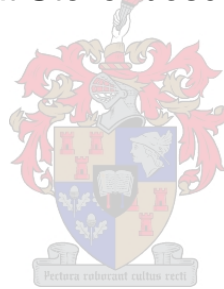


**An investigation into perceived stressors as barriers to student  
engagement in an extended degree programme**

by

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Thesis presented in partial fulfilment of the requirements for the degree  
of Master of Commerce in the Faculty of Economic and Management  
Sciences at Stellenbosch University



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## DECLARATION

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## ABSTRACT

Low participation rates are a matter of concern for Higher Education (HE) institutions across South Africa. The HE sector is under pressure to increase student intake and although efforts to address this objective have been relatively successful over the last couple of years, low throughput rates and high student dropout rates remain challenges not yet addressed adequately. The extent to which students participate in educational activities, thus student engagement, is a known key antecedent to student success. Perceived stressors can, however, potentially hinder student engagement. High levels of stress, which students feel they are not equipped to deal with, may have a negative impact on their functioning, leading to lower levels of engagement. In order to determine whether perceived stressors could be a barrier to student engagement in an Extended Degree Programme (EDP), the current study aimed to answer the following research question: Which stressors do students, enrolled in the EDP, experience in the Faculty of Economic and Management Science (EMS) that could hinder student engagement?

A quantitative non-experimental research design was employed in this study. Quantitative data was collected from 64 students registered for the EDP in the Faculty of EMS at Stellenbosch University. Data was collected specifically for the purpose of this research study and participation was voluntary. A self-administered web-based questionnaire was distributed to the participants. The questionnaire comprised five sections, including a biographical questionnaire and four existing scales measuring perceived stressors, perceived student stress, perceived social support and student engagement, respectively. Data analysis included descriptive statistics, correlations, regression analysis, Sobel Test, ANOVA and Bonferroni Post Hoc analysis.

The research results indicate that there are statistical significant positive relationships between academic stressors and perceived student stress as well as between relationship stressors and perceived student stress. The mediation effect of perceived social support on both the relationships (i.e. academic stressors and perceived student stress; relationship stressors and perceived student stress) were not significant. Furthermore, the relationship between financial stressors and perceived student stress was not statistically significant.

The correlations between perceived social support and student engagement (inclusive of all subscales) and perceived social support and the student engagement: absorption subscale were not statistically significant. However, the correlation between perceived social support and the two remaining student engagement subscales namely, vigour and dedication was statistically significant (weak negative correlations). Thus, the less perceived social support experienced, the greater the participants' vigour and dedication. This result could be indicative of the intrinsic motivation to succeed at all costs displayed by the respondents of this study - irrespective of perceived social support. The motivation to succeed is paramount as many of these students are first-generation students and a higher education qualification is perceived as indicative of future success. Perceived student stress did not correlate statistically significantly with student engagement or with any of the three student engagement subscales. This could further support the finding that respondents are resilient and show engagement, irrespective of their perceived student stress.

EDP students in different years of study did not significantly differ in their perception of academic and relationship stressors. However, they did differ in their perception of financial stressors (non-final year students perceived higher levels of stress). Furthermore, the sample group experienced moderate levels of student engagement, perceived student stress, academic stressors and financial stressors and low levels of relationship stressors. The sample reported high levels of perceived social support.

This study failed to find a statistically significant relationship between perceived student stress and student engagement as suggested by literature. This might be due to the unique characteristics of the student cohort and the context of the EDP student within the Faculty. Follow-up research is suggested to investigate these findings further. The results of the current study contribute to the understanding of student engagement and stressors experienced by EDP students. As the perception of stressors is evident in all year groups, it is suggested that non-final and final year students are supported in a similar manner as the first year students. Programmes on stress management could be offered as part of the available online facilities as developmental opportunities to manage stressors.

## OPSOMMING

Lae deelnamegetalle is 'n saak van kommer vir Hoër Onderwysinstellings reg oor Suid-Afrika. Die Hoër Onderwyssektor is onder druk om studente-inname te verhoog en hoewel pogings om dit aan te spreek, relatief suksesvol was oor die afgelope paar jaar, bly lae deurvloeiakoers en 'n hoë studente-uitvalkoers steeds uitdagings wat nog nie ten volle aangespreek is nie. Die mate waartoe studente aan akademiese verwante aktiwiteite deelneem, dus studentebetrokkenheid, is 'n erkende sleutelfaktor in studente se sukses. Waargenome stresfaktore kan potensieel studentebetrokkenheid verhinder. Hoë vlakke van stres, wanneer studente voel hulle is nie toegerus om te hanteer nie, kan 'n negatiewe impak hê op hul funksionering, wat tot laer vlakke van betrokkenheid kan lei. Die huidige studie het dus ten doel om die volgende navorsingsvraag te beantwoord: Watter stresfaktore, wat studentebetrokkenheid kan verhinder, word ervaar deur studente in die verlengde graadprogram (VGP) by 'n Fakulteit Ekonomiese en Bestuurswetenskappe (EBW)?

'n Kwantitatiewe nie-eksperimentele navorsingsontwerp is in hierdie studie gebruik. Kwantitatiewe data is ingesamel van 64 studente wat geregistreer is vir die VGP in die EBW Fakulteit aan Stellenbosch Universiteit. Data is spesifiek ingesamel vir die doel van hierdie navorsingstudie en deelname was vrywillig. 'n Self-gedadministreerde webgebaseerde vraelys is elektronies aan die deelnemers gestuur. Die vraelys het vyf afdelings ingesluit naamlik, 'n biografiese vraelys asook vier bestaande vraelyste wat onderskeidelik waargenome studentestresfaktore, waargenome studentestres, waargenome sosiale ondersteuning en studentebetrokkenheid meet. Kwantitatiewe data rakende die waargenome stresfaktore van VGP-studente is ingesamel. Data-ontleding het beskrywende statistiek, korrelasies, regressie-analise, Sobel-toets, ANOVA en Bonferroni Post Hoc analyses ingesluit.

Die navorsingsresultate dui op 'n statisties beduidende positiewe korrelasie tussen akademiese stressors en waargenome studentestres, sowel as verhoudingstressors en waargenome studentestres. Die moderator effek van waargenome sosiale ondersteuning op beide die korrelasies (d.w.s. akademiese stressors en waargenome studentestres; verhoudingstressors en waargenome studentestres) was nie betekenisvol nie. Verder was die verhouding tussen finansiële stressors en waargenome studentestres nie statisties betekenisvol nie.

Die korrelasies tussen waargenome sosiale ondersteuning en studentebetrokkenheid (insluitend al drie subskale) en waargenome sosiale ondersteuning en die studentebetrokkenheid subskaal: absorpsie was nie statisties betekenisvol nie. Die korrelasie tussen waargenome sosiale ondersteuning en die twee oorblywende studentebetrokkenheid subskale, naamlik, dryfkrag en toewyding was statisties betekenisvol (swak negatiewe korrelasies). Dus, hoe minder waargenome sosiale ondersteuning ervaar word, hoe groter die dryfkrag en toewyding. Hierdie bevinding dui op die betrokke respondente se intrinsieke motivering om ten alle koste te slaag, ongeag die waargenome sosiale ondersteuning. Die motivering om te slaag, is uiters belangrik aangesien baie van hierdie studente eerste generasie-studente is en 'n hoër onderwyskwalifikasie as 'n aanduiding van toekomstige sukses beskou. Waargenome studentestres het nie statisties beduidend met studentebetrokkenheid of met enige van die drie subskale van studentebetrokkenheid gekorreleer nie. Dit kan verder die bevinding ondersteun dat respondente veerkragtig is en betrokkenheid toon, ongeag hul ervaring van studentestres.

Studente in die verskillende studiejare van die VGP het nie beduidend verskil in hul persepsie van akademiese en verhoudingstressors nie. Hulle het egter verskil in hul persepsie van finansiële stressors (met hoër vlakke onder nie-finalejaarstudente). Verder het die steekproef matige vlakke van studentebetrokkenheid, waargenome studentestres, akademiese stressors en finansiële stressors en lae vlakke van verhoudingstressors ervaar. Die betrokke studente het hoër vlakke van waargenome sosiale ondersteuning gerapporteer.

Alhoewel die literatuur dit voorstel, kon hierdie studie nie daarin slaag om 'n statisties beduidende verband tussen waargenome stressors en studentebetrokkenheid te vind nie. Dit kan moontlik toegeskryf word aan die unieke eienskappe van die studentekohort en die konteks van die VGP binne die Fakulteit. Opvolg navorsing word voorgestel om hierdie bevindings verder te ondersoek. Die huidige studie dra by tot beter insig in studentebetrokkenheid en stressors wat VGP-studente ervaar. Aangesien die persepsie van stressors in alle jaargroepe voorkom, word voorgestel dat nie-finalejaar- en finalejaarstudente op soortgelyke wyse as die eerstejaarstudente ondersteun word. Programme oor stresbestuur kan aangebied word as deel van die beskikbare aanlynfasiliteite as ontwikkelingsgeleentheid om stressors te bestuur.

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## LIST OF ACRONYMS

BUSSE	Beginning University Survey of Student Engagement
CHE	Council on Higher Education
DHE	Department of Higher Education
EDP	Extended degree programme
EMS	Economic and Management Sciences
F-SozU	Perceived Social Support Questionnaire
FTE	Full-time equivalent
HE	Higher Education
HEI	Higher Education Institution
HESA	Higher Education South Africa
JDRS	Job Demands-Resources Scale
NBT	National Benchmark Test
NSC	National Senior Certificate
NSFAS	National Student Financial Aid Scheme
NSSE	National Survey of Student Engagement
PSS	Perceived Stress Scale
RSA	South Africa
SASSE	South African Survey of Student Engagement
SES	Socioeconomic status

SOS	Stress Overload Scale
SPSS	Statistical Package for the Social Sciences
SSEDS	Student Stressors and Emotional Distress scale
SSS	Student Stress Scale
SU	Stellenbosch University
UKZN	University of KwaZulu-Natal
USS	The University Stress Scale
UWC	University of the Western Cape
UWES-S	Utrecht Work Engagement Scale for Students
WITS	University of the Witwatersrand

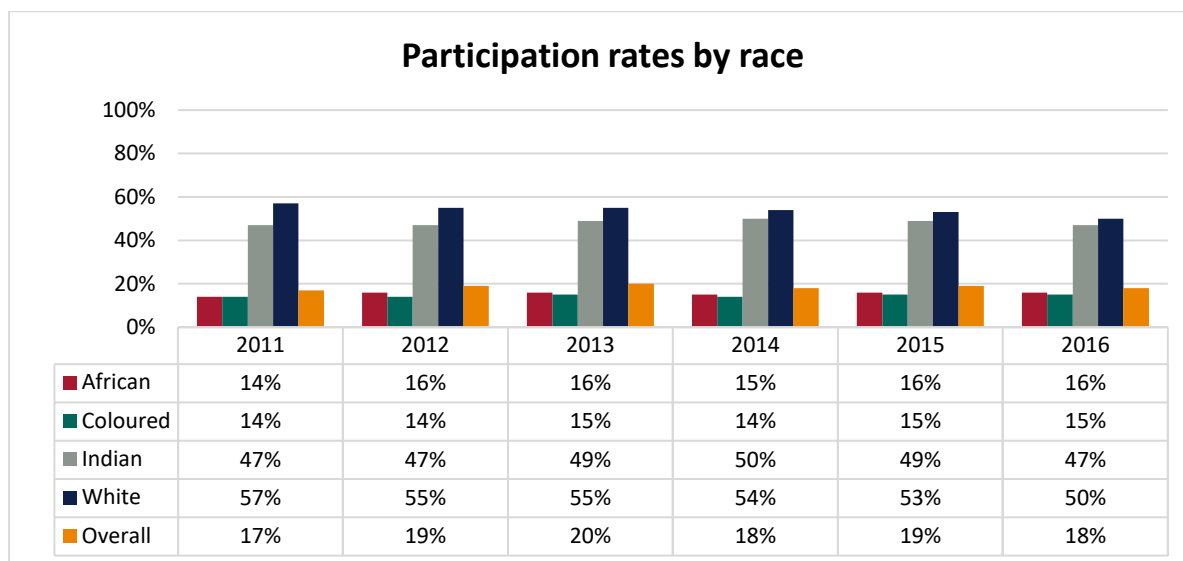
# CHAPTER 1: INTRODUCTION

## 1.1 Introduction

South African universities are currently in the massification period (Case & Marshall, 2016). The massification period marks a need for skills to be transferred in order to prepare students for a large range of roles in society due to the emergence of a knowledge economy. According to the Organisation for Economic Cooperation and Development (as cited in Meintjes, 2015), knowledge economies can be defined as economies that are based on the manufacture, supply and utilisation of information and knowledge. This is where higher education (HE) plays a critical role as economies across the world are dependent on the production, distribution and use of knowledge.

Since 1994, with the onset of the new democracy in South Africa (RSA), higher education has played a major role in rebuilding and transforming social institutions in the country by means of addressing challenges of poverty, inequality and the growth of the economy (Karodia, Soni & Soni, 2016; Petersen, Louw & Dumont, 2009). However, there is still a long way to go, with higher education participation rates still relatively low when compared to developed countries. Furthermore, the percentage of candidates who write the National Senior Certificate (NSC) examinations to qualify for admission into the tertiary system has been on the decline over the last couple of years (Engelbrecht, Harding & Potgieter, 2014). Figure 1.1 depicts the participation rate per race group within higher education from 2011 – 2016.

The calculations in Figure 1.1 are based on the total headcount of enrolments as a percentage of the total population group aged 20 – 24 (Council on Higher Education, 2018). According to the Council on Higher Education (2018, p. 6), only 19% of the population group between the ages of 20 and 24 was enrolled in a higher education institution (HEI) in 2012. The participation rates for previously disadvantaged groups still remain low when compared to the participation rate amongst White students. In 2016, the White and Indian population enrolment rates (50% and 47% respectively) were significantly higher than those of African (16%) and Coloured (15%) students (Council on Higher Education, 2018, p.6).



*Figure 1.1* Participation rates by race in higher education in South Africa from 2011 to 2016 (Council on Higher Education, 2018, p. 6).

Another matter of concern that compounds the challenges faced by the South African higher education sector is the low throughput rates (calculated as the number of students who graduate each year in relation to the total number of students enrolled) (Van Broekhuizen, 2016). According to Van Broekhuizen (2016, p. 41), the throughput rates in the RSA for the year 2013 was 18.3%, which shows a steady increase since 2001 (15.3%). However, the high level of student dropouts (i.e. students leaving higher education without a qualification) has a significant impact on the RSA as a country, the economy, academic institutions and youth (McGhie, 2014). Consequently, one of the principle objectives of the National Development Plan (NDP) is to increase the graduation rate of students to 25% by 2030 (Van Broekhuizen, 2016, p. 42).

Mji and Makgato (2006) argue that the secondary education system in the RSA is a contributing factor to the poor success rates at tertiary level and that the historic underdevelopment of the potential of the black population is at the root of the problem. They posit that there are a large number of talented black students that are unable to further their studies due to inadequate secondary schooling. This notion is further supported by Van Broekhuizen (2016) stating that pupils from low-income families and from historically disadvantaged communities are more likely to enrol in under-resourced schools, with the result that they have less opportunities to further their studies. These students also tend to score lower on standardised assessments and are consequently



faced with numerous challenges at tertiary level (more so than students from a privileged schooling background). Thus, the higher education system is likely to perpetuate the inequalities of secondary educational opportunities. Notwithstanding the strides made in the South African schools system since 1994 to address these challenges, the results remain mixed (Duthie & Freeman, 2015). According to Bass (2011), the redistribution of funds for higher levels of equity and fairness, the integration of schools and changes made to the curriculum are still not fully addressing the issue of quality education for all pupils. Even with schools having become universally accessible, many pupils that finish grade 12 tend to be unprepared for tertiary studies. Only 24% of those pupils who pass grade 12 obtains marks high enough to gain entry into tertiary education to study towards a bachelor's degree (Bass, 2011, p. 45). In 2016, these figures increased to 26.6% (NSC Information Booklet 2016, 2017, p. 8).

Universities are under pressure to increase the intake of students for undergraduate programmes (Louw & de Villiers, 2015), which could be viewed as motivating the acceptance of a wider range of students – many of whom are underprepared. However, the diversity of students accepted is not merely based on race but also on educational backgrounds, making it reasonable to expect that the number of underprepared students may not be limited to groups that were previously disadvantaged (Duthie & Freeman, 2015).

In addition to efforts aimed at increasing the number of students that enrol in higher education being relatively successful, there are a number of further challenges. Once these students have enrolled they still need to graduate within a reasonable time period (Butler, 2013). Thus, HEIs have identified the need to support underprepared students and have developed strategies and mechanisms in this regard. These mechanisms of support are regarded as an essential part of higher education and will be discussed in Chapter 2. One key mechanism is extended degree programmes (EDPs).

According to Van Schalkwyk, Bitzer and Van der Walt (2009), EDPs have become fairly common as most universities are now offering an EDP (in varied configurations). These programmes are primarily designed as an intervention to assist students that are less prepared for tertiary education to make a success of their studies. An additional year of study is added to the degree to develop skills relating to, *inter alia*, academic literacy,

numeric ability and reasoning. Their entry into the programme is usually determined by their final NSC results and/or results in specific subjects, where they failed to meet the minimum requirements to gain entry into mainstream programmes. Further measures applied by many universities are the National Benchmark Tests (NBTs) together with institutional measures, such as, the socio-economic status (SES) score.

The NBTs were implemented in 2009 by Higher Education South Africa (HESA) in an attempt to identify the educational needs of new undergraduate students and the writing of the NBTs prior to admission is currently a requirement at most HEIs. The NBTs are formal assessments where applicants are tested on their mathematical, quantitative and academic literacy competency (Lewin & Mawoyo, 2014).

Additionally, institutions such as Stellenbosch University (SU) are also taking into account the SES of the applicant (and family), given that the SES has a potential significant influence on the educational achievement of a student. Researchers posit that families with economic resources are more likely to be academically prepared for tertiary education, and have educational aspirations and family support (Kuh, Kinzie, Buckley, Bridges & Hayek, 2007; Taylor & Yu, 2009). The application measure provides for a SES score based on educational and economic disadvantages and first-generation-student status (families where neither parent had any form of post-secondary school education) (Admissions Policy of Stellenbosch University 2017, 2016).

The NSC results are mostly used in conjunction with those from the NBTs to identify “at risk” students who fall in the lowest percentile of students that gain entry into tertiary institutions and do not meet the admission requirements of mainstream programmes. In most EDPs, additional modules and content are included in the compulsory curriculum component. The curriculum is also spread over four years (for a three-year programme) in an effort to provide EDP students with the foundation, skills and knowledge to achieve student success and obtain their qualifications in minimum time (Ntakana, 2011). Warren (1998) identified EPD’s as having a number of advantages for students enrolled, in that modules are credit-bearing and provide students with an alternative access route to a number of study fields. Furthermore, academically disadvantaged students are catered for without having to move them completely away from mainstream classes and the programme structure allows for the development of knowledge and skills as additional

time is available. All of these efforts are aimed at increasing the student success rate, where student success can be defined as:

Academic achievement, engagement in educationally purposeful activities, satisfaction, acquisition of desired knowledge, skills and competencies, persistence, attainment of educational objectives, and post-college performance (Kuh et al., 2007, p. 7).

According to Kuh et al. (2007), a key antecedent to student success is the extent to which students participate in educational activities, thus student engagement. Student engagement is simply defined as a sense of belonging to the academic community and taking part in activities that contribute to the achievement of learning. Activities include interaction amongst students, interaction between students and staff and effective educational practices of institutions in order to encourage students to do things right (Kuh, Kinzie, Schuh & Whitt, 2005; Kuh et al., 2007; Mehdinezhad, 2011). However, numerous factors could impede on student engagement and success, one of which is the experience of stressors (Lewin & Mawoyo, 2014). According to Evans and Cohen (1987), the stressors experienced in an environment and the characteristics thereof can cause stress and impact negatively on an individual's functioning. Thus, high levels of stress experienced by students, which they feel they are not equipped to deal with, may impact negatively on them, leading to lower levels of engagement. Furthermore, Brannon and Feist (2010) argue that stress is caused by a person's perception of the situation, rather than the situation itself.

Goff (2009) investigated the relationship between stressors and academic performance. The results indicate that a student's perception of a stressor can have one of two outcomes. Firstly, the stressor can be viewed as challenging, leading to an increase in academic performance or, secondly, as threatening, leading to a decrease in academic performance. Thus, the question that arises is: What can HEIs do to decrease the stressors experienced by students that may hinder their academic success?

## 1.2 Problem Statement and Research Questions

The low success rates at HEIs in RSA are a matter of great concern and a number of interventions have been developed and implemented to assist students to enhance student engagement and achieve student success (Council on Higher Education, 2014; Jaffer & Garraway, 2016). Notwithstanding these efforts from HEIs such as SU, lower throughput rates amongst EDP students remain when compared to mainstream students.

A contributing factor to this phenomenon is higher levels of stressors experienced by this student population. Research indicates that EDP students are one of the most at-risk groups for stress as they experience a number of transitions during their time in higher education institutions (Chow & Flynn, 2016; Goff, 2009). They need to adapt to a new and unfamiliar environment, try to find a place in a diverse community, and learn the academic language of their field of study, all in order to succeed academically. A greater understanding of the perceived stressors of specifically EDP students could therefore shed light on intervention programmes and strategies to increase academic success of these students.

The research takes a positive psychology approach in understanding the stressors EDP students experience and how the stressors may hinder the students to take part in academic related activities. With EDP students identified as at risk of leaving HEI without completing a qualification (McKay, 2016), investigating the stressors experienced may serve as a proactive approach to understanding the students' challenges and assisting them in reaching their full potential and academic success.

Furthermore, through investigating the stressors these students experience and student engagement, this study will assist in facilitating individual processes to ensure effective transition and functioning within an organisation, as well as to develop skills and strategies to improve future performance. Thus, the research initiating question that will guide this research is:

Which stressors do students, enrolled in the extended degree programme, experience in the Faculty of Economic and Management Science (EMS) that could hinder student engagement?

Furthermore, the following questions can contribute to answering the research initiating question:

1. How could the EDP students enrolled in the EMS Faculty be described in terms of demographics?
2. What are the levels of student engagement of the EDP student cohort?
3. What are the perceived stressors that EDP students experience?
4. What are the levels of these perceived stressors?
5. What are the levels of the perceived stress experienced by the EDP student cohort?
6. What are the levels of perceived social support?
7. Do students in different years of study experience different types of stressors and which of these dominate in different study years?
8. What is the relationship between perceived social support and student engagement?
9. What is the relationship between the different types of perceived stressors and perceived stress?
10. What is the relationship between perceived stress and student engagement?
11. What is the mediation effect of perceived social support in the relationship between the different types of perceived stressors and perceived student stress?
12. What is the mediation effect of the different types of perceived stressors in the relationship between perceived social support and student engagement?
13. How can the support programmes in the EMS Faculty be augmented to increase student engagement and student success?

### **1.3 Aims and Objectives of the Study**

The primary aim of this exploratory study is to investigate the prevalence of stressors that EDP students experience in the EMS Faculty at SU. Secondary aims include to determine the levels of student engagement and perceived stress of the EMS EDP student cohort and to make recommendations regarding support programmes offered to students in the EMS Faculty.

To reach the aims of this study, the following objectives were formulated:

1. Describe the demographic profile of the EMS EDP student cohort.
2. Determine the levels of student engagement.
3. Investigate perceived stressors that EDP students experience.
4. Determine the levels of the perceived stressors.
5. Determine the levels of perceived student stress experienced by the EDP student cohort.
6. Determine the levels of perceived social support.
7. Determine if students experience different types of stressors as prevalent in different years of study and which of these dominate in different study years.
8. Determine the relationship between perceived social support and student engagement.
9. Determine the relationship between the different types of perceived stressors and perceived student stress.
10. Determine the relationship between perceived student stress and student engagement.
11. Determine the mediation effect of perceived social support in the relationship between the different types of perceived stressors and perceived student stress.
12. Determine the mediation effect of the different types of perceived stressors in the relationship between perceived social support and of student engagement.
13. Formulate recommendations for EMS Faculty specific student support programmes.

#### **1.4 Value of the Study**

The findings of this study can contribute to the understanding of perceived stressors experienced by different EDP student cohorts (per year of study). Insights will be gained

as to the different types of stressors experienced, the levels of perceived stressors and student engagement and the use and experience of support offered. Specifically, the broadening of the knowledge of perceived stressors will assist academic institutions toward the development of interventions aimed to assist in stress management as well as to increase particularly EDP student engagement and student success.

## **1.5 Summary: Chapter 1**

Chapter 1 sets the scene for the study. It commences with a brief background to present a rationale for selecting this topic, alluding to the fact that HEIs in the RSA are under pressure to increase the number of newly registered students each year (Van Broekhuizen, 2016). Along with the growing number of students, the success of participation has become a focal area in research as the dropout and low throughput rates in the RSA HEIs remains a matter of concern (Goldie, 2013). One way universities attempt to address these concerns are EDPs.

This study aims to investigate the prevalence of stressors that EDP students experience in the EMS Faculty at SU that could hinder student engagement and success. A quantitative approach was followed to determine the different types of stressors experienced, the levels of perceived stressors and student engagement and the current use and experience of support offered by the faculty. In the following chapter student engagement and perceived student stressors are discussed.

## CHAPTER 2: LITERATURE REVIEW

### 2.1 Introduction

There is consensus that HEIs need to understand what leads to student success, as a large number of factors challenge a student's ability to be successful, including family, cultural, social, and personal factors (Theron, 2015). The impact of these factors are especially relevant to students identified as being at risk for dropping out of university or not completing their programmes in the minimum time period.

HEIs have implemented numerous methods, interventions and institutional structures in order to support at risk students throughout their enrolment at the university. These endeavours are aimed to provide support to students to achieve academic success and navigate the challenges faced during tertiary studies (McKay, 2016). Students who do not meet the minimum requirements to gain entry into the mainstream programme can for example register for an Extended Degree Programme (EDP). Through the EDP, HEIs provide student support and the opportunity to build an academic foundation they will need in order to be successful (Jaffer & Garraway, 2016). The EDP has provided access to numerous students in the RSA who would not have had the opportunity to enter higher education. For example, at SU, 282 new students enrolled for an EDP in 2017, totalling 1402 students in the EDP stream (across all faculties) (G. Young, personal communication, 20 August, 2018).

Student engagement has been argued to be one of the key factors in contributing to the successful completion of a tertiary qualification (Kuh, 2011; Manwaring, Larsen, Graham, Henrie & Halverson, 2017). Pascarella and Terenzini (2005) are of the opinion that the greater a student's engagement in academic activities and other university-related experiences, the higher the level of knowledge acquisition and academic success becomes. In this chapter, focus is drawn to the two constructs that are central in this study, namely student engagement and student stressors. Two theoretical frameworks, the depiction of student engagement (Kuh et al., 2007) and the conceptual framework of Goff (2009) regarding student stressors form the foundations of this study and will be discussed in the subsequent sections together with perceived social support.



## 2.2 Student Engagement

Student engagement can be defined as the time and energy students spend on educational-related activities and the extent to which institutions implement effective educational practices in order to encourage students to do the right things by putting in effort in order to succeed (Kuh et al., 2005). Menz (2012) emphasizes that the construct of student engagement was not formulated from one single theory, but is the result of research into a number of higher education constructs that focused on student success and student involvement. Included in the research is the quality of the students efforts, students involvement in effective learning activities and students' perception whether the environment is supportive of their learning. Kuh et al. (2007) provide a graphic illustration of student engagement that depicts the complexity of the construct (refer to Figure 2.1).

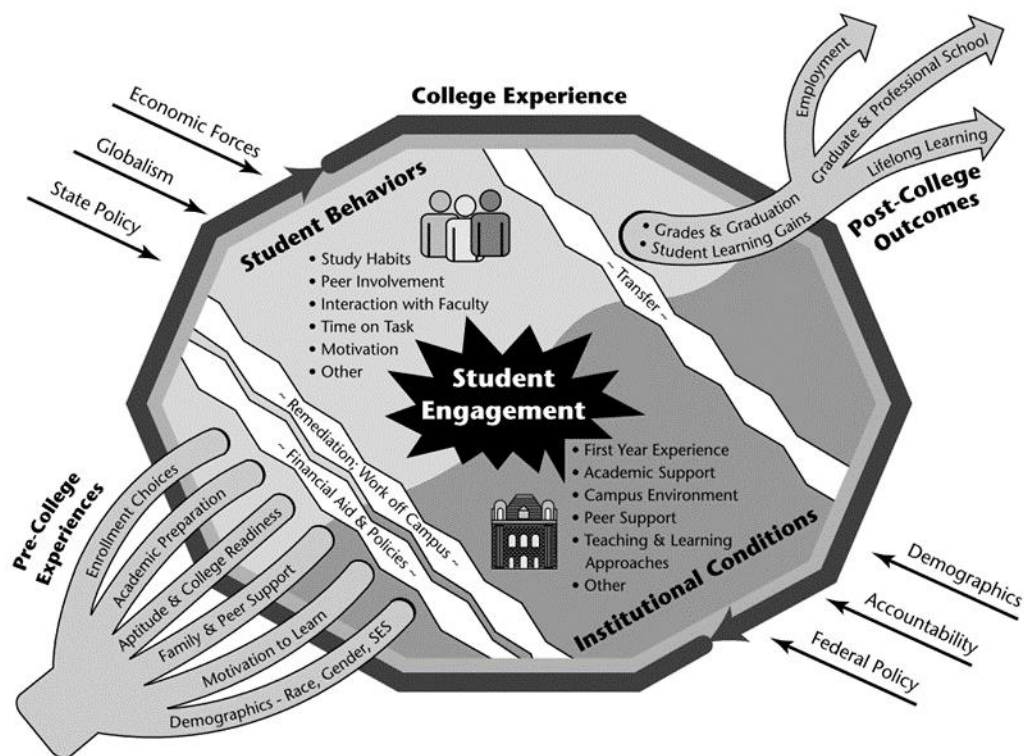


Figure 2.1 Illustration of student engagement (Kuh et al., 2007, p. 8).

According to Kuh et al. (2007), a number of factors contribute to student engagement at tertiary level. In Figure 2.1 student engagement is positioned between student behaviours and institutional conditions (universities have some control over these conditions) whilst

other factors, such as pre-university experiences are beyond the direct control of the university. Student behaviours include aspects such as study habits, time and effort put into studies, interactions with the lecturers, peer involvement and motivation. Institutional conditions include first year experiences, academic and peer support, approach to teaching and learning and structural features.

In the following sections, the student background characteristics, pre-university factors, student behaviours, institutional conditions and conditions students need to navigate toward attaining student engagement and success, will be discussed.

### **2.2.1 Student background characteristics and pre-university factors**

What students do prior to starting tertiary education, who they are, where and how they attend university, can impact on the likelihood of obtaining a degree (Kuh et al., 2007). Bean (2010) suggests that students with economic, social, or educational advantages are less likely to leave university without a qualification than their counterparts without these advantages. In the first year of study, student engagement is significantly influenced by prior experiences of education, and the expectations and goals of the students (Mehdinezhad, 2011). Integration into the social and academic community plays a significant role in instilling a 'sense of belonging' which, according to Hardy and Bryson (as cited in Mehdinezhad, 2011), is a precursor for engagement. There are a number of student demographical characteristics and pre-university factors that impact on student engagement, including gender, race and ethnicity, quality of academic experience at secondary school level, family educational background, motivation to learn, educational aspirations and preparation, family and peer support, SES, financial aid, precollege encouragement programmes and enrolment choices (Kuh et al., 2007). These are briefly discussed next.

#### **2.2.1.1 Demographics**

**Gender:** Between 1959 and 2002, the university participation rate in the USA increased with 29% to 68% for women and with 8% to 62% for men (Kuh et al., 2007, p. 18). In the RSA, women are outperforming men in tertiary education, showing greater academic success with higher graduation rates. In 2016, the majority of undergraduate degrees were awarded to women (58137), and only 35772 to men (CHE, 2018, p. 19). At the

University of the Western Cape (UWC), Schreiber and Yu (2016, p. 168) used data on 868 students' academic performance (as an average final mark in 2013) to distinguish academic performance between women and men. The sample was divided into quintiles with quintile 1 representing the 20% worst performing and quintile 5 the 20% best-performing students. Despite women representing 59% of the sample, 67.1% of quintile 5 was female. The investigation of Sommerville and Singaram (2018, p. 281) on the influence of demographic characteristics on academic achievements presented a similar picture. Data was gathered from 202 students throughout their five-year medical degree programme. The test scores of the female participants were higher than their male counterparts in 30 of the 32 assessments (tests). Qualitative data gathered from the sample further indicated that respondents expected female students' test marks to be higher than those of males as they display higher diligence levels and lower levels of risky behaviour.

**Race and ethnicity:** Race and ethnicity have historically played a significant role in whether someone will attend university. For example in the USA, minority population groups reflected lower completion rates at high school level as well as enrolment rates at university (Kuh et al., 2007). However, in the RSA, the enrolment rates for minority groups are higher (55% for White, 47% for Indian and 14% for Coloured minority groups) than that of the majority group (16% for African students) (CHE, 2016, p. 68). The enrolment rates at SU for 2017 indicate the majority of enrolled students are White (60%), followed by African (19%) and Coloured (18%), and Indian (3%) (Stellenbosch University, Statistical Profile, 2018).

Even when gaining entry into university, some racial groups show lower success rates than others (Astin, 1997). For the student intake of 2011 at South African HEIs (excluding UNISA), 63% of White students and 59% of Indian students graduated within five years, while 52% of Coloured and African students graduated within five years respectively (CHE, 2018, p. 63). A similar picture unfolds within SU, where for the 2011 intake, 71% of White students graduated within five years and 55% of Coloured students. For Indian and Black students, 53% and 41% graduated within five years respectively – figures that indicate the prevalence of significant differences between the graduation rates of different race groups (C. Kroon, personal communication, 5 September, 2018).

With large improvements in the average levels of education of South Africans (Cosser, 2018) the legacy of apartheid continues to be evident with some racial groups in a cycle of financial disadvantage, academic underperformance and academic underpreparedness. Efforts to correct this imbalance have been focused on structural factors such as poor teaching at school level (Pym & Kapp, 2013; Sader & Gabela, 2017). With 60% of public schools regarded as resource-poor schools, schools in rural areas and townships are falling behind where learners remain trapped in a survivalist economy, affecting predominantly Black families (van der Merwe, 2011, p. 772). This view is supported by Pym and Kapp (2013) and Schwab and Sala-i-Martin (2016) who argue that the majority of Black rural and working-class pupils are still educated in under-resourced primary and secondary schools. With only a small percentage of schools described as functional, the majority of schools (mostly government schools attended by African pupils) are described as having management inefficiencies, a lack of resources and educational outputs. According to Smit and Boshoff (2018) the underperformance of African students can thus be attributed to the substandard primary and secondary education they received. With the majority of African students being first-generation students, they are not only disadvantaged by their primary and secondary education but also their socio-economic circumstances.

**Socio-economic status (SES):** As previously mentioned, the quality of the curriculum at secondary level in South African schools significantly affect student success in tertiary education (Van Broekhuizen, 2016; Mji & Makgato, 2006). Students who are well prepared when entering tertiary institutions are best positioned to perform well academically and adjust socially (Kuh et al., 2007). However, the level of schooling is directly related to SES as it determines the type of school and environment the student had access to and the resources available at home, while indirectly providing the social capital needed to be successful. Wenglinsky (1998) investigated the difference between low and higher SES schools. The results indicate a number of variances related to instructional arrangements, materials, experience of teachers and student-teacher ratios. Students with a higher SES are more likely to be motivated to apply, enrol, and complete a tertiary degree. This could be due to exposure to information and support from surrounding structures (school, teachers and family). Research by Spaul and Kotze (2015) confirms that in the RSA, the majority of pupils from disadvantaged backgrounds are falling behind and are not

receiving the much needed support to excel at school. Data on the performance of school pupils indicate that only 16% of Grade 3 pupils are performing at the required level for mathematics. To compound matters further, the poorest 60% of Grade 3 pupils are at least three grade-levels behind the wealthiest 20% in the particular grade. This performance gap increases to four grade levels by the time pupils reach Grade 9 (Spaull & Kotze, 2015, p. 19).

This finding is supported by the research of Cardak, Bowden and Bahtsevanoglou (2015), who confirm that students with a low SES do not receive adequate guidance, information and support from their schools regarding the availability of post-school education options, leaving students with limited information (both in quantity and quality). Very few schools offer more than one guiding activity to students in their final year of school and little attention is given to students' decision-making knowledge to promote informed choices. Terenzini, Pascarella and Blimling (as cited in Kuh et al., 2007) furthermore posit that first-generation students are less likely to enrol in advanced courses, are less knowledgeable about financial aid and are less engaged. Students with a low SES are thus perceived as likely to fail at tertiary level and subsequently not encouraged by their secondary school teachers to pursue a tertiary qualification. This may lead to a self-fulfilling prophecy – if students are not encouraged, their effort and persistence may decrease, all indicative of a continuum of missed opportunities and failure given that effort and persistence are key factors in student success, especially for first-generation students.

Family support, educational aspirations and academic preparation are more prevalent in high-income households and increase as more finances are available (e.g. the ability to pay for extra classes, career guidance, psychometric testing). A higher SES allows for access to better schools and classroom environments, better resources to facilitate academic performance and indirectly provides the social capital needed to be successful at secondary school level. Students with a high SES are thus more likely to enrol in HEIs, complete an application form for admission, gain admission and aspire to earning a tertiary qualification (Kuh et al., 2007).

### 2.2.1.2 Motivation to learn

Motivation of students has shown to be positively related to academic performance and adjustment at university as students who are academically motivated tend to focus more on programmes and institutional factors that stimulate continuous student engagement (Petersen et al., 2009). The effort a student puts in when studying is a key factor in persistence, especially time spent studying (leading to higher pass rates) (Kuh et al., 2007) as a motivated student will work harder in order to achieve better results (Kranstuber, Carr & Hosek, 2011). Motivation is defined as the “why of behaviour” and can be either intrinsic (inherent enjoyment or interest) or extrinsic (motivation from outside) (Réka, Kármén, Susana, Kinga, Edit & Kinga, 2015). Intrinsically motivated students tend to prefer tasks that are more challenging, use more effective learning strategies and enjoy attending classes more than extrinsically motivated students. Bailey and Phillips (2016) investigated the relationship between motivation and academic performance among 184 first year Australian students. Results indicated that intrinsic motivation was a significant predictor of academic performance. Shanti, Janssaens and Setadi (2016) report similar results among 327 first year university students in Indonesia, where students were asked to complete the Stages of Learning Motivation Inventory as a measure of motivation to learn. The results indicated a positive correlation between motivation to learn and academic performance.

McGhie (2014, p. 118) conducted research on how “a will to learn” affected students’ academic progress at a historically black HEI in the RSA. Participants were divided into two groups depending on how well they performed academically. Students who failed to pass all modules in a particular year were grouped together, and those that did, formed the second group. The results (quantitative and qualitative) indicated that students faced multiple challenges in learning and that the two groups responded differently to these. For the successful students, difficulties and challenges experienced held motivational value to succeed academically. It further strengthened their will to learn and provided the drive and commitment needed to overcome challenges (McGhie, 2014). This was not the case for the less successful group as challenges had a negative influence on their academic progress as the challenges to learning were too severe.

Two factors that may influence students' persistence could be lower SES status and being first-generation students. These students tend to display lower levels of persistence than their counterparts. This can be attributed to a combination of factors, including academic preparedness, the campus openness to diversity, students' academic commitment and financial aid (Kranstuber et al., 2011). However, these challenges could also lead to commitment and motivate students to succeed (McGhie, 2014; Vincent & Hlatshwayo, 2018). Jury, Semding, Court and Darnon (2014) investigated the relationship between students' social class and the motivation to perform academically at a French university ( $n = 244$ ). The findings indicate that students from lower social classes tend to be more motivated to perform academically than students from higher social classes.

### **2.2.1.3 Family and peer support**

Social support can be defined as perceived or anticipated support from available social networks, which include instrumental support (being able to receive help with daily problems), emotional support (being liked and accepted by others) and social integration (belonging to a social group) (Kliem, Moßle, Rehbein, Hellmann, Zenger & Brahler, 2015). The support from family and family aspirations can play a big role in whether students study successfully at tertiary level. Hamrick and Stage (2004), state that expectations of parents are the strongest predictor of whether a student will further their education past secondary level (amongst students who attended low-income and high-minority secondary schools). Naumann, Bandalos and Gutkin (as cited in Kuh et al., 2007) argue that educational aspiration is the best predictor of first-semester marks for first-generation students. However, it was indicated that secondary school teachers also play a role in diminishing a student's aspirations as teachers' expectations were lower than those of parents and the students themselves. U.S. Department of Education (2004) argues teachers might have lower performance expectations as they believe that some groups are limited in their abilities regarding how much and what the students are able to learn and achieve.

Manik (2015) elaborates that the educational background of a student's family could be a risk factor to dropping out, with first-generation students being most at risk. First-generation students do not necessarily receive the needed support from their families, as the families do not have the educational capital nor resources to assist with the transition

to tertiary education (Ntakana, 2011). With these students being the first in their family, and in some instances the community, they might have added pressure to be academically successful. This is due to first-generation students often being viewed as the gateway to lift the family and community out of poverty (Vincent & Hlatshwayo, 2018). Further pressure to be successful can be experienced due to financial support offered by the community or family members and the expectation of success by the wider community. This expectation is confirmed by the findings of Sader and Gabela (2017) who investigated students from low socio-economic backgrounds' experiences of higher education. The responses indicated that students who received funding from their community experienced added pressure to be academically successful as they want to take care of, and improve their community by giving back after completion of their tertiary education. These views could impact on their motivation to learn, irrespective of the stressors perceived.

Heymann and Carolissen (2011, p. 1390) contend that as many as a third of first-generation students drop out before the end of their first year of tertiary education and subsequently identify this group as one that must be understood and assisted in overcoming obstacles unique to them. With that said, Heymann and Carolissen (2011) stress that institutions must be careful not to label first-generation students as a helpless group as it is not the first-generation factor alone that is presenting challenges, but a combination of individual and institutional factors from the environment.

From the aforementioned discussion on social support the following hypothesis is formulated, namely:

Hypothesis 1: Perceived social support is positively related to student engagement.
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#### **2.2.1.4 University readiness**

Perna and Thomas (2006) developed a model of student success which indicates that university achievement is largely dependent on university readiness (where adequate information about tertiary education is pivotal to increase readiness). Branson (as cited in



Van Broekhuizen, 2016) notes a significant informational irregularity related to the availability of information and the process to gain access into tertiary education in the RSA, more so for those from historically disadvantaged backgrounds. The lack of information causes confusion regarding expectations for academic work, fees and admission requirements. However, Kuh et al. (2007), state that a large amount of information is available on how <sup>1</sup>post-secondary encouragement programmes can assist in improving access for students from low- and moderate-income families as well as first-generation students by addressing some of these concerns.

Lemmens, Du Plessis and Maree (2011, p. 615) investigated university readiness amongst 829 South African first year students and the relation with academic success. The students' readiness were assessed during the first week of orientation with the completion the Academic Readiness Questionnaire. Subject performance marks and credits obtained were used as an indicator of academic success. The findings indicate that academic readiness is positively correlated with academic success. Thus, providing students with adequate information that will prepare them for university even before entering university could have a positive impact on their academic success.

#### **2.2.1.5 Academic preparation**

The quality of the secondary school curriculum and of academic experiences have a significant effect on most of the dimensions of success at tertiary level. Having a strong secondary school foundation places a student in a better position for success (Kuh et al., 2007). At tertiary level, the volume of work and the complexity thereof increase, compelling students to adopt new ways of learning. This is a challenge that is often intensified due to inadequate schooling and under-preparedness for the transition to higher education. For this transition, students require generic and professional skills and must be able to master content specific to the discipline. Students with a disadvantaged school background often lack adequate study methods (do not study to understand but to pass) and time management skills (Chetty, 2014).

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<sup>1</sup> Programs designed to encourage the broader community to pursue post-secondary education.

Van Broekhuizen (2016, p. 78) reports a correlation between final matric scores and dropout rates of students in the Western Cape. Students who had a higher average in matric were less at risk of dropping out of university, as the dropout rate for students with a matric average of 60% in 2006 was 20%, while students with an average score of 80% in the same year had a dropout rate below 10%. This highlights the importance of being academically prepared by having a strong secondary education foundation.

With the RSA also being culturally diverse and having 11 official languages, only 12% of students have English as their mother tongue (Chetty, 2014, p. 55). Thus, a great number of students have to study in their second or even third language, which complicates grasping and learning of terminology and definitions even more. The level of English proficiency as an academic language, impacts on the academic literacy of the students, as reading and writing are the building blocks to learn and develop knowledge in a discipline (Chetty, 2014). In support of this view, Van Schalkwyk et al. (2009) claim that students' acquisition of knowledge in their first year at an HEI is critical for future educational success. Even though the nature of reading and writing in higher education differs from that of secondary education, many students do have the ability to adapt their approach to take part in and be effective at tertiary level. However, Niven (2005) identified that it is more challenging for some students as the gap between secondary and tertiary education is too big and they struggle to make the adjustment (a challenge compounded by the current situation of the secondary education system in the RSA). This is supported by Passeron and De Saint (1994) who indicate that the students' background impacts on their academic language, as students who come from a less privileged background and school system may experience more difficulty in effectively employing academic language. The academic level and depth of knowledge and skills acquired at secondary school are thus great barriers for many students to achieve academic success.

#### **2.2.1.6 Enrolment choice**

Where and when a student decides to enrol at university play a role in their persistence to obtain a qualification. Some students that do not enter university directly after secondary school (non-traditional students) are at higher risk of dropping out (Kuh et al., 2007) than students that enter higher education directly after secondary school. To compound matters further, non-traditional students usually have more responsibilities and

demands on their time, reducing their ability to fully participate in engagement activities such as studying (Goff, 2009) and thus study successfully. Maringe (2006, p. 23) investigated factors students consider important when choosing a tertiary institution in the United Kingdom (n = 387). Respondents were requested to score 35 universities choice factors on a 10 point Likert type scale. The factors with the highest mean values were programme (7.8), price (7.5) and place (6.2).

Turning to South Africa, Wiese, van Heerden, Jordaan and North (2009, p. 49) investigated the factors that influence prospective students' choice to enrol for a degree in EMS at a HEI in the RSA (n = 1241 first year students; 6 HEI's). Students indicated the importance of various choice factors on a 5 point Likert type scale. Results indicated quality of teaching, employment prospects, campus safety and academic facilities as the leading four factors when selecting a HEI. Furthermore, Matsolo, Ningpuanyeh and Susuman (2018, p. 71) investigated enrolment rates at higher education institutions in the Gauteng province. Data from the General Household Survey (GHS) was used, where 25361 face-to-face households were interviewed. The most prominent reasons provided by 20 to 24 year old participants, who were not enrolled in higher education, were that they have household responsibilities or jobs/businesses (34.3%), experience a lack of finances (34.3%) and they are satisfied with their level of education (6.2%) and thus do not have a desire to further their studies (Matsolo et al., 2018, p. 74).

In summary, understanding the background characteristics and pre-university factors that influence student engagement and success provides information that can be used to better prepare students for university. However, literature is clear on the fact that students who are at risk from dropping out have additional challenges that could hamper their student success. These challenges should be addressed by universities in as far as they can offer activities aimed to develop student behaviours that contribute to success (Farr-Wharton, Charles, Keast, Woolcott & Chamberlain, 2018; Kuh et al., 2007). These student behaviours will be discussed briefly in the subsequent paragraphs.

### **2.2.2 Student behaviours**

As previously mentioned, student engagement is dynamic and dependent on a number of factors from inside and outside the institution (Gerber, Mans-Kemp & Schlechter, 2013;

Kuh et al., 2007; Mentz, 2012). Certain student behaviours should be encouraged as it can impact positively on their engagement (irrespective of the students' background characteristics and pre-university experiences). These include for example study habits, time and effort put toward their studies and interactions with the lecturers.

### **2.2.2.1 Study habits**

Study habits are described as the degree to which students engage in actions of studying that are characterised by academic related routines in an environment that is conducive to study (Credé & Kuncel, 2008). Fouché (2017) analysed the learning environment of students studying Chartered Accountancy at a South African university by gathering data on students' learning environment and study habits. The results indicate that poor study habits (not doing homework, low levels of class participation and procrastination) show a significantly negative relationship with student performance. On the other hand, effective study habits (doing homework, participating in class, time-management and hard work) show a significant positive correlation with student performance. The study concluded that HEIs should provide students with support to develop study skills (such as time-management) and not only offer pure academic support.

### **2.2.2.2 Interaction with faculty**

Strydom and Foxcroft (2017) suggest that university staff fulfils a number of roles including that of mentor, teacher and advisor for students. Chickering and Gamson (1991) investigated the effective educational practices that have a direct effect on student learning and behaviours together with the quality of the students' educational experiences. Their research was based on how lecturers teach, the way students learn, how students interact amongst each other and how lecturers and students communicate. They identified seven principles conducive to learning which could lead to students persisting and obtaining a qualification as it encourages students to participate in student behaviours that increase student success. The seven principles are: encourage student-faculty contact; encourage cooperation amongst students; encourage active learning; provide prompt feedback; emphasise time spent on tasks; communicate high expectations to students; and respect diverse talents and ways of learning (Chickering & Gamson, 1991). The importance of student-staff interaction and student engagement was confirmed by Farr-

Wharton et al. (2018). They studied the impact of student-staff interaction on student engagement among 363 students in an Australian university. Results indicated a positive relationship between student-staff interaction and student engagement, with students who interact more with faculty, showing higher levels of student engagement.

### **2.2.2.3 Time spent on tasks**

Previous research indicate that students take part in activities that are positively associated with desired learning outcomes, satisfaction and motivation (McKay, 2016; Ntakana, 2011; Tulgan, 2013). Investigating student satisfaction and engagement, Kuh et al. (2007) included three questionnaires, namely the College Student Expectations Questionnaire, the National Survey of Student Engagement and the Community College Survey of Student Engagement. The findings indicate that the students' perception of whether the university environment is supportive of their social and academic needs, is the best predictor of student satisfaction. Even though student satisfaction is not the only outcome that will impact on student learning and development, student satisfaction does influence the time and energy students will spend on educationally purposeful activities (Kuh et al., 2007). It is thus important for universities to offer activities that assist students to achieve success, including tutor programmes, facilitation classes and technological support (McKay, 2016; Ntakana, 2011).

In the RSA, Torres and Mabida (2017, p. 157) analysed data gathered from 12226 students from nine South African HEIs. The objective was to understand students' perception of the emphasis HEIs place on studies and academic work, and the academic support provided. For this purpose, items from the South African Survey of Student Engagement (SASSE) measurement instrument was used. Results indicate that students perceive their HEI to focus mostly on studying and academic work ( $M = 3.4$ ; maximum of 4) and on providing academic support ( $M = 3.0$ ; maximum of 4).

Gerber et al. (2013) further posit that class attendance is positively associated with academic performance (high test and examination scores). Time spent reviewing and learning material by class attendance is effective in increasing information retention as well as providing the opportunity for grasping the material.

Similarly, tutor programmes have been found to influence the academic performance of students positively because those students who attend tutor programmes tend to score higher marks (Chen, 2015; McKay, 2016). McKay (2016, p. 57) investigated the effects of attending tutor programmes on test scores of a racially diverse first year geography class at the University of Cape Town. The results indicate that students who attended tutor sessions (more than 10) improved their test scores by an average of slightly over 20%. The test scores of those students who did not attend any tutor classes dropped on average by 13%.

Together with student behaviours, institutional conditions also play a role in student engagement. These conditions will be discussed in the following section.

### **2.2.3 Institutional conditions**

Institutional conditions are a contributing factor to student engagement and success (Kuh et al., 2007) (Figure 2.1). These factors include campus environment, peer support, teaching and learning approaches, first year experience and academic support.

#### **2.2.3.1 Campus environment**

According to Kuh et al. (2007), the size of the institution has an indirect influence on student engagement due to other intervening variables. Size appears to be shaping enrolment decisions through the effect on students' perceptions of the environment, interaction between staff and peers, and students' social and academic involvement. Smaller institutions tend to be more engaged due to the smaller classes and better faculty-student ratios, offer higher probability for the development of relationships between staff and students and amongst students. In addition, smaller institutions tend to be more isolated geographically, thus increasing the chances of social and academic integration as students will live closer to one another and the campus.

McKay (2013) investigated the success of a teaching intervention model at the University of Johannesburg. The results indicate a positive relationship between the size of classes and success rate. When the staff-student ratio changed from 1:35 to 1:92, the class average decreased by approximately 10%, emphasising the need to balance student enrolment against available human resources (McKay, 2013, p. 691).

For some students enrolling in university may be the first experience to interact with people from a variety of backgrounds other than their own (Kuh et al., 2007). Strydom and Foxcroft (2017) argue that these interactions are beneficial to students as it prepares them for participation in diverse social and working environments. This finding is supported by Louw and De Villiers (2015) who examined the impact of a service-learning project undertaken by medical and physiotherapy students enrolled in the EDP at SU. Results indicated that students gained a better understanding of the challenges of others when spending time with people from diverse backgrounds and cultures, leading to the dismantling of stereotypes and the development of new perspectives. Pascarella and Terenzini (2005) advocate that the more diverse a group of students are, the more likely they are to interact and build positive relationships and that these interactions positively affect critical thinking.

### **2.2.3.2 Peer support**

Interacting with peers can be a contributing factor to students being more engaged. Roos (2014) argues that social interaction with peer groups outside of the classroom (e.g. sporting events and socialising in organisations) increases overall social interaction and will lead to increased academic-related activities. The interaction can manifest in number of forms within the student community, ranging from peer tutoring, mentor programmes or merely taking part in academic discussions outside of the classroom (Ntakana, 2011).

Strydom and Foxcroft's (2017, p. 37) research was based on the SASSE 2014 survey data ( $n = 12306$  students from nine HEIs across South Africa). They investigated collaborative learning where students work together on group projects, ask peers for assistance when experiencing challenges in a subject, or preparation in a group for an examination. According to the results, first-generation students collaborate more than those who are not non-first-generation students. First year students are slightly less involved in collaborative learning than senior students. Strydom and Foxcroft (2017) suggest that it might take first year students some time to realise the value of collaborative learning for which making new friends and class mates are important.

Furthermore, Young (2016) argues that participation in co-curriculum activities can assist students to develop holistically and prepare them for life after university and the world of

work. In 2013, SU introduced the BeWell programme with multiple objectives, namely to assist first year students in their adjustment to university, to develop problem-solving skills and to optimise student potential. The programme takes a positive psychology approach, focusing on whole student development and strength based development (rather than the deficit approach where the focus is on developing student shortcomings). In the BeWell programme, trained senior students (known as mentors and supported by SU staff) are assigned a group of first year students to assist during their first couple of months at university. Mentors are trained covering the six dimensions of the wellness model, namely physical, emotional, intellectual, occupational, social and spiritual wellness. Interaction between mentees and mentors take place in one hour sessions (between six and ten), with the focus on growth facilitation. Wellness cards (corresponding to the dimensions of wellness) are used to guide discussions, for example: “Do you think there are any intellectual skills that you need to develop further?” and “How could you develop them?” (du Plessis, 2015). Both the mentor and mentee are supported by an individualised and group wellness website that offers a variety of support including eBooks, audiobooks, online workshops, journals, profile pages and individualised leader boards. Du Plessis (2015) further states that some of the online well-being enhancing activities include online workshops on wellness, grit and time management - all of which aim to address factors that influence students’ academic performance (and subsequently the probability of them being successful).

The impact of the BeWell programme has been positive on both mentor and mentee. Data indicate that the more engaged the mentees are, the better they performed academically. Mentees who attended five or more wellness card sessions reported a weighted average of 62.02% for the first semester, whilst those who attended eight or more wellness card sessions, attained a weighted average of 63.14% for the same semester. For mentees that only attended one or more mentoring sessions, but none of the wellness card sessions, a weighted average of 57.92% were recorded (du Plessis, 2015, p. 18).

In the following section the teaching and learning approaches that students engage in are briefly discussed.



### 2.2.3.3 Teaching and learning approaches

Student learning and development are positively related to engagement, as students who spend more time on academic-related activities learn more about their field of study. Additionally, with universities using activities and teaching methods aimed at enhancing students' learning experience through practice, the more likely it is that they will become skilled in writing, analysing, and/or problem solving (Carini, Kuh & Kleint, 2006). This view is supported by Hallinger and Lu (2013) in that students tend to be more motivated to engage when they are presented with a challenging task and asked to come up with a solution. The use of problem-based learning, case teaching and simulation can therefore be effective methods to increase student engagement. Morgan (2014) notes that it is vital for institutions to realise that diversity in the classroom is important as different students learn differently. Lecturers should cater for this diversity in the learning experience offered and address the diverse characteristics, needs and attitudes of all the students in the classroom (Farr-Wharton et al., 2018).

De Frondeville (2009) proposes the ideal class situation to be one where lecturers create an environment that not only encourages learning, but makes it difficult for students not to participate. The following ten steps were identified as being conducive to create a positive learning environment: start class with a mind warm-up; use movement to get students focused; teach collaboration; use writing for reflection; be strict regarding instructions; be fair to keep students thinking; direct a question to all students; use minimal supervision tasks and add purposeful activities; use various teaching styles; and create teamwork strategies that emphasise accountability.

Furthermore, the learning approach students adopt is related to their perception of the learning environment (Cope & Staehr, 2006). Implementing a deep-learning approach (where students develop a real understanding of the content) is associated with perceptions of good teaching, independence in learning, clear goals, and timely feedback that provide opportunities for learning. On the other hand, surface-learning approaches where students learn isolated pieces of the content for regurgitation in assessment situations, are associated with the perceptions of a too high workload and assessments that mainly require memorising the study material. HEIs should thus develop a learning environment that is conducive to students adopting a deep-learning approach, as deep

learning enhances students' performance and motivation to perform academically (Scouller, 1998).

#### **2.2.3.4 First year experience**

HEIs offer a variety of first year experience programmes that could include pre-university programmes, ongoing orientation and first year seminars (Kuh et al. 2007). First year seminars are usually offered as structured or co-curricular programmes that bring first year students together in small groups with the aim to assist students' transition to HE and engage in academic activities. Participants usually include academic staff and senior students. Loots, Kinzie and Oosthuysen (2017) state that the first year experience should include a focus on critical inquiry, writing and collaborative learning and develop students' practical and intellectual competencies.

#### **2.2.3.5 Academic support**

HEIs employ a number of methods, interventions and institutional structures to support students toward academic success. Academic support aims to assist students to adapt to programme challenges and acquire the necessary skills for academic success (McKay, 2016). One such programme employed / developed by HEIs in the RSA is the EDP offering (Akoojee & Nkomo, 2007).

The principle purpose of extended programmes is to provide educationally underprepared students with the opportunity to build a solid academic foundation they will need to be successful in a field of their choice (Jaffer & Garraway, 2016). However, within the South African context, underprepared is also regarded as disadvantaged and due to the history of Apartheid in the RSA, disadvantaged usually refers to Black, Indian and Coloured people (Chetty, 2014). Chetty (2014) cautions that the term disadvantaged and the extended programme in itself may cause further racial differences and possibly racial stigmatisation, rather than providing the underprepared students with fair and equal opportunities to be successful at tertiary level.

Goldie (2013) explains that the development of support programmes at South African universities' academic support programmes followed three phases. In the early 1980s, the support was mostly dedicated to the perceived needs of predominantly Black students

enrolling at historically white universities. In 1990 and onwards, the number of Black students in HEIs increased and the nature of support programmes turned more toward the development of courses and teaching methodologies to address the needs of the students. Institutional development, phase three, emerged around 2000 and was driven by demands put on tertiary institutions in the RSA. Thus, student support programmes have undergone several theoretical and ideological shifts due to changes in purpose and function. As a result, the focus shifted to efficiency rather than equity (Engelbrecht et al., 2014; Goldie, 2013). Put differently, the focus within EDPs are on at-risk students - regardless of race as under preparedness is not limited to a specific group, but crosses the boundaries of gender and race (Pike & Saupe, 2002).

All 23 tertiary institutions in the RSA offer student support programmes which can be categorised into three types, namely: a) foundation b) augmented or c) extended programmes. Foundation programmes are typically a one-year curriculum of preparatory and academic literacy modules. After successful completion, students enter into the mainstream programme offering. In the augmented model, first year modules are spread over two years, with additional support offered to students in the form of extra tutorials and/or practical sessions. The EDP is a more recent model designed to address some of the limitations of the foundation and augmentation models (Engelbrecht et al., 2014). In extended programmes, foundation modules run concurrently with modules from the first academic year of the mainstream programme, but are spread over two years. The extra time available is used for skills development and academic support.

As student success is a comprehensive concept, and numerous indicators are used to measure student success (e.g. student persistence, student dropout, graduation and throughput rates) (Mentz, 2012), it is complex to determine whether a programme is successful. The EMS Faculty at UWC investigated the success of a module specific component of their EDP, by comparing the pass rate of mainstream (2008 intake) and EDP (2007 intake) students for the compulsory module in Introduction to Accounting (ACM112) (Arendse, 2009, p. 27). The success rate was defined as scoring a grade high enough to pass the module. The EDP students were registered for an Accounting foundation module, Introduction to Accounting (ACC121), in their first year of study. After the successful completion of ACC121, students were then registered for ACM112 offered

in the mainstream programme. In 2008, 269 students registered for ACM112, of which 176 were from the mainstream programme and 93 from the EDP. The pass rate for the mainstream students was 61%; 32% failed and 7% did not qualify for the final examination. For the EDP students, however, the pass rate was significantly higher, with 99% having passed; only 1% failed and all students qualified to write the final examination. The difference in the pass rates indicates that the attendance of the foundation module increased student success (pass rate) in the mainstream module.

Another method of assessing the success of EDPs is to investigate the graduate rate of students in the EDP versus the mainstream programme. From 1992 to 2005, the BSc four-year EDP offered at the University of the Witwatersrand (WITS) showed a graduation rate of slightly below 50%, outperforming the BSc three-year mainstream programme that reported a graduation rate of 42% for the same period (Engelbrecht et al., 2014, p. 290). Furthermore, for the period 1996 to 2002, the University of Kwazulu-Natal (UKZN) reported that 63% of students in the academic support programme were on course for graduation, which compared favourably with mainstream students at 65% (Engelbrecht et al., 2014, p. 290). It can thus be argued that in these two cases, the EDP graduation rates compare favourably to that of mainstream programmes.

In the EMS Faculty, SU, the EDPs have shown positive results with increased student success. This is evident as in 2007 only 25% of students graduated within six years, while in 2012 this number increased significantly to 67% (R. du Preez, personal communication, 20 August 2018). Similar results were reported by Goldie (2013) who investigated the influence of enrolment in a foundation mathematics course (in the Faculty of Natural Science EDP at SU) on the students' success in the mainstream mathematics module in the following year. The findings confirm that the students' success rates were significantly higher in the second-year module (first year for mainstream students) when compared to the mainstream students that did not participate in the foundation modules. Extra support during the first year was regarded as beneficial to students in their second year of study. However, low throughput rates amongst the EDP students remained, questioning the sustainability of the improvement in the academic achievement of the students in later years of study. These findings point to the fact that student success is complex and that it is influenced by numerous factors. This view is supported by The Human Sciences

Research Council's Student Pathways report (Arendse, 2009) that recognises the influence of other factors that may lead to student drop-out, for example a lack of financial resources as well as social and academic challenges.

In response to the above mentioned findings SU developed an institution-wide approach that extends the first year experience and orientation beyond that of the first couple of weeks in the semester (Young, 2016). All students in the EMS Faculty are supported in the first year by means of the module mentor programme and a support officer who serves all students in the faculty. The module mentorship programme is a support opportunity in the form of informal, small group peer learning sessions. Trained senior students with both mentor and tutor responsibilities lead these sessions.

Furthermore, EDP students who do not show satisfactory progress during early assessment and midyear examinations, are compelled to attend additional tutorials and/or mentor programmes arranged by academic departments. Du Preez (2015) states that the module mentor programme offered by the EMS Faculty has been a successful initiative. Module mentors (senior students with grades above 65%) undergo a four-hour training session on basic mentoring skills, after which they are paired with approximately ten mentees. Mentees are able to apply electronically to be mentored for a module in which they need support. Du Preez, Steenkamp and Baard (2013) investigated the perceptions of 2012 participants (both mentors and mentees) regarding their motivation to participate, and the success of the module-mentorship programme. Respondents indicated that they perceived and experienced the programme as beneficial to the mentors and mentees. Benefits included academic and socio-psychological support as well as social, cognitive and personal growth. A limited number of module mentors also reported financial benefits from participating in the programme (the module mentors receive a small remuneration per hour).

As students advance through the academic pipeline, indications are that the need for support shifts with senior student support more focused on services related to language and writing skills, academic advice and career development. At SU, these support services are offered through academic development departments, who play a key role in the support of all students. Young (2016) advocates that HEIs should identify support structures in existing facilities on campus, particularly for senior students (for example

academic development and support; academic advice on post graduate studies; preparation for entering the world of work). These support services correspond with the needs of final year students reported by Padgett and Kilgo (2012) and are inclusive of skills such as critical thinking, communication, research, problem-solving and professional development.

#### **2.2.4 Mediating conditions**

With student engagement influenced by pre-university experiences, student behaviours and institutional conditions, Kuh et al. (2007) further identifies mediation conditions (namely remediation and financial aid and policies) that students need to navigate successfully in order to continue with their education and be engaging students. These conditions will be briefly discussed in the subsequent paragraphs.

**Remediation:** According to Kuh et al. (2007), remediation modules assist students to improve their performance, even though their grades might be lower than other students who do not require remediation. Since the implementation of NBTs, institutions have made use of the test results to measure the level of mathematical, quantitative and academic literacy of students before entering university (Lewin & Mawoyo, 2014). By using the results, areas can be identified where student skills levels are not on par with what is required for tertiary education, and thus remedial support can be offered. For example, the University of the Free State (UFS) Faculty of Natural and Agricultural Sciences registers students that score below 65% in the language NBT for an additional language module. Furthermore, students that score below 50% in the NBT Mathematics, have to attend compulsory mathematics tutorials (Undergraduate Rule Book, 2017, p. 15).

**Financial aid and policies:** Lack of finances is one of the main reasons for students dropping out of higher education, emphasising the need to support students in need, especially from low SES backgrounds (Cosser, 2010). Most established universities offer students support systems to assist in meeting their personal and academic needs (Dhillon, 2005); however, students are still facing difficulties in securing bursaries and loans to finance their education (Ntakana, 2011). The Department of Higher Education (DHE) set up the National Student Financial Aid Scheme (NSFAS) in 1999 with the goal of providing financial assistance to poor students (Lewin & Mawoyo, 2014; McMillan, 2015). In the first

ten years of the fund, 659 000 students benefited (Lewin & Mawoyo, 2014, p. 43). The NSFAS works in collaboration with the financial aid offices of the 23 public universities in the RSA to identify students who are most in need. However, NSFAS are currently facing a number of administrative challenges which will be discussed later in this chapter.

**Work off campus:** With the rising cost of tuition and other educational-related expenses, the number of students enrolled at tertiary institutions with unmet financial need has increased significantly over the last couple of years. Recently, students taking up part-time employment while studying for a full-time degree have been the subject of discussion (Gbadamosi, Evans & Obalola, 2016) as the number of students that take up employment to fund their studies increases (Hui Xiong, 2009).

According to Heller (2004), working while studying towards a tertiary qualification may limit the number of classes a student can enrol in and limits the time students have for attending classes and studying, prohibiting students from being fully engaged (Hui Xiong, 2009). However, if the hours worked per week are limited (part-time employment), working while studying can have a positive effect on full-time enrolment as it can lead to better integration with the environment on campus, enhanced self-esteem and persistence (Astin, 1975; Gbadamosi et al., 2016; Hui Xiong, 2009). With work experience becoming increasingly important in the development of skills required by employers, students may not only use part-time employment for financial reasons but to differentiate themselves from their peers in the job market. As a result, part-time employment is not only taken up by students with low or no financial support, but also by students who want to gain experience in the workforce (Gbadamosi et al., 2016).

The attention of the literature review now turns to the central construct in Kuh's depiction, namely student engagement.

### **2.2.5 A positive-psychology view on student engagement**

The depiction of Kuh et al. (2007) illustrates the complexity of student engagement, with elements of student engagement starting even before the student enters university. The work of Seligman and Csikszentmihalyi (Ouweneel, Le Blanc, Schaufeli & Van Wijhe, 2012) pulls from the existing body of knowledge of positive psychology when defining engagement. The more positive approach is regarded as part of an emerging trend toward

positive psychology, which instead of focusing on weaknesses and failure, focuses on optimal functioning and human strengths. Thus, for the purpose of this study, the positive psychology approach is supported.

Within a work context, Schaufeli, Martínez, Pinto, Salanova and Bakker (2002) define engagement as a positive, fulfilling, and work-related state of mind within the person. Thus, engagement refers to a persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behaviour. Engagement is seen as an active measure of well-being characterised by vigour, dedication and absorption.

The framework of the Job Demands-Resources model has been used to study engagement at work, with the aim of optimising staff performance. One of the assumptions of the model is that there are two categories of risk factors and work-related aspects associated with work, namely job resources and job demands. Job resources are defined as psychological, social, physical or organisational features of work that assist in the achievement of work goals, decrease job demand effects and improve individual development and learning. Whilst, job demands are the psychological, social, physical or organisational aspects of a job that need continuous effort from a person. Cilliers, Mostert and Nel (2018) argues that students' studies can be considered as their work (including both demands and resources), as whilst studying students are involved in structured and organised activities such as studying for tests and examinations, attending classes and doing assignments. These activities are all directed toward a goal of achieving academic success.

Schaufeli et al.'s (2002) approach to engagement includes the willingness and ability of individuals to invest fully in their work (and in the case of students, their studies), thus taking a within-person approach instead of focusing on external factors that impact on an individual becoming engaged. It can be argued that the three subscales of work engagement as depicted by Schaufeli et al. (2002), namely vigour, dedication and absorption relate to the engagement experience of students. Thus, for the purposes of this study, the conceptualisation of Schaufeli et al. (2002), on (work) engagement will be used as point of departure when investigating engagement of students.



Vigour is characterised by high levels of strength, energy, power and mental resilience while busy with work or study related activities. It also includes a person's willingness and ability to invest effort in their work. Dedication is characterised by a sense of enthusiasm, significance, inspiration, pride, and challenge. Dedication further includes being fully involved in work or study related tasks, the ability not to get tired easily, as well as devotion, sacrifice and persevering in the face of difficulty. The last subscale of engagement, absorption, is characterised by pleasant conditions in the job or task, whereby time passes quickly and a person feels carried away by their work. For a person to be fully absorbed in their work, they must go beyond merely feeling effective, but reach a state of optimal experience. Their experiences, also known as flow, is characterised by a clear mind and body, focused attention, effortless concentration, complete control, loss of self-consciousness, distortion of time, and intrinsic enjoyment. However, flow refers to particular experiences rather than a pervasive and persistent state of mind (Ariani, 2015; Cilliers et al., 2018; Schaufeli et al., 2002).

In a recent student study, Stoliker and Lafreniere (2015) investigated the relationship between student engagement, loneliness and academic stress amongst 150 undergraduate students at a Canadian university. Results indicated that students experiencing high levels of loneliness, also experience a decline in academic performance and increased levels of stress. This result could point to the interaction between perceived stressors and student engagement. This will be discussed further in the following section(s).

## **2.3 Student Stressors**

Students are faced with various challenges as they make the transition from the school environment into higher education. According to Bitsika, Sharpley and Rubenstein (2010), these challenges include forming new relationships, changing existing relationships, increased responsibility, and developing alternative study methods, all while attempting to function as independent young adults. Furthermore, changes in residence, life circumstances, exposure to university environment (first examination, completing assignments, and meeting other students), difficulty with studying, tension, depression and/or anxiety were identified as stressors (i.e. factors contributing to high levels of stress)

students experience (Bitsika et al., 2010; Crandall, Preisler & Aussprung, 1992; Louw & Edwards, 2003; Morton, Mergler & Boman, 2014; Rodgers & Tennison, 2009).

Lazarus (as cited in Brannon & Feist, 2010) defines stress as an interaction between the environmental stimulus and the individual, whereas Frese and Zapf (1999) define stress as the process where an individual perceives difficult or challenging demands (stressors), assesses the demands and reacts to them. Thus, the individual's perception of the situation (stressors) is an important variable that influences the personal experience of stress. This view of Frese and Zapf (1999) is based on the stimulus-response approach and makes a distinction between two specific elements of stress: firstly, stressors themselves, which are situational stimuli that require an adaptive response from the individual and, secondly, the response of the individual on the stimuli (Perrewe & Ganster, 2011). Thus, the experience of stressors cause an imbalance in the individual's physical and psychological well-being that requires action in order to restore the balance (Ansari, Khalil & Stock, 2014).

Messarra (2005) argues that people have a built-in resistance to stressful events that can impact on the experience of stress, with some individuals able to deal with a stressful situation better than others. According to Louw and Edwards (2003), the levels of stress experienced by individuals are determined by their capability to accommodate the stressors. They posit that the intensity at which stress is experienced is mostly dependent on three factors, namely external support and resources available, the individuals' stress tolerance, and the individual's perception of the stressful event. Noteworthy is that most definitions of stress emphasise the role of the individual's perception of the stressor, with this individualised perception of the event being regarded as the single most important factor in the experience of a stressor (Messarra, 2005; Smith, 2012).

In the following section, stressors that could hinder student engagement are discussed in more detail.

### **2.3.1 Perceived stressors and student engagement**

Engaging in university activities is an effective way to increase student success and is also recognised as a method of reducing the stressors that students experience (Krumrei-Mancuso, Newton, Kim & Wilcox, 2013). According to Kirschbaum, Flipp and Hellhammer

(1995), being active in student and academic communities and taking part in social activities may serve as a buffer to experiencing stressors. Students with high levels of stress tend to be less motivated to take part in academic activities, thus leading to lower levels of student engagement and subsequently lower success rates (Krumrei-Mancuso et al., 2013).

Chow and Flynn (2016) developed the Student Stressors and Emotional Distress Scale (SSEDS). This scale not only identifies stressors, but also alludes to the influences that stressors have on students. Long-term stress was identified as leading to poor health (psychological and physical), which in turn leads to poor academic performance. These findings add to the recognition of the need to understand and reduce the stressors students experience.

Petersen et al. (2009) included perceived stress as a variable in their investigation on the effects of psychosocial variables on the adjustment to university and academic performance of disadvantaged students in the RSA. The findings indicate that perceived stress has a significant negative effect on a student's adjustment to university. Furthermore, adjustment to university is significantly positively related to academic performance, with well-adjusted students achieving higher grades. The results further point to the importance of students engaging in academic-related behaviour, but emphasise that engagement must be of intrinsic importance to the student (Petersen et al., 2009).

The different sources of stress that could possibly impact on student engagement will be discussed in the following section.

### **2.3.2 Sources of stressors**

Stress is caused by a number of sources, ranging from world events to daily hassles (Brannon & Feist, 2010; Chen, 2015). This section will explore factors which contribute to high levels of stress by utilising the model of Lazarus and Cohen (Brannon & Feist, 2010; Evans & Cohen, 1987). This model categorises the factors into three clusters, namely cataclysmic events, life events, and daily hassles.

**Cataclysmic events:** Cataclysmic events refer to a single life event that occurs suddenly and requires the affected population or group to adapt to this powerful event. There is no way to predict these events, which mainly include natural disasters (e.g. typhoons, hurricanes, fires and earthquakes) that cause the death of a large number of people, leading to stress, fear and grief for those who survived (Brannon & Feist, 2010; Evans & Cohen, 1987).

**Life events:** There are numerous life events that require the individual to adjust or change. Some events may be seen as positive, such as getting a promotion or getting married, but others are experienced as negative, such as going through a separation or losing a job. Life events are part of one's lifecycle, and thus all individuals will experience these stressors to some extent at some or other time (Brannon & Feist, 2010; Evans & Cohen, 1987).

**Daily hassles:** Daily hassles form part of individuals' daily lives and may cause frustration or tension, for example work issues and interpersonal problems. These hassles are more common than life events, and the stress caused may have psychological and physical effects (Brannon & Feist, 2010; Evans & Cohen, 1987).

Given the different sources of stress and the important role of individual perception thereof, more emphasis is placed on the identification of stressors that students in particular experience during their studies. Therefore, the following section will focus on student stressors.

### **2.3.3 Sources of student stressors**

The field of developmental psychology regards people in the age group of 18 to 24 years to be emerging adults. It is during this period that one is expected to develop the skills to be self-sufficient. For those who are fortunate enough to be a student during this stage, it is seen as a highlight in their lives, a time for growth on a personal and intellectual level and a time to explore their new-found freedom. However, this period is also regarded as one of the most stressful (Chow & Flynn, 2016).

Taylor and Owusu-Banahene (2010) state that stress among Ghanaian university first year students is considerable due to the demands associated with change. Data was

gathered from 300 business students regarding their experience of stressors. When enrolling in university students leave the well-known environment of their family home and have to adjust to the increased HE academic demands. Daily stressors included workload related to the volume of work covered and required reading as well as limited time for other academic tasks. Furthermore, 73.3% of students reported changes in sleeping habits and 69.6% in eating habits. The desire to perform academically (63.7%) and financial demands (63.3%) were also identified as stressors (Taylor & Owusu-Banahene, 2010, p. 114).

According to Krumrei-Mancuso et al. (2013), the experience of stress is a barrier to student success, as the experience and compounding influence of stressors can cause students to drop out of the programme prior to completing a qualification.

Goff (2009) proposed a model (Figure 2.2) of student stress based on the work of Hans Selye and the Transactional Model of Lazarus and Folkman. Goff's (2009) model focuses on the interaction between an individual and the external environment and suggests that stress is caused by an imbalance between resources and demands. This imbalance is experienced when the pressure students experience exceed their perceived ability to cope in that situation. The model categorises stressors experienced by students into academic and/or personal stressors that in turn are influenced by external factors (Dabney, 1998; Goff, 2009; Smith, 2012).

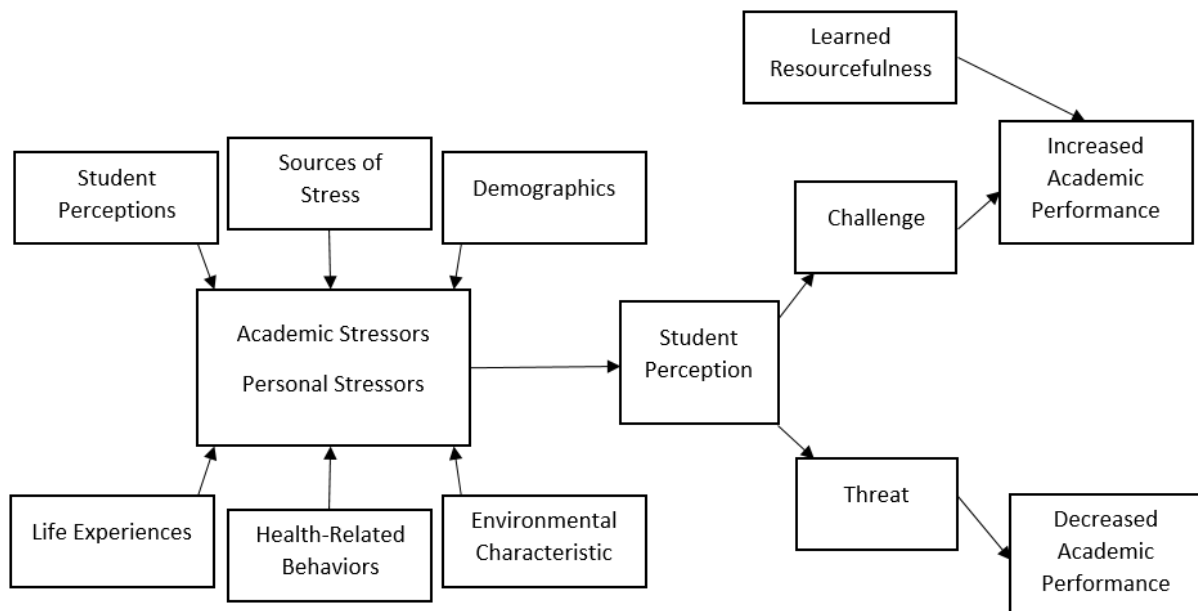


Figure 2.2 Model of stressors, academic performance, and learned resourcefulness (Goff, 2009, p. 23).

In the following section, the attention turns to the model of Goff (2009) and the different factors that contribute to the experience of stressors, namely external factors, academic stressors and personal stressors as the model could contribute to the understanding of stressors and the impact thereof on academic performance.

### 2.3.3.1 External factors

The experience of stressors is influenced by a number of external factors, including the student's perception (thus individual differences in the perception of stressors), sources of stress, demographics, life experiences, environmental characteristics and health-related behaviour (Goff, 2009).

**Students' perception of stressors:** As previously discussed, a major factor in the experience of stressors is the individual's perception thereof (Ansari et al., 2014; Messarra, 2005). Research has shown that a student's perception of stressors significantly affects his/her satisfaction and persistence related to academic commitment, and even to a career (Hurst, Baranik & Daniel, 2012). According to Zajacova, Lynch and Espenshade (2005), when a stressor is perceived as threatening, students are likely to be less motivated and satisfied, thus decreasing their persistence, leading to poor academic performance and ultimately dropping out of university. However, when a stressor is

perceived as being challenging, the student's motivation is likely to increase. The increased motivation holds a number of advantages for the student as it improves decision-making, self-confidence, coping style, and behaviour relating to good health, all of which lead to an improvement in academic performance (Goff, 2009).

Ivancevich and Matteson (1993) attribute the different responses to stressors to individual differences and the psychological processes at play in the adaptive response to any outside situations, actions or events that may place extreme physical and/or psychological stressors on an individual. In other words, stress is caused by the individual's reaction to the stressor and not necessarily the stressor itself, and individual differences impact differently on the experience of stress. Brannon and Feist (2010) proposed a model that posits that individuals experience stress and stressors differently and that appraisal, vulnerability and coping differences influence perception of stress. This model is based on the Transactional Theory of Lazarus and Folkman that conceptualised the experience of stressors as the result of a negative interaction between the person and the environment (Brannon & Feist, 2010). This interaction must be perceived as demanding (or as exceeding available resources), that results in a negative outcome and impact on the individual's functioning (Brannon & Feist, 2010; Greer, Rieke & Baylor, 2015). Thus, when students are confronted with situations in which they feel they do not have adequate resources to cope in the situation, the students will experience stress.

*Appraisal:* As mentioned earlier, the experience of stress is dependent on the individual's perception/appraisal of the event (Dabney, 1998; Messarra, 2005; Perrewe & Ganster, 2011). Lazarus (as cited in Brannon & Feist, 2010) argues that the perception is related to feelings of vulnerability and threat within the situation. Consequently, when confronted with a stressful situation, an individual goes through three stages of appraisal in order to assess a situation, namely primary appraisal, secondary appraisal and reappraisal (Brannon & Feist, 2010).

When initially confronted with a situation, the situation is assessed with regard to the effect it will have on someone's well-being (primary appraisal). The event can either be seen as irrelevant, positive or stressful. Irrelevant will imply that the situation does not have an effect, while positive appraisal will mean a favourable effect on the person's well-being. When a situation is regarded as harmful, challenging or even threatening, it would be

appraised as stressful. Lazarus (as cited in Brannon & Feist, 2010) defines harm as damage that has already occurred to someone and may result in sadness, disgust, anger or disappointment. A situation is regarded as challenging when the stressor is perceived/experienced, but the individual feels confident that he/she will be able to overcome the demands. This state may provoke feelings of excitement or anticipation, while a threat (the anticipation of harm to be done) may provoke fear, feelings of worry and anxiety. According to Gildea, Schneider and Shebilske (2007) the different perceptions of challenges and threats contribute to individual differences in performance. Stressors that are perceived as a challenge, could lead to better performance, whilst stressors that is perceived as a threat will tend to lower performance.

Secondary appraisal is defined as an individual's impression of their own ability to cope with a situation (or even to control it) as well the appraisal of a situation as one where the individuals feel that they can actively do something to influence the (favourable) outcome thereof and reduce the level of stress. However, appraisal is an ongoing process; thus, an individual can go through reappraisal, resulting in increased or reduced stress based on newly introduced information and the appraisal thereof (Brannon & Feist, 2010).

*Vulnerability:* A person is more likely to experience stress when they feel vulnerable, that is when an individual does not have adequate resources in a situation that is of importance to them. The resources may be of social or physical nature, however, the importance thereof is determined by psychological factors (the evaluation and perception of a situation) (Brannon & Feist, 2010). Thus, the lack of social and/or physical support is not the only factor contributing to feelings of vulnerability. The circumstances should also be of importance to the person (Brannon & Feist, 2010). Brannon and Feist (2010) argue that there is a difference between feeling vulnerable and threatened, where vulnerability represents the potential for threat. Put differently, individuals will feel threatened when they perceive their self-esteem to be in danger, but when someone feels they are lacking in resources and that it is creating a potential harmful situation, they are vulnerable.

*Coping:* The ability to cope with a stressful situation is significant in the perception of stress. Coping is defined as "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Brannon & Feist, 2010, p. 105). From this



definition the following features of coping could therefore be derived, namely: coping is a process that changes as the efforts that are put in are evaluated as successful or unsuccessful; coping is not an automatic response; effort is required in order to cope; and these efforts are an attempt to manage a situation.

Dabney (1998) identified the need to enhance students' coping abilities in order to reduce the stressors they experience. When confronted with a demand or stressful situation that is out of the control of the student, the ability to cope should reduce the perceived stressors. Furthermore, research findings indicate that there are a number of personal resources that have an effect on an individual's ability to cope with a stressful situation (Chow & Flynn, 2016; Greer et al., 2015). Firstly, healthy individuals have the ability to manage demands (internal and external) better than those who are sick and frail (Brannon & Feist, 2010). Secondly, having a positive belief contributes to coping behaviour as the belief in the attainment of a desired outcome contributes to an individual's coping abilities. Lastly, positive belief could impact on effective problem-solving skills. Having belief in your problem-solving skills therefore enhances the ability to be successful during a stressful situation.

**Demographics:** Demographics impact on the perception of both personal and academic stressors. Goff (2009) identifies gender, age, and race as demographic variables that impact on levels of stressors experienced by students. He also cites age as a predictor of academic performance. This notion is supported by Prymachuk, Easton and Littlewood (2008) who indicate that older students tend to perform better academically as they have higher levels of commitment and motivation to succeed due to previous life experiences.

**Environmental characteristics:** According to Kudlacek (1996), characteristics in the environment, for example class size, can increase the demands put on students, thus contributing to the experience of stressors. Goff (2009) divided environmental characteristics into two groups of variables, namely institutional and classroom variables. Institutional variables include the size of the university, level of student integration and the resources students have at their disposal. Classroom variables include the duration of the semester, student participation, lecturer-student ratio and teaching style used by the lecturer. For example, a student in a university environment where the lecturer-student

ratio is high, resources are limited or the learning environment is less optimal, could perceive higher levels of stress (Ross, Niebling & Heckert, 1999).

**Health-related behaviours:** A balanced lifestyle (emotional, physical and social) is an important part of managing stress (Louw & Edwards, 2003) and, according to Gupchup (as cited in Goff, 2009), the behaviours of a person can either be promoting health or increase health-risk, both of which affect perceived stressors. When students partake in behaviours such as unsafe sexual activities, increased drinking, smoking or eating (regarded as unhealthy behaviours), perceived stressors increase (Goff, 2009).

**Life experiences:** Life experience plays a major role in the experience of stressors, especially for students. According to Vincent (2014), students draw from previous life experiences when entering university. Thus, being previously exposed to having a high workload and busy schedule will assist students in adapting to university life. More so, being a first-generation student is regarded as a major contributing factor to the experience of stress (due to a lack of exposure to higher education). First-generation students also do not have the same type of family support (neither parent went to university) as non-first-generation students, are less prepared for university and may have false expectations of what to expect when entering university (Messarra, 2005).

From the preceding discussion the following hypotheses can be stated:

Hypothesis 2: Perceived student stress is negatively related to student engagement.

Hypothesis 3: Students within the EDP experience a variety of stressors.

### **2.3.3.2 Academic stressors**

For the purposes of this study, academic stressors are defined as situations that contribute to the experience of stress in the university environment, and relate to the academic expectation and structure of the university (Smit, 2012).

For numerous students, arriving at university is a liberating and exciting experience as HEIs are well resourced, offer freedom and feel somewhat safe. However, many students are confronted with difficulties relating to academic and linguistic challenges, which include students not being prepared for the demands of higher education (Pym & Kapp,

2013). Additionally, Fouché (2017) stated that factors causing increased academic stress and negatively affecting student performance are long working hours, students not getting enough sleep and insufficient breaks.

Murphy and Archer (1996) investigated the prevalence of stressors students experienced between 1985 and 1993. The stress patterns were identified to be similar when data from the different years were compared, with most of the stress being related to grades, examinations, constraints on free time and long study hours, with the exception of 1993, when the number of stressors increased. In 1993, there were changes in the academic climate, with bigger class sizes and a redesign in the curriculum. The redesign led to increased pressure on formal assessments by means of tests and examinations, as the number of assignments decreased.

Research done by Pillay and Bundhoo (2011, p. 418) reported that academic stressors are the most prevalent among 327 undergraduate students at a university in Mauritius. Participants were asked to indicate whether they experienced academic stressors as 'stressful' to 'not stressful' over the past three months. The results identified fear of failing (86.4%), academic work being too demanding (83.5%) and failing a test or examination (74.3%) as the biggest sources of stress. However, students tend to experience different sources of stress as they progress through their studies (Heier, 2012; Madhyastha, Latha & Kamath, 2014; Pedersen & Jodin, 2016, Morton et al., 2014). First year students are faced with a new environment to which they must adapt (Morton et al., 2014) without the instrumental support from their families and the structure provided by secondary schools (Pedersen & Jodin, 2016). The challenges first year students are faced with include forming new relationships (interacting with fellow first year students and senior students), changing existing relationships, increased responsibility, greater workload (tests, examination and assignments) and developing other ways to study, all while trying to function as independent young adults (Bitsika et al., 2010; Ntakana, 2011). Rayle and Chung (2008) regard the first year of studying as the most stressful year, with academic stress being especially prevalent. This is supported by Pedersen and Jodin (2016) who indicate that the persistence and magnitude of course expectations are regarded as some of the main stressors in students' first year of study.

During the second year of study, students tend to experience higher levels of satisfaction as they achieve a sense of belonging and start to master the environment (Heier, 2012). According to Schreiner (2010), some second-year students experience low levels of academic engagement because they might not be on track in making satisfactory academic progress. Abuse of alcohol and other forms of drugs may contribute to this situation. Research conducted by Du Preez, Pentz and Lategan (2016) amongst university students in the RSA indicate that students expect an element of tension relief from drinking (as an outcome expectancy) as they experience high levels of stress when studying at a university. Thus, the primary reason for students drinking may not be to relieve stress *per se*, but because they expect an element of stress relief from consuming alcohol.

As final year students need to prepare for life after graduation, their academic stressors go beyond the university environment. They experience pressure to complete the programme and need to make career decisions regarding whether to start working or the possibility of further studies with a post-graduate qualification (Madhyastha et al., 2014; Pedersen & Jodin, 2016). From the preceding discussion the following hypothesis can be stated:

Hypothesis 4: The perceived academic stressors is positively related to perceived student stress.

### 2.3.3.3 Personal stressors

Personal stressors are defined as stressors that are unique to each student, depending on their circumstances. Each student must adapt to student life and changes in lifestyle; however, some are not able to cope with these demands, which in turn leads to an increase in perceived stressors (Goff, 2009). Financial stressors and social and family relationships are amongst these perceived stressors.

**Financial stressors:** The rise in tuition fees and the cost of living are major concerns for large numbers of students. The RSA has seen a hike in the cost of tertiary education over the last three decades, with 2015 showing an annual price increase of 9.2%, more than double that of headline inflation for the same year (4.4%) (Calitz & Fourie, 2016, p. 3).

The main reason for the price increase is the lack of government funding, the largest source of university revenue. The annual funding that the South African government provides per enrolled full-time student decreased between 2000 and 2010 by 1.1%, while the student fees per FTE (full-time equivalent) student increased annually by 2.5% for the same period (Council on Higher Education, 2016, p. 8).

With interest rates rising in the RSA, it is becoming increasingly difficult to secure a study loan. Many students do not have access to adequate funding (parents, loans or bursaries) – a major contributor to financial stressors (Jordaan, 2013). Eisenberg, Gollust, Golberstein and Heftier (2007) indicate that students who do not have a sense of financial stability are more prone to experiencing symptoms of anxiety and depression which in turn are linked to high levels of stress (Kudlacek, 1996). A growing number of students (mostly first-generation) are supported financially by the community they come from. These students experience heightened pressure to be successful, as many have the ideal and vision to uplift their communities and family after graduation (Pym & Kapp, 2013).

Students without financial support often need to take on part-time jobs while studying in order to pay class fees and other living expenses. Working while studying increases the stressors experienced as these students now have to fulfil multiple roles and may find it difficult to create balance in their lives (Pedersen & Jodin, 2016). Fairchild (2003) argues that the multiple roles can form a web of constraints and increase role demands (and associated stressors) as students have less time to spend on academic-related activities.

The #FeesMustFall campaign is a movement that started at the WITS and quickly spread to other South African HEIs during October 2015. The campaign was a platform where students voiced their opposition to the high cost of tertiary education and promises not kept by government. The movement voiced a number of demands (ranging from transformation to financial support and zero fee increases). Student leaders from the majority of HEIs in the RSA mobilised protest action on various campuses that ultimately brought a number of universities to a standstill (academic and administrative activities) in 2015 and 2016 (Karodia et al., 2016). However, the protesting activities were not only limited to HEI campuses. Students also gathered outside the Parliament demanding answers from the South African Minister of Higher Education, which in turn escalated into a riot and the arrest of a number of protestors (Karodia et al., 2016). Additionally, these

protests had a significant impact on the academic calendar, as students were unable to attend classes and write formal assessments, which resulted in the development of alternative strategies to complete the 2016 academic year. Consequently, the majority of institutions announced that there will be no formal contact sessions for the remainder of the academic year and that lectures will be made available electronically to students (with some exceptions) (Gqirana, 2016; Tau, 2016).

The Minister of Higher Education consulted with universities and other stakeholders and negotiated a cap of 8% on the fee increase. However, with a demand for 0% increase for both the 2015/2016 and 2016/2017 academic years, the cap was rejected by the protesting students. They indicated that they will only accept a 0% increase (Karodia et al., 2016), which was later announced by the former president, Jacob Zuma (Calitz & Fourie, 2016).

Calitz and Fourie (2016, p. 6) investigated whether the students' claims of high university tuition fees were justified by analysing the tuition fees at SU for a BA degree over the previous couple of years. The results indicated an increase of 30% in tuition fees from 2006 to 2015. Moreover, the costs of attending an HEI requires 44% of an average adult's income, which is unfeasible for a large part of the South African population without any additional form of financial support (study loans or bursaries). However, in December of 2017, the former president, Jacob Zuma, announced that in 2018 first year students from families with an income of less than R350000 per year would be provided with free HE (Muller, 2018). As a result, the #FeesMustFall campaign can be seen as a symptomatic part of the financial stress experienced by the current student generation, more specifically the first-generation students.

Irrespective of funding mechanisms such as NSFAS, the financial support available is insufficient to provide in all the students' needs. Even if students are academically strong, they may not necessarily receive funding. In 2016 the Minister of Higher Education and Training announced that the budget of NSFAS would increase from R9.5 billion in 2015 to R10 billion for the 2016/2017 financial year (Matsolo et al., 2018, p. 66). Further challenges include insufficient communication on student funding and the availability of bursaries. As a result, students in need did not apply. In some cases, students did not receive communication regarding the success of their applications in time. This resulted

in students being unable to take advantage of the funding as well as insufficient time to apply for alternative funding (McKay, Naidoo & Simpson, 2018).

Recently, NSFAS experienced complications with non-payment of loans. South African Unions of Students (SAUS) discussed this as some students have been evicted from their residences due to the delay in NSFAS payments (Herman & Gerber, 2017). Furthermore, the 2019 application was put on hold due to the backlog of 2018 applications. As a result, the Minister of Higher Education, Naledi Pandor raised her concerns on the lack of progress in processing applications and approved payments for students that qualify (Seale, 2018). From the preceding discussion regarding financial stressors, the following hypothesis can be stated:

Hypothesis 5: The perceived financial stressors is positively related to perceived student stress.

**Social relationships:** When students enter university, they are confronted with new relationships and in their attempt to navigate through higher education, they may need to interact (for the first time) with people of other races, cultural groups and students who speak foreign languages (Ntakana, 2011; Strydom & Foxcroft, 2017). In this new environment, many students deal with feelings of loneliness and isolation (Pym & Kapp, 2013). Dunkel-Schetter and Lobel (as cited in Dabney, 1998, p. 26) report similar findings among University of California students who reported a variety of relationship stressors with the following being highlighted: difficulties forming new friendships (27%) , feeling lonely at times (14%) and rarely socialising with their class members (22%). More evident was that as much as half of the participants (50%) did not feel that they belonged to any social group at university (which in turn could influence the relationship between relationship stressors and stress).

**Family relationships:** Even though family is a major source of support during all life stages (Louw & Edwards, 2003), Dabney (1998) reports that students indicate family relationships as being a source of stress as they are regularly in conflict with their parents and have trouble getting along with them. However, irrespective of these conflicts, respondents still view their families as being supportive (Dabney, 1998, p. 43). Furthermore, perceived social support could impact on the relationship between different

perceived stressors and perceived student stress where support may serve as buffer for the experiences of stress.

By following a systematic literature review methodology, Hurst et al. (2012, p. 280) identified sources of students stress. Family relationships were prevalent in 38% of the studies included in this systematic review with the main stressor identified as students leaving their family behind when attending a tertiary institution. However, family can also be an added stressor if they expect academic excellence and do not leave room for possible failure. This tension is particularly true for first-generation students, as for some, they are not only the first of their family to attend university, but also in the community. As mentioned previously, many first-generation students come from poor rural areas and townships and they have high ideals to, after graduation, contribute to the (financial) well-being of their families and communities (Pym & Kapp, 2013). Furthermore, the experience of different stressors (academic, financial and relationship) could impact on the relationship between perceived social support and student engagement. Regardless of the social support student experience, the experience of stressors can influence levels of student engagement.

From the preceding discussion regarding relationship stressors, the following hypotheses can be stated:

Hypothesis 6: The perceived relationship stressors is positively related to perceived student stress.

Hypothesis 7: The prevalence of the three categories of stressors differs over years of study.

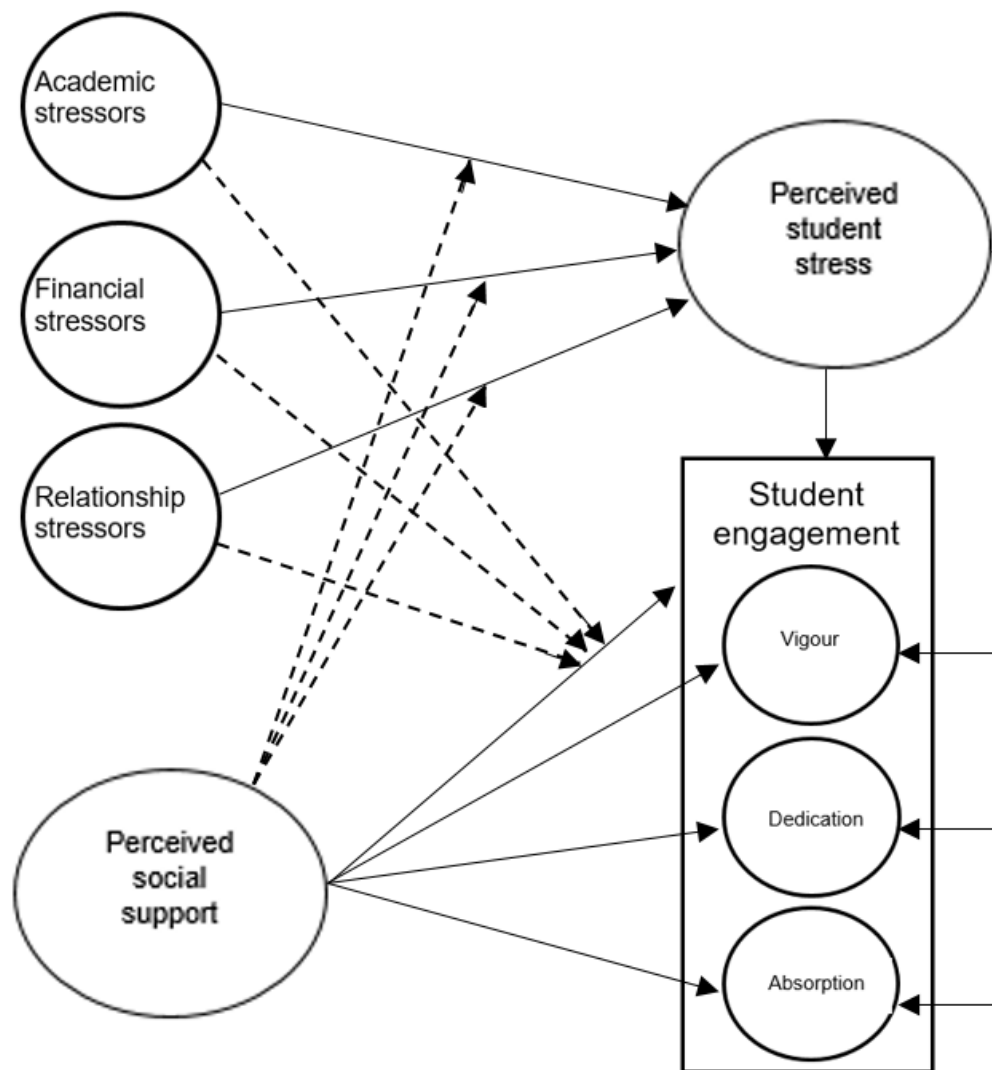
## **2.4 A Conceptual Model of the Relationship between Perceived Stressors, Perceived Student Stress, Perceived Social Support and Student Engagement**

The foregoing sections provided the theoretical framework of the relationship between perceived stressors, perceived student stress, perceived social support and student engagement. It was posited that the perceived stressors experienced by students can



vary over years of study and impact on their ability to participate in student engagement behaviours, such as vigour, dedication and absorption.

Furthermore, literature supports the hypotheses that perceived stressors (specifically academic, financial and relationship stressors) correlate with the experience of perceived student stress. Perceived social support can increase student engagement and decrease perceived levels of stress. A conceptual model representative of the various relationships is proposed in Figure 2.3.



Note. ----- Mediating effect

Figure 2.3 Conceptual model for perceived stressors, perceived student stress, perceived social support and student engagement.

## **2.5 Summary: Chapter 2**

It is evident from the literature review that student experiences of stressors may be a contributing factor to the low(er) levels of student engagement and subsequently low(er) levels of student success. EDP students are particularly at risk due to lower levels of preparedness, student background characteristics, pre-university factors, student behaviours and institutional conditions that may impact on student engagement. Sources of student stress and student stressors were highlighted together with the variation evident over years of study and the appropriate student-support initiatives needed. In Chapter 3 the research methodology that guided the study will be discussed.

## CHAPTER 3: RESEARCH METHODOLOGY

### 3.1 Introduction

Chapter two reviewed the theoretical background of student engagement and perceived student stressors. Literature was presented to provide a framework for the current study. Furthermore, the methodology that was applied throughout the research process in order to obtain answers to the research initiating question is described. The broad aims, objectives and hypotheses of the study are revisited. This is followed by an explanation of the research design, research methodology, target population, sample, instruments, proposed analysis and ethical considerations of the study.

### 3.2 Objectives and Hypotheses revisited

The aims and objectives of the study were outlined in the first chapter. However, the principle objectives and stated hypotheses of this quantitative non-experimental study are revisited here for ease of reference. The objectives that guided this research study were to:

1. Describe the demographic profile of the EMS EDP student cohort.
2. Determine the levels of student engagement.
3. Investigate perceived stressors that EDP students experience.
4. Determine the levels of the perceived stressors.
5. Determine the levels of perceived student stress experienced by the EDP student cohort.
6. Determine the levels of perceived social support.
7. Determine if students experience different types of stressors as prevalent in different years of study and which of these dominate in different study years.
8. Determine the relationship between perceived social support and student engagement.

9. Determine the relationship between the different types of perceived stressors and perceived student stress.
10. Determine the relationship between perceived student stress and student engagement.
11. Determine the mediation effect of perceived social support in the relationship between the different types of perceived stressors and perceived student stress.
12. Determine the mediation effect of the different types of perceived stressors in the relationship between perceived social support and the different types of student engagement
13. Formulate recommendations for EMS Faculty specific student support programmes.

Seven hypotheses were formulated from the literature (see Chapter 2) in order to address the research initiating question and the subsequent objectives. They are restated here.

Hypothesis 1: Perceived social support is positively related to student engagement.

Hypothesis 2: Perceived student stress is negatively related to student engagement.

Hypothesis 3: Students within the EDP experience a variety of stressors.

Hypothesis 4: The perceived academic stressors is positively related to perceived student stress.

Hypothesis 5: The perceived financial stressors is positively related to perceived student stress.

Hypothesis 6: The perceived relationship stressors is positively related to perceived student stress.

Hypothesis 7: The prevalence of the three categories of stressors differs over years of study.

The following mediating effects were also investigated:

Perceived social support mediates the relationship between stressors and perceived student stress.

Prevalence of stressors mediates the relationship between perceived social support and student engagement.

### **3.3 Research Design**

A research design can be seen as the plan that will be followed in the execution of a proposed research study (Babbie & Mouton, 2002). Research that is quantitative in nature is a form of decisive research involving large samples (representative of the population) and data collection procedures that are comparatively structured (Struwig & Stead, 2007). Garwood (2006) defines quantitative research as research conducted involving the collection of numerical data (counts of incidents, scores, ratings, or scales) that are then analysed using mathematically based methods to explain a phenomenon.

Quantitative research can either be experimental or non-experimental. In experimental research, the researcher exposes the subjects to an intervention in order to measure the effects thereof. The measures can be done before and/or after the intervention and in some designs (pre-test/post-test control group design, post-test only control group design and factorial design) a control group that is not exposed to the intervention is used (Bless & Higson-Smith, 2000).

In a non-experimental research design, there are no planned interventions and no random assignment of subjects to groups. The design can further be a correlational design or criterion group design. A correlational design allows the researcher to use a single group of subjects that is measured on at least two variables at about the same time, after which the relationships between the variables are analysed. A criterion-group design makes use of a randomly drawn sample from the population, representing the different levels of the independent variable, with the intention of investigating whether the groups differ in terms of the dependent variable. Such a design can either be cross-sectional (criterion group typically comprised of different age groups) or longitudinal (changes due to passing of time) (Bless & Higson-Smith, 2000).

For the purposes of this study, a quantitative non-experimental research design was followed and data was gathered from a sample of respondents by means of a survey questionnaire.

### **3.4 Population and Sampling**

The suitability of a sampling method is important in the overall quality of the research (Cohen, Manion & Morrison, 2007). There are a number of factors that prevent researchers from gathering data from the entire population, such as limited time, funding and accessibility. Thus, the data gathered must be from a sample of the population so that it is representative of the entire population. When making sampling decisions, the following factors must be considered (Cohen et al., 2007): sample size, representativeness of the sample, access to the sample and the sampling strategy.

The sample of the current research was limited to the EDP group of students enrolled in the EMS Faculty at SU. Convenience and purposeful sampling were used as the research was dependent on the willingness of the population group to participate (Freedman 2004). At the time of the study, a total of 164 students were registered in the EMS Faculty for the BCom (Management Sciences) EDP programme. First years (n=39), non-final year students (n=58) and final year students (n=67) made up the EDP student cohort at the time of the study (n=164). This is the only programme in the faculty offered in an extended degree format. Out of the population of 164, the majority is White (88), followed by Coloured (48), Black (27) and Indian (1) students. The population was split relatively even in terms of gender with 49% female and 51% male students (R. Robbertze, personal communication, 30 August, 2018).

### **3.5 Procedures for Gathering Data from Students**

The research procedure commenced by seeking institutional clearance (for gathering data from students) and ethical approval from SU. After obtaining approval, an email inviting the participants to take part in the study was sent to their student email address. The Survey Checkbox platform, with the link to the survey, was employed. If a participant volunteered to participate in the study, written consent was sought and obtained through an informed consent form (refer to Appendix A).

Participation in the study was deemed relatively risk-free. However, reflecting on stressors experienced in the participants' daily life has the potential of causing some discomfort. If students should experience high levels of stress while participating in the research, they were requested to contact the Unit for Psychotherapeutic and Support Services at SU (the contact details were provided) for assistance. Furthermore, participants were given the option to withdraw at any point with no negative consequence to them.

Those who consented to participate could complete the web based questionnaire, which consisted of five sections (discussed in the next section). It was estimated that the questionnaire would take 15 to 20 minutes to complete.

Unfortunately, a very low participation rate (approximately 16 completed responses after two weeks) was evident from the start. To increase participation, an EDP lecturer was contacted with the request to motivate the students to open the link to the survey and to decide if they will participate (many students do not open email sent to their student email address). However, this strategy of lecturer motivation, could only be followed for first year students as they are the only group that follow modules that are for EDP students enrolment only. To further encourage students to participate, a SunLearn group of all the EDP students were created to communicate with this group via the SunLearn platform (the learning management system/platform used by SU). Again, the total EDP student cohort over all the years of study was invited to participate in the study by posting an invitation to all the group members via the announcement function of SunLearn. These efforts to increase the response rate resulted in 64 complete responses, a response rate of 39%. The responses were automatically captured on Survey Checkbox once submitted. The individual results were kept confidential and were only used for the purposes of analysis.

### **3.6 Measurement Instruments**

In this section, the measurement instruments that were employed in this study are considered and the rationale behind the selection of the each to gather the data is discussed. The questionnaire included five sections, namely biographical information, student engagement, perceived stressors, perceived student stress questionnaire and perceived social support questionnaire.

### 3.6.1 Biographical questionnaire

A biographical questionnaire was administered to collect personal information, including age, gender, race, year of study (first, non-final and final) and first-generation status. This data will assist to describe the sample and serve to provide insight into the experience of stressors by students in different years of study.

### 3.6.2 Student engagement

The Beginning University Survey of Student Engagement (BUSSE) and Utrecht Work Engagement Scale for Students (UWES-S) were considered for the research to measure the levels of student engagement of the participants. BUSSE is a self-report survey administered during the first weeks of the academic year and includes three subscales, namely *high school engagement*, *expected university engagement* and *actual university engagement* consisting out of a total of 72 items (excluding biographical items). Each of the subscales are measured on different scales. High school engagement is measured on a five-point Likert scale where respondents indicate how much time they spent preparing for class. Expected university engagement uses a 4-point scale measuring expected class participation and actual university engagement is measured on an eight-point scale regarding their expected preparation time. Mentz (2012, p. 146) reported the BUSSE to be a reliable instrument with reliability of  $\alpha = .67$  (high school engagement),  $\alpha = .75$  (expected university engagement) and  $\alpha = .68$  (actual university engagement). Even though the BUSSE was previously administered among South African student populations, this instrument was not selected for the current study given that it was developed for first time HE entering students. The scope of this study includes students in advanced years of study.

The UWES-S is the student version of the Utrecht Work Engagement Scale. This scale supports a more narrow view of student engagement and focus on motivation and feelings of mental engagement students have in their studies. It requires students to indicate on a 7-point Likert scale (0 being never and 6 every day) how often they experience a set of feelings, behaviours or beliefs. The UWES-S measures three subscales, namely vigour (6 items), absorption (6 items) and dedication (5 items). All items are scored positively, thus high scores indicate high levels of engagement (Schaugeli et al., 2002). The sum of



all the items can be used to calculate a total score for Engagement (Stoliker & Lafreniere, 2015). In previous studies on university students, all three subscales have shown acceptable psychometric properties, with Cronbach's alpha of  $\alpha = .82$  for vigour, absorption  $\alpha = .84$  and dedication  $\alpha = .86$  (Cadime, Lima, Pinto & Ribeiro, 2016, p. 260). Furthermore, previous research indicated that the engagement measurement (as a combination of the three subscales) is reliable with Cronbach's alpha of .79 (Stoliker & Lafreniere, 2015, p. 154).

For the purposes of this study, the UWES-S was used to measure student engagement. It shows acceptable psychometric properties and measures the three subscales supported by the positive-psychology view on student engagement (Schaufeli et al, 2002).

### **3.6.3 Perceived stressors**

For the purposes of this study, a number of scales were considered to measure perceived stressors. In the following paragraphs, three scales, namely the Stress Scale of Messarra, the University Stress Scale (USS) and the Student Stress Scale (SSS) are discussed in brief, with a motivation selecting the SSS for this study.

Messarra (2005) developed a perceived stressors questionnaire aimed at identifying perceived stressors of students at the University of Leicester. The questionnaire identifies individual exposure to stressors and requires participants to indicate the extent to which the stressors have been experienced since the start of the semester. A 4-point Likert scale (0 = not a problem, 1 = slight problem, 2 = clear problem, and 3 = major problem) is used. This instrument includes four factors: factor 1 relates to *developmental challenges* (11 items); factor 2 relates to *time pressure* (6 items); factor 3 relates to *social problems* (13 items); and factor 4 relates to *assorted annoyances* (5 items). The instrument showed acceptable reliability with a Cronbach's alpha score of  $\alpha = .85$ ; however, the different subscales showed lower reliability scores: *developmental challenges* ( $\alpha = .68$ ), *time pressure* ( $\alpha = .65$ ), *social problems* ( $\alpha = .71$ ) and *assorted annoyances* ( $\alpha = .61$ ) (Messarra, 2005, p. 62).

The University Stress Scale (USS) is a 21-item screening questionnaire developed to provide a measure of stressors university students experience. The scale allows for the respondents' interpretation of, and thus subjective experience of the stressor stimulus and

measures the broad categories of stressors rather than specific events. The students' cognitive appraisal of the stressor is also included. The USS requests students to rate, on a 4-point Likert scale, the degree to which each category of stressors have caused them stress in the previous month. The six categories of stressors are *academic*, *relationships*, *equity*, *parenting*, *practical*, and *health*. The scale not only includes stressors that may be experienced by most students, but also those experienced by minority groups (e.g. international students or students who are parents). Stallman and Hurst (2016, p. 129) investigated the psychometric properties of the scale for Australian university students ( $n = 2596$ ). The scale showed satisfactory reliability with a Cronbach's alpha score of  $\alpha = .83$ . However, the different individual factors showed only fair reliability scores: *academic* ( $\alpha = .62$ ), *equity* ( $\alpha = .63$ ), *parenting* ( $\alpha = .69$ ), *relationships* ( $\alpha = .73$ ), *practical* ( $\alpha = .64$ ), and *health* ( $\alpha = .60$ ).

The last measurement instrument considered was the Student Stressor Scale (SSS). The SSS was developed to measure the level of stress likely to be experienced by students. It consists of three subscales with two items measuring *academic stressors*, four items measuring *financial stressors* and 11 items measuring *relationship stressors*. All items are rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) and respondents are required to indicate to what degree they agree or disagree with the statements. The scores on each subscale are added up and divided by the number of items to calculate means ranging from 1 to 5, with higher scores indicative of higher stress levels.

The internal consistency of the three subscales were reported as  $\alpha = .54$  (*academic stressors*),  $\alpha = .84$  (*relationship stressors*) and  $\alpha = .86$  (*financial stressors*) by Moore, Thomas, Kale, Spence, Zlatevska, Staiger, Graffam, and Kyrios (2012, p. 228). Given the low internal consistency for the academic stressors subscale, Moore et al. (2012) conducted further analysis and two poor items were removed from the initial scale to improve the reliability properties of the subscale. Thus, for the purposes of this study, the SSS with the two items removed was used to measure stressors experienced by students as previous applications provided some evidence of acceptable internal consistency. The factorial structure of the scale also supports the types of stressors that this study intended to measure, given the theoretical underpinnings evident from the literature review.

### 3.6.4 Perceived student stress

The Stress Overload Scale (SOS) and Perceived Stress Scale (PSS) were considered for this research to measure the levels of perceived stress of the participants.

The Stress Overload Scale (SOS) is a self-report instrument designed to measure levels of stress. According to Amirkhan (2012), the SOS is the first wholly empirical development stress measurement and is believed to represent an improvement over existing stress scales. Amirkhan argues that: firstly, the scale is conceptually derived from constructs shared by stress theories; secondly, psychometrically it offers both reliability and superior validity and practicality as it places a small burden on respondents; and thirdly, the instrument is appropriate for use on diverse population groups. The SOS contains 30 items, with two subscales, namely *personal vulnerability* and *event load*. Respondents are requested to rate each statement on a Likert type scale ranging from 1 (not at all) to 5 (a lot) based on their experiences of the previous week. Prior research indicates that the SOS shows acceptable psychometric properties, with an internal consistency of .95 for the SOS and for the subscales *personal vulnerability* and *event load* .93 and .92 respectively (Amirkhan, 2012, p. 64).

The Perceived Stress Scale (PSS) measures the extent to which individuals perceive their life to be stressful over the last month (Tawanda, Ricks & Baylor, 2015). Respondents are asked to rate 14 items using a 5-point Likert-scale ranging from 0 (never) to 4 (very often). Some items are reversed scored. The total score on the PSS can range from 0 to 56 with higher scores indicative of higher levels of perceived stress. Tawanda et al. (2015, p. 574) report acceptable reliability findings for the PSS, with Cronbach alpha scores of .84, .85, and .86 across three different samples of university students.

For the purposes and context of the current study, the PSS was deemed the most appropriate measure of stress amongst a student population. According to previous research (Surujlal, Van Zyl & Nolan, 2013; Tawanda et al., 2015) the PSS provides a reliable measure of the experience of stress amongst student populations. It also provides context on the more recent stress experienced by the student (during the last month).

### 3.6.5 Perceived social support

To measure perceived social support, the South African Survey of Student Engagement (SASSE), the short version of the Perceived Social Support Questionnaire (F-SozU K-14) and the Job Demands-Resources Scale (JDRS) were considered for use in this study.

The SASSE is the South African version of the National Survey of Student Engagement (NSSE) developed in the USA. The SASSE includes five areas of student engagement, namely: level of academic challenge, active and collaborative learning, student-staff interaction, enriching educational experiences, and supportive campus environment. SASSE also provides information on aspects regarding students' engagement in activities such as writing, reading and other educational-related behaviours (e.g. class preparation and asking questions in class). According to Strydom and Mentz (2010), other information that SASSE provides includes students' use of time, personal growth and opinions on satisfaction with the institution. Previous research indicates a Cronbach's alpha score of .81 for the *university activity* dimension (22 items represent activities inside and outside the classroom that students engage in). The *reading, writing and educational programme* dimension measures the five mental activities of Bloom's taxonomy and showed a reliability score of  $\alpha = .75$ . The other three dimensions of *student time usage* ( $\alpha = .82$ ), *personal growth* ( $\alpha = .86$ ) and *student opinions and satisfaction* ( $\alpha = .75$ ) also showed acceptable psychometric properties (Strydom, Kuh & Mentz, 2009, p. 271). The SASSE is under copyright and thus cannot be administered by a third party. Consequently it could not be considered for this study given the constraints of time and not being able to upload the questionnaire onto the Survey Checkbox platform that was used to gather data among SU students.

The Job Demands-Resources Scale (JDRS) was developed by Jackson and Rothmann (2005) to measure the specific job demands and resources experienced in a variety of occupational settings. The scale consists of 40 items. Respondents are requested to rate each item, according to how often they experience a particular event, on a 4-point Likert scale ranging from 1 (never) to 4 (always). The JDRS includes seven subscales, *namely organisational support, growth opportunities, overload, job insecurity, relationship with colleagues, control, and rewards*. Previous research shows acceptable psychometric properties when used within South African populations (Rothmann, Mostert & Strydom,

2006), for example, Jackson and Rothmann (2005, p. 116) reported Cronbach's alpha scores ranging from .71 to .90 on all seven dimensions.

The Perceived Social Support Questionnaire (F-SozU K-14) measures general social support in all German-speaking populations. It is the shortened version of the F-SozU S-54. Participants are required to rate statements regarding perceived social support on a 4-point Likert scale ranging from 1 (not true) to 4 (exactly true). This shortened version consists of 14 items and three dimensions, which combine to give a total score for general perceived social support. The three dimensions are emotional support, instrumental support, and social integration. Kliem et al. (2015) caution that the total score of the F-SozU K-14, should be used rather than a dimensional interpretation, as the shortened version focuses on general perceived social support. Previous research indicates acceptable psychometric properties for the F-SozU K-14 ( $\alpha = .94$ ) (Kliem et al., 2015 p. 552). For the purposes of the current study, the shortened version (F-SozU K-14) was used to measure perceived social support as it was not developed for a specific setting and could be used amongst student populations.

### **3.7 Data Analysis**

This section provides an overview of how the quantitative data were managed and analysed. Descriptive statistics were used to describe the dataset. The statistical programme, Statistica (version 13), was used to analyse the data. The data analysis included descriptive and inferential statistics. Table 3.1 provides an overview of the various data analyses employed to address each of the research objectives.

Table 3.1

*Data analysis used for each research objective*

<b>Research objective</b>	<b>Data analysis</b>
1. Describe the demographic profile of the EMS EDP student cohort.	Descriptive statistics
2. Determine the levels of student engagement.	
3. Investigate perceived stressors that EDP students experience.	
4. Determine the levels of the perceived stressors.	
5. Determine the levels of perceived student stress experienced by the EDP student cohort.	
6. Determine the levels of perceived social support.	
7. Determine if students experience different types of stressors as prevalent in different years of study and which of these dominate in different study years.	ANOVA and Bonferroni Post Hoc analysis
8. Determine the relationship between perceived social support and student engagement.	Descriptive statistics, correlation and simple multiple regression analysis
9. Determine the relationship between the different types of perceived stressors and perceived student stress.	
10. Determine the relationship between perceived student stress and student engagement.	
11. Determine the mediation effect of perceived social support in the relationship between the different types of perceived stressors and perceived student stress.	Sobel Test
12. Determine the mediation effect of the different types of perceived stressors in the relationship between perceived social support and the different types of student engagement.	

The descriptive statistics and inferential statistics used in the research will be discussed in the following section.

### **3.7.1 Descriptive statistics**

Descriptive statistics refer to the organising, summarising and presenting of data in a direct and simple manner; thus, the researcher uses descriptive statistics to describe the data (Pallant, 2011; Stangor, 2011). Frequency distribution, measurement of central tendency and measures of variability were used to describe the dataset of the current study.

Measures of variability explore to what extent the scores for a variable are spread around the central point (Pallant, 2011; Stangor, 2011). The range of the scores is the difference between maximum and minimum, while the standard deviation provides an indicator of variability. The standard deviation is calculated as the square root of the variance and provides an indication of how much the individual scores vary from the mean (Pallant, 2011; Stangor, 2011).

### **3.7.2 Inferential statistics**

In order to determine the degrees of difference amongst the groups in the sample, inferential statistics were used. The one-way analysis of variance (ANOVA) was used to explore the differences between the means of more than two groups. The association between the biographical variables (year of study) and the independent variables was investigated by using the ANOVA to determine if any significant differences can be identified between the different years of study. With the ANOVA, an F-value is calculated and compared to a critical value. While the ANOVA can be used to indicate if statistically significant differences between groups exist, it does not determine in which of the three or more groups the significance exists (Field, 2009; Pallant, 2011; Stangor, 2011). To determine this, a Bonferroni Post Hoc analysis was done, thus indicating between which groups the differences occur (Pallant, 2011).

The correlation coefficients were also determined in an attempt to measure the association of a single independent variable with the dependent variable. The correlation coefficient can be positive (indicating a direct relationship) or negative (indicating a

negative relationship), with a coefficient of 1 or -1 indicating that the scores form a perfect linear relationship. The smaller the value becomes, the more scattered the scores are and a 0 value indicates no relation between the variables (Pallant, 2011; Stangor, 2011). Pearson's product-moment correlation ( $r$ ) was used to calculate correlation coefficients as a measure of the strength of the linear associations between the different variables. It is the most commonly used method to describe the correlation between two variables (Hauke & Kossowski, 2011). In addition to correlation coefficient, standard multiple regression was used in an attempt to evaluate a number of independent variables separately in terms of its predictive power, over and above which is offered by all the other independent variables. Standard multiple regression is the most frequently used multiple regression analysis (Pallant, 2011).

### **3.8 Ethical Considerations**

Students can be considered as a vulnerable population group (Meintjes, 2015) and thus the main ethical considerations that were addressed are discussed below.

#### **3.8.1 Informed consent**

Informed consent indicates that participation in a study is voluntarily (Berg & Lune, 2012). For the current study, students were asked to volunteer to take part in the study and complete the questionnaires. Prior to the commencement of data collection all participants were informed that they are free to cease partaking at any point without any negative consequences. This was done by means of a consent form (see Appendix A). By signing this form they gave written consent to be included in the study.

#### **3.8.2 Confidentiality**

Confidentiality entails that the information shared by the participant will be dealt with the utmost care and not be shared with any unauthorised third party (Berg & Lune, 2012). For the current study, students completed the questionnaires anonymously online. At no time were participants asked to provide information that can be used to identify them.



### **3.9 Summary: Chapter 3**

This chapter provides a description of the methodological choices that were applied throughout the research process. In summary, a quantitative non-experimental research design was followed, including a cross-sectional survey questionnaire. Convenience and purposeful sampling were used to gather quantitative data from EDP students in the EMS Faculty at SU using a self-administered web-based survey. Instruments included in the survey comprised Utrecht Work Engagement Scale, Student Stress Scale, Perceived Stress Scale, and Perceived Social Support Questionnaire. Furthermore, statistical measures used and ethical considerations were discussed. In the next chapter, the results are presented and discussed.

## CHAPTER 4: RESULTS AND DISCUSSION

### 4.1 Introduction

The purpose of this chapter is to present and discuss the results obtained through the various analyses performed. The demographic profile of the sample is presented first followed by the reliability analysis and descriptive statistics. The proposed relationships between the variables under investigation are presented and discussed thereafter.

### 4.2 Demographic Profile of Sample

Descriptive statistics were calculated for the demographic data of the participants. Data on gender, age group, race, first-generation status and year of study were collected.

Of the seventy-one students that started the questionnaire on the SunSurvey platform, five declined to participate, and two who agreed to participate, completed only the first question. These respondents were excluded from further analysis. The sample thus consisted of 64 students, representative of a response rate of 39% (164 possible respondents in the EDP cohort). Of the 64 participants, 34 (53%) were female and 30 (47%) were male. The age groups of the sample indicate that most of the sample were 19 years old or younger ( $n = 31$ ; 48%), 23 (36%) participants were 20 to 21 years old and 10 participants (16%) were 22 to 23 years old.

The racial profile of the sample reflects 19 respondents (30%) in each of the Black and Coloured groups respectively. The White respondents were in the majority with 24 (38%). The remaining two participants did not indicate their race, of which one specifically stated that he/she preferred not to disclose his/her race. In comparison with the total EDP cohort ( $n = 164$ ) at the time of the study, the respondents do not reflect the racial composition of the total cohort (White (54%), Coloured (29%), Black (16%), Indian (1%)). In the sample, Black respondents are overrepresented and White respondents underrepresented in terms of racial distribution.

Participants were also asked to indicate whether they were first-generation or non-first-generation students, of which 42 (66%) indicated they were first-generation students and

21 (33%) indicated that they were non-first-generation students. This is representative of the total cohort as 57% are first-generation students and 39% non-first-generation students (for 4% of the cohort, the status is unknown). For the first-generation group (n = 42), 16 were Black, 14 Coloured and 11 White with one student preferring not to indicate his/her race. For the non-first-generation group (n = 21), most were White (13), followed by Coloured (5) and Black (5). This racial profile of the generational groups are consistent with the findings in previous studies (Smit & Boshoff, 2018; van der Merwe, 2011) indicating that in the RSA, first-generation status is still very much linked to race. The history of race and apartheid in the RSA remains a contributing factor.

Lastly, participants were asked to indicate their year of study. The majority of the sample, 31 (48%), indicated that they were in their first year of study, 20 (31%) were non-final year students, and 12 (19%) were final year students. This is not representative of the total EDP cohort at the time of the study where the majority were in their final year of study (41%), followed by non-final year (35%) and lastly, first year (24%). The admission decisions made by the EMS Faculty (for first year students in the 2017 EDP group) contributed largely to the small number of first years in the cohort. For the first time in 2017, the SES score of applicants, together with their Grade 11 examination marks were used to place students in the EDP (the SES score was not used previously). This decision resulted in a very small intake of first year students. The EMS Faculty is again increasing the EDP intake to approximately 120 students (still applying the SES and academic criteria).

### **4.3 Reliability Analysis and Descriptive Statistics**

The following sections provide the reliability analysis and descriptive statistics of the current study.

#### **4.3.1 Reliability of instruments**

Cronbach reliability measures are indicative of the internal consistency of the measuring instrument. The Cronbach's alpha provides a coefficient of inter-item correlations, which is the correlation of each item with the sum of all the other items (Cohen et al., 2007).

Reliability analysis was conducted to ensure the reliability and validity of the measurement instruments utilised in this study. Table 4.1 show the results.

*Table 4.1*

*Reliability of measurement instruments*

Variable	No. of items	Cronbach alpha ( $\alpha$ )
Engagement	14	.82
Engagement: vigour	5	.69
Engagement: dedication	5	.89
Engagement: absorption	4	.78
Perceived student stress	10	.87
Perceived social support	14	.90
Perceived academic stressor	2	.84
Perceived relationship stressor	11	.62
Perceived financial stressor	4	.86

Overall, the results of the reliability analyses were acceptable, with all but two of the subscales surpassing the benchmark of .70 for acceptable reliability (Pallant, 2011). Moreover, the subscales of engagement: dedication, perceived student stress, perceived social support, perceived academic stressor and perceived financial stressor measured well above .80, indicating strong evidence of reliability. The subscales of engagement: vigour and perceived relationship stressor were .69 and .62 respectively. Table 4.2 and Table 4.3 show the Cronbach alpha if items were to be removed from the subscale.

Table 4.2

*Reliability: Engagement – vigour subscale*

Engagement: vigour	Cronbach alpha ( $\alpha$ ) if deleted
Item 1: When I'm studying, I feel mentally strong.	.58
Item 2: I can continue for a very long time when I am studying.	.64
Item 3: When I study, I feel like I am bursting with energy.	.46
Item 4: When studying I feel strong and vigorous.	.49
Item 5: When I get up in the morning, I feel like going to class.	.78

If item 5 were removed from the engagement: vigour subscale, the reliability of the subscale would increase to .78. However, due to the close proximity of the subscale's alpha score to .70 ( $\alpha = .69$ ) and this study being basic exploratory research, all the items were retained for further analysis and interpreted with caution.

Table 4.3

*Reliability: Perceived stressors – relationship subscale*

Perceived relationship stressors	Cronbach alpha ( $\alpha$ ) if deleted
Item 1: I feel lonely.	.57
Item 2: I feel homesick.	.60
Item 3: I have problems with romantic relationships.	.61
Item 4: My family worries about my safety due to my race.	.56
Item 5: I am afraid of abuse/attack due to my race.	.55
Item 6: I experience racism and/or sexism.	.56
Item 7: I experience pressure from peers to do things I don't want to.	.57
Item 8: I have problems/conflict with others.	.56
Item 9: I have problems with family relationships.	.60
Item 10: I am being bullied at university.	.61
Item 11: I am being bullied outside of university.	.60

If removed, none of the items in the perceived relations stressors subscale would improve the reliability of the subscale. Previous research did find the subscales to be reliable (Moore et al., 2012) and McDermott and Sarvela (2000) suggested to retain the subscale

if it meets the minimum acceptable level of .60. All the items were retained and the findings interpreted with caution.

### 4.3.2 Levels of student engagement

Participants were asked to indicate how often they experienced certain feelings, beliefs or behaviours, ranging from 0 (never) to 6 (every day). The student engagement items can be categorised into three subscales, namely vigour, dedication and absorption. The mean scores and standard deviation of each of the subscales were calculated, and are depicted in Table 4.4.

Table 4.4

*Descriptive statistics – Student engagement subscales*

	Engagement: vigour			Engagement: dedication			Engagement: absorption		
	n	Mean	Standard Deviation	n	Mean	Standard Deviation	n	Mean	Standard Deviation
Total	62	3.92	0.81	60	4.87	1.04	63	4.44	1.25

The participants indicated moderate levels of engagement for all the subscales of student engagement, with dedication scoring the highest mean ( $M = 4.87$ ,  $SD = 1.04$ ), followed by absorption ( $M = 4.44$ ,  $SD = 1.25$ ) and vigour ( $M = 3.92$ ,  $SD = 0.81$ ) (scale is between 0 and 6).

The descriptive statistics of each item of student engagement are presented in Table 4.5.

Table 4.5

## Descriptive statistics – Student engagement items

Subscale	Student engagement items	Mean	Standard Deviation
Vigour	Item 1: When I'm studying, I feel mentally strong.	4.84	1.06
	Item 2: I can continue for a very long time when I am studying.	4.29	1.22
	Item 3: When I study, I feel like I am bursting with energy.	3.59	1.21
	Item 4: When studying I feel strong and vigorous.	3.69	1.17
	Item 5: When I get up in the morning, I feel like going to class.	3.68	1.60
Dedication	Item 6: I find my studies to be full of meaning and purpose.	4.92	1.36
	Item 7: My studies inspire me.	4.71	1.34
	Item 8: I am enthusiastic about my studies.	4.63	1.29
	Item 9: I am proud of my studies.	5.13	1.33
	Item 10: I find my studies challenging.	4.88	1.32
Absorption	Item 11: Time flies when I'm studying.	5.22	1.49
	Item 12: When I am studying, I forget everything else around me.	3.97	1.57
	Item 13: I feel happy when I am studying intensively.	4.29	1.84
	Item 14: I can get carried away with my studies.	4.29	1.55

When taking all the student engagement items into account, the behaviours and feelings that participants experienced the most, were indicative of absorption, namely *time flies when I'm studying* ( $M = 5.22$ ,  $SD = 1.49$ ) followed by dedication, with *I am proud of my studies* ( $M = 5.13$ ,  $SD = 1.33$ ) and *I find my studies to be full of meaning and purpose* ( $M = 4.92$ ,  $SD = 1.36$ ) reflecting the highest scores. The student engagement items with the lowest mean scores are in the vigour subscale namely, *when I study, I feel like I am bursting with energy* ( $M = 3.59$ ,  $SD = 1.21$ ), *when I get up in the morning, I feel like going to class* ( $M = 3.68$ ,  $SD = 1.60$ ) and *when studying I feel strong and vigorous* ( $M = 3.69$ ,  $SD = 1.17$ ).

The results indicate that the students in this sample are engaged and experience energy, power and mental resilience while studying. They are willing to invest effort in their studies and feel mentally strong while studying. Furthermore, students indicated that they are inspired by and feel proud of their studies which give them meaning and a sense of purpose. Lastly, the respondents' reported that time passes quickly while studying and

that they get carried away by their studies. Kuh et al., (2007) investigated student satisfaction and engagement and reported that students who view the environment as supportive tend to invest more time and energy into educationally purposeful activities.

### 4.3.3 Levels of perceived stressors

Participants were asked to indicate the degree to which they agree or disagree with certain statements (1 = strongly disagree and 5 = strongly agree). The statements measure three subscales of stressors namely; academic, relationship and financial stressors. The mean scores and standard deviation of the different subscales of perceived stressors were calculated and the results are illustrated in Table 4.6.

Table 4.6

*Descriptive statistics – Perceived stressors subscales*

	Perceived academic stressors			Perceived relationship stressors			Perceived financial stressors		
	n	Mean	Standard Deviation	n	Mean	Standard Deviation	n	Mean	Standard Deviation
Total	62	2.98	1.03	58	1.88	0.52	58	2.49	1.3

The participants indicated moderate levels of perceived academic stressors ( $M = 2.98$ ,  $SD = 1.03$ ) and perceived financial stressors ( $M = 2.49$ ,  $SD = 1.3$ ) (given that the scale is between 1 and 5). The results pertaining to the relationship subscale indicate that the sample experienced low levels of perceived relationship stressors ( $M = 1.88$ ,  $SD = 0.52$ ).

The descriptive statistics of the perceived stressors items are presented in Table 4.7.



Table 4.7

## Descriptive statistics – Perceived stressors items

Subscales	Perceived stressors items	Mean	Standard Deviation
Academic	Item 1: I feel that I am not progressing well enough with my studies.	3.08	1.17
	Item 2: I am having difficulty with my studies.	2.84	1.04
Relationship	Item 3: I feel lonely.	2.75	1.40
	Item 4: I feel homesick.	2.13	1.32
	Item 5: I have problems with romantic relationships.	2.33	1.40
	Item 6: My family worries about my safety due to my race.	2.02	1.27
	Item 7: I am afraid of abuse/attack due to my race.	2.25	1.45
	Item 8: I experience racism and/or sexism.	1.97	1.31
	Item 9: I experience pressure from peers to do things I don't want to do.	1.57	0.88
	Item 10: I have problems/conflict with others.	1.59	0.80
	Item 11: I have problems with family relationships.	1.83	1.22
	Item 12: I am being bullied at university.	1.10	0.44
	Item 13: I am being bullied outside of university.	1.07	0.31
Financial	Item 14: I do not have enough money to meet unexpected expenses.	3.23	1.61
	Item 15: I am under constant pressure to pay my regular bills.	2.38	1.53
	Item 16: I worry about paying my tuition fees.	2.38	1.64
	Item 17: I do not have enough money for suitable accommodation.	2.13	1.52

When taking all the stressors into account, the item with the highest mean was indicative of financial stressors, namely *I do not have enough money to meet unexpected expenses* ( $M = 3.23$ ,  $SD = 1.53$ ) (maximum score of 5). This is followed by items from the academic stressors subscale, namely *I feel that I am not progressing well enough with my studies* ( $M = 3.08$ ,  $SD = 1.17$ ) and *I am having difficulty with my studies* ( $M = 2.84$ ,  $SD = 1.04$ ). The stressor items with the lowest means are included in the relationship stressors subscale and refer to bullying at and outside of the university ( $M = 1.10$ ,  $SD = 0.44$  and  $M = 1.07$ ,  $SD = 0.31$  respectively) and peer pressure ( $M = 1.57$ ,  $SD = 0.88$ ).

From the results, it is evident that academic stressors were the most prevalent of all the stressors with the exception of the financial stressor *I do not have enough money to meet unexpected expenses*. Respondents indicated stronger opinions for items on the

academic stressors subscale. Students reported that they are not satisfied with their academic progress and that they are experiencing challenges within their studies. The findings support that of Pillay and Bundhoo (2011) who identified academic stressors among the main sources of stress for undergraduate students at a university in Mauritius (n = 327). They indicated the three highest sources of stressors as fear of failing, academic work being too demanding and failing a test or examination.

Furthermore, financial stressors experienced include respondents not having enough money for unexpected expenses and paying regular bills. Paying tuition fees is also reported as a source of stress. The findings support that of Taylor and Owusu-Banahene (2010) who investigated stress among business students at a Ghanaian university (n = 300). In their research, financial demand was reported by almost two-thirds (63.3%) of the respondents.

The respondents experienced relationship stressors to a lesser extent. Students reported that they feel lonely (item mean the only score above the mean of the scale). Furthermore, getting homesick, experiencing problems with romantic relationships and fear of abuse/attack due to race were indicated with mean scores just below the mean of the scale. Respondents also reported that they experience little peer pressure and bullying (both outside and within the university). Research by Dunkel-Schetter and Lobel (as cited in Dabney, 1998) supports some of these findings. They highlighted relationship stressors relating to difficulties forming new friendships (27%) and feelings of loneliness (14%).

The results discussed above provide some support for the hypothesis that students within the EDP experience a variety of stressors, namely academic, relationship and financial. Thus, hypothesis 3 is supported.

#### **4.3.4 Levels of perceived student stress**

Participants were asked to indicate how often in the past month they experienced certain thoughts or feelings, on a scale from 0 (never) to 4 (very often). The mean scores and standard deviation of the perceived student stress were calculated and the results are illustrated in Table 4.8.

Table 4.8

*Descriptive statistics - Perceived student stress scale*

	Perceived student stress		
	n	Mean	Standard Deviation
Total	60	2.47	0.77

Participants indicated that they experience moderate levels of perceived student stress ( $M = 2.47$ ,  $SD = 0.77$ ) (scale is between 0 and 4). The mean is slightly below the middle point of the scale (2.50) indicating that over the last month, the students experienced relatively low levels of stress.

The descriptive statistics of the perceived student stress items are presented in Table 4.9.

Table 4.9

*Descriptive statistics – Perceived student stress items*

Perceived student stress item	Mean	Standard Deviation
Item 1: In the last month, how often have you been upset because of something that happened unexpectedly?	3.38	1.22
Item 2: In the last month, how often have you felt that you were unable to control the important things in your life?	3.44	1.30
Item 3: In the last month, how often have you felt nervous and “stressed”?	3.95	0.97
Item 4: In the last month, how often have you felt confident about your ability to handle your personal problems? (reverse scored)	0.73	1.11
Item 5: In the last month, how often have you felt that things were going your way? (reverse scored)	1.08	0.99
Item 6: In the last month, how often have you found that you could not cope with all the things that you had to do?	3.10	1.15
Item 7: In the last month, how often have you been able to control irritations in your life? (reverse scored)	1.08	1.00
Item 8: In the last month, how often have you felt that you were on top of things? (reverse scored)	1.13	0.95
Item 9: In the last month, how often have you been angered because of things that were outside of your control?	3.52	1.24
Item 10: In the last month, how often have you felt difficulties were pulling up so high that you could not overcome them?	3.00	1.37

Respondent indicated that they have often felt nervous and stressed ( $M = 3.95$ ,  $SD = 0.97$ ); angered by things beyond their control ( $M = 3.52$ ,  $SD = 1.24$ ) as well as unable to control important things in their life ( $M = 3.44$ ,  $SD = 1.30$ ). The four reverse scored items (items 4, 5, 7 and 8) have the lowest mean scores. This indicates

that respondents did not feel that things were going their way ( $M = 1.08$ ,  $SD = 0.99$ ). They were unable to control irritating things ( $M = 1.08$ ,  $SD = 1.00$ ) and were not on top of things ( $M = 1.13$ ,  $SD = 0.95$ ). In addition, they did not feel confident in their ability to handle their problems ( $M = 0.73$ ,  $SD = 1.11$ ).

The moderate stress levels may be in part due to the class size of foundation and augmentation modules of EDP students. They are the only students who enrol for these modules, a factor which decreases numbers. In the current study, 39 students (of the sample population) were in their first year and 31 of them took part in the study. Consequently, almost half of the sample (48%) were enrolled in relatively small classes. Ross et al. (1999) report that students in a university environment with smaller class sizes (lecturer-student ratio) could perceive lower levels of stress. These modules and smaller class sizes could provide students with the support needed to deal with some of the demands put on them and thus lowering their experience of stress.

#### 4.3.5 Levels of perceived social support

Participants were asked to rate several statements on perceived social support on a 4-point scale, ranging from 1 = not true to 4 = exactly true. The mean scores and standard deviation of the perceived social support scale as well as for the individual items in the scale were calculated and the results are depicted in Table 4.10 and Table 4.11 respectively.

*Table 4.10*

*Descriptive statistics – Perceived social support scale*

	Perceived social support		
	n	Mean	Standard Deviation
Total	59	3.08	0.62

Overall, participants' perceptions were that they have high levels of perceived social support ( $M = 3.08$ ,  $SD = 0.62$ ), indicating that they thought the statements apply to their own lives with a maximum score of 4.

Table 4.11

*Descriptive statistics – Perceived social support items*

Perceived social support items	Mean	Standard Deviation
Item 1: I can easily find someone who can look after my home when I'm not there.	2.58	1.14
Item 2: There are people who accept me the way I am without reservations.	3.25	0.85
Item 3: I receive a lot of understanding and security from others.	2.97	0.84
Item 4: There is someone very close to me whose help I always count on.	3.16	1.02
Item 5: If I need to, I can borrow something from friends or neighbours without any problems.	3.13	1.02
Item 6: I have friends/relatives who will definitely take time to listen if I need someone to talk to.	3.31	0.90
Item 7: I know several people with whom I like to do things.	3.19	0.81
Item 8: I have friends/relatives who sometimes simply give me a hug.	2.97	1.08
Item 9: When I am sick, I can ask friends/relatives to handle important things for me without hesitation.	2.82	1.15
Item 10: If I'm very depressed, I know who I can turn to.	2.97	1.02
Item 11: There are people who share both joy and sorrow with me.	3.23	0.82
Item 12: I have some friends/relatives with whom I can be quite playful.	3.21	0.86
Item 13: There is someone close to me in whose presence I feel comfortable without any reservations.	3.16	0.92
Item 14: There is a group of people (friends, clique) that I belong to and whom I meet often.	2.93	0.98

None of the scores for the individual items are below the mean of the scale. This could be an indication of a positive perception of the truth (or applicability) of the statements regarding social support. The items with the highest mean scores were: *I have friends/relatives who will definitely take time to listen if I need someone to talk to* ( $M = 3.31$ ,  $SD = 0.90$ ), *There are people who accept me the way I am without reservations* ( $M = 3.25$ ,  $SD = 0.85$ ) and *There are people who share both joy and sorrow with me* ( $M = 3.23$ ,  $SD = 0.82$ ).

The results indicate that respondents perceived high levels of social support. They were accepted and felt comfortable in their current social circles. Respondents also indicated they have someone they can count on and with whom they like to spend time. Furthermore, they have friends or relatives to whom they can talk and who share their happiness and troubles. These findings are supported by Strydom and Foxcroft (2017) who reported moderate scores on SASSE items regarding peer assistance when experiencing

challenges and preparing for examinations in groups. Additionally, studying with peers can assist with mastering difficult material and building social networks at university (Strydom & Foxcroft, 2017).

#### 4.4 Inferential Statistics

Inferential statistics were used to test the proposed relationships among the different variables. Firstly, the relationship between perceived social support and student engagement, and perceived student stress and student engagement. Secondly, the relationships among the three different types of perceived stressors (academic, relationship and financial) and perceived student stress were also tested. Additionally, inferential statistics were used to determine if respondents' experience of stressors vary during different years of study. Guilford's guidelines (as cited in Tredoux & Durheim, 2002, p.184) for the interpretation of statistical significance were implemented to evaluate the strength of statistically significant relationships.

*Table 4.12*

*Guilford's strength of statistical significance*

Absolute value of r	Interpretation
< 0.19	Slight, almost no relationship
0.20 - 0.39	Low correlation, definite but small / weak relationship
0.40 - 0.69	Moderate correlation; substantial relationship
0.70 - 0.89	High correlation; strong relationship
0.90 - 1.00	Very high correlation; very dependable relationship

In the subsequent sections, the findings of the correlational analysis are presented and discussed.

##### 4.4.1 The relationship between perceived social support, perceived student stress and student engagement

In order to explore the relationship between perceived social support and student engagement, the following hypothesis was formulated:

Hypothesis 1: Perceived social support is positively related to student engagement.

With regard to the hypothesised relationship between perceived student stress and student engagement, the following hypothesis was formulated:

Hypothesis 2: Perceived student stress is negatively related to student engagement.

The results of the correlational analysis are depicted in Table 4.13.

Table 4.13

*Correlation between perceived social support, perceived student stress and student engagement*

Construct	Engagement	Engagement: vigour	Engagement: dedication	Engagement: absorption
Perceived social support	-0.23	-0.26*	-0.28*	-0.13
Perceived student stress	-0.11	-0.21	-0.13	-0.02

Note. \* $p \leq .05$

An investigation of Table 4.13 reveals no statistical significant relationship between student engagement and perceived social support ( $r = -0.23$ ,  $n = 55$ ,  $p = 0.08$ ). However, a small significant negative relationships exist between perceived social support and vigour ( $r = -0.26$ ,  $n = 58$ ,  $p = 0.05$ ) as well as perceived social support and dedication ( $r = -0.28$ ,  $n = 56$ ,  $p = 0.04$ ). The relationship between perceived social support and absorption is not significant ( $r = -0.13$ ,  $n = 59$ ,  $p = 0.34$ ). Furthermore, as is evident from Table 4.13, there is no statistical significant relationship between perceived student stress and student engagement ( $r = -0.11$ ,  $n = 55$ ,  $p = 0.42$ ) nor between perceived student stress and each of the three student engagement subscales: vigour ( $r = -0.21$ ,  $n = 59$ ,  $p = 0.11$ ), dedication ( $r = -0.13$ ,  $n = 57$ ,  $p = 0.35$ ) and absorption ( $r = -0.02$ ,  $n = 60$ ,  $p = 0.85$ ). This finding contradicts the literature and previous research on the relationship between perceived social support and student engagement as well as the relationship between perceived student stress and student engagement. This finding could also be a result of the measurement instrument that focus on a more narrow view of student engagement.

To investigate the variance in the dependant variable, student engagement, a multiple regression analysis was performed between perceived student stress, perceived social support and student engagement. Results are presented in Table 4.14. Preliminary

analyses were conducted to ensure no violation of the assumptions of multicollinearity. Tolerance was found to be acceptable

Table 4.14

*Multiple regression analysis – Perceived student stress, perceived social support and student engagement*

	$\beta^*$	Std Err of $\beta^*$	t(50)	p-value
Intercept			7.37	0.00
Perceived student stress	-.19	0.14	-1.34	0.19
Perceived social support	-.28*	0.14	-2.01	0.05

According to the results depicted in Table 4.14 the combined independent variables explain only 9% ( $R^2 = .09$ ) of the variance in student engagement. However, it was not significant ( $\beta = -.19$ ,  $p = 0.19$ ) for perceived student stress while perceived social support is significant ( $\beta = -.28$ ,  $p = 0.05$ ). Thus, for this sample, only 9% of the variance in student engagement can be attributed to the independent variables. The results indicate that there is a complex nomological network of variables at play when investigating Student Engagement which was not included in the current research.

These findings are in contrast to previous research findings. With social support regarded as anticipated support from available social networks, Roos (2004) states that an increase in social interaction will lead to an increase in student engagement as interaction among students can take many forms. According to Ntakana (2011) this may include taking part in mentor programmes or academic discussions outside of the class.

The majority of participants were first year students (48%), with 53% of the participants being 19 year of age or younger. Based on the SASSE data, Strydom and Foxcroft (2017) identified first year students as being less engaged in activities related to collaborative learning. Collaborative learning is considered as group work on projects, asking a peer for assistance when struggling with a subject, or preparing in a group for examinations. The lower student engagement could therefore be ascribed to first year students not having realised the value of collaborative learning (Strydom & Foxcroft, 2017) nor partaking in academic related activities where they could interact with peers. Consequently, the number of first year students in the sample could contribute to this result.



Furthermore, the majority of participants indicated that they are first-generation students (66%). Ntakana (2011) states that first-generation students may not receive the same support from their families as non-first-generation students due to these students' families not always having the educational capital to assist with the transition to tertiary education. As first-generation students are the first in their families to attend HE, they may feel added pressure to succeed as they consider themselves uplifting their families and community after graduating (Sader & Gabela, 2017; Vincent & Hlatshwayo, 2018). With the motivation of being successful at tertiary education, the students may be willing and able to invest in their studies (vigour) and become fully involved in study related tasks (dedication). In other words, even though students in this sample (mostly young and first-generation) may perceive low levels of support, their intrinsic motivation to be successful could inspire them to engage in behaviours indicative of vigour and dedication.

According to Goff's model (2009), students' perceptions of the stressor can lead to increased academic performance if perceived as a challenge. If the situation is perceived as a threat it leads to decreased academic performance. This is supported by McGhie (2014) who investigated how the 'will to learn' affected students' academic progress at a historically black HEI in the RSA. For academically successful students (passed all modules in a specific year), challenges held motivational value to succeed academically and provided the determination to overcome challenges.

The results of this study do not provide support for hypothesis 1.

There was no statistical significant relationship between perceived social support and the total scale of student engagement. Subsequently the mediating effect of the different types of perceived stressors (academic, relationship and financial) on the relationship between perceived social support and student engagement was not further investigated.

The results of this study did not support a relationship between perceived student stress and student engagement. Krumrei-Mancuso et al. (2013) identify student engagement as an effective way to reduce stress experienced by students. They argue that students' participation in, for example, committees and social activities could serve as a buffer for students' experiences of stress. The higher the levels of stress experienced by students, the less motivated they will be to take part in academic related academic activities, leading

to lower levels of student engagement (Krumrei-Mancuso et al., 2013). Furthermore, perceived stress has a significant negative effect on a student's adjustment to university. In turn, it was found that adjustment to university has a significant positive relationship with academic performance. Academically performing students were better adjusted.

At SU, EDP students are provided with additional academic support during their first year. Additional modules (foundation modules) as well as mentors and tutor sessions require student participation in academic related activities (student engagement). The levels of engagement of the participants were moderate on all three subscales (vigour, dedication and absorption), with students feeling proud of their studies and indicating that time flies when they study. Furthermore, the levels of perceived student stress were slightly below the mean of the scale indicating that students perceived stress to a lesser extent. Thus, if students experienced lower levels of stress it could be attributed to the additional academic support they received from SU during their studies (BeWell programme, module-mentor programme and support officer). Du Preez et al. (2013) report both mentors and mentees perceived the module-mentor programme at SU to be beneficial in terms of academic and socio-psychological support as well as social growth, cognitive growth and personal growth.

In summary, the results presented in Tables 4.13 and 4.14 offer no support for hypothesis 2, hypothesis 2 is thus not supported.

#### **4.4.2 The relationship between the different types of perceived stressors and perceived student stress**

In order to explore the relationship between the different types of perceived stressors (academic, relationship and financial) and perceived student stress, the following research hypotheses were formulated:

Hypothesis 4: The perceived academic stressors is positively related to perceived student stress

Hypothesis 5: The perceived financial stressors is positively related to perceived student stress

Hypothesis 6: The perceived relationship stressors is positively related to perceived student stress

The results depicted in Table 4.15 give evidence to accept or reject these hypotheses.

Table 4.15

*Correlation between perceived stressors and perceived student stress*

Construct	Perceived academic stressors	Perceived relationship stressors	Perceived financial stressors
Perceived student stress	0.39*	0.63*	0.07

Note. \* $p \leq .05$

A weak (to borderline moderate) significant positive relationship was obtained between academic stressors and perceived student stress ( $r = 0.39$ ,  $n = 59$ ,  $p < 0.01$ ). Further, a significant moderate positive relationship between relationship stressors and perceived student stress was evident for participants in this study ( $r = 0.63$ ,  $n = 55$ ,  $p < .01$ ). The relationship between financial stressors and perceived student stress was not significant ( $r = 0.07$ ,  $n = 56$ ,  $p = 0.63$ ).

In addition to the correlation analysis, standard multiple regression analyses were conducted on the three stressors as independent variables (academic, relationship and financial) and perceived student stress as depended variable. The results are presented in Table 4.16. Preliminary analyses were conducted to ensure no violation of the assumptions of multicollinearity. Tolerance was found to be acceptable.

Table 4.16

*Multiple regression analysis – Perceived student stress and three perceived stressors (academic, relationship and financial)*

	$\beta^*$	Std Err of $\beta^*$	t(49)	p-value
Intercept			0.8	0.43
Perceived academic stressors	0.28*	0.11	2.53	0.01
Perceived relationship stressors	0.57*	0.11	5.37	<0.01
Perceived financial stressors	-0.04	0.11	-0.37	0.71

The results from the multiple regression analysis (Table 4.16) indicate that in the regression model, the three independent variables combined explains only 45% ( $R^2 = .45$ ) of the variance in perceived student stress. Furthermore, two of the independent

variables, namely academic stressors ( $\beta = 0.28, p = 0.01$ ) and relationship stressors ( $\beta = 0.57, p < 0.01$ ) had significant beta coefficients with the dependent variable. However, the third independent variable, namely financial stressors, did not have significant beta coefficient ( $\beta = -0.04, p = 0.71$ ) with the dependent variable (perceived student stress). It could be surmised that other stressors than the three included in this study also influence student stress.

The results presented in Tables 4.15 and 4.16 support findings from previous research on academic stressors. Participants in the current study reported feelings of not progressing enough and they find their studies to be difficult. Pym and Kapp (2013) reported that students experience the demands of HEI as stressful. Sources of academic stress included long working hours, students not getting enough sleep and not taking sufficient breaks (Fouché, 2017). Furthermore, Pillay and Bundhoo (2011) reported academic stressors to be the most prevalent for undergraduate students at a university in Mauritius. Fear of failing, high demand of academic work and failing a test or examination were the biggest sources of stress. These findings are supported by Murphy and Archer (1996) who reported stressors experienced among students to be related to test and examination grades, limitations on students' free time and long study hours. Thus, hypothesis 4, the perceived academic stressors is positively related to perceived student stress, is supported.

According to the literature financial stressors could be a source of stress for students. The current study could not support the proposed relationship between financial stressors and perceived student stress. Over the last three decades, the cost of tertiary education has been on the rise (Calitz & Fourie, 2016), and not all students have funding to support them financially whilst pursuing a tertiary qualification (Jordaan, 2013). Students without a sense of financial stability are more disposed to experience symptoms of anxiety and depression, which are both linked to high levels of stress (Eisenberg et al., 2007; Kudlacek, 1996). A possible reason for the findings in this study could be that the students qualify for free higher education or have a NSFAS bursary. Consequently, students have the necessary finance to pay their tuition fees and they have access to accommodation while studying.

Furthermore, many of the students in the EDP could be in a continuous cycle of financial disadvantage (Pym & Kapp, 2013; Sader & Gabela, 2017) with constant and continuous experiences and awareness of financial stressors from a very young age. This continued exposure to financial stressors could lead to adaptation, in other words, the prevalence of financial stressors do not necessarily lead to heightened levels of perceived stress.

The results of the current study do not offer support for hypothesis 5.

Previous research on relationship stressors support the findings of the current study. University students are confronted with the formation of new relationships whilst navigating university adjustment. Many of these new relationships may lead to interactions with people from other races and cultural groups that, for example may speak a language different from their own (Ntakana, 2011; Strydom & Foxcroft, 2017). Dunkel-Schetter and Lobel (as cited in Dabney, 1998) report relationship stressors experienced by students particularly related to difficulty in forming new friendships, loneliness and socializing with class members. Similar results are reported by Stoliker and Lafreniere (2015). They found that the stress levels of students at a Canadian university increased with higher level of loneliness. Furthermore, students' relationship with their family is also as a sources of relationship stress as many students leave home for the first time to attend university (Hurst et al., 2012; Louw & Edwards, 2003). Hurst et al. (2012) identified family relationships to be prevalent in 38% of the studies included in a systematic literature review with the main stressor reported to be separation from their family when leaving for a HEI.

For some students, especially first-generation students, family relationships can be an added stressor. Pym and Kapp (2013) reported that first-generation students experience pressure to succeed academically from their family members. These students also have ideals to contribute financially to the well-being of their families and communities after completing their education.

The significant moderate positive relationship between relationship stressors and perceived student stress may be due to the number (66%) of first-generation students in the sample. The students may be far away from home with little or no social networks causing them to feel lonely and homesick at times. They may also be exposed to cultures

and social settings they are not used to, for example when living in university residences where they are forced to interact and even share a room with students from different backgrounds.

The findings of the current study provide support for hypothesis 6, namely that there is a positive relationship between relationship stressors and perceived student stress.

In order to investigate the mediating effects of perceived social support on the relationships between academic stressors and relationship stressors and perceived student stress (both relationships were statistically significant), the Sobel Test was conducted. The results are presented in Table 4.17.

Table 4.17

*Sobel Test for mediation*

Path	Indirect effect	p-value	Bootstrap 95% CI lower	Bootstrap 95% CI upper	Description
Perceived academic stressors > perceived social support > perceived student stress	0.02	0.40	-0.05	0.07	Non-significant
Perceived relationship stressor > perceived social support > perceived student stress	0.05	0.36	-0.06	0.21	Non-significant

As is evident from Table 4.17, the proposed mediating effect of perceived social support on the relationship between perceived academic stressors and perceived student stress was not significant ( $p = 0.40$ ). Furthermore, the proposed mediating effect of perceived social support on the relationship between perceived relationship stressors and perceived student stress was not significant for the respondents ( $p = 0.36$ ). The correlation between perceived financial stressors and perceived student stress was not significant, thus the mediation effect of perceived social support on the relationship between perceived financial stressors and perceived student stress was not investigated.

#### 4.4.3 Experience of stressors during different years of study

The current study investigated the perceived stressors during different years of study. The following research hypothesis was formulated:

Hypothesis 7: The prevalence of the three categories of stressors differs over years of study.

The different year groups' experience of stressors are presented in Table 4.18.

Table 4.18

*Experience of stressors during different years of study*

	Perceived academic stressors			Perceived relationship stressors			Perceived financial stressors		
	n	Mean	Standard Deviation	n	Mean	Standard Deviation	n	Mean	Standard Deviation
First year of study	30	2.87	0.86	28	1.77	0.41	28	2.14	1.05
Non-final year	20	3.25	1.24	18	1.89	0.64	18	3.54	1.25
Final year	12	2.79	1.01	12	2.11	0.49	12	1.71	0.95

Perceived academic stressors are reported to be the highest for non-final year students ( $M = 3.25$ ,  $SD = 1.24$ ), followed by the first year group ( $M = 2.87$ ,  $SD = 0.86$ ) and then final year students ( $M = 2.79$ ,  $SD = 1.01$ ). Results indicate perceived relationship stressors to be the most prevalent among students in their final year ( $M = 2.11$ ,  $SD = 0.49$ ), followed by non-final year students ( $M = 1.89$ ,  $SD = 0.64$ ) and first year students ( $M = 1.77$ ,  $SD = 0.41$ ). Perceived financial stressors are reported to be the most prevalent for the non-final year group ( $M = 3.54$ ,  $SD = 1.25$ ), next first year students ( $M = 2.14$ ,  $SD = 1.05$ ) and the least prevalent for final year group ( $M = 1.71$ ,  $SD = 0.95$ ).

During the first year of study, students in the EDP are supported in a number of ways including mentor and tutor sessions, the BeWell programme and dedicated faculty officers which may serve as buffer for academic stressors. The support offered may assist the students to deal with difficulties in their first year of studies, such as increased responsibility (assignments, tests, examinations) and developing new ways of studying. During their second year, EDP students are expected to be more academically independent with less support offered to them. The non-final year students may have increased academic stressors due to the repeating modules they failed in previous years (Schreiner, 2015). As a result students have to enrol for more modules in the specific year and may feel that they are not progressing enough with their studies. Final year students reported slightly lower academic stressors. The group might be under pressure to

graduate and make decisions regarding possible careers or perusing post-graduate qualifications.

Relationship stressors were reported to be the highest for final year students. This could be ascribed to more senior students having a need for romantic relationships. If they are not in any relationships it may cause feelings of loneliness. The lower levels of relationship stressors experienced by the first year respondents may be explained by the support offered during the first year of study. For example, in the BeWell programme students are assigned to groups with a trained mentor who may serve as a buffer to relationship stressors as students are forced to interact with other students and the mentor. Furthermore, when first year students reside on campus the SU makes an effort to pair those studying the same course. This could also lower relationship stressors.

Turning to financial stressors, non-final year students may be in the position where they lose bursaries or financial support due to not passing all of their modules in the previous year. This could increase financial stressors such as payment of tuition fees and other expenses (bills). Additionally, poor academic performance could lead to students losing their place in university residences with the outcome that financial stressors increase, due to the cost of off campus accommodation.

A one-way ANOVA was performed to determine whether students significantly differ in their respective experience of the three types of stressors over their years of study. The results are presented in Table 4.19 and Figures 4.1, 4.2 and 4.3. For the significant differences between year of study groups, the post-hoc test results are presented in Table 4.20.



Table 4.19

ANOVA test results – Significance of difference in experience of stressors between three year groups

Perceived stressors	F	p
Perceived academic stressors	1.08	0.44
Perceived relationship stressors	1.86	0.11
Perceived financial stressors	12.70	<0.01*

For two of the stressors subscales, namely academic stressors ( $F(2,59) = 1.08, p = 0.44$ ) and relationship stressors ( $F(2,55) = 1.86, p = 0.11$ ), no statistically significant differences were reported between any of the three study year groups (Figures 4.1 and 4.2). However, for the financial stressors subscale, significant differences between the three study year groups were observed ( $F(2,55) = 12.70, p < 0.01$ ) (Figure 4.3).

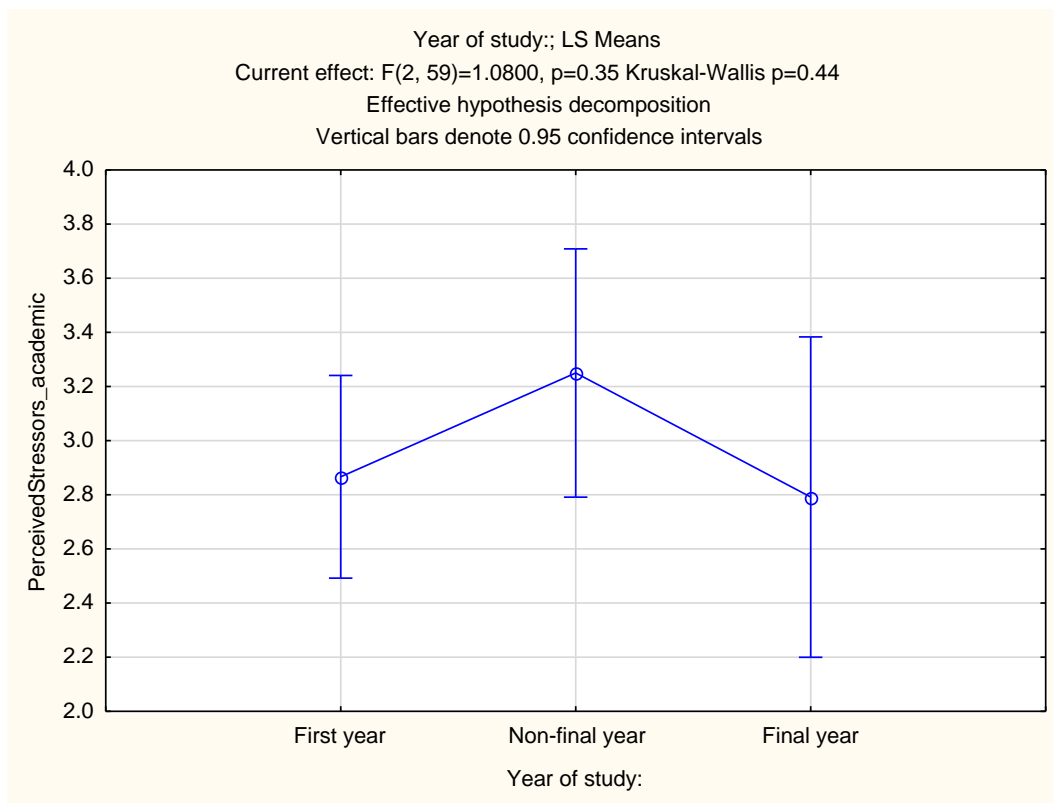


Figure 4.1 ANOVA test results – Significance of difference in experience of academic stressors between three groups of first year, non-final year and final year.

Figure 4.1 depicts the results of the ANOVA test on the significance of difference in experience of academic stressors between three year groups. No significant differences are noted ( $F(2,59) = 1.08, p = 0.44$ ).

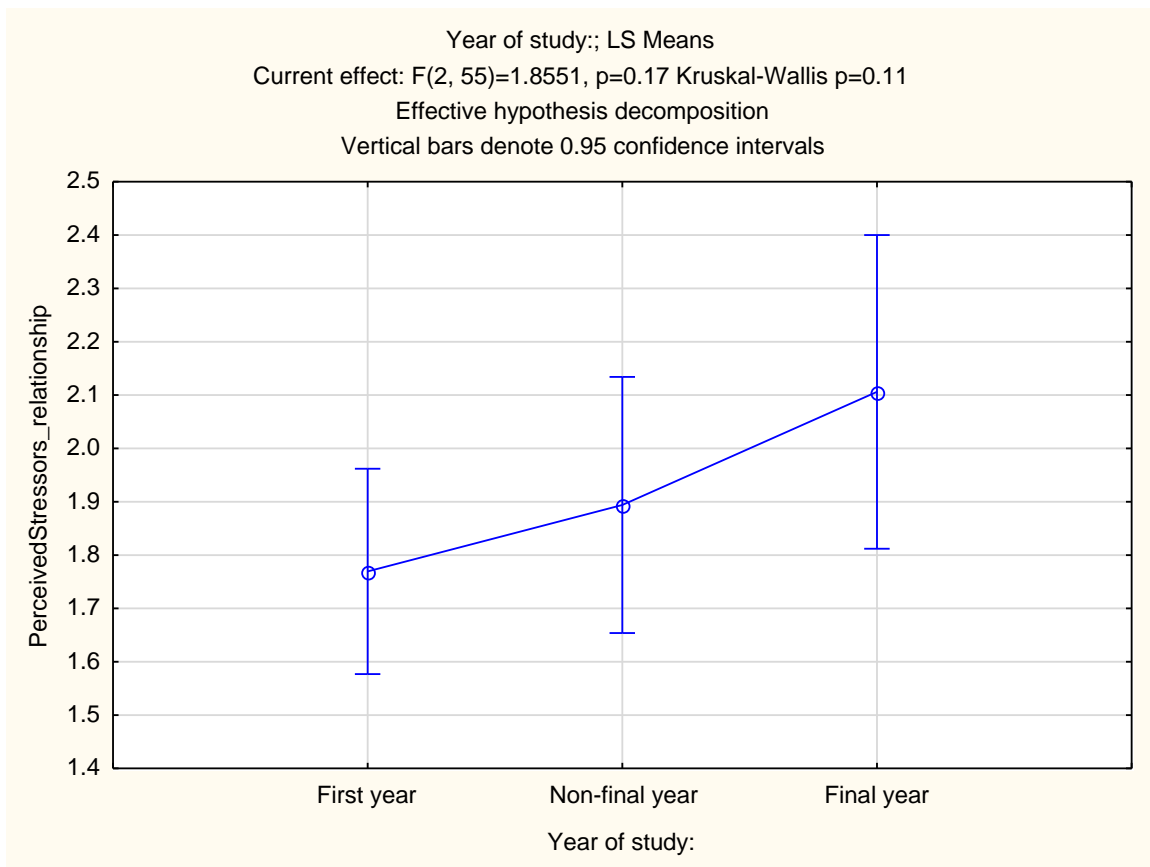


Figure 4.2 ANOVA test results – Significance of difference in experience of relationship stressor between three groups of first year, non-final year and final year.

Figure 4.2 depicts the results of the ANOVA test on the significance of difference in experience of relationship stressors between three year groups. Again, no significant differences are noted in the experience of relationship stressors between the three groups of students in their respective years of study ( $F(2,55) = 1.86, p = 0.11$ ).

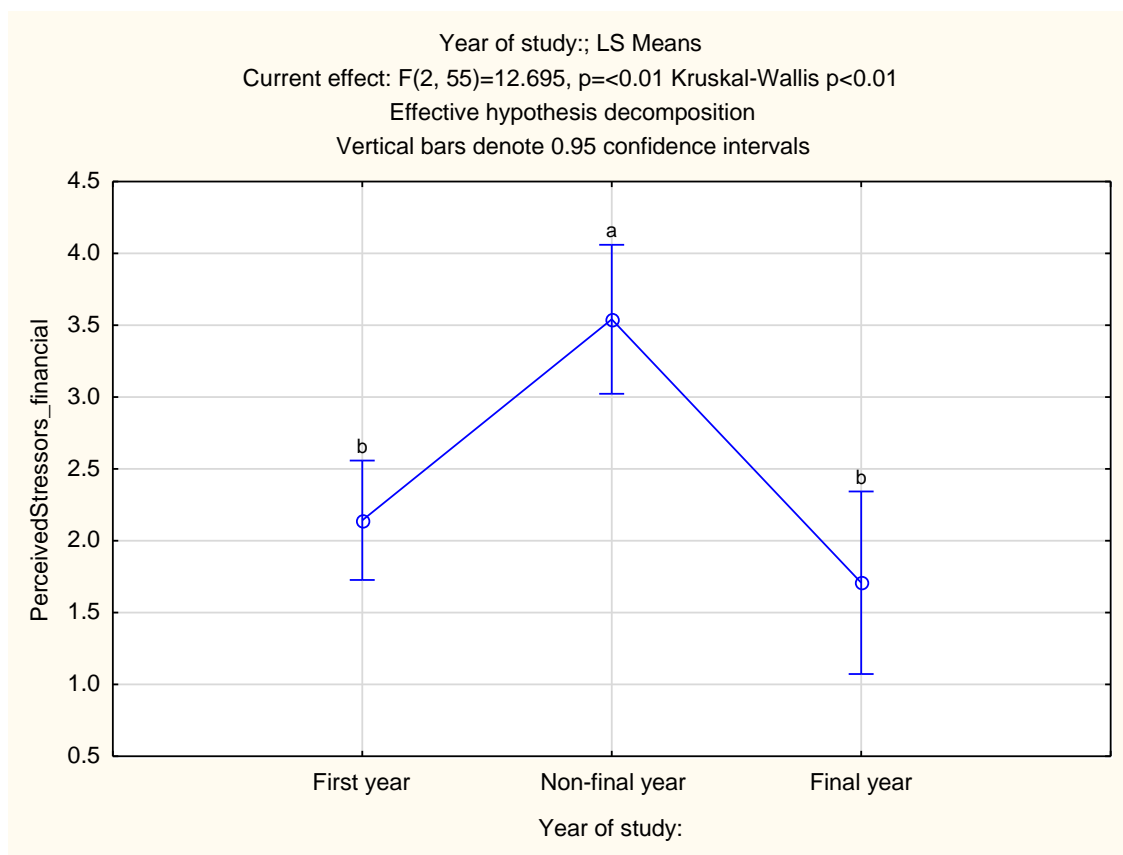


Figure 4.3 ANOVA test results – Significance of difference in experience of financial stressors between three groups of first year, non-final year and final year.

Figure 4.3 presents the results of the ANOVA test on the significance of difference in experience of financial stressors between the three year groups ( $F(2,55) = 12.70, p < 0.01$ ).

The Bonferroni post-hoc analysis was used to determine between which groups the differences occurred across the three years of study for the financial stressors. The results are reported in Table 4.20.

Table 4.20

Bonferroni analysis results – Differences between year groups for financial stressors

		Mean Difference (I-J)	Sig.
First year	Non-final year	-1.34766	<0.01*
	Final year	0.53611	0.50
Non-final year	First year	1.34766	<0.01*
	Final year	1.88377	<0.01*
Final year	First year	-0.53611	0.50
	Non-final year	-1.88377	<0.01*

Note. \* $p \leq .05$

There is a significant difference between first year students and non-final year students ( $Md = 1.34766$ ,  $p < 0.01$ ). A mean score of 2.14 for financial stressors was calculated for the first year students, which is significantly lower than the mean score of 3.54 for the non-final year students. There is also a significant difference between the scores for the non-final year students and the final year students ( $Md = 1.88377$ ,  $p < 0.01$ ). The mean score of 1.71 for final year students is significantly lower than the mean score of 3.54 for the non-final year students.

The findings indicate that the non-final year students experience significant higher levels of financial stressors than the two other groups (first and final year students). It is possible that many first year students in the study (2018 intake) qualified for the free tuition announced by the former president, Jacob Zuma. As the SES factor is used as selection criteria for the EDP, many of the participants would qualify for free HE tuition because their family income could be less than R350000 per year (Muller, 2018). However, data was not gathered on the sources of funding of the participants (free education or funding mechanisms like NSFAS).

Irrespective of whether respondents were recipients of NSFAS funding mechanisms, it is evident that the NSFAS scheme is faced with a number of administrative challenges that may increase the financial stressors of the students. These challenges include: payments not being made to recipients on time, outcomes of applications for funding not communicated effectively, students not knowing how to apply and backlog of application leading to postponement of opening date for applications to be submitted (McKay et al.,

2018; Seale, 2018). The higher level of financial stressors may be because of students not showing adequate academic performance and losing academic support (bursary).

The results partially support hypothesis 7 in that there is a statistically significant difference between the three groups of students related to financial stressors. However, no statistical significant differences were reported between the different year groups for both relationship and academic stressors.

#### **4.5 Summary: Chapter 4**

In this chapter, the results of the study were presented and discussed. The sample consisted of 64 EDP students from the EMS Faculty at SU. The majority of the sample were female (53%) and the racial profile of the sample was distributed evenly. The respondents were young (48% of the sample consisted of students 19 years old or younger and in their first year of study), and mostly included first-generation students (66%).

Respondents indicated that they experience relationship, academic and financial stressors, with a significant difference between the three groups for the experience of financial stressors. The significant difference was reported for the non-final year students, where the financial stressor score was significantly higher than in both the first year group and final year group.

The correlation matrix showed that there were significant relationships between perceived stressors (academic and relationship) and perceived student stress. However, there were no correlation between perceived student stress and financial stressors. The negative relationship between perceived social support and student engagement was significant. However, the study failed to support a significant relationship between perceived student stress and student engagement. In the next chapter the conclusions, recommendations and limitations of the study will be discussed.

# CHAPTER 5: CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

## 5.1 Introduction

Low participation and throughput rates are challenges the South African HE sector is currently facing. Furthermore, universities are under pressure to increase the intake of students into undergraduate programmes. With the objective of the National Development Plan to increase the graduation rate to 25% by 2030, there is a need for systems that can support students in achieving academic success. It is argued that an understanding of the perceived stressors that EDP students experience, could support the goal of higher student engagement (that has been proven to increase student success). Based on the literature, a conceptual model (Figure 2.3) was developed proposing the relationship between perceived stressors, perceived student stress, perceived social support and student engagement.

This study perused the following research question: Which stressors do students, enrolled in the EDP, experience in the EMS Faculty that could hinder student engagement? Furthermore, thirteen research objectives and hypothesis were formulated and investigated.

A quantitative non-experimental research design was employed in this study. Quantitative data was collected from 64 students registered for the EDP in the EMS Faculty at SU. In order to investigate the proposed relationships, four existing instruments were used. The conclusions regarding each will be addresses in the following section. Data analysis included descriptive statistics, correlations, regression analysis, Sobel Tests, ANOVA and Bonferroni Post Hoc analysis.

The study's research findings were presented and discussed in Chapter 4. In Chapter 5, an overview of these results, as well as general conclusions related to the empirical evidence acquired will be considered. This chapter concludes with an indication of the limitations of this study, as well as recommendations for future research within this domain of study.

## 5.2 Conclusions

The conclusions of the study will be presented according to each of the objectives.

1. Describe the demographic profile of the EMS EDP student cohort.

The total of the extended degree cohort within the EMS Faculty was relatively small compared to other programmes (n = 164 students) and the first year enrolment figure was very low in 2018. This resulted in a skewed distribution of first years (n = 39), non-final (n = 58) and final year students (n = 67). The majority of the students were White (n = 88), followed by Coloured (n = 48) and Black (n = 27). Only one student was Indian. The total EDP cohort was split relatively even in terms of gender with 80 female and 84 male students.

The sample (n = 64) mirrored the population with the majority of the participants being 19 years old or younger, the White racial group being the largest followed by Coloured and Black respondents. The sample differed from the population in that most of the participants were in their first year of study (n = 31); 20 were non-final year students, whilst the remaining 12 indicated that they were final year students. The small number of first year students in the cohort resulted from the change in admission requirements and first time application of the SES factor in the selection process. The first year group will again grow in future as the EMS Faculty enrolls more students from previously disadvantaged school environments (that meet the SES criteria and NSC average and Mathematics requirements).

2. Determine the levels of student engagement.

The UWES-S was used to measure student engagement in the study. The UWES-S measures student engagement through three subscales, namely vigour, dedication and absorption. The participants indicated moderate levels of engagement on all three subscales. When considering the items with the highest mean scores respondents indicated that time flies while they study and they feel proud of their studies. Respondents further indicated feeling mentally strong while studying and they experience their studies to be full of meaning and purpose. These results are encouraging as it indicates that the EDP

students (whom if not for the EDP might not have had the opportunity to enrol in a HEI), were motivated and consider their studies as meaningful.

3. Investigate perceived stressors that EDP students experience.

To investigate the perceived stressors experienced by the student cohort, the SSS was used. The SSS is an existing questionnaire used to measure three perceived stressors namely; academic, relationship and financial. For the two subscales of academic and financial stressors, moderate levels were reported with academic stressors being higher. For the remaining subscale, relationship stressors, a low mean score was reported. It can thus be concluded that overall, students in the EDP sample perceived academic stressors to a greater extent than financial stressors while relationship stressors were of less concern.

4. Determine the levels of the perceived stressors.

It was observed that stressors related to both perceived academic and financial stressors were at moderate levels while perceived relationship stressors was indicated to be low. Students reported that they experienced the following stressors: not having enough money for unexpected expenses, feelings of not progressing enough with their studies and having difficulty with their studies. These findings indicate the importance of supporting students, who may not have been adequately prepared for HE due to factors outside of their control. They need support to adapt and cope with the challenges of tertiary education.

It could be surmised that students in the EDP sample perceived a culture of acceptance and respect for differences among students who may vary in terms of race, gender and SES. Peer pressure, bullying, racism and sexism were probably not part of what they perceived or considered as important stressors which is positive.

5. Determine the levels of perceived student stress experienced by the EDP student cohort.

Respondents completed the PSS questionnaire regarding their experiences of stress over the last month. Results indicated that these EDP students experienced moderate levels of perceived student stress over the last month. They reported that losing control



contributed to their stress and they were angered by these incidents. They also became upset if things happened unexpectedly or when they were unable to control irritations in their life. Furthermore, they may not have confidence in their own abilities and skills to handle their personal problems effectively. It can thus be concluded that EDP students experienced stress during their studies.

6. Determine the levels of perceived social support.

Participants completed the F-SozU K-14 in order to determine the levels of perceived social support. From responses it could be deduced that participants experienced high levels of perceived social support. They reported that they have someone (friends or relatives) who would be willing to listen to them if they need someone to talk to, who they can share joys and sorrows with and that they feel accepted by them. These findings are encouraging and could have a bearing on the low mean scores of items referring to stressors such as bullying, racism and sexism. It could point towards a supportive social structure experienced by the EDP students in the EMS Faculty at SU.

7. Determine if students experience different types of stressors as prevalent in different years of study and which of these dominate in different study years.

No statistically significant differences were reported between the three different groups (first year, non-final year and final year) on both the academic stressors subscale and the relationship stressors subscale. However, a statistically significant difference was reported on the financial stressors subscale. Further analyses revealed differences between the non-final year and first year group, as well as the non-final year and final year group. An important finding is that the non-final year group experienced higher levels of financial stressors. This might be attributed to the group not qualifying for bursaries or financial aid due to unsatisfactory academic performance in the previous academic year. These students have to pay for their own tuition fees and other financial expenses. In conclusion, there is a need to investigate the financial stressors experienced by non-final year students and to provide different assistance for this group as their financial stressors differs statistically from the other two groups.

8. Determine the relationship between perceived social support and student engagement.

Data analysis revealed no statistical significant relationship between student engagement and perceived social support. However, the relationships between perceived social support and vigour (student engagement subscale) and perceived social support and dedication (student engagement subscale) were significant (a weak negative correlation). The relationship between perceived social support and student engagement subscale absorption was not significant. These results are somewhat surprising considering literature indicating perceived social support and student engagement being positively related. When students receive more social support they become more engaged in academic related activities. However, in light of some social challenges students may experience at university (belonging to a social group, not having someone to turn to in times of need or getting security or understanding from others) the low negative correlation to vigour and dedication may be positive. Students may still feel mentally strong while studying, finding meaning in their studies and be proud of what they accomplish.

9. Determine the relationship between the different types of perceived stressors and perceived student stress.

Evidence for a weak, but significant positive relationship was found between academic stressors and perceived student stress. Relationship stressors were found to significantly correlate with perceived student stress (a moderate positive correlation) whilst the relationship between financial stressors and perceived student stress was not significant. Thus, relationship stressors had the greatest effect on students' perceived stress, whilst financial stressors did not have a significant impact on perceived student stress. It could be concluded that both academic and relationship stressors contributed to the students' perceived stress. However, the three stressors explained 45% of the variance of perceived student stress. The complexity of students' perceived stress should be kept in mind as well as the fact that many other variables, not included in this research, could also affect students' stress.

10. Determine the relationship between perceived student stress and student engagement.

The results on the relationship between perceived student stress and student engagement were somewhat surprising. For the EDP students in the EMS Faculty that participated in this study, the experience of stress did not affect their student engagement. Even the subscales of student engagement (vigour, dedication and absorption) did not show a statistically significant relationship with perceived student stress. Literature on perceived student stress revealed that student engagement could act as a buffer to stress. In addition, the reverse could also be true where higher levels of stress may decrease students' participation in academic related activities (a form of student engagement). For the participants, their involvement in academic related activities (student engagement) was not affected by their perception of stress and as such could act as a buffer for the experience of stress. As such, intentional efforts by lecturers and students to increase student engagement could decrease the stress perception of students.

11. Determine the mediation effect of perceived social support in the relationship between the different types of perceived stressors and perceived student stress.

As the correlation between perceived financial stressors and perceived student stress was found not significant, there was no need to further investigate the mediation effect of perceived social support on the relationship of the two variables. The mediating effects of perceived social support on the relationship between perceived academic stressors and perceived student stress, as well as the relationship between perceived relationship stressors and perceived student stress were not significant. Thus, perceived social support did not affect the relationship between perceived academic stressors and perceived student stress or the relationship between perceived relationship stressors and perceived student stress.

12. Determine the mediation effect of the different types of perceived stressors in the relationship between perceived social support and the different types of student engagement.

Analysis of the data revealed no statistically significant relationship between the total scale of student engagement and perceived social support. Thus, there was no need to

investigate the mediating effect of the different types of perceived stressors (academic, relationship and financial) on the relationship between perceived social support and student engagement.

### 13. Formulate recommendations for EMS Faculty specific student support programmes.

The research failed to find a statistically significant relationship between EDP students' perceived stress and their levels of engagement as hypothesised. It is proposed that a possible reason for this is the unique characteristics of the sample group. The support offered by SU to EDP students (BeWell programme, mentor and tutor sessions and a dedicated faculty officer) may contribute to the students already being engaged in academic related activities. The lecturers involved in the EDP programme use teaching methodologies and practices that encourage high levels of engagement (e.g. the flipped classroom; group work; question and answer sessions; homework). Staff should continue and consider further deployment of these methodologies, as reduced levels of stress could result from higher levels of student engagement.

Perceived academic and relationship stressors correlate positively with perceived student stress. The broad range of possible negative effects of stress when situations are appraised to be stressful requires attention. Programmes that could assist students to deal with stressful situations is recommended. The BeWell programme which is offered to all first year SU students (not limited to EDP students) already offers a number of psycho-social support opportunities with facilitated group discussion and a wellness website. The wellness website offers an individualised page which is secure for private use (both mentor and mentee). Programmes on stress management could be offered as part of the available online facilities, such as eBooks, audio-books, online workshops and journals accessible through the portal. These programmes should assist students in handling stress effectively and preventing it from becoming overwhelming.

First year, non-final year and final year students included in this study did not differ regarding perceived academic and relationship stressors. This could indicate that senior students need support similar to that of first year students. After completion of the foundation programme, the EDP students enter the mainstream programme. Support may be provided by setting up a group where the EPD students can meet (electronically or in

person) and discuss their challenges with each other. This could be ideal to offering continued support in all domains (academic, relationship and financial) over all the years of study.

Only perceived financial stressors showed a significant difference between the three groups. Non-final year students experienced higher levels of financial stressors than the two other groups. This finding could point to non-final year students' need for assistance regarding financial stressors. Students who perform well academically should be encouraged to become mentors for junior students. Although the financial benefit is small it may help students in meeting unexpected expenses and lessen some of the financial demands. Another recommendation is to offer first year students a workshop on budgeting skills as part of the BeWell programme, eBooks and/or online workshops. The aim should be to teach long-term skills and provide students with tools they could use throughout their study career.

### **5.3 Value of the Study**

A profile of the EDP student cohort of the EMS Faculty was developed which shed light on their levels of engagement. Students indicated that they were proud of their studies and reported feelings of meaning and purpose. Further insight was gained into perceived stressors where academic stressors were reported to be the most prevalent. The levels of perceived stress students experience indicated that they did not feel confident about their ability to handle personal problems and felt irritated when things were out of their control. An important finding was the high levels of social support experienced indicating that students have a social support structure.

Useful information on the perceived stressors were obtained that could guide support initiatives in the EMS faculty. Knowledge of the perceived stressors and levels of the different stressors could assist in understanding the challenges faced by the unique group of students and reviewing the current support programmes offered.

The study failed to provide evidence of a statistically significant relationship between perceived student stress and the level of student engagement for EDP students. This finding is still valuable as it indicates that perceived student stress did not affect the students' engagement. The relationship between perceived social support and student

engagement was surprising as the correlations with the subscales vigour and dedication were negative. It was also found that the two independent variables (perceived student stress and perceived social support) only explain 9% of the variance in student engagement indicating the complex nomonological network of variables at play when investigating student engagement.

Positive relationships were found between both academic and relationship stressors and perceived social support. This was not the case for financial stressors. Students reported stressors relating to progress with studies and academic challenges. The three stressors only explain 45% of the variance in perceived student stress. Furthermore, it was identified that students in different years of study experience financial stressors differently. These stressors were significantly higher for non-final year students than for first and final year students. However, no statistical significant differences were found between the three groups on academic stressors and relationship stressors. This makes a contribution to understanding the challenges faced by the different groups. EDP students are supported during their first year through foundation modules, mentor and tutor programmes. Similar support may be needed for the senior students, for example programmes on how to manage and deal with stressful situations relating to both academic and relationship stressors.

## **5.4 Limitations**

Although valuable the current research has several limitations. The convenience sample included a limited number of EDP students in the EMS Faculty at SU. It was not inclusive of other EDP programmes. This implies that the sample did not represent random sampling and the results did not include a variety of EDP programmes, faculties and different institutions. Furthermore, due to the unique characteristics of SU, more research is needed on students from different faculties, and HEIs as the findings of the current study cannot be generalised to other HEIs. The EDP students in the EMS Faculty might differ significantly from other EDP student profiles and their experience of stressors, stress, student engagement and social support may vary significantly.

Although the sample size of 64 EDP students was acceptable, a larger sample size would have made the findings of the study more credible and increased the statistical power.

Due to the low participation rate, attempts were made to reach students after the initial invitation was sent to their student email addresses. However, this did not significantly increase the response rate. Furthermore, as convenience and purposeful sampling were used, the possible influence of self-selection bias should also be noted as participants select themselves to take part in the study.

Furthermore, this study used a self-administered, web-based survey which included self-report data collection. Method bias is one of the weaknesses of self-report questionnaires as participants are able to respond in a more positive manner in an attempt to create a favourable impression of themselves. Another problem of self-report instruments is that this method could lead to response bias across questions.

Although the measurement instruments used in the research were reliable, they were not initially developed specifically for application in a South African context. Another possible impact of this could be that participants might misinterpret some of the items.

Lastly, the results on perceived financial stressors that EDP students experienced could have been skewed in this sample group. The researcher did not gather data on sources of funding, thus information on NSFAS and other sources of funding were unknown. If students did obtain funding (institutional data does show that a large proportion of EDP students do qualify for financial support) this could have had an impact on the level of financial stressors indicating that some of the students did not need to worry about paying tuition fees. To address the limitations of the current study, future research opportunities are presented in the following section.

## **5.5 Future Research**

The current study only focused on EDP students in the EMS Faculty at SU and the results cannot be generalised to the larger population. Thus, the first suggestion for possible future research is to extend the study to include other EDP programmes, faculties, and institutions in the RSA. The results obtained in such studies could be compared with those obtained in the present study, promoting an in-depth investigation of student stressors in EDP students across South African institutions. As noted previously, the relatively small sample size may cause some concern regarding generalising the results of the study. It

is recommended that future studies aim to procure a larger and more representative sample.

This was a quantitative study using existing questionnaires to test the relationships proposed in the conceptual model (Figure 2.3). This model was limited in scope and numerous other variables do form part of the complex nomological network of variables that influence student engagement. These variables should be investigated further with more advanced statistical analysis (e.g. structural equation modelling).

A qualitative approach to the investigation of perceived stressors, perceived student stress, perceived social support and student engagement could provide additional insights and a deeper understanding of the EDP student cohort. This together with quantitative measures may provide more reliable findings and in-depth knowledge.

Lastly, future research could employ longitudinal research designs in order to measure the long-term effects of stress on student engagement and subsequently student success.

## **5.6 Concluding Remarks**

The implementation of EDPs at SU, and across the RSA has broadened access for many students that do not meet the minimum requirements for mainstream programmes. These programmes aim to support students with disadvantaged school backgrounds who are underprepared for higher education and the challenges of university life. EDP's are, and should be, a vehicle to broaden access and to support students with the necessary skills, knowledge and attitudes to be engaged and successful students.

Historically, EDP students are considered as being at risk of not completing their studies in the minimum time or leaving tertiary education without having obtained a qualification. This study provides evidence that students do perceive and experience different types of stressors, levels of social support, and student engagement. Furthermore, it is evident that student support is needed beyond the first year of study, and that this support could take different forms as students' progress in their degree programme. Providing support could enhance the success of EDP students at SU and contribute significantly to the EMS Faculty's strategic vision of student success at SU.



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# Appendix A

STELLENBOSCH UNIVERSITY

## CONSENT TO PARTICIPATE IN RESEARCH

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***Research title: An investigation into perceived stressors as barriers to student engagement in an extended degree programme***

You are asked to participate in a research study conducted by Manie Prinsloo, from the Industrial Psychology Department at Stellenbosch University. The results obtained will contribute to the completion of a Masters of Commerce degree in Industrial Psychology. The results of this study will be contributed to the completion of the thesis component of the degree. You were selected as a possible participant because you are registered for an extended degree programme in the Faculty of Economic and Management Sciences at Stellenbosch University.

### **1. PURPOSE OF THE STUDY**

The extent to which students participate in educational activities, thus student engagement, is a known key antecedent to student success. Perceived stressors can potentially, however, hinder student engagement. High levels of stress, which students feel they are not equipped to deal with, may have a negative impact on their functioning leading to lower levels of engagement. In order to determine whether perceived stressors could be a barrier to student engagement in an extended degree programme. Thus the research initiating question of the study is:

Which stressors do students enrolled in the extended degree programme experience in Faculty of Economic and Management Science that could hinder student engagement?

### **2. PROCEDURE**

Participation in this study is completely voluntary. If you volunteer to participate in this study, you will be asked to give input by completing a computer based questionnaire. The questionnaire can be accessed on any computer that is linked to the internet by clicking on the link provided within the email that was sent to

you. You can indicate your consent to participate in the study by selecting “Yes” or “No” in the first question of the questionnaire. Should you decide not to participate and select “No” you are not required to complete the rest of the questionnaire.

Because the intention of the study is obtain insight into your perception there is no right or wrong responses to questions. You can complete the questionnaire at any place, time and location that is convenient to you. It is estimated that it should take no more than 20 minutes to complete the questionnaire.

### **3. POSSIBLE RISKS AND DISCOMFORTS**

This study will not put you in any physical harm, but it may be that emotions are sparked relating to your personal experience of stressors. Should you feel at any point that you do not want to continue, you can immediately stop completing the questionnaires.

### **4. POSSIBLE BENEFITS TO PARTICIPANTS AND/OR TO THE SOCIETY**

This study unfortunately will not have personal gains for you as individual and you will not be compensated for your contribution. However, the contribution you will be able to make is to further research on stressors experienced by students in extended degree programmes. It is hoped that the outcomes of the study will be beneficial to university management and staff responsible for student success, EDP programme development and support.

### **5. CONFIDENTIALITY**

Any information that is obtained in the course of this study and that can be used to identify you will remain confidential and will be disclosed only with your permission, or as required by law. Confidentiality will be maintained by means of assigning random numbers to each participant that will allow for no connection to be made between you and your responses.

### **6. PARTICIPATION AND WITHDRAWAL**

You can choose whether to be in this study or not. If you agree to take part in this study, you may withdraw at any time without any consequence. You may also refuse to answer any questions you don't want to



answer and still remain in the study. The researcher may withdraw you from this study if circumstances arise that warrant doing so.

## 7. RESEARCHERS' CONTACT INFORMATION

If you have any questions or concerns about this study, please feel free to contact Manie Prinsloo at 084 809 2762 or [prinsloomanie@gmail.com](mailto:prinsloomanie@gmail.com) and/or the supervisor Prof Ronel du Preez at 021 808 9562 or [rdp@sun.ac.za](mailto:rdp@sun.ac.za).

## 8. RIGHTS OF RESEARCH PARTICIPANTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research participant, contact Ms Maléne Fouché [[mfouche@sun.ac.za](mailto:mfouche@sun.ac.za); 021 808 4622] at the Division for Research Development.

## 9. RIGHTS OF RESEARCH PARTICIPANTS

Please note that participation in this study is completely voluntarily. You can indicate your consent to participate in the study by selecting "Agree" or "No" in the first question of the questionnaire.

## DECLARATION OF CONSENT BY THE PARTICIPANT

As the participant I confirm that:

- I have read the above information and it is written in a language that I am comfortable with.

By clicking agree, I agree to take part in this research study as conducted by Manie Prinsloo.

Agree	<input type="checkbox"/>
Do not agree	<input type="checkbox"/>