. (2020) investigated the psychometric properties of the AMS-C on first year South African university students and found that the scale had acceptable levels of factorial validity, reliability, and convergent and discriminant validity. This made the AMS-C an appropriate tool for assessing academic motivation among first-year students in South African higher education institutions. In the current study, Cronbach’s alpha values between 0.784-0.914 were obtained, indicating high internal consistency among the AMS-C subscales. The estimated time to complete this instrument is 15 minutes.

#### **3.6.4 Rosenberg Self-Esteem Scale**

The Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965) as shown on Appendix J, was utilised to measure the students’ self-esteem. The RSES is a self-report measure that comprises of 10 items with responses rated on a 4-point Likert scale (1 = *strongly agree* to 4 = *strongly disagree*). The scale consists of positively worded items (e.g., “On the whole, I am satisfied with myself”) and negatively worded items (e.g., “I certainly feel useless at times”). Negatively worded items (5,6,8 and 9) are reversed scored (3 = *strongly agree* to 0 = *strongly disagree*) and the total possible score is 30. The scale has been used in a considerable number of South African studies and shown good internal consistency ranging from 0.77 to 0.88 in these studies (Maluka & Grieve, 2008; Ndima, 2017; Rosenberg, 1965; Westaway et al., 2015). Despite being used in a considerable number of South African studies, the RSES has

been surrounded with some controversy regarding its use in cross-cultural settings. In their study, Makhubela and Mashegoane (2017) tested for the factorial validity and the extent to which the RSES had equal meaning across a sample of 579 black and 291 white university students and found that some of the RSES items had method bias. Findings suggested that method effects on black students as compared to the white respondents in the RSES were strongly associated with negatively worded items. In other words, there were variations in responses between the two race groups with a tendency for black respondents to respond differently to negatively worded items. This suggests that the RSES should be interpreted with caution when it comes to the cross-cultural utility in South Africa. Despite controversy regarding the utilization of the RSES in cross-cultural settings, in her study, using a diverse sample of 304 South African university students from two different South African universities, Ndima (2017) found the Rosenberg self-esteem scale to have construct and divergent validity and considered it to be a valid tool for use in the South African university context. Therefore, the RSES was utilised in the current study taking into account all the above psychometric properties and considerations. The estimated time to complete this instrument was 5 minutes. In the current study, a Cronbach's alpha of 0.904 was obtained, indicating the RSES's high internal consistency for use on the current study sample

### ***3.6.5 Perceived Stress Scale***

Perceived stress was measured using the 14-item Perceived Stress Scale (Pss-14) (Appendix K) that measures the degree to which individuals view situations as stressful (Cohen et al., 1983). This measure is “free of content specific to any sub- population group” (p. 388) and is thus a suitable scale to measure perceived stress in diverse contexts. The scale consists of negatively stated statements (Items 1, 2, 3, 8,11 ,12 and 14) used to assess students' perceived distress (e.g., In the last month, how often have you felt that you were



unable to control the important things in your life?”), and positively stated statements (Items 4, 5, 6, 7, 9,10 and 13) intended to assess students’ coping capacity or perceived ability to manage existing stressors (e.g., In the last month, how often have you felt confident about your ability to handle your personal problems?”). Responses are rated on a 5-point Likert scale never (0 = *never* to 4 = *very often*). Positively stated items are reversed scored and then a sum of all the 14 items is obtained. The estimated time to complete this instrument was 10 minutes. The total score ranges from 0 to 56 and higher scores indicate higher levels of stress. The PSS-14 has been found to have the fundamental psychometric properties needed to deem it as an appropriate assessment to use. In their study investigating the reliability and validity of the PSS-14 for use on two samples of college students ( $n = 332$ ,  $n = 114$ ), Cohen et al. (1983) found the scale to have excellent reliability with a Cronbach’s alpha coefficient of 0.84 and 0.85 in each sample and adequate predictive validity. The scale continues to be used globally to assess perceived stress in various contexts. The Cronbach’s alpha obtained ( $\alpha = 0.684$ ) in the current study indicated the PSS’s low internal consistency

### ***3.6.6 The Student to College Adaptation Questionnaire***

The Student Adaption to College Questionnaire (SACQ) as shown on Appendix L, was used to measure the quality of the students’ adjustment to university (Baker & Siryk, 1989). The estimated time to complete this measure was 20 minutes. The SACQ is a 67 item self-report measure where high scores indicate a high level of adjustment. It consists of four subscales that assess perceived academic adjustment, social adjustment, personal-emotional adjustment, and institutional attachment. The subscales were found to have internal consistency, with Cronbach’s alphas higher than 0.80 (Baker & Siryk, 1989). Furthermore, correlations have been found between the subscales and other measures such as academic motivation (Baker & Siryk, 1989). Responses are rated on a 9-point scale (1= *applies very*

*closely to me to 9 = does not apply to me at all*) indicating the extent to which the statements are applicable to respondents. Respondents were asked to indicate to what extent the items best described their university experiences. Examples of items from the SACQ include, “I feel that I fit in as part of the college environment” and “I’m not really smart enough for academic work I am expected to be doing now”. The SACQ has been used in numerous South African studies and has proven to be both a reliable and valid instrument across multiple studies (Davidowitz & Schreiber, 2008; Mittelmeier et al., 2019; Papageorgiou & Callaghan, 2020; Peterson et al., 2009). Therefore, the SACQ was used in the current study. The current study found that the SACQ had a low internal consistency ( $\alpha = 0.546$ ) for the full scale and institutional attachment subscale ( $\alpha = -0.518$ ). High internal consistency was found in the personal-emotional adjustment subscale ( $\alpha = 0.840$ ), while the academic adjustment ( $\alpha = 0.611$ ) and social adjustment ( $\alpha = 0.640$ ) subscales, displayed an acceptable internal consistency.

### **3.6.7 Academic Success**

Academic success was the dependent factor in this study. A pass at the end of the year on all modules registered in their first year of study was used as a measure of academic success. Respondents were asked to specify how many modules they were registered for in their first year of study, how many of these they passed, how many they failed and how many they discontinued. A self-reported pass for all modules registered for in their first year of study was indicative of academic success.

### **3.8 Data Collection Procedures**

Initially, research posters were meant to be handed out to first-year lecturers and placed on notice boards around campus to invite respondents once ethical clearance was

obtained. However, in light of the COVID-19 regulations, only a few students were on campus therefore, an alternative approach was utilised. First-year module co-ordinators in the three departments were contacted and sent a research poster which they proceeded to post on their undergraduate ClickUp modules inviting students in their respective departments to participate in the study.

The research poster contained a link to follow and QR code that students could scan directing them to an information and consent page (Appendix F), followed by the research questionnaires on an online platform (Qualtrics). The research procedure was specified on both the posters and the information page appearing on the Qualtrics link prior to respondents' completion of the questionnaires. This included what data was being collected, how it was being collected, what it would be used for, respondent's right for withdrawal from the study, confidentiality, access to data and benefits. The respondents were directed to a demographic questionnaire, the HSS, AMS-C, RSES, PSS-14, and the SACQ. The respondents were made aware that the results of the study would be disseminated in the form of a thesis and on other academic platforms, and that any questions could be directed by emailing the researcher or the supervisor on the email addresses that were provided on the Qualtrics information page.

### **3.9 Data Analysis**

Analysis of the data collected in the current study was done by means of the Statistical Package for the Social Sciences (SPSS) version 25 (IBM Corporation, 2017). Both descriptive and inferential statistics were utilised to analyse the data. The descriptive statistics were computed to obtain the sample's demographic characteristics and descriptive statistics as pertaining to each scale. In order to answer the research question and investigate the

relationship between help seeking, academic motivation, self-esteem, perceived stress, adjustment and academic success, a binomial logistic regression was utilised.

### ***3.9.1 Binary Logistic Regression***

Binary logistic regression is a form of regression used to predict a nominal dependent factor with a binary response given to one or more independent variables (Field, 2018). This type of regression is useful for predictive analyses and provides information on the adequacy of a model for a particular data set. For the purposes of this study, binary logistic regression helps provide insight into how well the independent variables predict or describe the dependent factor (Xu et al., 2018). The dependent factor (Y) is treated as a dummy factor coded or categorised as either Y=1 or Y= 0. The binary logistic regression model aims to determine the odds of Y=1 as a result of the independent variables ( $X_1, X_2, X_3...X_k$ ). Category 1 maximizes the likelihood of failure whereas Category 0 denotes success.

Binary logistic regression uses a maximum likelihood estimation to compare the alternative and null hypothesis. The alternative hypothesis assumes that the beta coefficients of at least one factor are not equal to 0, indicating some association between the variables. The null hypothesis assumes that the beta coefficients in the regression are equal to 0, indicating no association between the variables. Additionally, the maximum likelihood estimation is used to estimate the regression coefficient ( $\beta$ ) for each explanatory factor included in the model and to determine “how likely the observed values of the dependent factor may be predicted from the observed values of the independent variables” (Garson, 2016, p. 43). The binary logistic regression is defined by the following logit function (Haines, et al., 2018):

$$\text{Logit}(\pi) = \ln\left(\frac{P}{1-P}\right) = \beta_0 + \beta_1 X_1 \dots \dots + \beta_k X_k$$

With

**Logit( $\pi$ )**= The log odds of the dependent factor (Y)

**P**= probability of the event occurring

**$\beta$**  = estimated regression coefficient also called parameter estimates

**$\beta_0$** = the estimated regression coefficient for the Y-intercept of the line of regression

**$\beta_1$** = the estimated regression coefficient for the Y-intercept of the line of regression

**X<sub>1</sub>**= independent factor

Using the equation and notations above, binary logistic regression holds that for every estimated regression coefficient, the natural logarithm of the likelihood that Y = 1 (rather than 0) increases by the value of the estimated regression coefficient for each unit of increase in the independent factor. In other words, the probability that Y = 1 will increase as values of X increase.

### ***3.9.2 Binary Logistic Regression Assumptions***

Binary logistic regression is a statistical method and is therefore based on several assumptions that the data must meet for this type of regression to be considered. The following sub-sections present the assumptions that are typically applicable to a binary logistic regression, coupled with indications of the extent to which the current study met these assumptions:

**a) Nature of the dependent and independent variables.** The first and important assumption that needs to be met is that the dependent factor needs to be dichotomous having two categories and tested with one or more independent variables that are either continuous or categorical independent variables (Garson, 2014). The dependent factor (academic success) in our study is measured as a nominal level with two categories (pass, fail) and is

tested with five independent, ordinal variables (help seeking, academic motivation, self-esteem, perceived stress, and adjustment) therefore a binary logistic regression was considered.

**b) Absence of Multicollinearity.** Daoud (2017) strongly suggests the absence of multicollinearity among the independent variables as an important assumption to be met when considering using a binary logistic regression, to avoid biased coefficients and invalid statistical inferences. The data was tested for multicollinearity by examining the simple Pearson's correlation coefficient among the variables and the Variance Inflation Factor (VIF) values. Field (2018) suggests that sample correlation coefficients ( $r$ ) greater than 0.80 in the correlation matrix may signal possible problems with collinearity among the variables. Field (2018) also suggested that a VIF greater or equal to 10 (which corresponds to a tolerance of .10) is indicative of problems with collinearity. Intrinsic motivation towards accomplishment was excluded in the binary logistic regression due to a strong correlation with intrinsic motivation to experience stimulation and extrinsic motivation introjected and due to a VIF greater than 10. None of the other correlations between our variables were greater than 0.80.

**c) Linearity of the Logit.** The binary logistic regression does not require linearity between dependent and independent variables. Instead, there needs to be linearity between any continuous independent variables and the log odds of the dependent factor (Garson, 2016). The independent variables in this study are ordinal; however, they were treated as scale variables in the context of the binary logistic regression. Linearity was tested using the Box-Tidwell transformation test on SPSS, which involves observation of the interactions between the continuous independent variables and their natural logs. Results indicated that the significance probability ( $p$ ) is  $> 0.05$  for the variables in our study, suggesting that there is a linear relationship between help seeking, academic motivation, self-esteem, perceived stress, adjustment, and the logit transformation of academic success. This result implies that

the variables in this study are linearly related to the logit of the outcome factor and that the assumption is satisfied.

**d) Absence of Outliers.** Among other effects, outliers in the data set may cause problems with parameter estimations, reduce the statistical power of a test being used and impact conclusions (Herdiani et al., 2019). In the case of logistic regressions, outliers may harm the model's fit. The Mahalanobis distance is one of the common methods used in multivariate statistics to detect outliers by measuring “the number of standard deviations that an observation is from the mean of a distribution” (Ghorbani, 2019, p. 587). To test for outliers, a regression analysis was used to compute the Mahalanobis distances ( $p < .001$ ). No multivariate outliers were detected.

**e) Sample Size.** The general rule of thumb for logistic regressions often referred to as the Events Per Factor (EPV) criteria is 10 observations per independent factor (Garson, 2016). A small sample size in any logistic regression may limit the statistical power of the tests being conducted. Considering our sample size ( $n = 49$ ), this general rule of thumb is not being met. However, growing literature has found that the EPV is not an appropriate criterion for binary prediction models (Van Smeden et al., 2019).

**f) Model fit.** Garson (2016) highlighted the importance of establishing model fit of logistic regression models on the data being used. Binary logistic regression makes use of several tests and approaches to test for model fit (Abdulqader, 2017). The current study made use of the following:

- *The Omnibus Tests of Model Coefficients*, which are used to check that the new model (with explanatory variables included) is an improvement over the baseline model.
- *Pseudo R-Square values* (Cox & Snell  $R^2$  and Nagelkerke  $R^2$  values), which are both methods of calculating the explained variation.
- *The Hosmer and Lemeshow test*, which is a goodness-of-fit test.

- *The Classification Table*, which is used as an indication of how well the model (that includes the independent variables) is performing in correctly predicting category membership on the dependent factor (academic success).

Results pertaining to the above assumptions are presented in detail in the Results chapter.

### **3.10 Ethical Considerations**

To ensure that the respondents were protected there are several ethical considerations this study adhered to. First, ethical clearance was obtained from the University of Pretoria's Ethics Committee before the current study could begin (Appendix A). This is because social research should not impose any harm on respondents and obtaining approval from relevant ethical bodies is an essential step in research (Basit, 2013). Relevant Heads of Department were approached to obtain permission to conduct the study in their respective departments (Appendix B). To further minimise any harmful effects, prior to participation, the researcher ensured that each respondent was aware of what the research entailed as shown in Appendix C. This included content relating to the purpose of the study, voluntary nature of the research, respondents' right of withdrawal from the study at any time without any penalties, the procedures as well as information about ensuring that the results of the study will remain confidential. Respondents' information was held with high regard by ensuring confidentiality. Confidentiality was maintained by assigning code numbers to each participant and by ensuring that the study data is safeguarded with a strong security password that can only be accessed by the researcher and the supervisor. Declaring the purpose of the study and voluntary participation, notation of any risks or benefits to the respondents associated with the study, identification of the researcher and maintaining confidentiality are all important ethical considerations that ensure the protection of respondents (Creswell, 2018).

Respondents were not asked to provide their names or student numbers, instead Qualtrics



generated respondent numbers. Furthermore, respondents were informed that the researcher is working under supervision. The completed online questionnaires are stored and safeguarded from unauthorised access on a Qualtrics account which can only be accessed with a password.

In terms of access, the respondents were informed about their right to access data in the form a dissertation after completion (Creswell, 2018). The researcher is aware that academic success may be a sensitive topic and that higher education institutions may be perceived as stressful environments; therefore, respondents were made aware of student psychological services at the university and free landline counselling services such as Lifeline and the South African Depression and Anxiety Group should they have felt distressed or in need of psychological help at any stage as a result of participating in the study.

In light of COVID-19 regulations, implications to the study have been considered. Firstly, data collection was impacted because of the social distancing regulation. Due to this regulation, there were only a few to no students on campus. This implication was countered by making use of online recruitment through research posters on undergraduate ClickUp modules. In doing so, both the safety of the respondents and the researcher was ensured.

### **3.11 Conclusion**

This chapter presented the research methodology used in this study. First, the aim and research questions were reiterated, followed by a discussion of the research methodology and approach used. The study employed a quantitative approach, more specifically a non-experimental, correlational research design which was illustrated throughout the chapter.

This was followed by a discussion of the sampling and recruitment methods employed and the various measures that were used for data collection. Thereafter, I outlined the procedures of obtaining ethical clearance from the university's ethics committee and

informed consent from the respondents. This was followed by a discussion of how the data was analysed and a discussion of the methods used to check whether the data from this study met the assumptions for the chosen analytic tool. The chapter concluded with a presentation of the ethical considerations that underpinned this study. The next chapter presents the results of this study.

## CHAPTER 4

### RESULTS

#### 4.1 Introduction

This chapter presents the results of the study. In the first section of this chapter, descriptive statistics will firstly be presented and described for the demographic characteristics as well as for the key variables. The first sub-section of this first section outlines the demographic characteristics of the sample. The specific characteristics that were used to describe the sample include gender, age, home language, socio-economic status, year of study, and department of study. In the demographic questionnaire, students were also asked to rate their general perception of university thus far. The results are also outlined, particularly, whether respondents are happy at the specific university, their levels of satisfaction with how the university runs its' affairs (i.e., academic, support and social programmes) and facilities (i.e., library and classrooms), and their opinion on the academic, psychological, and financial support offered by the university. The second sub-section of this chapter outlines the descriptive characteristics of help seeking, academic motivation, self-esteem, perceived stress, adjustment and academic success of the respondents in this study.

The second section on this chapter outlines the results of the main analyses conducted to test the relationships between help seeking academic motivation, self-esteem, perceived stress, adjustment, and academic success. First, the results of the test of the assumptions that are typically applicable to a binary logistic regression, specifically linearity of logit, absence of multicollinearity and absence of outliers are outlined. Secondly, the results of the analysis of model fit are shown. This includes the omnibus tests of model coefficients, Cox & Snell  $R^2$  and Nagelkerke  $R^2$  values, goodness-of-fit tests, and the classification table.

The third section of this chapter shows the results on the binary logistic regression. The chapter concludes with a summary of the results of the study.

## 4.2 Demographic Characteristics of the Sample

The sample, as mentioned in the previous chapter, was obtained using non-probability purposive homogenous sampling. Table 1 illustrates the demographic characteristics of the study sample. The final sample consisted of 49 first-year students, of which 45 (91.8%) were female and 4 (8.3%) were male. The mean age of the sample was 19.96 ( $SD = 1.207$ ) years, with respondents' ages ranging between 18 and 25 years of age. More than half of the respondents identified as White (53.1%), whilst a large portion of the remaining respondents identified as African (40.8%). The lowest number of respondents identified themselves as Coloured (4.1%) and Indian (2%), respectively.

Regarding the home language of the sample, 36.7% of the respondents indicated that their home language was English, followed by 26.5% indicating Afrikaans, while the rest of the respondents (36.7%) indicated isiZulu: (12.2%), Setswana: (8.2%), Sepedi: (6.1%), Sesotho: (6.1%), Xitsonga: (4.1%) respectively as their home language. None of the respondents selected Tshivenda, isiNdebele, isiXhosa, and siSwati as a home language. As shown in Table 1, the majority (61.2%) of the respondents were from a self-reported middle-income household, followed by 26.5 % of respondents from self-reported low-income households. The lowest number of respondents (12.2%) indicated that they come from a high-income household.

The respondents comprised of students who were in their first year of study in 2020 and registered with the Faculty of Humanities. The respondents in the study were registered in one of the three departments; 61% in the Department of Psychology, 28.6% in the Department of Speech-Language Pathology and Audiology, and the lowest number of

respondents were registered with the Department of Sociology (10.2%). Respondents were asked to indicate which of five variables influenced their choice of study. The majority of the respondents (73.5%) indicated that they simply preferred institution, while the remaining respondents' choice of study was influenced by family (18.4%), few institutions offering their selected study course (4.1%), bursary obligations (2%) and other undisclosed variables (2%).

**Table 1**

*Descriptive Statistics for the Demographic Characteristics*

Demographic Characteristic	Frequency	Percent
<b>Age (M = 19.96, SD = 1.21)</b>		
18-25	49	100
<b>Gender</b>		
Male	4	8.2
Female	45	91.8
<b>Race</b>		
African	20	40.8
White	26	53.1
Coloured	2	4.1
Indian	1	2.0
<b>Home Language</b>		
Sepedi	3	6.1
Setswana	4	8.2
Afrikaans	13	26.5
English	18	36.7
Xitsonga	2	4.1
IsiZulu	6	12.2
Sesotho	3	6.1

### Socio-Economic Status

High-income household	13	61.2
Middle-income household	30	26.5
Low-income household	6	12.2

### Department of Study

Psychology	30	61.2
Sociology	5	10.2
Speech Pathology and Audiology	14	28.6

### Influence on Study Choice

Family	9	18.4
Few/No University Offering	2	4.1
Bursary Obligations	1	2.0
Chose	36	73.5
Other	1	2.0

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Note:  $n = 49$

Table 2 illustrates the respondents' general perception of university thus far. These were stand-alone items forming part of the demographic questionnaire. The total possible score on each stand-alone item was 4. Results indicate that majority of the respondents (81.6%) are happy at their specific university ( $M = 2.80$ ,  $SD = 0.456$ ) while the remaining respondents indicated neutral and disagreeable feelings. Results also indicated that the respondents had neutral feelings about whether university courses are treated equally ( $M = 2.04$ ,  $SD = 0.856$ ). In response to levels of satisfaction with how the university runs its' affairs (i.e., academic, support and social programmes) and facilities (i.e., library and classrooms), there seemed to be adequate satisfaction with how the university runs its facilities ( $M = 2.73$ ,  $SD = 0.569$ ) and how the university runs its affairs ( $M = 2.55$ ,  $SD = 0.542$ ) Respondents were also asked to indicate their opinion on the academic, psychological,

and financial support offered by the university. Results indicate that the respondents found that their university provides adequate academic ( $M = 2.82$ ,  $SD = 0.486$ ) and psychological support ( $M = 2.71$ ,  $SD = 0.612$ ). Perceptions on whether the university offered adequate financial support differed, with respondents reporting neutral feelings ( $M = 2.20$ ,  $SD = 0.645$ ) regarding whether the university offered adequate financial support.

**Table 2**

*Means and Standard Deviations of Respondents General Perception of University*

	Min.	Max.	$M$	$SD$
General Happiness at University	1	3	2.80	.456
Courses Treated Equally	1	3	2.04	.865
Affairs	2	3	2.55	.542
Facilities	1	3	2.73	.569
Adequate Academic Support	1	3	2.82	.486
Adequate Psychological Support	1	3	2.71	.612
Adequate Financial Support	1	3	2.20	.645

$n = 49$

### 4.3 Descriptive Statistics of Key Variables

Tables 3-9 depict the descriptive statistics of the key variables in this study (i.e., help seeking, academic motivation, self-esteem, perceived stress, adjustment, and academic success).

### 4.3.1 Attitudes Toward Seeking Professional Psychological Help-Short Form (ATSPPH-SF)

Table 3 below depicts the descriptive statistics for the ATSPPH-SF. The total possible score is 18. Scores on the ATSPPH-SF ranged from 6 to 18, with  $M = 13.8$  ( $SD = 2.794$ ) indicating that mean attitude towards help seeking was positive. The highest scores were obtained on Item 6 ( $M = 2.46$ ,  $SD = 0.808$ ) “Getting help in my academic work would be an admission of my own lack of ability or ignorance” and Item 2 ( $M = 2.43$ ,  $SD = 0.886$ ), “The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts” and Item 6 ( $M = 2.43$ ,  $SD = 0.886$ ), “Getting help in my academic work would be an admission of my own lack of ability or ignorance”. The lowest score was obtained on Item 4 ( $M = 2.02$ ,  $SD = 0.977$ ), “If I were experiencing difficulty with my academic workload, I would be confident in approaching a lecturer for assistance”. Results on these items suggest that the respondents have a positive attitude towards psychological and academic help seeking.

**Table 3**

*Means and Standard Deviations of the ATSPPH-SF*

Statement	Min.	Max.	<i>M</i>	<i>SD</i>
If I were experiencing a serious emotional crisis at this point in my life, I would be confident that I could find relief in psychological services	0	3	2.37	.741
The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts	0	3	2.43	.886
A person should work out his or her own problem, getting psychological counselling would be a last resort	0	3	2.22	.917



If I were experiencing difficulty with my academic workload, I would be confident in approaching a lecturer for assistance	0	3	2.02	.977
Talking to a lecturer about the difficulties I experience with my academic work strikes me as a poor way to get understanding	0	3	2.30	.891
Getting help in my academic work would be an admission of my own lack of ability or ignorance	0	3	2.46	.808
<b>Total</b>	<b>6</b>	<b>18</b>	<b>13.80</b>	<b>2.794</b>

$n = 46$

#### 4.3.2 Academic Motivation Scale

The scores from the AMS-C were calculated for the seven motivation subscales (intrinsic motivation-to know, intrinsic motivation-toward accomplishment, intrinsic motivation-to experience stimulation, extrinsic motivation-identified regulation, extrinsic motivation-introjected regulation, extrinsic motivation-external regulation and amotivation). The total possible score for each subscale is 28. As shown in Table 4, in terms of the academic motivation types, respondents in this sample exhibited the highest mean score ( $M = 17.25$ ,  $SD = 2.759$ ) for identified regulation (a type of extrinsic motivation where an individual performs an activity to obtain rewards or avoid punishment), followed by intrinsic motivation to know ( $M = 16.47$ ,  $SD = 2.987$ ). Intrinsic motivation toward accomplishment scores ranged between 4-20 ( $M = 14.19$ ,  $SD = 4.336$ ), while intrinsic motivation-to experience stimulation scores ranged between 4-19 ( $M = 12.16$ ,  $SD = 4.182$ ). Extrinsic motivation introjected scores ranged between 5-19 ( $M = 14.13$ ,  $SD = 3.833$ ), while extrinsic motivation external regulation scores ranged between 7-20 ( $M = 14.94$ ,  $SD = 3.454$ ). Results indicated that the respondents had low amotivation ( $M = 5.00$ ,  $SD = 1.191$ ).

**Table 4***Descriptive Statistics for the AMS-C 28*

Motivation Types	Min.	Max.	<i>M</i>	<i>SD</i>
Intrinsic Motivation-to Know	9	20	16.47	2.984
Intrinsic Motivation-toward Accomplishment	4	20	14.19	4.336
Intrinsic Motivation-to Experience Stimulation	4	19	12.16	4.182
Extrinsic Motivation-Identified	11	20	17.25	2.759
Extrinsic Motivation-Introjected	5	19	14.13	3.833
Extrinsic Motivation-External Regulation	7	20	14.94	3.454
Amotivation	4	8	5.00	1.191

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*n* = 32
**4.3.3 Rosenberg Self-Esteem Scale**

Individual scores on the RSES range from 0-30. Negatively worded statements (item 5,6,8 and 9) are reversed scored. The total scores then indicate the levels of self-esteem where higher scores indicate higher self-esteem. For the sample in this study, scores ranged from 4 to 28. There are three score categories to consider when observing the results of the RSES. Scores ranging from 0-15 are considered indicators of low self-esteem; scores ranging from between 15-25 are within the medium range also referred to as the normal range; and those within the range of 25-30 would be considered indicators of high self-esteem. Results as

stipulated shown in Table 5 indicate that respondents' self-esteem falls within the normal range ( $M = 18.2$ ,  $SD = 5.291$ ).

**Table 5**

*Descriptive Statistics of the RSES*

Statement	Min.	Max.	<i>M</i>	<i>SD</i>
On the whole, I am satisfied with myself.	1	3	1.92	.628
At times I think I am satisfied with myself.	1	3	2.08	.628
I feel that I have a number of good qualities.	1	3	2.00	.632
I am able to do things as well as most other people	0	3	2.00	.632
I feel I do not have much to be proud of.	0	3	1.88	.993
I certainly feel useless at times.	0	3	1.38	.852
I feel that I'm a person of worth, at least on an equal plane with others.	0	3	1.96	.824
I wish I could have more respect for myself.	0	3	1.23	1.070
All in all, I am inclined to feel that I am a failure.	0	3	2.23	.908
I take a positive attitude toward myself.	0	3	1.85	.925
Total RSES	4	28	18.54	6.041

$n = 40$

#### **4.3.4 Perceived Stress Scale**

The total possible score on the PSS is 56. From the data gathered, the mean score on the PSS was 30.73 ( $SD = 6.885$ ). Positively stated statements (Items 4, 5, 6, 7, 9,10 and 13) are reversed scored and a sum of the scores on all the 14 items is obtained, where higher

scores indicate higher levels of perceived stress. Individual scores for the respondents in this study ranged from 17-43. There are three score categories of perceived stress. Scores ranging from 0-18 are considered indicators of low stress; scores ranging from 19-37 are indicative of moderate stress; and those within the range of 38-56 would be considered indicators of high perceived stress. Results indicated that the majority of respondents obtained a score within the 19-37 range category indicating moderate level of perceived stress.

**Table 6**

*Means and Standard Deviations of Perceived Stress*

Statement	Min.	Max.	<i>M</i>	<i>SD</i>
1. In the last month, how often have you been upset because of something that happened unexpectedly?	1	4	2.88	1.033
2. In the last month, how often have you felt that you were unable to control the important things in your life?	0	4	2.62	1.098
3. In the last month, how often have you felt nervous and “stressed”?	2	4	3.04	.720
4. In the last month, how often have you dealt successfully with day-to-day problems and annoyances?	0	4	1.46	1.067
5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?	0	4	1.50	1.068
6. In the last month, how often have you felt confident about your ability to handle your personal problems?	0	4	1.65	1.018
7. In the last month, how often have you felt that things were going your way?	0	4	2.38	1.134

8. In the last month, how often have you found that you could not cope with all the things that you had to do?	0	4	2.08	1.093
9. In the last month, how often have you been able to control irritations in your life?	0	4	1.96	.999
10. In the last month, how often have you felt that you were on top of things?	0	4	2.08	1.197
11. In the last month, how often have you been angered because of things that happened that were outside of your control?	0	4	2.81	1.059
12. In the last month, how often have you found yourself thinking about things that you have to accomplish?	0	4	2.08	1.383
13. In the last month, how often have you been able to control the way you spend your time?	0	4	1.96	1.216
14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	0	4	2.23	1.336
<b>PSS Total</b>	<b>17</b>	<b>43</b>	<b>30.73</b>	<b>6.885</b>

*n* = 37

#### ***4.3.5 Student Adaptation to College Questionnaire***

Table 7 presents the mean total scores for each type of adjustment as well as the full scale. The total possible score on each subscale of SACQ is 75. Scores that fall below 40 are considered as indicators of low adjustment, while scores that fall above 60 are considered indicators of high adjustment. For this study, scores ranged between 25-50 ( $M = 35.77$ ,  $SD = 6.542$ ) for the academic adjustment subscale, 31-46 ( $M = 38.51$ ,  $SD = 3.289$ ) for the social adjustment, 25-59 ( $M = 39.86$ ,  $SD = 8.144$ ) for the personal-emotional adjustment subscale, 31-42 ( $M = 37.40$ ,  $SD = 2.463$ ) for the institutional attachment subscale and between 28-45

( $M = 35.17$ ,  $SD = 3.940$ ) for the full scale. The mean scores indicate that respondents had low levels of adjustment. The highest mean score was in relation to personal-emotional adjustment while the lowest mean score was obtained on the academic adjustment subscale.

**Table 7**

*Mean Item Scores for each Adjustment Type*

Adjustment Type	Min.	Max.	<i>M</i>	<i>SD</i>
Academic Adjustment	25	50	35.77	6.542
Social Adjustment	31	46	38.51	3.289
Personal-Emotional Adjustment	25	59	39.86	8.144
Institutional Attachment	31	42	37.40	2.463
Full Scale	28	45	35.17	3.940

$n = 33$

#### **4.3.6 Academic Success**

A self-reported pass on all first-year modules registered for in the respondents' first year of study was used as a measure of academic success. Respondents were asked to specify how many modules they were registered for in their first year, how many of these they had passed, how many they had failed and how many they had discontinued. Results as depicted in Table 9 indicated that 75% of the respondents had passed all their first-year modules, while 7% discontinued, and 3.1% had failed some of their modules.

**Table 8**

Academic Outcome for the First Year

Academic Outcome	Frequency	Percent
Passed	24	75.0
Discontinued	1	3.1
Failed	7	21.9
Total	32	100.0

#### 4.4 Evaluation of Assumptions for Binary Logistic Regression

The assumptions that are typically applicable to a binary logistic regression (as stated in the previous chapter) were tested. Academic success was measured on a nominal level (with the categories, “Passed”, “Failed”) and tested with the independent variables help seeking, intrinsic motivation to know, intrinsic motivation to experience stimulation, extrinsic motivation identified, extrinsic motivation introjected, extrinsic motivation external regulation, and amotivation, self-esteem, perceived stress, academic adjustment, social adjustment, personal-emotional adjustment, attachment, and overall adjustment. All the independent variables were ordinal scale. The assumptions for a binary logistic regression are discussed below.

**Linearity of the logit.** The Box-Tidwell transformation test on SPSS used to test for linearity of the logit indicated that the significance probability is  $> 0.05$  for the variables in our study, suggesting that there is a linear relationship between help seeking, intrinsic motivation to know, intrinsic motivation to experience stimulation, extrinsic motivation identified, extrinsic motivation introjected, extrinsic motivation- external regulation, and amotivation, self-esteem, perceived stress, academic adjustment, social adjustment, personal-emotional adjustment, attachment and overall adjustment and the logit transformation of

academic success. This result implies that the variables in this study are linearly related to the logit of the outcome factor and that the assumption of linearity of the logit for conducting a binary logistic regression is satisfied (Field, 2018).

**Absence of Multicollinearity.** Pearson's correlations coefficients (Table 10) for the variables and VIF values used to test for multicollinearity indicated that intrinsic motivation towards accomplishment had a strong correlation with intrinsic motivation to experience stimulation ( $r = 0.822, p < 0.05$ ) and extrinsic motivation introjected ( $r = 0.851, p < 0.05$ ) and a VIF greater than 10. This finding suggests that multicollinearity is present among the variables mentioned, therefore there is a need to exclude the factor responsible for multicollinearity (Field, 2018). Intrinsic motivation towards accomplishment was therefore excluded in the binary logistic regression. None of the other correlations between our variables were greater than 0.80.



**Table 9***Pearson's Correlations Among the Psychosocial Variables*

	Help Seeking	Self-Esteem	Perceived Stress	IM to Know	IM towards Accomplishment	IM to experience Stimulation	EM Identified	EM Introjected	External Regulation	Amotivation	Academic Adjustment	Social Adjustment	Personal-Emotional Adjustment	Attachment	Total Adjustment
Help Seeking	1	.129	.066	.153	.097	.071	.321	-.030	.282	-.481*	-.132	-.174	-.092	.182	-.170
Self-Esteem	.129	1	-.409*	-.108	-.174	-.069	-.053	-.302	-.118	-.138	.315	-.100	.634**	-.039	.515**
Perceived Stress	.066	-.409*	1	.005	-.146	-.152	-.039	.004	.006	.077	-.194	-.205	-.687**	.085	-.450*
Intrinsic Motivation to Know	.153	-.108	.005	1	.781**	.750**	.617**	.715**	.294	-.184	-.424*	-.293	-.091	.002	-.278
Intrinsic Motivation towards Accomplishment	.097	-.174	-.146	.781**	1	.822**	.600**	.851**	.489*	-.085	-.277	.103	-.037	-.081	-.222
Intrinsic Motivation to Experience Stimulation	.071	-.069	-.152	.750**	.822**	1	.456*	.731**	.288	.083	-.098	.061	.124	-.150	-.008
Extrinsic Motivation Identified	.321	-.053	-.039	.617**	.600**	.456*	1	.470*	.714**	.047	-.305	-.056	-.084	-.277	-.342
Extrinsic Motivation Identified Introjected	-.030	-.302	.004	.715**	.851**	.731**	.470*	1	.509**	.107	-.151	.158	-.194	-.117	-.193
Extrinsic Motivation-External Regulation	.282	-.118	.006	.294	.489*	.288	.714**	.509**	1	.198	.063	.186	-.192	-.252	-.173
Amotivation	-.481*	-.138	.077	-.184	-.085	.083	.047	.107	.198	1	.446*	.434*	-.026	-.592**	.177
Academic Adjustment	-.132	.315	-.194	-.424*	-.277	-.098	-.305	-.151	.063	.446*	1	.339	.429*	-.199	.705**

Social Adjustment	-.174	-.100	-.205	-.293	.103	.061	-.056	.158	.186	.434*	.339	1	.101	.029	.414*
Personal-Emotional Adjustment	-.092	.634**	-.687**	-.091	-.037	.124	-.084	-.194	-.192	-.026	.429*	.101	1	-.213	.707**
Attachment	.182	-.039	.085	.002	-.081	-.150	-.277	-.117	-.252	-.592**	-.199	.029	-.213	1	.152
Total Adjustment	-.170	.515**	-.450*	-.278	-.222	-.008	-.342	-.193	-.173	.177	.705**	.414*	.707**	.152	1

\*\* . Correlation significant at 0.05 significance level

\* . Correlation significant at 0.01 significance level

**Absence of Outliers.** To test for outliers, a regression analysis was used to compute the Mahalanobis distances ( $p < .001$ ). No multivariate outliers were detected.

#### 4.5 Analysis of Model Fit

When conducting a binary logistic regression, an important criteria measure is model fit. A binary logistic regression produces outputs that help us to test the alternative hypothesis that there is some association between the variables, with the null hypothesis that there is no association between the variables. Of the 49 cases available in the current study, only 26 cases were included in our analysis for model fit and in the binary logistic regression, as 23 respondents were missing data on some of the variables included in our analysis. Tables 10-14 depict the tests and approaches used to test for model fit. This includes the omnibus tests of model coefficients, Cox & Snell  $R^2$  and Nagelkerke  $R^2$  values, goodness-of-fit tests, and the classification table.

##### 4.5.1 The Omnibus Tests of Model Coefficients

The Omnibus Tests of Model Coefficients (Table 11) was used to check that the new model (with explanatory variables included) is an improvement over the baseline model. Chi-square tests are used to achieve this. For this study, the model includes the following variables: help seeking, academic motivation (intrinsic motivation to know, intrinsic motivation to experience stimulation, extrinsic motivation identified, extrinsic motivation introjected, extrinsic motivation external regulation, and amotivation), self-esteem, perceived stress and adjustment (academic adjustment, social adjustment, personal-emotional adjustment, attachment and overall adjustment). A significant chi-square test statistic ( $p < 0.05$ ) would suggest that this model is a significant fit of the data while a nonsignificant chi-

square ( $p > 0.05$ ) would suggest that there is no effect on the independent variables on the dependent factor

Based on the chi square and significance level test (chi-square = 25.457,  $df = 14$ ,  $p = 0.030$ ), we can say that the model containing the full set of predictors represents a significant improvement in fit relative to a null model in which the full set of independent variables have zero regression coefficients and therefore have no effect on or relationship with academic success.

**Table 10**

*Omnibus Tests of Model Coefficients*

		Chi-square	<i>df</i>	<i>P</i>
Step 1	Step	25.457	14	.030
	Block	25.457	14	.030
	Model	25.457	14	.030

#### 4.5.2 Pseudo R-Square

Table 12 contains pseudo  $R^2$  values, more specifically the Cox & Snell  $R^2$  and Nagelkerke  $R^2$  values, which are both methods of calculating the explained variation. Explained variation refers to the how much of the dependent factor can be explained by the independent variables. It is represented as a proportion between 0 and 1, with 0 indicating that the model does not explain any of the variation in the dependent factor (academic success) and 1 indicating that the model predicts 100% variation in the dependent factor (Young, 2017). The Cox and Snell  $R^2$  values as well as the Nagelkerke  $R^2$  provide values that range from '0' to '1' with scores closer to 1 indicating good fit (Young, 2017).

Results indicate that the model has a relatively larger pseudo  $R^2$  of 1.000 for the Nagelkerke  $R^2$  and 0.624 for the Cox and Snell  $R^2$ . This indicates that the model, which

contains the variables help seeking, intrinsic motivation to know, intrinsic motivation to experience stimulation, extrinsic motivation identified, extrinsic motivation introjected, extrinsic motivation external regulation, and amotivation, self-esteem, perceived stress, academic adjustment, social adjustment, personal-emotional adjustment, attachment and overall adjustment, accounts for 100% of the variation in the dependent factor (academic success). Due to the variation between the Nagelkerke  $R^2$  and Cox and Snell  $R^2$  values, they should be treated as approximations (Wilson & Lorenz, 2015). This means that these pseudo  $R^2$  values should be treated with caution and not used as the only tests for model fit as they can be misleading.

**Table 11**

*Model Summary*

Step	-2 Log likelihood	Cox & Snell $R^2$	Nagelkerke $R^2$
1	.000 <sup>a</sup>	.624	1.000

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

**4.5.3 The Hosmer & Lemeshow Goodness-of-Fit test**

The Hosmer & Lemeshow Goodness-of-Fit test was conducted to further test whether the model is a good fit to the data. An overall goodness of fit of the model and for better prediction power,  $p$ -values need to be greater 0.05 (Hosmer & Lemeshow, 2013). Results from this test as presented on Table 13, indicated that the model is a good fit to the data as  $p > 0.05$ . This meant that the predicted probabilities did not deviate from the probabilities in such a way that was not aligned with the prediction of the binary distribution, and the model, with help seeking, academic motivation (intrinsic motivation to know, intrinsic motivation to

experience stimulation, extrinsic motivation identified, extrinsic motivation introjected, extrinsic motivation- external regulation, and amotivation), self-esteem, perceived stress and adjustment (academic adjustment, social adjustment, personal-emotional adjustment, attachment and overall adjustment) was adequate for analysis purposes.

**Table 12**

*Hosmer and Lemeshow Test*

Step	Chi-square	<i>df</i>	<i>p</i>
1	.000	7	1.000

#### ***4.5.4 Accuracy of the Model with the Independent Variables on Academic Success in Predicting Academic Success***

The classification table as shown in Table 14 is used as an indication of how well the model (that includes the independent variables) is performing in correctly predicting the two dependent factor categories. In other words, the table is concerned with prediction as to whether a respondent will fall within the “passed” or “failed” group. The classification accuracy for a given category (passed/failed) is reflected in the row percentages. As shown in Table 13, the overall classification accuracy for the model was 100% as compared to the null model, which was predicting the outcome for 80.8% of the cases. This result indicates that the model with all the independent variables (except for intrinsic motivation towards accomplishment) has a good enough capacity to classify whether a respondent will fall in the “pass” or “fail” category.

**Table 13***Classification Table<sup>a</sup>*

Observed		Predicted		
		Academic Outcome		Percentage Correct
		Passed	Failed	
Step 1	Academic Outcome Passed	21	0	100.0
	Failed	0	5	100.0
	Overall Percentage			100.0

a. The cut value is .500

#### 4.6 Binary Logistic Regression Results

Table 15 shows the contribution of each independent factor to the model and the statistical significance of each independent factor's prediction of the dependent factor. It allows us to determine which of the independent variables significantly predict academic success. This includes the regression coefficients (B), which are interpreted as Odds Ratios that represent the predicted change in the odds of a person falling into the 'pass' category on the academic success factor (in comparison with the 'fail' category) per unit increase on a predictor, the Wald statistic (to test the statistical significance) and the all-important Odds Ratio for each factor category.

Among the independent variables in this study, the regression coefficients for intrinsic motivation to experience stimulation ( $B = 4.442, p > 0.05$ ), extrinsic motivation identified ( $B = 126.320, p > 0.05$ ), extrinsic motivation introjected ( $B = 40.420, p > 0.05$ ), perceived stress scale ( $B = 0.309, p > 0.05$ ), academic adjustment ( $B = 3.210, p > 0.05$ ) and total adjustment ( $B = 19.100, p > 0.05$ ) were positive and non-significant. The positive coefficients indicate that with increasing values on intrinsic motivation to experience stimulation, extrinsic motivation introjected, perceived stress, academic adjustment, and overall adjustment, the

outcome of academic success increases. However, the non-significant  $p$ -values indicate that the above variables do not significantly predict academic success. Help seeking ( $B = -15.678$ ,  $p > 0.05$ ), intrinsic motivation to know ( $B = -99.253$ ,  $p > 0.05$ ), external regulation ( $B = -56.810$ ,  $p > 0.05$ ), amotivation ( $B = -13.414$ ,  $p > 0.05$ ), self-esteem ( $B = -1.686$ ,  $p > 0.05$ ), social adjustment ( $B = -25.205$ ,  $p > 0.05$ ), personal-emotional adjustment ( $B = -6.920$ ,  $p > 0.05$ ) and attachment ( $B = -1.824$ ,  $p > 0.05$ ) were negative and non-significant. The negative coefficients indicate that with increasing values on help seeking, intrinsic motivation to know, external regulation, amotivation, self-esteem, social adjustment, personal-emotional adjustment and attachment, the outcome of academic success decreases. However, the non-significant  $p$ -values indicate that the above variables do not significantly predict academic success.

Results of the binary logistic regression demonstrate that the psychosocial variables included in this study were not necessarily predictive of academic success. This means help seeking, academic motivation, self-esteem, perceived stress, and adjustment do not help us explain much in terms of the psychosocial variables that determine whether first-time first-year students will succeed. Wald statistic values were approaching zero, which may indicate that there may be complete separation in the data (Wilson & Lorenz, 2015). This may be a result of using a small sample size. Separation in data is commonly encountered in logistic regression “where the covariates perfectly predict the outcome” (Mansournia et al., 2018, p. 864). The implications of separation in data are small sample bias and parameter estimate bias, which mean that the results of this study should be interpreted with caution.



**Table 14***Variables in the Equation*

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup>	Total HSS	-15.678	5105.213	.000	1	.998	.000
	Intrinsic Motivation to Know	-99.253	25457.995	.000	1	.997	.000
	IM To Experience Stimulation	4.442	11785.627	.000	1	1.000	84.973
	Extrinsic Motivation Identified	126.320	24415.476	.000	1	.996	7.242E+54
	Extrinsic Motivation Introjected	40.240	12672.857	.000	1	.997	299215512820375 230.000
	EX External Regulation	-56.810	17225.321	.000	1	.997	.000
	Amotivation	-13.414	57511.354	.000	1	1.000	.000
	RSES Total	-1.686	1899.839	.000	1	.999	.185
	PSS Total	.309	1261.333	.000	1	1.000	1.362
	Academic Adjustment	3.210	1919.267	.000	1	.999	24.778
	Social Adjustment	-25.205	5008.437	.000	1	.996	.000
	Personal-Emotional Adjustment	-6.920	3438.366	.000	1	.998	.001
	Attachment	-1.824	6308.668	.000	1	1.000	.161
	Full Scale	19.100	5610.780	.000	1	.997	197320364.406
	Constant	751.799	250075.164	.000	1	.998	.

a. Factor(s) entered on step 1: Total HSS, RSES Total, PSS Total, Academic Adjustment, Social Adjustment, Personal-Emotional Adjustment, Attachment, Full Scale, Intrinsic Motivation to Know, IM To Experience Stimulation, Extrinsic Motivation Identified,

Extrinsic Motivation Introjected, EX External Regulation, Amotivation.

#### 4.7 Summary of Results

The sample in this study consisted of 49 first-time first-year students aged between 18 and 25 ( $M = 19.96$ ,  $SD = 1.207$ ) years of age from the Faculty of Humanities and registered with the Department of Psychology, the Department of Sociology and Department of Speech-Language Pathology and Audiology. Results from the descriptive analysis of the key variables indicated that the respondents had an overall negative attitude towards help seeking ( $n = 46$ ,  $M = 13.8$ ,  $SD = 2.794$ ) and exhibited higher levels of external regulation ( $n = 32$ ,  $M = 4.37$ ,  $SD = 0.69$ ) as compared to other types of motivation. Results further indicated that the respondents exhibited normal levels of self-esteem ( $n = 40$ ,  $M = 18.2$ ,  $SD = 5.291$ ), moderate perceived stress ( $n = 37$ ,  $M = 30.73$ ,  $SD = 6.885$ ) and overall displayed low levels of adjustment in their first academic year ( $n = 33$ ,  $M = 4.77$ ,  $SD = 0.50$ ). Of the 39 respondents who reported their academic outcomes, 24 indicated that they had passed all their academic modules at the time of data collection, while 1 respondent had discontinued their studies, and 4 had failed an academic module at the time of data collection. A logistic regression carried out to assess the prediction of help seeking, intrinsic motivation to know, intrinsic motivation to experience stimulation, extrinsic motivation identified, extrinsic motivation introjected, extrinsic motivation- external regulation, and amotivation, self-esteem, perceived stress, academic adjustment, social adjustment, personal-emotional adjustment, attachment, and overall adjustment on academic success indicated that the psychosocial variables in this study do not significantly predict academic success. We therefore fail to reject the null hypothesis and conclude that the psychosocial variables in this study, do not predict academic success.

## 4.8 Conclusion

This chapter presented the results of the current study by presenting the demographic characteristics of the study sample, descriptive statistics of the key variables (help seeking, academic motivation, self-esteem, perceived stress, adjustment, and academic success). Results of the analysis of the assumptions of a binary logistic regression were presented followed by a discussion of the tests and approaches used to test for model fit. Results of the binary logistic regression conducted were then presented and the chapter concluded with a summary of the results of the study. A discussion of the study results follows in the next chapter.

## CHAPTER 5

### DISCUSSION OF FINDINGS

#### 5.1 Introduction

The main aim of the study was to investigate the psychosocial predictors of academic success amongst first-time first-year students at a South African higher education institution. The current study is unique in that, only a few studies in South Africa have looked at the relationship between the psychosocial variables mentioned in this study and academic success. This chapter presents a detailed discussion of the findings presented in Chapter 4. First, I reiterate the study's research question. This is followed by a discussion of the findings in relation to the research question and in the context of current literature. The first part of the discussion centres on the salience of each psychosocial predictor used in the study. The second part of the discussion focuses on the relationship between each psychosocial variable with academic success. The limitations and implications of the research are also discussed, and the chapter concludes with recommendations for further research.

#### 5.2 Background of the Study

Higher education institutions in South Africa have been characterised by low participation, low graduation rates and high dropout rates among first-year students (Fisher & Scott, 2011; Jacobs & Pretorius, 2016; Matsolo et al., 2018; Otu & Mkhize, 2018). This has raised an urgency to investigate the predictive variables of academic success in these institutions. Research investigating the predictors of academic success in higher education has focused largely on pre-enrolment variables such as matric results, which have proven to not be a true reflection of what predicts academic success. Growing literature encourages a focus on post-enrolment individual and institutional variables. The psychosocial variables

used in this study are based on the meta-analysis conducted by Robbins et al., (2004) from which Petersen et al. (2009) proposed a model suggesting that students' help seeking, academic motivation and self-esteem, perceived stress, academic workload, and adjustment influence their academic success. The research question guiding the study was: What are the relationships between academic success and help-seeking, academic motivation, self-esteem, perceived stress, and adjustment as psychosocial predictors of academic success, among first-time first-year students at a South African university

### **5.3 Discussion of Findings**

#### **5.3.1 The Salience of the Psychosocial Variables and Academic Success**

This sub-section provides a discussion of the salience of each psychosocial predictor used in the study.

##### ***Help seeking***

The respondents in this study had an overall attitude towards help seeking. Pico et al. (2016), found that positive attitudes as measured by the ATSPPH-S, indicate an openness to seeking professional help. This result was unexpected given that it has been previously reported that university students tend to not seek psychological help even in university environments where free psychotherapy is offered (Lourens & Fourie-Malherbe, 2017). This is supported by Bantjes et al. (2020), who found in their study very low mental healthcare treatment utilisation among first-year university students in two South African higher education institutions. Positive attitudes towards seeking psychological help as found in this study, suggest that perhaps the stigma and lack of knowledge pertaining to help seeking may be decreasing and that students see value in psychological help.

Results pertaining to attitudes towards academic help seeking, prompt the need for initiatives or strategies that encourage interaction between students and academic staff (e.g., lecturers). This is supported by Segabutla (2015) who stresses the need for lecturers to create a context for dialogical interaction between themselves and students. In view of the student-lecturer relationship, Hassel and Ridout (2018) have found that there is often a discrepancy between what students expect of their lecturers and what, in turn, is expected of them. While higher education lecturers tend to view students as primarily responsible for their own learning, students entering the higher education context, tend to view their lecturers as having a greater responsibility for their learning. For example, lecturers and university staff may consider independent study, critical evaluation, self-motivation, and regular class attendance as important, whereas students may view receiving detailed notes, availability and support from lecturers as being most important. Poor lecturer-student relationships and a mismatch of expectations between first-year students and lecturers, may be one of the major reasons for low academic help seeking among students (Hassel & Ridout, 2018; Segabutla, 2015). A distant relationship between lecturers and students may deter students from consulting their lecturers on their academic challenges. Improving lecturer-student relationships may increase participation in the classroom, provide students with emotional and cognitive support, and encourage students to consult their lecturers on their areas of incompetence. Although lecturers may normalise academic help seeking as an acceptable part of learning, students' reluctance to seek help may stem from individual and psychological variables such as, the fear of being labelled as incompetent or being negatively perceived, anxiety, and an inability to perceive a need for help. Help seeking behaviours can therefore not be viewed as solely resulting from the quality of the lecturer-student relationship. Based on Astin's student involvement theory, the help seeking behaviours of the respondents can be understood as resulting from their involvement within their higher education environment, which is the

responsibility of both the student and the institution. Positive attitudes towards seeking psychological help as found in this study, suggest that students have engaged with the psychological support systems offered in their academic environment and that the institution has made the academic environment conducive for students to seek psychological support. Identification of key determinants of academic help-seeking behaviour among first year students would help give insight into which, if any, individual and psychological variables influence students' decision to seek help.

### *Academic motivation*

The respondents in this study had reasonably high extrinsic motivation (identified regulation) and intrinsic motivation to know. Students with extrinsic motivation more inclined to engage in academic learning and achieving academic outcomes because it is of personal importance or of perceived value (Ryan & Deci, 2017; Vallerand et al., 1992). The high degree of intrinsic motivation to know, suggests that students in this study, are motivated to learn out of curiosity and out of the satisfaction they experience from learning and exploring new things (Mikail et al., 2017; Vallerand, 1992). Respondents had low levels of amotivation, as could have been expected, given that the other forms of motivation were high. Among the types of motivation, intrinsic motivation is preferable. This is because a considerable amount of research has found that extrinsic motivation yields less learning effectiveness in the long term compared to intrinsic motivation (Cerasoli et al., 2014; Greene, 2011; Petersen et al., 2009; Zaccone & Pedrini, 2019). This stems from the belief that intrinsic motivation creates more engagement and increased persistence in learning. An example of extrinsic motivation yielding less learning effectiveness is found in Petersen et al.'s (2009) study investigating predictive and mediating psychosocial variables of adjustment, where students whose academic behaviour was extrinsically motivated achieved



lower average academic grades at the end of the year. Knowledge of student's motivation types can help first year educators develop strategies to reinforce motivation. Although educators are well positioned to motivate students, they are not solely responsible for students' academic motivation. This is supported by Astin's (1984) involvement theory, which highlights that student involvement and success are the responsibility of both the student and the institution. Students' future aspirations, determination of goals, perception of their academic abilities, effort regulation and fear of academic failure may influence their motivation (Isik et al., 2018). Employment prospects and funding have also been reported to influence students' motivation (Thomas & Maree, 2022).

Higher education institutions could highlight the availability of academic resources and personnel (e.g., educational psychologists, tutors, librarians) which can help promote academic motivation by helping students with their areas of incompetence, collaborating with students to set up achievable goals in line with their aspirations, and assisting students with any psychological or intrapersonal challenges that may be hindering their motivation. It can be argued that even when higher education institutions might have devoted a considerable number of resources towards providing students with academic support services to increase students' academic motivation, students often fail to seek academic help (Thomas & Tagler, 2019). Identification of key determinants and barriers of academic motivation among first year students would help give insight into which, if any, institutional, social, and individual variables increase or hinder academic motivation. Additionally, identification would give insight into how to retain students' motivation. Identification of key determinants and barriers of academic motivation among first year students in future studies would help give insight into which, if any, institutional, social, and individual variables increase or hinder academic motivation. Additionally, identification would give insight into how to retain students' motivation

### *Self-esteem*

The respondents in this study possessed moderate levels of self-esteem. This finding suggests that students in this study have an overall positive self-esteem. This finding is consistent with a few studies that have been conducted on undergraduate students (Fakaruddin & Tharbe, 2018; Gidi et al., 2021; Mustafa et al., 2015; Paudel et al., 2020). High levels of self-esteem would have been preferable because they have been found to motivate behaviours that are integral to the higher education context, such as academic engagement, help seeking and problem solving (Malinauskas & Dumciene, 2017). Additionally, high levels of self-esteem have been found to be vital for the successful transition to university. Students' psychological resources (including self-esteem) have been found to decline during the first year of university due to multiple stressors that come with transitioning from high school to university (Malinauskas & Dumciene, 2017; Van Breda, 2017). Stressors in the first year include increased academic and interpersonal-societal demands, increased responsibility for own learning, peer pressure, and separation from home ties (Brooker, et al., 2017; Chinneck et al., 2018; Nel et al., 2016). These stressors may leave students' self-esteem compromised. Ciccarelli and White (2015) believe that positive self-esteem is important for self-actualisation to occur and for the development of relationships. The first-year experience is characterised by the dilemma of developing new interpersonal and academic relationships. Students with low self-esteem may be hesitant to forming these relationships and hesitant to engage in learning, which may impact their integration into the higher learning environment and the formation of quality lecturer-student relationships and interpersonal relationships.

Contrary to literature supporting benefits of high levels of self-esteem in university, Arshad et al. (2015) argue that high self-esteem is not always associated with better

interpersonal relationships or behaviour. On the contrary, high levels of self-esteem might promote narcissism and the alienation of others, thus impacting relationships and giving a false sense of achievement. Perhaps moderate levels of self-esteem, as found in this current study, reflect a healthy self-esteem.

The study focused on post-enrolment variables so it is possible that the moderate levels of self-esteem of the respondents in this study could have resulted from the experience of the higher education institution. There are various challenges and experiences in the higher education context that may impact students' self-esteem. The increased workload may result in low academic performance, which may lead to feelings of incompetence, thus lowering a student's self-esteem. The difficulty in developing peer relationships and critical feedback from lecturers may cause feelings of inadequacy or rejection, thus lowering self-esteem. It may be argued that various challenges and experiences in the higher education context impact certain parts of self-esteem as opposed to students' overall esteem (Ndima, 2017). For example, low academic performance may impact a student's academic self-esteem, while poor peer relationships might impact student's social self-esteem. The current study looked at global self-esteem, therefore, the moderate levels of self-esteem found in the sample only explain students' overall attitude towards themselves.

### ***Perceived stress***

The respondents displayed moderate levels of perceived stress. This result concurs with several previous studies on the stress levels amongst first year students in the Faculty of Humanities at a South African university, where majority of the respondents experienced moderate levels of perceived stress (Bhayat & Madiba, 2017; Emebigwine 2017; McConnachie, 2018; Nekgotha, 2020). Moderate to high perceived stress can be expected during the first year of university, as students are faced with several environmental and

personal stressors such as a greater responsibility for their own learning, demanding coursework, being away from home and a lack of social support (Keat Lau et al., 2018). The results obtained from this study, demonstrate the prevalence of academic stress among the sample. Based on the transactional model of stress and coping by Lazarus and Folkman (1984), we can say that the moderate levels of perceived stress among first-year students may be as a result of a dilemma in the primary appraisal and secondary appraisal stage. A dilemma in the primary appraisal stage suggests that students need to learn how to properly appraise a situation. For example, a first-year student might perceive doing a class presentation as threatening (primary appraisal) instead of perceiving it as presenting a challenge or an opportunity to develop competence. Other situations that may be negatively appraised include asking lecturers for help, assignment deadlines, group work and examinations. A dilemma in the secondary appraisal stage, suggests that students are employing ineffective coping strategies to perceived stressors. For example, a student who perceives doing a class presentation as threatening might avoid coming to campus on the day of class presentation. Other ineffective coping strategies include alcohol consumption, use of stimulants and procrastination. Snehaja and Mani (2016) suggest that students need to learn appropriate coping strategies. Higher education institutions and concerned bodies such as student support services could host workshops on strategies to manage stress (e.g., problem solving, help seeking and positive reappraisal). This study was conducted during a global pandemic (COVID-19), therefore moderate to high perceived levels of stress could have been expected. The results in this study replicate the findings of Hoyt et al. (2020), who found in their study that college students were experiencing moderate levels of perceived stress during the global pandemic.

## *Adjustment*

The respondents had low levels of adjustment. Results from the study suggest that students are struggling with the academic and social demands inherent in the university experience (Baker & Siryk, 1989). Additionally, students may be experiencing psychological distress and low commitment to their educational goals and to the university. The low levels of social adjustment found in this study suggest that students experienced difficulty with the interpersonal-societal demands inherent in the university experience. Low scores in the SACQ social adjust scale are associated with low participation in social activities in university, low interaction with the university environment, feelings of loneliness and difficulty separating from home ties (Baker & Siryk, 1989). According to Tinto's integration theory, students in this study may be stuck in the separation stage, which consists of departing from their existing system or community and adjusting to the new set of norms, demands and interactional styles. The low levels of social adjustment found in this study could be explained by the impact of the global pandemic (COVID-19) experienced during data collection. Due to the pandemic, social distancing regulations were put in place, resulting in online teaching and learning at South African education institutions. As a result, students could not participate in social activities in university or interact with the others on campus. The lowest score was obtained for academic adjustment, suggesting low academic motivation, academic effort, and satisfaction with the academic environment (Baker & Siryk, 1989). The results of the students' adjustment levels are inconsistent with studies that have found moderate to high adjustment levels among first-year students (Dlamini et al., 2020; Petersen et al., 2009, Van Viet, 2021). These studies have connected adjustment problems to socio-economic variables and low interaction with the higher education institution. The context of the study is a historically white higher education institution. Therefore, it is possible that the effects of the previous higher education system that was segregated,

inequitable, and provided low-quality education for non-white and socioeconomically disadvantaged students (Mzangwa, 2019) may still exist, making previously disadvantaged groups particularly vulnerable and under-prepared for the demands of the higher learning context. Among the variables that have been found to contribute to non-white students' adjustment are problems surrounding proficiency in English. The majority of the respondents in this study did not have English as their home language. Literature has demonstrated that proficiency in the medium of instruction in higher education, assists students in grasping the concepts and content used in the higher education context, as well as the processes required for effective learning such as metacognition (Opperman, 2020; Thomas & Maree, 2022). Students with limited proficiency in the medium of instruction (English) may struggle to adapt to higher education demands (Opperman, 2020). Proficiency in English was not measured in this study and could have been a contributing factor to the low academic adjustment. This leaves a gap for future studies to investigate the relationship between language proficiency and adjustment to university.

### *Academic success*

The majority of the respondents study passed the academic modules forming part of the programme registered for. According to Scott (2018), academic success indicates that students have sufficiently mastered their field of learning. Conversely, those who failed have not mastered their field of learning. Kuh at al. (2006) would, however, argue that successful completion of students' academic modules reflects academic achievement and acquisition of knowledge pertaining to those modules. They viewed academic success as also reflected in students' engagement in educationally purposeful activities, skills and competencies, persistence, and attainment of educational outcomes. It may be argued, however, that students' pass mark for their academic modules may have resulted from rote learning and not

mastery or acquisition of knowledge. Ahmed and Ahmed (2017) have found that rote learning is a well-practiced approach at a higher education level. First year students may just have good memorization skills. This approach, however, is not sustainable. The goals of higher education are the retention and transfer of knowledge. Therefore, if the students in this study's pass marks were obtained via rote learning, they might not be able to comprehend and transfer the knowledge presumably obtained to other modules that are built on their current modules.

With regards to results pertaining to academic failure, Van Rooij et al. (2018) viewed module credits and intention to persist as two important outcomes of academic success. This perspective suggests that the respondents who failed their academic modules in this study, can be considered successful should they intend to persist in their studies. It is recommended that future research investigate the intention to persist of first-time first year students who failed their first-year academic modules. There was a very low discontinuation of academic modules among the respondents in this study. This suggests that students in this study are persisting in their studies.

### **5.3.2 The relationship between each psychosocial variable with academic success**

A binary logistic regression analysis was conducted to test whether psychosocial variables predict academic success. This sub-section provides a discussion of the relationship between each psychosocial factor and academic success.

#### ***Help Seeking and Academic Success***

In this study, help-seeking did not significantly predict academic success. This finding is consistent with the Petersen et al. (2009) study, where no relationship was found between help seeking and academic success. This result is inconsistent with studies conducted in the South

African context, which have found help seeking to significantly impact on academic success (Melese, 2018; Pillay et al., 2020; Umarani, 2020). In their study on the psychosocial variables predicting academic achievement of first- and second-year students, Sommer and Dumont (2011) found that, although help seeking did not directly predict academic success, students who had positive attitudes towards academic help seeking were better adjusted to the university context, and students with higher adjustment levels obtained higher grades than students who were not adjusted to the higher education institution. This result suggests that help seeking could be a mediating variable between adjustment and academic success. The relationship between help seeking and academic success is thus still important to investigate. Additionally, studies have shown the prevalence of depression and academic stress in university students which ultimately impact students' academic performance (Naidoo et al., 2015; Pillay et al., 2020). Positive help seeking behaviours may help students with the depression and academic stress that university students might experience in higher education institutions. Thomas and Tagler (2019) view help seeking as an adaptive self-regulated learning strategy that facilitates positive academic outcomes. The findings in this study contradict this perspective. Help seeking may be a mediating factor and not a predictive factor.

### ***Academic Motivation and Academic Success***

It was expected that amotivation would have a negative association with academic success. Intrinsic motivation and extrinsic motivation were both expected to have a positive association with academic success, however both psychosocial variables did not predict academic success. Academic motivation did not significantly predict academic success in this study. The nonsignificant result is inconsistent with several South African studies that have found academic motivation to affect academic success (Chinomona & Macongwe, 2021; Petersen et al., 2009; Sikhwari, 2017; Van Den Berg & Coetzee, 2014; Sommer & Dumont,



2011; Thomas & Maree, 2022). Petersen et al. (2009) found that extrinsic motivation predicted academic success. Findings from their study indicated that students who were extrinsically motivated achieved lower average academic grades at the end of the year. Sommer and Dumont (2011) also found that extrinsic motivation predicted academic performance. In their study, extrinsic motivation positively predicted academic performance. They also found that amotivation resulted in lower academic performance. Van Rooij et al. (2017) found that motivational variables did not impact academic success directly but only through adjustment. This finding suggests that having academic motivation does not warrant academic success. It can, however, increase students' chances of being well-adjusted to the higher education context. This finding may explain the nonsignificant result found in the current study.

### *Self-esteem and Academic Success*

In this study, self-esteem did not significantly predict academic success. A similar result was found in Petersen et al.'s (2009) study where self-esteem did not predict academic success. This result contradicts studies that have found a significant relationship between self-esteem and academic success (Ahmed, 2019; Arshad et al., 2015; Gezu et al., 2020; Maropamabi, 2014; Seabi, 2011). These studies focused on students' overall self-esteem. Kärchner et al. (2021), found that self-esteem facets predicted academic success as opposed to overall self-esteem. They further highlighted the importance of investigating the impact of various self-esteem facets on academic performance. This study focused on global self-esteem. Perhaps a focus on the relationship between various facets of self-esteem and academic success may have yielded different results. Self-esteem could also be a mediating factor and not a predictive factor. Kärchner et al. (2021) suggest that self-esteem influences students' motivation and attitudes, which then determine academic performance. A

nonsignificant relationship between self-esteem and academic success suggests that the way in which students evaluate themselves has no implications for their academic success.

### *Perceived Stress and Academic Success*

Perceived stress did not significantly predict academic success. This finding is consistent with a few studies investigating the psychosocial predictors of academic success at a South African higher learning institution (Petersen et al., 2009; Petersen, et al., 2010; Sommer & Dumont, 2011). These studies did not find a significant predictive relationship between perceived stress and academic success. It was expected that perceived stress would predict academic success in the current study, as students with high levels of stress may experience difficulty coping with the academic, social and personal-emotional demands of university, which may adversely affect academic performance. Additionally, students with high levels of perceived stress have been found to employ ineffective coping strategies such as alcohol, drugs, and other risky behaviours, which affecting their academic performance (Bhayat & Madiba, 2017; Govender, et al., 2015). In a cross-sectional analytical study conducted on clinical students, Bhayat and Madiba (2017), found that students experienced moderate to severe levels of perceived stress, with fear of failing as the highest perceived. These levels of perceived stress led to some students contemplating suicide or quitting university altogether. On the contrary, Jha et al. (2018) found that perceived stress increased academic performance in female respondents. These contrary findings suggest that perceived stress may cause an increase in students' academic performance or cause them to become ineffective such as adopting avoidant coping strategies. Perceived stress did not predict academic success in our study. Perhaps perceived stress impacts students' coping strategies and not their academic performance. Research into whether coping strategies predict

academic success could give insight into which strategies increase the chances of academic success.

### *Adjustment and Academic Success*

Adjustment did not significantly predict academic success. This result was unexpected given that a considerable amount of research has demonstrated a relationship between adjustment to university and academic success (Alasbool & Fateel, 2019; AlDababseh et al., 2017; Fateel, 2019; Petersen et al., 2009; Sommer & Dumont, 2011; Van Rooij et al., 2017). In their study, Petersen et al. (2009) found adjustment to significantly predict academic success. Their findings suggested that students who were well-adjusted to the university context achieved higher academic grades at the end of the academic year. They did, however, find that social adjustment did not predict academic success at the end of the year. It was expected that social adjustment would predict academic success in the current study, as students who are socially adjusted have been found to cope with the interpersonal-societal demands of higher education institutions, which ultimately made them successful university (Baker & Siryk, 1989). Conversely, students with low levels of social adjustment have been found to have difficulty with establishing social relationships and interacting with the higher education environment. They practise social avoidance, have less social confidence, and less success in coping with the transition from secondary school to the higher education context. As a result, their academic performance is impacted. The results of this study also contradict Spady's (1971) integration theory, which suggests that the results of students' interaction with the higher education institution determine students' assimilation and ultimately their retention in the higher education institution. Student retention increases chances of students' course completion and gives students an opportunity to enhance their academic skills. The lack of significant results could be attributed to a low sample size, but if

the results are a true reflection of the relationship between adjustment and academic success, that would imply that students do not have to be academically, socially, and emotionally adjusted to university, to succeed.

In summary, despite a statistically significant model, results from the binary logistic regression show that none of the predictor variables in this study were significant at the 0.05 significance level, meaning that help seeking, academic motivation, self-esteem, perceived stress, and adjustment do not significantly predict academic success. Perhaps stronger associations between the psychosocial variables and academic success would have been found if analyses had been performed on a larger sample.

#### **5.4 Reliability of Measures Used in the Study**

A Cronbach's alpha for the ATSPPH-S indicated low internal consistency ( $\alpha = 0.577$ ). This result is inconsistent with the original study conducted by Fischer and Farina (1995) where Cronbach's alpha coefficient for the scale was 0.84. Pallant (2020) holds that it is common to find quite low Cronbach values in scales with a few numbers of items.

Cronbach's alpha values obtained for the AMS-C subscales ranged between 0.799-0.914, indicating high internal consistency, making it a reliable tool to assess academic motivation. Amotivation, however displayed very low internal consistency ( $\alpha = 0.426$ ). The high Cronbach values found for the subscales are consistent with those of the original study conducted by Vallerand et al. (1992), where Cronbach's alpha coefficients for the subscales ranged between 0.83 and 0.86. In a more recent study, the internal consistencies in a sample of first year South African university students proved to be acceptable with Cronbach's alpha coefficients ranging from 0.87- 0.92 (Kapp et al., 2020). The results above render the AMS-C as a reliable measure to use in the context of this study.

For the RSES, a Cronbach's alpha of 0.904 was obtained, indicating the RSES's high internal consistency for use on the current study sample. This result is consistent with that in Ndima's (2017) study in which the RSES had a high internal consistency ( $\alpha = 0.81$ ) and was found to be a suitable tool to use in the South African university context. The RSES was administered to 304 students from two South African higher education institutions.

The Cronbach's alpha obtained ( $\alpha = 0.684$ ) in this study for the PSS, indicated a low internal consistency. This result is inconsistent with those in the original studies conducted by Cohen et al. (1983), where Cronbach's alpha coefficients for the subscales ranged between 84-86 for three samples. Despite having low internal consistency in this study, the PSS-14 has been found to be a reliable assessment to use in larger sample of college students. It is therefore assumed that the study would have yielded different results had there been a larger sample.

The current study found that the SACQ had a low internal consistency for the full scale ( $\alpha = 0.546$ ), academic adjustment ( $\alpha = 0.611$ ); social adjustment,  $\alpha = 0.640$ ; and institutional attachment,  $\alpha = -0.518$ ). High internal consistency was found for the personal-emotional adjustment,  $\alpha = 0.840$ . Results on the four subscales are inconsistent with a recent study (Mittelmeier et al., 2019) conducted in a South African higher education institution where the SACQ had good internal reliability for all four subscales (academic adjustment,  $\alpha = 0.713$ ; social adjustment,  $\alpha = 0.751$ ; personal-emotional adjustment,  $\alpha = 0.743$ ; attachment,  $\alpha = 0.872$ ). Papageorgiou and Callaghan (2020) suggest that the SACQ is a useful tool, however, they recommend that the questionnaire needs to be modified to obtain a better fit to the South African university population. The low internal consistency obtained for the SACQ in this study, suggests that results should be interpreted with caution.

## 5.5 Limitations of the Study

Several limitations were noted in the current study. The first limitation is related to the sample. The analysis of this research was based on a limited sample size drawn from a single Faculty, the Faculty of Humanities. Furthermore, 91.8% of the respondents were female and 4 (8.3%) were male. This limitation impacts the generalisability of the findings as the sample underrepresented male first-time first-year students. A larger sample size would have been considered more representative of the first-time first year population (Babbie, 2014).

The second limitation was limited access to the respondents. Data was collected during a global pandemic (COVID-19) where social distancing regulations were put in place at tertiary institutions to ensure safety. The pandemic led to online teaching and learning at South African education institutions. Students without access to computers may have been unable to participate in the current study, as the study was restructured from a paper-based survey to an online survey to allow online participation. This may have created a socioeconomic status bias by representing privileged first-time first year students who have access to a computer. Furthermore, the shift to online education may have been overwhelming to students, limiting their interest in participating in any research study. There was low participation from first-time first-year students in this study. The low participation could be attributed to the use of online surveys instead of a paper-based survey. Online surveys have been reported to produce lower response rates as compared to paper-based surveys (Liu & Wronski, 2017).

The third limitation relates to missing data. Out of the 49 respondents, 23 had missing data on some of the variables included in our analysis. This led to separation in data. Separation in data is commonly encountered in logistic regression “where the covariates perfectly predict the outcome” (Mansournia et al., 2018, p. 864). The implications are small sample bias and parameter estimate bias which mean that the results of this study should be interpreted with caution.

Regardless of the limitations mentioned above, the results of this study provide valuable information related to predicting academic success among first-time first-year students. The contribution of the study is discussed next, followed by recommendations for future research

### **5.6 Implications of the Study**

The study makes several contributions. First, the study focused on South Africa. As stated in chapter two, there is limited research on psychosocial predictors of academic success in South African higher education institutions (Malefo, 2000; Petersen et al., 2009; Petersen et al., 2010; Sommer & Dumont, 2011). These studies are on the extent to which psychosocial variables predict academic performance. The study contributes to the limited research and prompts future studies on post-enrolment predictive variables of academic success. Secondly, the study offers the university and the Faculty of Humanities some insight about students' first year experience particularly their help seeking attitudes, academic motivation, self-esteem, perceived stress, and adjustment. Finally, the study took place during a global pandemic (COVID-19). Although the study did not focus on the pandemic, its results provide some insight into how the pandemic could have impacted the perceived stress and adjustment levels of the students in this study.

### **5.7 Recommendations for Future Research**

The limitations of the present study as outlined in an earlier section, suggest some avenues for possible future research. Replication of the study with a larger sample would be important to make results generalisable. Additionally, while this study focussed on one faculty (Humanities) at one higher education institution, comparative studies across more South African institutions and faculties can yield valuable information pertaining to

help seeking behaviour, academic motivation, self-esteem, perceived stress, adjustment levels and the academic success of each faculty.

The study was cross-sectional in nature. A longitudinal study could help study of the same group and in doing so tracking changes in first-time first year students' help seeking attitudes, academic motivation, self-esteem, perceived stress, adjustment, and academic success over time and more broadly the psychosocial variables influencing their academic success.

The current study employed an online based survey. It is recommended that paper-based surveys be used in future research to increase the response rate.

This study used measures that were developed in other countries. Despite having been found to be reliable tools to use in South Africa, "the diversity inherent in the South African context may have important implications for the testing of the psychometric properties of scales developed in other contexts" (Papageorgiou et al., 2020, p. 225). It is therefore recommended that future studies utilise South African developed measures.

It is also recommended that future studies investigate key determinants and barriers of academic motivation among first-year students in future studies as this would help give insight into which, if any, institutional, social, and individual variables increase or hinder academic motivation. Additionally, identification would give insight into how to retain students' motivation.

Lastly, the inclusion of first year lecturers' perceptions on psychosocial variables that predict the academic success of first-year students may add a unique perspective to the understanding of students' academic success. First year lecturers, through a qualitative study, could be asked to identify post-enrolment variables that they perceive as having the most important influence on students' success.



## 5.8 Conclusion

Understanding the academic success of students in higher education institutions in South Africa is imperative as academic success impacts the individual, institutional and national economic outcomes. A focus on academic success in the first year of higher education helps tertiary institutions to monitor academic success and address its impediments at a tertiary grassroot level. Moreover, the focus on academic success in the first year helps them improve their throughput rates, which impact the institutions' efficacy reports. To address the alarming dropout rates and low throughput among first-year students, the identification of key factors linked with academic success is required.

This is especially necessary in relation to the South African higher education institutions context, where relatively little research on the post-enrolment predictive factors of academic success among first-time first-year students has been conducted. More specifically, research on the predictive relationship between psychosocial variables and academic success among students in South African higher education institutions is limited. This limitation has created a gap for further research on the psychosocial variables of academic success among first-time first-year students.

The main aim of the study was to investigate the psychosocial predictors of academic success amongst first-time first-year students at a South African higher education institution. To test these predictions, a binary logistic regression was conducted to test whether help seeking, academic achievement, self-esteem, perceived stress, and adjustment predicted the academic success of students in their first year of study. No association between the psychosocial variables and academic success was found. This result may have been due to the small sample size used in this study. Additionally, this result contradicts previous studies that have found a significant relationship between psychosocial factors and academic success. Although no association between the psychosocial variables and academic success was

found, descriptive results on each psychosocial variable provided valuable insight on how first-time first-year students in this study experienced university. This study found that the respondents in this study had positive attitudes towards psychological and academic help seeking and that their self-esteem was within the normal range. Additionally, the respondents were extrinsically motivated, experienced moderate levels of perceived stress and had low levels of adjustment. The moderate levels of perceived stress and low levels of adjustment magnifies the need for higher education institutions to investigate how first-time first-year students experience the first year of higher education and how the first-year experience impact their success and their prospects of success in higher education, based on the first-year experience. It can be concluded that the implications and limitations of this study prompt further studies on the psychosocial variables of academic success.

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## Appendices

### A. Ethical Approval from the University of Pretoria Research Ethics Committee



**Faculty of Humanities**  
Fakulteit Geesteswetenskappe  
Lefapha la Bomotheo



13 October 2020

Dear Miss RLE Makgato

**Project Title:** Psychosocial Predictors of Academic Success amongst First-Year Students  
**Researcher:** Miss RLE Makgato  
**Supervisor(s):** Dr TA Thomas  
**Department:** Psychology  
**Reference number:** 18312251 (HUM022/1119)  
**Degree:** Masters

I have pleasure in informing you that the above application was **approved** by the Research Ethics Committee on 13 October 2020. Data collection may therefore commence.

Please note that this approval is based on the assumption that the research will be carried out along the lines laid out in the proposal. Should the actual research depart significantly from the proposed research, it will be necessary to apply for a new research approval and ethical clearance.

We wish you success with the project.

Sincerely,

**Prof Innocent Pikirayi**  
**Deputy Dean: Postgraduate Studies and Research Ethics**  
**Faculty of Humanities**  
**UNIVERSITY OF PRETORIA e-mail: PGHumanities@up.ac.za**

Fakulteit Geesteswetenskappe  
Lefapha la Bomotheo

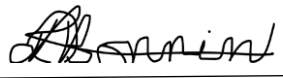
**Research Ethics Committee Members:** Prof I Pikirayi (Deputy Dean); Prof KL Harris; Mr A Bizo; Dr A-M de Beer; Dr A dos Santos; Ms KT Govinder; Andrew; Dr P Gutura; Dr E Johnson; Prof D Maree; Mr A Mohamed; Dr I Noomé; Dr C Puttergill; Prof D Reyburn; Prof M Soer; Prof E Taljard; Prof V Thebe; Ms B Tsebe; Ms D Mokalapa

## B. Permission Letter from Department of Sociology

### Letter of Consent from Department of Sociology for MA Counselling Psychology Proposed Study

- I understand that Miss **RLE Makgato** is currently MA Counselling Psychology student currently working on her Master's dissertation at the University of Pretoria.
- I understand that **Miss Makgato** has applied for ethical approval which is pending requiring approval from the heads of department and from the Dean of the Faculty of Humanities.
- I grant permission for her to conduct her study on first year students in the Department of Sociology

Yours sincerely

Signature: 

Name: Prof Debby Bonnin

Department: Sociology

Date: 7 September 2020

### C. Permission Letter from Department of Speech-Language Pathology and Audiology

#### Letter of Consent from Department of Speech-Language Pathology and Audiology for MA Counselling Psychology Proposed Study

- I understand that Miss **RLE Makgato** is currently MA Counselling Psychology student currently working on her Master's dissertation at the University of Pretoria.
- I understand that **Miss Makgato** has applied for ethical approval which is pending requiring approval from the heads of department and from the Dean of the Faculty of Humanities.
- I grant permission for her to conduct her study on first year students in the Department of Speech-Language Pathology and Audiology

Yours sincerely

Signature:



07-09-2020

Name: Prof Jeannie van der Linde



## D. Permission Letter from the Department of Psychology



### Faculty of Humanities

Fakulteit Geesteswetenskappe  
Lefapha la Bomotho

### Department of Psychology



D. Permission Letter from the Department of Psychology

7 September 2020

#### Faculty of Humanities Research Ethics Committee

Dear Committee

#### PERMISSION TO CONDUCT RESEARCH WITH STUDENTS: E L MAKGATO

I hereby grant permission for Eliotta Makgato to conduct research among undergraduate psychology students for purpose of her dissertation titled: *Psychosocial predictors of academic success among first-year students.*

Sincerely,

**Prof Tharina Guse Head of Department: Psychology**

---

**Head: Department of Psychology, Counselling Psychologist & HPCSA Board Member**

Room 11 - 15, Humanities Building  
University of Pretoria, Private Bag X20  
Hatfield 0028, South Africa  
Tel +27 (0)12 420 2403 or 2329

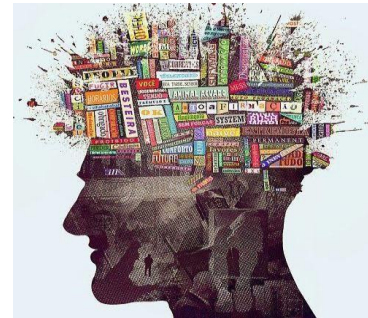
Email : tharina.guse @up.ac.za | www.up.ac.za/psychology

## E. Invitation to Participate in Research

# PARTICIPANTS NEEDED FOR STUDY

## INVESTIGATING PREDICATORS OF ACADEMIC SUCCESS

My name is Lebogang Makgato. I am a UP Master's in Counselling Psychology student conducting research on predictors of academic success among first-year students looking for volunteers to participate in my research study.



### Who do I need?

- Students who were **first-time first year students in 2020** in the department of Psychology, Sociology or Speech-Language Pathology and Audiology.

### Participation involves:

- Voluntary participation
- Following a link that will lead you to a consent form and self-report surveys.
- You to try to answer the survey as

**The survey can be found on the link below or by scanning the QR code:**

[https://pretoria.eu.qualtrics.com/jfe/form/SV\\_1FUIT5uDF6jXUEd](https://pretoria.eu.qualtrics.com/jfe/form/SV_1FUIT5uDF6jXUEd)



## **F. Consent Form**

<p><b>FACULTY OF HUMANITIES</b></p> <p><b>DEPARTMENT OF PSYCHOLOGY</b></p>
--

### **CONSENT TO PARTICIPATE IN RESEARCH**

**Title of Study:** Predictors of academic success among first-year students in higher education

**Researcher:** Lebogang Elliottah Makgato

#### **Introduction**

You are being asked to take part in a study being conducted by Lebogang Elliottah Makgato for a Master's dissertation under the supervision of Dr Angela Thomas (Tel: (012) 420 2923; e-mail: angela.thomas@up.ac.za) in the Department of Psychology at the University of Pretoria.

Please read this form carefully and contact the researcher if you have any questions before deciding whether to participate in the study.

#### **Purpose**

The purpose of this study is to investigate the predictive variables that play a role in your academic success.

#### **Research Procedures**

If you agree to participate in the study, you will be asked to complete a series of questionnaires online. You will also be asked about your academic performance for your 2020 academic year **only**.

The questionnaires may take approximately 15-55 minutes to complete; you are encouraged to complete these questionnaires in one session.

#### **Risks to Participants**

Your participation in the study is not expected to pose any risks or harm to you. However, if you feel distressed at any stage as a result of participating in this study, please contact your student support office for counselling at no cost to you, at (012) 420 2333 for University of Pretoria students or Lifeline at (011 422 4242) and SADAG at (0800) 456 789

### **Confidentiality**

All the information that you provide will be treated with confidentiality.

### **Voluntary Participation**

Participation in this study is voluntary and you may withdraw from participation at any time without penalty.

### **Dissemination of Results**

The results of this study will be disseminated in the form of a thesis, conference papers, and articles in academic journals. The information gathered from you will be stored for 15 years for the purposes of archiving and any future research. You may ask for a copy of the dissertation after completion by emailing the researcher/supervisor.

### **Contact details and Questions**

If you have any further questions about this study, please feel free to contact Lebogang Elliottah Makgato at [elliottahmakgato@gmail.com](mailto:elliottahmakgato@gmail.com) / 0726191627

### **Statement of Consent**

Clicking “Agree” below indicates that you have read and understood the information provided above and voluntarily agree to participate in this research.

## G: Demographic Questionnaire

Please specify the following demographics about yourself

### 1. Gender

- Male  
 Female

### 2. Race

- African  
 White  
 Coloured  
 Indian  
 Other

### 3. Home Language

- Sepedi  
 Tshivenda  
 Setswana  
 Afrikaans  
 English  
 Xitsonga  
 iSiNdebele  
 siSwati  
 Sesotho  
 Other (Specify)

### 4. Would you describe your household as:

- low-income  
 middle-income  
 high-income

### 5. Year of study in 2020:

- First year  
 Second year  
 Third year  
 Other (Specify)

### 6. Who/What influenced your choice to study at this institution?

- My family  
 Few/No institutions offer my course  
 siSwati  
 Sesotho  
 Other (Specify)

### 7. Which of the following modules/department are you currently registered for as a student? Tick all the applicable answers.

- Psychology  
 Sociology  
 Speech-Language Audiology

**8. I am generally happy at university:**

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**9. I feel that all courses are treated equally at this university:**

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**10. I am satisfied with how the university runs its affairs:**

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**11. I am satisfied with how the university runs its facilities:**

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**12. I think the university offers adequate academic support:**

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**13. I think the university offers adequate psychological support:**

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**14. I think the university offers adequate financial support:**

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

## H. Help Seeking Scale

Below is a list of statements. Please indicate how strongly you agree or disagree with each statement. There are no right or wrong answers. You should answer each statement given below as honestly as possible in order for the data to be meaningful. Please do not leave any statements unmarked in order for the data to be meaningful.

Statement	Agree	Partly Agree	Partly Disagree	Disagree
1. If I were experiencing a serious emotional crisis at this point in my life, I would be confident that I could find relief in psychological services				
2. The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts				
3. A person should work out his or her own problem, getting psychological counselling would be a last resort				
4. If I were experiencing difficulty with my academic workload, I would be confident in approaching a lecturer for assistance				
5. Talking to a lecturer about the difficulties I experience with my academic work strikes me as a poor way to get understanding				
6. Getting help in my academic work would be an admission of my own lack of ability or ignorance				

## I. Academic Motivation Scale

(1992)

### ACADEMIC MOTIVATION SCALE (AMS-C 28)

#### COLLEGE VERSION

*Robert J. Vallerand, Luc G. Pelletier, Marc R. Blais, Nathalie M. Brière,  
 Caroline B. Senécal, Évelyne F. Vallières, 1992-1993*

*Educational and Psychological Measurement, vols. 52 and 53*

#### WHY DO YOU GO TO COLLEGE?

*Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to college.*

Does not correspond at all 1	2	Corresponds a little 3	4	5	6	7	Corresponds exactly
---------------------------------------	---	------------------------------	---	---	---	---	------------------------

#### WHY DO YOU GO TO COLLEGE ?

- |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 1. Because with only a high-school degree I would not find a high-paying job later on.                | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. Because I experience pleasure and satisfaction while learning new things.                          | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. Because I think that a college education will help me better prepare for the career I have chosen. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. For the intense feelings I experience when I am communicating my own ideas to others.              | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. Honestly, I don't know; I really feel that I am wasting my time in school.                         | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. For the pleasure I experience while surpassing myself in my studies.                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. To prove to myself that I am capable of completing my college degree.                              | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. In order to obtain a more prestigious job later on.  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. For the pleasure I experience when I discover new things never seen before.                        | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. Because eventually it will enable me to enter the job market in a field that I like.              | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. For the pleasure that I experience when I read interesting authors.                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. I once had good reasons for going to college; however, now I wonder whether I should continue.    | 1 | 2 | 3 | 4 | 5 | 6 | 7 |



13. For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments. 1 2 3 4 5 6 7
14. Because of the fact that when I succeed in college I feel important. 1 2 3 4 5 6 7
15. Because I want to have "the good life" later on. 1 2 3 4 5 6 7
16. For the pleasure that I experience in broadening my knowledge about subjects which appeal to me. 1 2 3 4 5 6 7
17. Because this will help me make a better choice regarding my career orientation. 1 2 3 4 5 6 7
18. For the pleasure that I experience when I feel completely absorbed by what certain authors have written. 1 2 3 4 5 6 7
19. I can't see why I go to college and frankly, I couldn't care less. 1 2 3 4 5 6 7
20. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities. 1 2 3 4 5 6 7
21. To show myself that I am an intelligent person. 1 2 3 4 5 6 7
22. In order to have a better salary later on. 1 2 3 4 5 6 7
23. Because my studies allow me to continue to learn about many things that interest me. 1 2 3 4 5 6 7
24. Because I believe that a few additional years of education will improve my competence as a worker. 1 2 3 4 5 6 7
25. For the "high" feeling that I experience while reading about various interesting subjects. 1 2 3 4 5 6 7
26. I don't know; I can't understand what I am doing in school. 1 2 3 4 5 6 7
27. Because college allows me to experience a personal satisfaction in my quest for excellence in my studies. 1 2 3 4 5 6 7
28. Because I want to show myself that I can succeed in my studies. 1 2 3 4 5 6 7

© **Robert J. Vallerand, Luc G. Pelletier, Marc R. Blais, Nathalie M. Brière, Caroline B. Senécal, Évelyne F. Vallières, 1992**

## J. Rosenberg Self-Esteem Scale

### Rosenberg Self-Esteem Scale (RSE)

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
1. On the whole, I am satisfied with myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. At times I think I am no good at all.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I feel that I have a number of good qualities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I am able to do things as well as most other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I feel I do not have much to be proud of.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I certainly feel useless at times.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I feel that I'm a person of worth, at least on an equal plane with others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I wish I could have more respect for myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. All in all, I am inclined to feel that I am a failure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I take a positive attitude toward myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## K. Perceived Stress Scale

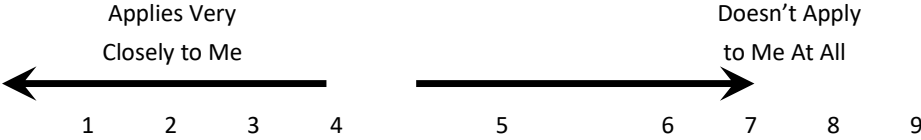
### INSTRUCTIONS:

The questions in this scale ask you about your feelings and thoughts during **THE LAST MONTH**. In each case, you will be asked to indicate your response by placing an “X” over the circle representing **HOW OFTEN** you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer fairly quickly. That is, don’t try to count up the number of times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate.

	Almost Never	Fairly Never	Sometimes	Very Often	Often
1. In the last month, how often have you been upset because of something that happened unexpectedly?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. In the last month, how often have you felt that you were unable to control the important things in your life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. In the last month, how often have you felt nervous and “stressed”?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. In the last month, how often have you dealt successfully with day to day problems and annoyances?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. In the last month, how often have you felt confident about your ability to handle your personal problems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. In the last month, how often have you felt that things were going your way?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. In the last month, how often have you found that you could not cope with all the things that you had to do?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. In the last month, how often have you been able to control irritations in your life?
10. In the last month, how often have you felt that you were on top of things?
11. In the last month, how often have you been angered because of things that happened that were outside of your control?
12. In the last month, how often have you found yourself thinking about things that you have to accomplish?
13. In the last month, how often have you been able to control the way you spend your time?
14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

## L. Student Adaptation to College Questionnaire

<b>Section 4:</b>		
<b>SACQ</b>		
Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to college (university):		
		
1	2	3
4	5	6
7	8	9
1	I feel that I fit in as part of the college environment	1 2 3 4 5 6 7 8 9
2	I have been feeling tense or nervous 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 college	1 2 3 4 5 6 7 8 9
5	I know why I'm in college and what I want out of it	1 2 3 4 5 6 7 8 9
6	I am finding academic work at college difficult	1 2 3 4 5 6 7 8 9
7	Lately I have been blue and moody a lot	1 2 3 4 5 6 7 8 9
8	I have been very involved with in social activities in college	1 2 3 4 5 6 7 8 9
9	I am adjusting well to college	1 2 3 4 5 6 7 8 9
10	I have not been functioning well during examinations	1 2 3 4 5 6 7 8 9
11	I have felt tired much 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 contacts with college professors	1 2 3 4 5 6 7 8 9
15	I am pleased now about my decision to go to college	1 2 3 4 5 6 7 8 9
16	I am pleased now about my decision to attend this college in particular	1 2 3 4 5 6 7 8 9
17	I am not working as hard as I should with my course work	1 2 3 4 5 6 7 8 9
18	I have several close social ties at college	1 2 3 4 5 6 7 8 9
19	My academic goals and purposes 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 academic work I am expected to be doing now
22.	Lonesomeness for home is a source of difficulty for me now
23.	Getting a college degree is very important for me
24.	My appetite has been good lately
25.	I haven't been very efficient in the use of my study time lately
26.	I enjoy living in a college dormitory. (Please omit if you do not live in a dormitory; any university housing should be regarded as a dormitory.)
27.	I enjoy writing papers for courses
28.	I have been having a lot of headaches lately
29.	I really haven't had much motivation for studying lately
30.	I am satisfied with the extracurricular activities available at college
31.	I've given a lot of thought lately to whether I should ask to help from the Psychological/Counselling Services Centre or from a psychotherapist outside of college
32.	Lately I have been having doubts regarding the value of a college education
33.	I am getting along very well with my roommate(s) at college (Please omit if you do not have a roommate)
34.	I wish I were at another college or university
35.	I've put on (or lost) too much weight recently
36.	I am satisfied with the number and variety of courses available at college
37.	I feel that I have enough social skills to get along well in the college setting
38.	I have getting angry too easily lately
39.	Recently I have had trouble concentrating when I try to study
40.	I haven't been sleeping very well
41.	I am not doing well enough academically for the amount of work I put in
42.	I am having difficulty feeling at ease with other people at college
43.	I am satisfied with the quality or the calibre of courses available at college
44.	I am attending classes regularly
45.	Sometimes my thinking gets muddled up too easily

46.	I am satisfied with the extent to which I am participating in social activities at college
47.	I expect to stay at this college for a bachelor's degree
48.	I haven't been mixing too well with the opposite sex lately
49.	I worry a lot about my college expenses
50.	I am enjoying my academic work at college
51.	I have been feeling lonely a lot at college lately
52.	I am having a lot of trouble getting started on homework assignments
53.	I feel I have good control over my life at college
54.	I am satisfied with my program of courses for this semester/quarter
55.	I have been feeling in good health lately
56.	I feel I am very different from other students at college in ways that I don't like
57.	On balance, I would rather be at home than here
58.	Most of the things that I am interested in are not related to any of any of my course work at college
59.	Lately I have been giving a lot of thought to transferring to another college
60.	Lately I have been giving a lot of thought to dropping out of college altogether and for good
61.	I find myself giving considerable thought to taking time off from college and finishing later
62.	I am very satisfied with the professors I have now in my course
63.	I have some good friends or acquaintances at college with whom I can talk about any problems I may have
64.	I am experiencing a lot of difficulty coping with the stresses imposed upon me in college
65.	I am quite satisfied with my social life at college
66.	I'm quite satisfied with my academic situation at college
67.	I feel confident that I will be able to deal in a satisfactory manner with future challenges here at college

## M. Collinearity Diagnostic Table

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### *Collinearity Diagnostics Table*

Psychosocial Variable	Tolerance	VIF
Help seeking	.374	2.671
Self-Esteem	.464	2.157
Perceived Stress	.443	2.258
Intrinsic Motivation to Know	.106	9.471
IM Toward Accomplishment	.085	11.742
IM To Experience Stimulation	.164	6.106
Extrinsic Motivation Identified	.156	6.429
Extrinsic Motivation Introjected	.140	7.118
EX External Regulation	.201	4.965
Amotivation	.111	9.048
Academic Adjustment	.230	4.348
Social Adjustment	.246	4.073
Personal-Emotional Adjustment	.083	12.015
Attachment	.142	7.067
Full Scale	.074	13.528



## N. Cronbach's Alpha Values

### Internal Consistency of Instruments

Questionnaires Used	Psychosocial Variables	$\alpha$
Atspph-sf	Help Seeking	.577
Academic Motivation Scale	Intrinsic Motivation to Know	.820
	Intrinsic Motivation Towards Accomplishment	.914
	Intrinsic Motivation to Experience Stimulation	.820
	Extrinsic Motivation Identified Regulation	.784
	Extrinsic Motivation Introjected Regulation	.799
	Extrinsic Motivation External Regulation	.818
	Amotivation	.426
Rosenberg Self-Esteem Scale	Self-Esteem	.904
Perceived Stress Scale	Perceived Stress	.684
Student Adaptation to College Questionnaire	Academic Adjustment	.611
	Social Adjustment	.640
	Personal-Emotional Adjustment	.840
	Institutional Attachment	-.518
	Full Scale	0.55

## MA Dissertation- Psychosocial Predictors of Academic Success of First-Time First-Year Students

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