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Faculty of Community and Health Sciences

ESTABLISHING A PSYCHOSOCIAL AND NEEDS PROFILE OF FIRST-GENERATION UNDERGRADUATE STUDENTS AT AN IDENTIFIED HISTORICALLY DISADVANTAGED INSTITUTION

A thesis submitted in fulfilment of the requirements for the degree of Doctor Philosophae in the Department of Psychology, University of the Western Cape.

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Abstract

Following the dismantlement of the racial segregationist apartheid system and the establishment of a democratic republic, South Africa embarked on education policy reform that established a mandate to increase access to higher education for previously disadvantaged groups. This has led to an increase in first-generation students at South African higher education institutions. Despite suggestions from the international literature of associations between first-generation status, attrition, and poorer academic performance among first-generation students compared to their continuing-generation peers, there is a paucity of South African literature on this student population. This study address this scarcity of empirical evidence on South African first-generation students through a two-phase doctoral research project.

The first phase consisted of a scoping review of the barriers and facilitators of participation, retention, and throughput among first-generation students in higher education. The aims of this phase were to: (1) determine the scope of the existing literature reporting on the barriers and facilitators of participation, retention, and throughput among first-generation students in higher education; and (2) to summarise and disseminate the key findings of the reviewed studies. The scoping review followed the methodological guidelines outlined by Arksey and O'Malley (2005) and Levac et al. (2010).

The second phase of the study consisted of a cross-sectional survey administered to both first-generation and continuing-generation students following degree courses in the faculty of community and health sciences at an identified historically disadvantaged institution. The sample consisted of 291 undergraduate first-generation students and 190 undergraduate continuing-generation students. The aims of the cross-sectional survey were to: (1) identify the barriers and facilitators of academic performance among undergraduate

first-generation students at an identified historically disadvantaged institution; and (2) synthesise a psychosocial profile of undergraduate first-generation students at an identified historically disadvantaged institution. Data analysis included tests of association, difference, and prediction. The latter included Person's correlation analysis, regression analysis, chi-square analysis, and analysis of variance. To determine whether the data generated by this sample supported the planned analysis and use of inferential statistics, tests of data normality were conducted.

Results from Phase 1 of the study provide an analysis of the scope and nature of existing international and local literature on the barriers and facilitators of academic performance among FGSs. The results further allowed the collation and dissemination of findings related to the research questions guiding this phase.

Results from Phase 2 of the study allowed the identification of correlates and predictors of academic performance among the FGSs in the study. Results led to the identification of the psychosocial characteristics in the present study's FGSs sample. Findings from Phase 2 were critically discussed and compared against the existing, mostly international, literature. It was ultimately surmised that first-generation status is a highly context-bound construct, as significant differences were found in the current sample's FGS profile as compared to the dominant literature. Findings from Phase 2 additionally led to recommendations for future research. Lastly, an intervention design strategy was synthesized and proposed based on the findings from both Phases 1 and 2 of the study.

*Keywords***:** academic performance**,** attrition**,** barriers**,** challenges**,** facilitators**,** first-generation student(s)**,** participation**,** psychosocial profile**,** retention**,** South Africa**,** supportive factors**,** throughput

Declaration

I declare that *Establishing a Psychosocial and Needs Profile of First-Generation Undergraduate Students at an Identified Historically Disadvantaged Institution* is my own work, that it has not been submitted for any degree or examination at any other university, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Mariska Pienaar   Date: 23 March 2022

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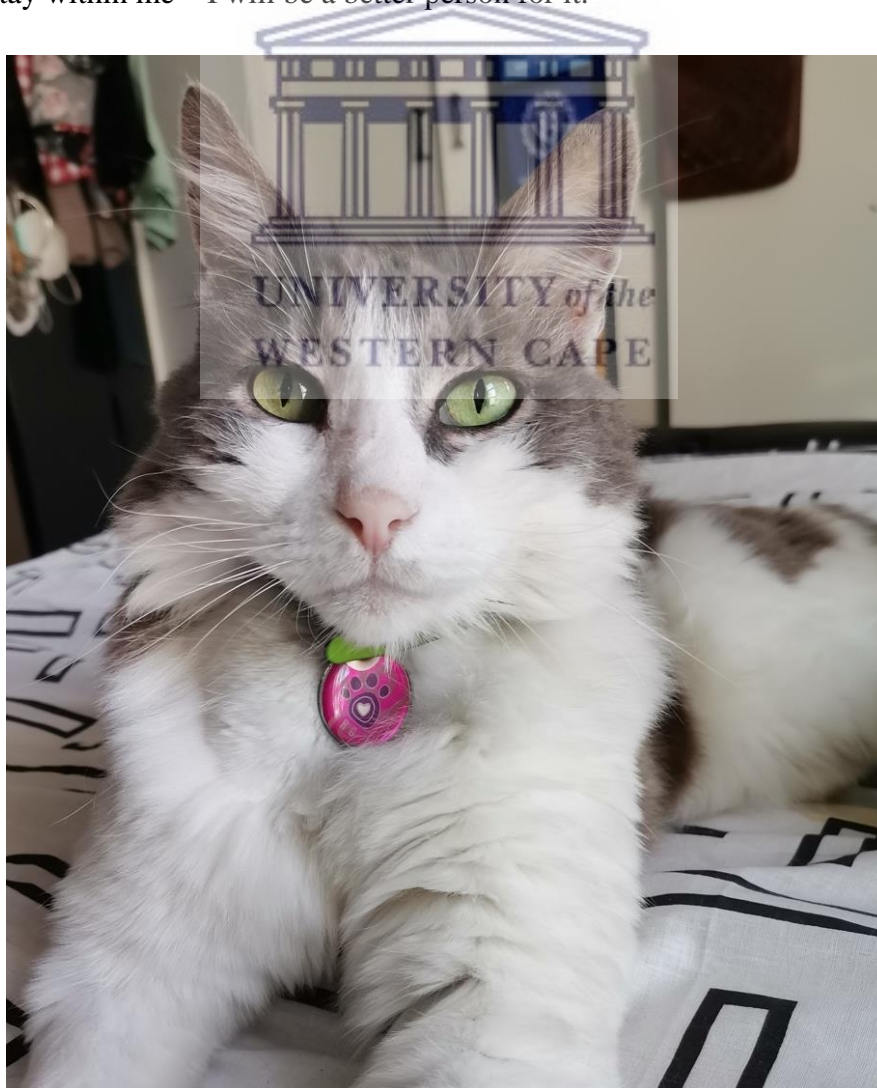
Dedication

Life does not give, for that would imply permanence of things. Life lends, and it takes.

I am dedicating this work to my sweetest, angel baba boy, Alfie. When I went to adopt a cat, you climbed onto my shoulder from the top level of the bunk bed. The staff there said you had never done that before with anyone. So, at the risk of sounding clichéd, you chose me. I can only hope you felt that you made the right choice. I can certainly say that you were the right choice for me. For thirteen years you have been beside me, in front of me, and behind me. Whatever I went through, you were there, silent, gentle, loving, and accepting. Just always there in a manner reflecting your tender soul. I am sorry for all the times I did not notice you when you were next to me or close to me due to preoccupations and anxieties consuming my mind space. I am sorry for taking you for granted and not always realising just how special you were.

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If there is a chance that we might meet again someday, then heaven is a place worth pursuing. I'm not sure where you are right now, but I hope your wings are spread wide and strong. Please also stay within me – I will be a better person for it.

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List of Abbreviations

AP	Academic performance
AP exams	Advanced placement exams
CG	Continuing-generation
CGS	Continuing-generation student
CSSS	Centre for Student Support Services
FG	First-generation
FGCS	First-generation college student
FGS	First-generation student
GHQ-12	General Health Questionnaire-12
GPA	Grade point average
GSE	General Self-efficacy Scale
HDI	Historically disadvantaged institution
HE	Higher education
HEI	Higher education institution
MANOVA	Multivariate analysis of variance
MSPSS	Multidimensional Scale of Perceived Social Support
NSFAS	National Student Financial Aid Scheme
NFGS	Non-first-generation student
SA	South Africa
SAT	Scholastic Assessment Test
SES	Socio-economic status
SGS	Second-generation student
USA	United States of America
UWC	University of the Western Cape

CHAPTER 1
INTRODUCTION

1.1 Background to the Study

Tertiary education during the apartheid period was largely reserved for the privileged and the average student population was therefore immersed in a relatively "secure" socioeconomic context. Higher education prospects were largely unavailable for black South Africans. socio-political landscape of South African higher education generally Excellent overviews focussing on the socio-political historical landscape of the higher education context in South Africa are provided by Boughey (2003; 2005; 2007) and Bozalek and Boughey (2012).

Following education policy reform after the establishment of a democratic South Africa, higher education institutions have seen an ever-increasing number of so-called "first-generation" students (FGSs) enter through its doors. Traditionally, the term "first-generation student" has been used to indicate a student who represents the first-generation in his/her family to enter tertiary education. Owing to the apartheid system which ruled the country for a number of generations, a great number of first-generation students currently entering higher education are from previously disadvantaged groups.

While the afore-mentioned broadening of access to higher education is no doubt a shift in a very positive direction, indications are that student success rates in South African higher education institutions are of great concern. According to Higher Education South Africa (2014) 35% of enrolled students drop out after their first year of tertiary education, and a further 20% of students drop out after their second year. In addition, only 15% of students complete their degree in the designated time.

Many students currently entering university are also members of a racial group at high risk of attrition (Strydom et al., 2010). A significant percentage of students therefore present with two or more of the risk factors associated with university attrition (i.e., first-generation

status, low socio-economic status, Black African ethnicity) (Kuh et el., 2007). This undermines efforts to address equity in the South African workforce as well as the country's critical skills shortage (Strydom et al., 2010).

1.2 Problem Statement

South African higher education institutions are seeing an ever-increasing number of first-generation students enter through its doors following education policy reform after the establishment of a democratic South Africa. There is however mounting evidence within the literature that first-generation students face unique challenges, both in terms of their academic performance, retention, and throughput in higher education, and in terms of the psychosocial realities they are confronted with (e.g., Falcon, 2015; Hui, 2017; Mrozinske, 2016; Pellew, 2016; Radunzel, 2018). The importance of these issues lies in the fact that the unique challenges experienced by FGSs have been empirically demonstrated to contribute to attrition and a decrease in retention rates among these students. This undermines efforts to address equity in higher education as well as in the South African workforce and the country's critical skills shortage (Scott et al., 2007). It also hampers attempts to redress past injustices related to access to education. Despite these realities, South African research on the experiences of first-generation students, the challenges they are faced with, and the needs created by their psychosocial realities, is in its infancy. There are significant gaps in our knowledge and understanding of this unique student population and much remains to be learnt to allow the development of efficient and targeted intervention and support strategies to optimize these students' chances of academic success

The present study aimed to bridge some of the afore-mentioned gaps in the South African literature by establishing a psychosocial profile of first-generation undergraduate students at an identified historically disadvantaged institution and by identifying the barriers

and facilitators of academic performance among first-generation undergraduate students at an identified historically disadvantaged institution.

1.3 Rationale for the Study

This study relates to the mandate to prioritize an increase in student access, opportunity, and success in higher education (Higher Education South Africa, 2014). The study also relates to the mandate to address the current issues of low participation, high attrition rates, and low completion rates in South African higher education (Higher Education South Africa, 2014). The same goals were expressed in the White Paper for post-school education and training (Higher Education & Training, 2013). Improving participation rates invariably means increasing the number of FGSs in HE. Gaining insight into the psychosocial and demographic profile and the barriers and facilitators of academic performance in this cohort can assist us in providing supports that promote FGS retention, throughput, and ultimately, the opportunity to pursue a desired future path.

1.4 Aims and Objectives

The overarching aim of the study is to:

a) Investigate the barriers and facilitators of academic performance among FGSs at an identified HDI

b) To develop a psychosocial profile of FGSs at an identified HDI.

The sub-aims and objectives are presented below per phase.

1.4.1 Phase I

The aim of Phase I of the doctoral study was twofold. First, the aim was to determine the scope of literature reporting on the barriers and facilitators of participation, retention, and throughput in higher education among first-generation students. Secondly, to summarize and

disseminate from the reviewed literature the key findings relating to the barriers and facilitators reportedly experienced by FGS students in terms of:

    a) Participation,

    b) Retention, and

    c) Throughput.

1.4.2 Phase II

AIM 1

To identify the barriers and facilitators of academic performance in a sample of First-generation students at an HDI.

Objective 1.1: To assess relationships between psychosocial variables, demographic variables, generational status, and academic performance.

Objective 1.2: To assess for predictive relationships between psychosocial variables, demographic variables, generational status, and academic performance

AIM 2

To develop a psychosocial profile of first-generation students at an HDI.

Objective 2.1: To assess *differences* between FGSs and CGSs in terms of demographic factors, psychosocial factors, and academic performance and thereby determine which factors render FGSs a distinct student population.

1.5 Methodology

This study consisted of a two-phase project. The first phase consisted of a scoping review of the barriers and facilitators of participation, retention, and throughput among first-generation students.

The second phase of the study consisted of a cross-sectional survey with the aims of (1) developing a psychosocial profile of first-generation undergraduate students at an identified historically disadvantaged institution and (2) the identification of the barriers and facilitators of academic performance among first-generation undergraduate students at an identified historically disadvantaged institution.

1.5.1 Phase I: Scoping Review

1.5.1.1 Design

The first phase of this project consisted of a scoping review of the literature on the barriers and facilitators of academic performance experienced by first-generation students in HE.

A scoping review "rapidly [maps] the key concepts underpinning a research area and the main sources and types of evidence available" (Mays et al., 2001, p. 194). Scoping reviews are relevant in fields containing a lack of rigorous evidence (O'Brien et al., 2010, as cited in O'Flaherty & Phillips, 2015). Scoping reviews incorporate literature that encompasses a broad range of study designs (Levac et al., 2010). The aim is to determine the availability and/or absence of literature pertaining to a specified research question. In contrast to systematic reviews, scoping reviews do not have the aim of determining the "weight" and quality of evidence in relation to the review question (Arksey & O'Malley, 2005).

1.5.1.2 Review Questions

1.5.1.2.1. What is the extent and nature of existing literature on the barriers and facilitators to participation, retention, and throughput among FGS in higher education?

1.5.1.2.2. What barriers and facilitators of (1) participation, (2) retention, and (3) throughput in higher education have been identified for FGS?

1.5.1.3 Method of the Review

The scoping review was conducted through the following five stages (Arksey & O'Malley, 2005): (1) identification of the research question; (2) identification of relevant studies; (3) selection of appropriate studies; (4) data charting and collation; and (5) summarizing and reporting findings.

1.5.2 Phase II: Cross-Sectional Survey

1.5.2.1 Research Setting

The University of the Western Cape (UWC) served as the broader research setting. UWC was considered to be an appropriate setting for the current study because, as a historically disadvantaged institution, UWC has many students from minority groups and these groups typically include a significant proportion of FGSs. In particular, the study focused on first-generation and continuing generation undergraduate UWC students following professional health sciences programmes within the Faculty of Community and Health Sciences (CHS). This included undergraduate psychology students who may have followed degree programs in faculties other than CHS. Psychology students were however included as the psychology department resides within the CHS faculty and because many undergraduate psychology students ultimately aim to follow post-graduate, professional courses in psychology.

1.5.2.2 Population and Sample

The population for the survey study consisted of first-generation and continuing generation undergraduate students registered for health sciences degree programs in the Faculty of Community and Health Sciences at UWC. The sampling frame consisted of all undergraduate students registered in the CHS faculty or registered for undergraduate psychology course, even if they were registered in other faculties. Inclusion criteria for the survey study were 1) participants had to be undergraduate students following professional

health sciences courses or undergraduate psychology courses at UWC; and 2) participants had to be registered for the academic year in which data collection took place. The final sample consisted of 481 participants, of whom 291 (60.5%) participants were FGSs and 190 (39.5%) participants were CGSs.

1.5.2.3 Design

This phase employed a survey design and incorporated an internet survey. Survey research is appropriate for describing the current status of specified characteristics within a given population and to discover relationships among variables (Graziano & Raulin, 2000). The survey was cross-sectional, i.e., it was administered once to the sample (Wyse, 2012).

The survey was hosted in Google Forms, a web-based survey application. Eligible students received an electronic invitation that contained a brief description of the study, inclusion criteria and what participation would entail, as well as a consent form that served as a link to the survey.

1.5.2.4 Instruments

The cross-sectional survey included a demographic questionnaire covering a broad range of variables including gender, age, year level, family responsibility, financial stress, place of residency, etc. In addition, three quantitative research instruments were used.

Firstly, the General Health Questionnaire 12 (GHQ-12) (Politi et al., 1994) is a measure of psychological distress and consists of a full-scale measure as well as three sub-scales, namely Depression and Anxiety, Loss of Confidence, and Social Dysfunction. The 12-item instrument is a Likert-type rating scale with scores ranging from 0 – 3 for each question.

Secondly, the General Self-Efficacy Scale (GSE) (Schwarzer et al., 1997) consists of 10 items which must be rated on a Likert scale with scores ranging from 1 – 4.

Thirdly, the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988) is a 12-item scale measuring perceived social support relating to three domains: (1)

family; (2) friends; and (3) a significant other. The instrument also produces a full-scale score. Respondents were required to rate 12 statements on a Likert scale ranging between 1 and 7, with 1 = *Very Strongly Disagree* and 7 = *Very Strongly Agree*.

1.5.2.5 Data Analysis

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS). Data analysis was focused on (1) obtaining descriptive statistics and frequency distributions; (2) analysis of the reliability and internal consistency of the research instruments; (3) tests of data normality; (4) the Pearson correlation coefficient was used to investigate associative relationships between generational status, academic performance, and demographic and psychosocial variables; (5) stepwise linear regression analysis was used to determine significant predictors of academic performance; (6) chi-square analysis was done to determine differences between the FGS and CGS groups in relation to categorical variables in the study, and (7) multivariate analysis of variance (MANOVA) to determine differences between FGSs and CGSs on a range of psychosocial and demographic variables.
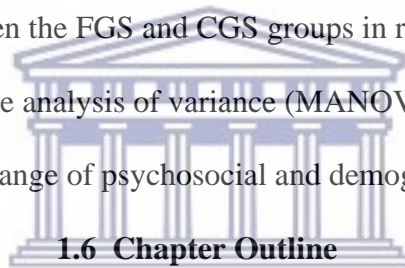
1.6 Chapter Outline

Chapter 1: Introduction

The Introduction chapter provided information on the background to the study. The problem statement and rationale for the study were discussed. The chapter also covered the aims and objectives both of the overarching study as well as each of the two phases, respectively. The methodologies for each of the two phases of the study were discussed. Next, ethical considerations were presented.

Chapter 2: Literature Review and Theoretical Framework

This chapter provides a brief literature review of challenges experienced by FGSs, and covers the theoretical framework that was selected to guide this study. The chapter discusses the origins of the theory as well as the further developments of the theory by a

number of authors in more recent times. There then follows further proposed adaptations to the framework as this was considered to be highly relevant and suitable in the context of the study aims and objectives. The chapter concludes with a rationale for the use of the proposed theoretical framework.

Chapter 3: Phase I – Scoping Review Methodology

Chapter 3 presents the methodology for the scoping review.

Chapter 4: Phase I – Scoping Review Results

Chapter 4 is dedicated to presenting the results of the scoping review. First, the chapter presents an evaluation of the scope of existing literature reporting on the barriers and facilitators of participation, retention, and throughput among FGSs in higher education. Secondly, a metasynthesis of the main findings of the reviewed studies is presented in relation to the aim of identifying the barriers and facilitators of participation, retention, and throughput among FGSs.

Chapter 5: Phase II Methodology

This chapter provides an account of the research methodology employed for the cross-sectional survey. As such, the chapter includes information relating to the aims and objectives, design, research setting, population and sample, research procedures, and the research instruments used in the survey study. The chapter then also discusses the data analysis processes employed in the survey study.

Chapter 6: Phase II Results

The Phase II results chapter presents the results of the statistical analysis of the cross-sectional survey data.

Chapter 7: Identifying the Barriers and Facilitators of Academic Performance Among South African First-Generation Students at an Identified HDI

This chapter identifies from the survey study results, and discusses in terms of the existing literature the barriers and facilitators of academic performance among undergraduate FGSs at an identified HDI.

Chapter 8: Synthesis of a Psychosocial Profile of South African First-Generation Students

Chapter 8 focuses on the synthesis of a psychosocial profile of South African FGSs at an identified HDI. Psychosocial characteristics are identified from the survey study results, and discussed against the existing literature. The identified characteristics are synthesized to create a psychosocial profile within the framework of the study's theoretical model.

Chapter 9: Discussion

Chapter 9 presents a critical consideration of key findings. Implications of key findings are discussed as they relate to the conceptualization of first-generation status as well as implications for research and intervention design. Lastly, the chapter discusses the contributions of the study as related to theoretical development, contribution to the knowledge base of South African FGSs in HE, contribution to the advancement of research on first-generation students in South Africa, and contributions to intervention design.

Chapter 10: Conclusion

The conclusion chapter provides a brief overview of the study's core findings, recommendations for future research and interventions, as well as a consideration of the limitations of the study.

CHAPTER 2

Literature Review

The aim of this chapter is to present an introductory and succinct literature review providing a broad overview of the central themes emergent in the literature on challenges experiences by FGSs in the higher education context. Given that Phase I of the study consists of a scoping review of the entire body of existing literature on this topic, the overview provided in this chapter will not be exhaustive. The central purpose is to provide conceptualizations of key constructs and to contextualize the present study.

The second aim of this chapter is to outline the theoretical framework that guided the study.

2.1 First-Generation and Continuing Generation Students

The term "first-generation student" has been defined somewhat differently by different authors (Inkelas et al., 2007), and researchers and policy makers have not reached agreement on what constitutes a first-generation college student (Byrd & MacDonald, 2005). Hsiao (1992) defined FGSs as the first in their families to attend college. Mehta et al. (2011), and Billson and Terry (1982) defined first-generation college students as those whose parents did not attend college. Abel (2020) defines FGSs as students whose parent(s) did not complete a four-year college or university degree. Closely related to the latter, Choy (2001), Hicks (2003), McConnell (2000), and Prospero and Vohra-Gupta (2007) define a FGS as a student who comes from a family where neither parent/guardian graduated from college. The latter definition removes Abel's (2020) four-year degree specifier. For the purpose of the present study, the definition of Choy (2001), Hicks (2003), McConnell (2000) and Prospero and Vohra-Gupta (2007) was adopted. A FGS was therefore defined as a student of whom neither parent/guardian graduated from a tertiary education institution. In the context of types of tertiary institutions present in South Africa, what is referred to in the adopted definition as

"college" might include colleges, universities of technology, or comprehensive and academic universities. This definition does not preclude the possibility that a parent/guardian might have attended some tertiary education, however, they did not graduate with a tertiary qualification and thus did not complete the qualification. This definition was selected for the present study as it is somewhat more inclusive than, for example, the definitions offered by Abel (2020) and Mehta et al. (2011).

A "continuing generation student" (CGS), on the other hand, is defined as a student who has at least one parent/guardian that completed college (Choy, 2001). In the literature, continuing-generation students are often also referred to as "non-first-generation" (NFGS) or "second-generation" college students (SGS) (Pike & Kuh, 2005; Ramos-Sanchez & Nichols, 2007).

Ramos-Sánchez and Nichols (2007) define a non-first-generation college student as a student with at least one parent who had completed a college degree. Stebleton et al. (2014) adopt a similar definition, except that they add the requirement that it must be a baccalaureate degree or higher that had been attained. With reference particularly to the present study's sample, the term "continuing generation student" was favoured, and was conceptualized as representing participants of whom one or both parents completed a college / university of technology / university degree, diploma, or certificate. Where findings of other studies are described, however, the preferred term of the study authors (non-first-generation versus second-generation versus continuing generation) will be used.

2.2 Challenges Experienced by First-Generation Students in Higher Education

2.2.1 Socio-Economic Status of First-Generation Students

First-generation students often come from families who have a lower socio-economic status than is the case for CGSs (Heymann & Carolissen, 2011). As a result, FGSs are less likely to receive financial support from their parents for college-related expenses (Nomi,

2005). This is concerning, because socio-economic difficulties have been associated with higher attrition rates among FGSs (Pellew, 2016). This is due to having more financial obligations such as working full-time or part-time which leaves less time to spend on studies (Falcon, 2015; Hui, 2017; Mrozinske, 2016; Pratt et al., 2019; Stebleton and Soria, 2012; Terenzini et al., 1996). Pascarella et al. (2004) found that work responsibilities had a significant negative effect on critical thinking, internal locus of attribution for academic success, and preference for higher-order cognitive tasks among first-generation students. Other significant effects of a low-income background include living off-campus, which results in lower involvement in extra-curricular college activities (Pascarella et al., 2004), lower levels of peer interaction (Pascarella et al., 2004), reduction in the intellectual and personal development during college (Duggan, 2001), and experiences of isolation and marginalization which negatively affect long-term persistence in higher education (Jehangir, 2009). We could expect to find that financial difficulty for South African FGSs would lead to similar difficulties in higher education than those identified in the international literature.

2.2.2 Academic Preparedness for Higher Education

The literature indicates that FGSs often have lower levels of academic readiness for HE than their CGSs counterparts (Hui, 2017), and this contributes to lower academic performance among FGSs in HE (D'Amico & Dika, 2013; Falcon, 2015; Radunzel, 2018). Stebleton and Soria (2012) found that FGSs reported statistically significant higher instances of weak English skills than CGSs and enter college with weaker cognitive skills in reading, math, and critical thinking (Terenzini et al., 1996).

FGSs tend to take less difficult classes in high school than CGSs (Falcon, 2015), including less advanced placement courses (Warburton et al., 2001), less Algebra in the 8th grade, and less advanced math courses (Balemian & Feng, 2013). These factors appear to pose difficulties when FGSs are confronted with the academic standards of HE.

2.2.3 Academic Performance

Studies have shown that FGSs face obstacles in the classroom as they adjust to the new level of rigour that accompanies higher education (Kizart, 2014; Mrozinske, 2016; Ricks, 2016). The literature demonstrates that FGSs have significantly lower grade point averages (GPAs) and poorer academic performance (D'Amico & Dika, 2013; Palbusa, 2016; Vuong et al., 2010) as well as lower retention rates than CGSs (D'Amico & Dika, 2013). Warburton et al. (2001) found a 15% gap between the 3-year persistence rates of first- and second-generation students (73% and 88%, respectively). First-generation students were 4% less likely to persist through higher education than second-generation students (Duggan, 2001).

Academic preparation and GPA in high school, social integration/student engagement, economic factors, and FGSs status have been found to have the greatest impact on student retention and persistence among FGSs in HE (Engle & Tinto, 2008; Lotkowski et al., 2004). Academic integration has been found to be positively associated with retention among FGSs (Mrozinske, 2016).

2.2.3.1 Academic Performance in the Health Sciences

According to Mulholland et al. (2008), student attrition is one of the most important challenges to financial, educational and workforce development targets in the health and social care fields. Several authors and studies have alluded to higher attrition rates among medical students (Deary et al., 2003; Dyrbye et al., 2003; Huff & Fang, 1999; Iputo & Kwizera, 2005; Lazin & Neumann, 1991), students following allied health education programmes (Gupta, 1991), and nursing students (Dyrbye et al., 2003; Mulholland et al., 2008; Stott, 2007). One of these studies (Huff & Fang, 1999) found the risk of attrition among medical students to increase among students with racial-ethnic underrepresented minority status. Some of the afore-mentioned literature is of South African origin (Iputo &

Kwizera, 2005). Another South African study (Lourens & Smit, 2003) at Technikon Pretoria across a broad range of study areas found that the main subject of study was one of the two most significant predictors of success in the first year of studying. Burnout has been identified as a particular problem for nursing students (Deary et al., 2003). Additionally, male nursing students may experience difficulty with feelings of being isolated and excluded from an academic and clinical perspective, as they represent a gross minority compared to female nursing students (Stott, 2007). Burnout has also been noted as a problem among medical students (Dyrbye et al., 2003).

2.2.4 Parental Education / First-Generation Status

First-generation status *itself* is a risk factor for attrition, even when controlling for those variables that are frequently associated with poorer academic performance, including low income, limited academic readiness, enrolment characteristics, limited social support, various demographic factors, etc. (Allan et al., 2016; Berkner & Chavez, 1997; Chen & Carroll, 2005; Choy, 2001; Horn & Nunez, 2000; Nunez & Cuccaro-Alamin, 1998; Radunzel, 2018; Warburton et al., 2001). Ishitani (2003) found that even when factors such as age, gender, race, and high school marks were controlled for, FGSs were 71% more likely to drop out of HE than students who had two university-educated parents. This suggests that parental education alone can explain much of the variance in academic performance among FGSs.

Having a parent(s) who underwent tertiary education has distinct advantages to the children of these parents during their own HE journeys. Students whose parents attended college begin college with more understanding, awareness, and proficiency in the codes of conduct, rules, and practices of the higher education setting than do FGSs (Palbusa & Gauvain, 2017). Parents pass on knowledge along with advice and emotional support that help their children when they transition to college (Palbusa & Gauvain, 2017). Young

students therefore benefit from interacting with parents and others who have college experience (Hurtado & Gauvain, 1997; Kuh et al., 2005). Unfortunately, these learning experiences and support are less attainable for FGSs (Engle, 2007).

2.2.5 Ethnicity and Minority Status

Various studies indicate that ethnicity and minority status may present obstacles to academic success among FGSs (e.g., Falcon, 2015; Pellew, 2016). Pellew (2016) found that ethnicity impacted the retention rate of FGSs. Moreover, Falcon (2015) found that African American, Hispanic, Native American, and low-income students had completed high school and attended college at consistently lower rates than their white and higher income student counterparts in the USA over the past few decades.

Some studies have however had contrary findings. For example, D'Amico and Dika (2013) found that minority students had a higher rate of persistence in HE than white students. Furthermore, Radunzel (2018) found that in terms of ethnicity, Asian and Hispanic students were less likely than white students to leave college. In addition, Hui (2017) found in a study of FGSs that ethnicity was not related to being on-track to graduate.

2.2.6 Social Support Structures

There are indications that FGSs experience less social support from parents (Jenkins et al., 2013) and other family members (London, 1992; Terenzini et al., 1994). Lack of support from the family's side (Kizart, 2014) may include less perceived helpfulness (Palbusa, 2016), less perceived emotional and information support (Sy et al., 2012), and difficulties relating to family members (Hui, 2017).

FGSs may also experience less social support from friends who had not gone to college (Jenking et al., 2013; London, 1992; Terenzini et al., 1994). This has been attributed in part to the fact that FGSs tend to spend less time socializing (Terenzini et al., 1996). Lotkowski et al. (2004) found that greater work responsibilities and living off campus

negatively impact the ability of FGSs to engage with the institution. First-generation community college students have significantly lower levels of extra-curricular involvement, athletic participation, volunteer opportunities, and non-course related interactions with peers (Pascarella et al., 2004).

First-generation students also tend to be more reluctant to develop relationships with faculty members and are less likely to perceive faculty members as being concerned about their development (Katrevich & Aruguete, 2017; Richardson & Skinner, 1992; Soria & Stebleton, 2012). This is unfortunate as it has been found that communication and relationships with faculty members influence the retention and persistence rates of FGSs (Katrevich & Aruguete, 2017; Soria & Stebleton, 2012).

The issue of social support for FGSs is of great importance as the literature shows clear associations between social support and integration, academic performance, retention, and attrition among FGSs (Katrevich & Aruguete, 2017; Mrozinske, 2016; Pratt et al., 2019; Reome, 2012; Ricks, 2016;).

2.2.7 Psychological Factors

The literature indicates that FGSs may be vulnerable to mental health difficulties due to their first-generation status and resulting experiences, and this represents a significant obstacle to academic achievement (DeBerard et al., 2004).

FGSs have reported statistically significant higher instances of feeling depressed, stressed, or upset than CGSs, and experienced this as an obstacle to their academic success (Stebleton & Soria, 2012). One study found that FGSs, low-SES students, and students with disabilities had stress levels that are much higher than average and had anxiety levels that are just below the threshold for an anxiety diagnosis (Allison, 2015). Jenkins et al. (2013) found that FGSs reported significantly stronger PTSD symptoms and less life satisfaction than NFGSs. Garriot and Nisle (2018) also found that FGSs experience increased stress levels

because they do not have effective ways to cope with limitations in school and family support while in college. Another study demonstrated that self-efficacy beliefs affected GPA and persistence rates of FGSs (Vuong et al., 2010). FGSs appear to have lower self-esteem than CGSs and this represents an obstacle college success (Falcon, 2015). Likewise, Pratt et al. (2019) found that lack of confidence in one's academic ability posed a risk factor for attrition among FGSs. In addition, certain cultural factors relating to the first-generation student's context may unfortunately prevent them from seeking out psychological services when it is needed, which puts their mental health at risk (Garriott et al., 2017).

2.2.8 Cultural Adaptation

FGSs may experience difficulties adjusting to the HE environment. FGSs who originate from interdependent families may feel that individual strivings are selfish, and this may cause a feeling of isolation at "Western" universities that focus on student independence (Katrevich & Aruguete, 2017). First-generation community college students have more to adapt to when moving from high school to college, because their experience often involves substantial cultural as well as academic and social transitions (Terenzini et al., 1996). The extent to which first-generation students can negotiate a transition from home culture to academic culture has a significant impact on whether they can attain success in college (Terenzini et al., 1994).

2.2.9 Lack of Knowledge of Tertiary Institutions and Processes

FGSs may lack knowledge of tertiary institutions and processes and they are constantly faced with questions, confusions, and challenges. Ricks (2016) found that first-generation students were confused about academic policies, degree requirements, and the financial aid process. This may leave these students with feelings of isolation and loneliness at the beginning of their HE journey (Ricks, 2016). Another study revealed confusion about bursaries and student loans as well (Katrevich & Aruguete, 2017). This lack of knowledge of

tertiary institutions can be so overwhelming for FGSs that some are less likely to enrol for HE even if they qualified for admission (Engle, 2007). However, Reome (2012) found that better understanding of college level work, classroom expectations, and the financial aid process assisted FGSs in successful degree attainment.

2.2.10 Summary

In summary, the current literature indicates unique challenges experienced among first-generation students, including difficulties with academic performance and attrition, lower levels of academic preparedness for higher education, lack of knowledge of tertiary institutions and processes, limitations in social support, significant financial limitations, difficulties with cultural adaptation to higher education, ethnicity and minority status, psychological difficulties, and lower levels of parental education which substantially limits the ability of parents to provide their FGSs child with guidance on HE processes.

2.3 Theoretical Framework

This chapter presents the theoretical framework which guided the present study. The selected theoretical framework consisted of what was originally Cross' (1981) *Chain of Response Model.*

2.3.1 Chain of Response Model

Cross (1981) first developed what was termed the *Chain of Response model* with the purpose of studying the barriers to participation of mature-aged students in tertiary education. Cross' original Chain of Response model had undergone various adaptations following its initial proposition by several researchers, including Gibson and Graff (1992), Garland (1992), Schilke (2001), Carroll et al. (2009), McClelland (2014), and Bowles and Brindle (2017).

The adaptations and applications of Cross' (1981) original model by the abovementioned authors progressed from an initial focus on the study of barriers to mature-aged students' participation in higher education generally, to the study particularly of barriers

to retention of tertiary education students in distance learning. Applications of the model further progressed to a consideration of both barriers and facilitators to retention in distance learning higher education. Lastly, the model was applied also to the study of barriers and facilitators to retention among tertiary education students generally.

In the original model by Cross (1981), three primary factors were identified as barriers to participation in adult education. Firstly, *situational factors* referred to barriers that arise from the adult's particular life circumstances, such as the need to spend time with family members. Secondly, *dispositional barriers* referred to the student's concept of the self as a learner, such as low self-concept. Finally, *institutional barriers* referred to factors such as difficulties with the scheduling of classes or the registration process.

In the context of the present study, the theoretical model was used to guide the study in terms of (1) the aims and objectives as well as the research questions guiding both Phases I and II of the study; (2) the methodology, including research design, selection of research instruments, and data analysis approaches in both phases of the study, and (3), the integration, interpretation, and critical consideration of research findings.

What follows will be an outline of the main contributions to the further development of Cross' (1981) original model by other authors.

2.3.2 Applications of the Model to Research in Higher Education

2.3.2.1 Gibson and Graff (1992)

Gibson and Graff (1992) adapted the three-barrier structure proposed by Cross (1981) in their investigation of mature aged student retention in an undergraduate distance education context. Moreover, they expanded on Cross' (1981) model to include *independent study barriers*, as their study proposed that the independent study context itself represented a barrier to some learners, because of the inherent isolation and physical distance between learner and instructor and learner and classmates (Gibson & Graff, 1992).

Exploring each of these categories in greater detail, Gibson and Graff (1992) found that the factors presented in Figure 2.3.2.1 had the greatest impact on the retention of mature aged distance education students undertaking undergraduate academic programs.

Situational	*Dispositional*	*Independent Study*
• Balancing home life with studies • Finding enough time to study • Balancing employment with studies	• Motivation • Ability to concentrate • Confidence in one's ability • Setting specific study times • Energy • Thinking one is too old to be a student • Not knowing the value of the degree • Increased stress	• Few opportunities to meet with instructors • Deciding how to study • Few opportunities for discussion • The time required to complete a degree • Feeling isolated • Sufficient guidance from instructor • Taking responsibilities for one's own studies

Figure 2.3.2.1

Factors Impacting Mature Aged Distance Education Student Retention (Gibson & Graff, 1992).

2.3.2.2 Garland (1992, 1993)

Garland (1992, 1993) undertook an ethnographic study to investigate barriers to persistence among persisting and withdrawing students in distance learning in a natural resource sciences course. She expanded on the original model by Cross (1981) which identified dispositional, institutional, and situational factors to add *epistemological factors*.

Epistemological factors refer to the course content and the subject matter itself. Garland (1992, 1993) believed epistemological factors to be significant based on findings from other researchers including Brindley (1988) and Bartels (1982). These researchers found that the course content itself can affect attrition in distance education and that students who

drop out were less satisfied with the content of their courses. Woodley and Parlett (1983) found that the form and content of courses accounted for the dropout of about one quarter of British Open University students. Garland cites a further study (Chacon-Duque, 1985) which demonstrated that the difficulty of specific courses also contributes to student attrition in distance education. Epistemological barriers were thus defined as disciplinary differences in epistemology (the nature, origin, and scope of knowledge) and disciplinary differences in modes of discourse.

Garland (1992, 1993) was also influenced by the work of Rubenson (1986), who proposed that many institutional and situational barriers do not directly cause attrition. Rather, they contribute to attrition in interaction with predisposing characteristics that affect students differently as a result of their disposition.

Garland's (1992, 1993) research confirmed this proposition. The study demonstrated that variables contributing to attrition acted "additively and synergistically" (p. 195), and that identified obstacles to persistence did not seem to act singly to cause attrition.

2.3.2.3 Schilke (2001)

Schilke (2001) investigated attrition from web-based courses at a Midwestern community college through the online classroom experiences of learners who dropped out of these courses. Schilke (2001) extended Garland's (1993b) conceptual framework to include technology as a potential barrier to completion of distance education courses. Schilke (2001) notes that the primary distance education instructional methods used in the distance education courses at the time of Garland's (1993c) study were paper-based and did not include technology-based instructional methods. Technology barriers for both the students and the institution include lack of reliable computer access, difficulty accessing the internet, challenges with online resource availability due to missing or broken electronic links, and lengthy download times.

This analysis was compared to existing research on attrition in distance education and replicated the findings reported in the Garland's Model of Barriers to Persistence in Distance Education. The model was updated to reflect the unique features of learning delivered through the World Wide Web. Five groups of barriers were identified namely, situational, dispositional, epistemological, institutional, and technological.

2.3.2.4 Carroll, Ng, and Birch (2009)

Carroll et al. (2009) conducted an exploratory case study that investigated the factors affecting retention and progression of postgraduate business students at an Australian distance education university. The authors adopted the Chain of Response Model (Cross, 1981), later adapted by Gibson and Graff (1992) as the theoretical framework for their study. However, as opposed to Gibson and Graff (1992), Carroll et al. (2009) considered *independent study* to be a situational factor given that students opt to study by distance education due to circumstances in their life (i.e., situational factors) that make full-time campus study impractical. The authors thus categorized independent study as a situational factor rather than a discrete category.

Carroll et al. (2009) also departed from the exclusive focus on the obstacles/barriers to participation in tertiary education and consequently adopted the term "factors" to include both obstacles and enablers of student retention. The authors investigated factors associated with (1) a normal rate of progression; (2) continued studies but at a delayed rate of progression, and (3) exit from the degree course. Fig 2.3.2.4 represents the research framework adopted by Carroll, Ng, and Birch (2009).

One commonality among research from 1981, when Cross first discussed dispositional, situational, and institutional factors through to 2009, is that these factors were all conceptualized as barriers to study. The factors first identified by Cross (1981) were

conceptualized as variables that could influence a student's persistence in distance study both positively and negatively only with the advent of Carroll et al.'s (2009) work.

2.3.2.5 *McClelland (2014)*

McClelland (2014) investigated the influence of situational, dispositional, institutional, technological, and epistemological factors on student withdrawal from undergraduate online programs of study in higher education. It reflects and extends from the work of Cross (1981), Garland (1992, 1993), and Carroll (2008). This model adapted Garland's (1992) model and added to this the influence of technology factors (note: for situational, dispositional, institutional, and epistemological factors, Garland (1992) used the term "barriers" while this research referred to all of these as "factors").

Added to Garland's (1992) model by McClelland (2014) were the technological factors as identified by Schilke (2001), noting that these factors may be influential on the student, institution, and course content.

SITUATIONAL FACTORS

- **Employment status**
- **Financial pressures**
- **Family commitments**
- **The independent study context**
- **The health of the student**

INSTITUTIONAL FACTORS

- **Staff responsiveness**
- **Distance education program design**
- **Relevance of the program**
- **Student support systems**
- **Student orientation**

DISPOSITIONAL FACTORS

- **Student motivation**
- **Realistic goals and intentions**
- **Self-efficacy**
- **Student satisfaction**

DECISION

Continue at normal rate of progression

Continue at delayed rate of progression

Exit from degree

Figure 2.3.2.4

Research Framework adopted by Carroll, Ng, and Birch (2009).

Like Garland (1992, 1993), McClelland (2014) also proposed that the respective factors potentially interrelate. Table 2.3.2.5 provides examples of potential interrelationships between the differing factors. McClelland (2014) stresses that the interrelationships presented in Table 2.3.2.5 are not meant to be fully inclusive or exhaustive. Instead, these are given as examples to underscore the complex nature of a student's withdrawal/persistence decision. McClelland's (2014) study however did not empirically investigate interrelationships between the differing factors in her study.

Table 2.3.2.5

Description and Interrelationship Examples for Situational, Dispositional, Institutional,

Technological and Epistemological Factors (McClelland, 2014).

FACTOR	DESCRIPTION / EXAMPLE	EXAMPLES OF POTENTIAL INTERRELATIONSHIPS BETWEEN FACTORS
Situational	Specific to the personal circumstances of the student: employment, health, family, finances	Situational factors may influence/be influenced by institutional factors (e.g. student's financial circumstances and institutional cost of study) and dispositional factors (e.g. changes in health or employment may impact upon the student's confidence or motivation).
Dispositional	Related to the student's intrinsic nature: beliefs, confidence, attitudes, motivation	Dispositional factors may influence/be influenced by institutional factors (e.g. lack of staff response impacting upon student's motivation) and technological factors (e.g. software stability issues impacting upon student's confidence or attitude).
Institutional	Under the control of the institution: staff response times, media, course design, cost	Institutional factors may influence technological factors (e.g. media used impacting upon software or data cap requirements) and epistemological factors (e.g. course design impacting upon communication styles).
Epistemological	Student's expectations and perceived relevance: personal interest, prerequisite knowledge, communication styles	Epistemological factors may influence dispositional factors (e.g. lack of prerequisite knowledge impacting upon confidence, or not perceiving any relevance of study to personal goals impacting upon motivation).
Technological	Relevant to the mode of delivery: computer/internet access, data caps, system stability, resource links, software	Technological factors may influence situational factors (e.g. software requirements impacting upon student's financial situation).

2.3.2.6 Bowles and Brindle (2017)

Guided by Carroll et al.'s (2009) model of facilitating factors and barriers in

postgraduate higher education, Bowles and Brindle (2017) conducted a systematic review of

the facilitating factors and barriers to student retention among students studying education at tertiary institutions. These factors were first allocated to one of three categories identified in previous research as influential on student retention: situational, dispositional, and institutional factors. These three factors were then extended to include sub-factors to more fully define the model of facilitating factors and barriers identified through the systematic review. The expanded model is displayed in Figure 2.3.2.6.
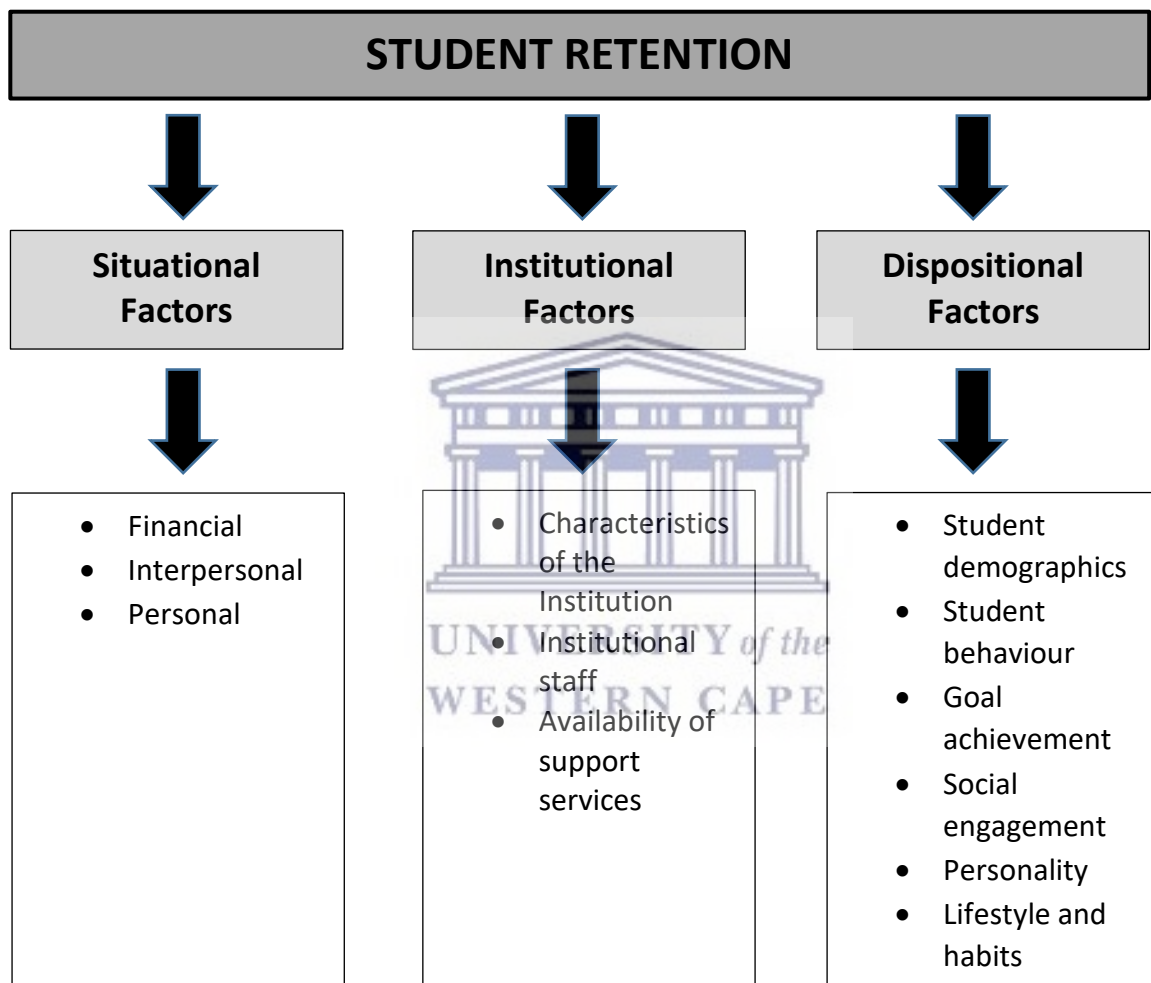
Figure 2.3.2.6

Carroll et al.'s (2009) Model Extended to Represent the Student Retention Factors identified through Bowles and Brindle's (2017) Systematic Review.

2.3.3 Theoretical Framework for the Present Study

An adaptation of the chain of response model (Cross, 1981) - including the further developments thereof by other authors - was used as the theoretical framework for the present study. The adaptation entails the following.

First, the model was used as comprising five categories of barriers and facilitative factors instead of three. The factors include dispositional, situational, epistemological, institutional, and extra-institutional factors. The model seeks to identify the situational, institutional, dispositional, and epistemological, institutional, and extra-institutional factors that serve as barriers and facilitators to academic performance among undergraduate first-generation students at a previously disadvantaged South African university.

The model adds extra-institutional variables (to be defined below) as an additional factor category. While the definitions of the various factors have been touched upon in earlier sections of this chapter, the five factors will be more comprehensively defined and described below.
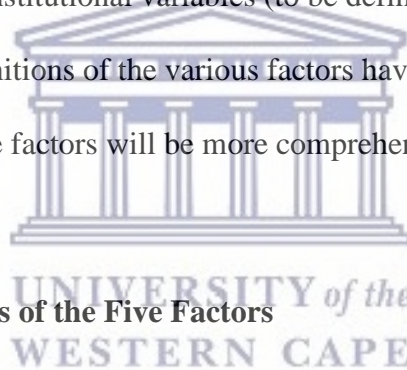
2.3.3.1 Elaborated Definitions of the Five Factors
2.3.3.1.1 Situational Factors

Situational factors arise from the student's particular life circumstances, such as the need to spend time with family, care for dependents and undertaking work responsibilities (Carroll et al., 2009; Cross, 1981; Gibson & Graff, 1992)

Also included are employment and health of the student (Carroll et al., 2009; Cross, 1981; McClelland, 2014; Roberts, 2004), as well as financial factors (Garland, 1992). Roberts (2004) also includes factors such as the learning environment and time constraints. Rezabek (1999) added factors such as transportation and age. In the model proposed for the current study, technological factors, which have previously been considered to be a distinct

factor category, will be added to the category of situational factors and no longer serve as a separate and distinct factor category. Technological factors refer to those areas relating to the mode of course delivery and includes access to computers and the internet (McClelland, 2014; Roberts, 1999). Problematic technological issues may include missing or broken electronic links as it pertains to the internet and excessive download times (Schilke, 2001).

2.3.3.1.2 Institutional Factors

Institutional factors include those areas under the control of the institution such as cost of studies, staff responsiveness, and course design (Carroll et al., 2009; Cross, 1981; Roberts, 2004, McClelland). Also included are factors that result from procedures, policies, and structures of the educational institution (Carroll et al., 2009; Cross, 1981; Gibson & Graff, 1992).

Institutional factors also include the availability of courses, the adequacy of information dissemination about the opportunities available, policies involving such matters as admission qualifications and course pacing, transferability of credits, the provision of foundation or remedial courses for those with insufficient background, requirements to meet at particular times and/or places for labs or audio-teleconferences, the technologies employed, and provision of student support services (Garland, 1992). Additional institutional factors include scheduling of classes and the registration process (Cross, 1981), as well as financial aid and admissions processes (Rezabek, 1999).

For the purpose of the current study, the socio-historical context of the institution is also added as an institutional factor.

2.3.3.1.3 Dispositional Factors

Dispositional (or attitudinal) factors are individually and collectively held beliefs, values, attitudes, or perceptions that may inhibit a person's participation in organised learning activities (Carroll et al., 2009) and also includes the student's intrinsic nature and confidence

(Carroll et al., 2009; Cross, 1981; McClelland, 2014; Roberts, 2004). In addition, students' learning styles and motivation are of importance here (Roberts, 2004). Under dispositional factors can also be understood the student's psychological and sociological nature, perceptions about themselves as learners, their degree of self-directedness (Garland, 1992), and their personal background (Rezabek, 1999).

2.3.3.1.4 *Epistemological Factors*

Epistemological factors include those areas relating to student expectations, the students' conceptual frame, and the creation and dissemination of knowledge (Garland, 1993; McClelland, 2014). Also included is the student's subjective experience of the difficulty of the course. Barriers in this category may include courses that are experienced as too technical, theoretical, or abstract (Garland, 1992). Epistemological factors additionally include the level of prerequisite knowledge that the student possesses and the level of personal interest in the course content as well as the perceived relevance of the course material to the student and the student's envisioned career path (Garland, 1999). Finally, epistemological factors include the nature of the disciplinary knowledge, the role of theory, the extent of modelling and quantification, and the level of jargon in the course subject matter (Garland, 1992).

2.3.3.1.5 *Extra-Institutional Factors*

For the purpose of the proposed model for the current study, extra-institutional factors refer to factors that are beyond the control of the institution and have an effect on the characteristics and functioning of the institution. These factors may include the broader socio-political and socio-economic contexts within which the institution functions. Extra-institutional factors may also include prevalent socio-political discourses which influence functioning of the institution as well as the academic offerings of the institution.

Finally, the Covid-19 pandemic has taught us that public health matters may also exert a direct influence on the functioning of education institutions.

The abovementioned extra-institutional factors have a direct influence on institutional, dispositional, situational, and epistemological barriers and facilitators to the academic performance of students.

2.3.3.2 Central Propositions of the Adapted Theoretical Framework for the Present Study

The adapted model was appropriate for the present study and the decision to use this particular formulation of the model rests on three core considerations or propositions:

1) The academic performance of South African first-generation students is affected by dispositional, institutional, situational, epistemological, and extra-institutional factors, each of which are classified as being either a barrier or a facilitator to academic performance.

2) This conceptual adaptation of the model adds "extra-institutional" factors to be considered as a variable that contributes to an understanding of academic performance. The effects of extra-institutional factors exert influence on the institutional, situational, dispositional, and epistemological factor dimensions.

Among the critique of Cross' Chain of Response model is included the notion that the model does not account for the effects of personal and social history on participation in learning activities and education (Hearne, 2018). It was suggested that much research is needed in terms of this aspect. The addition of extra-institutional factors to the present model addresses this limitation of the original model.

3) Technological factors have previously been considered to be a distinct factor or category. The incorporation of technical factors into the category of situational factors help to provide a clearer and more contextualised understanding of the impact of technology. This is particularly important in the South African context as there is great variation in

the ICT readiness and issues of data vulnerability and inequitable access to technology are intermingled with other contextual factors.

4) The model proposes particular directionalities of influence between the factor dimensions. Moreover, it is suggested that:

- Extra-Institutional factors affect institutional, epistemological, situational, and dispositional factors.

- Institutional factors affect epistemological, situational, and dispositional factors.

- Epistemological factors affect situational and dispositional factors.

- Situational factors affect dispositional and epistemological factors.

- Dispositional factors affect situational and epistemological factors.

5) There are also intra-factorial relationships between the factors found within one dimension.

The model was appropriate for the study as it enabled the identification and categorization of barriers and facilitators of student retention and success across the five-factor formulation.

Figure 2.3.3.2.1 represents the adapted model for the identification of barriers and facilitators of academic performance among FGSs in the present study. Figure 2.3.3.2.2 provides a diagrammatical illustration of the proposed directionalities of interrelationships between the factor dimensions.
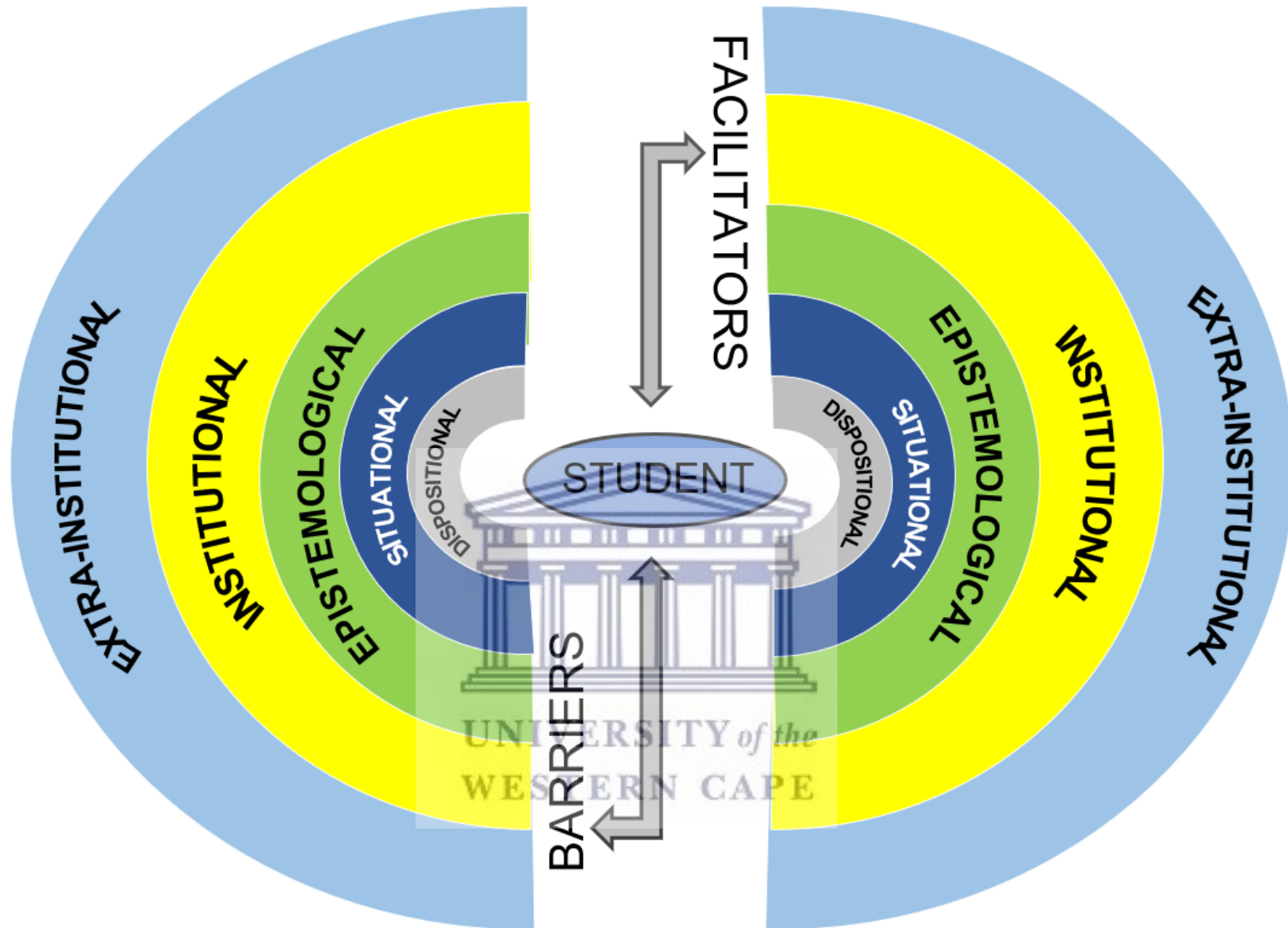
Figure 2.3.3.2.1

Adapted Theoretical Framework for the Identification of Barriers and Facilitators of Academic Performance among FGSs in HE.
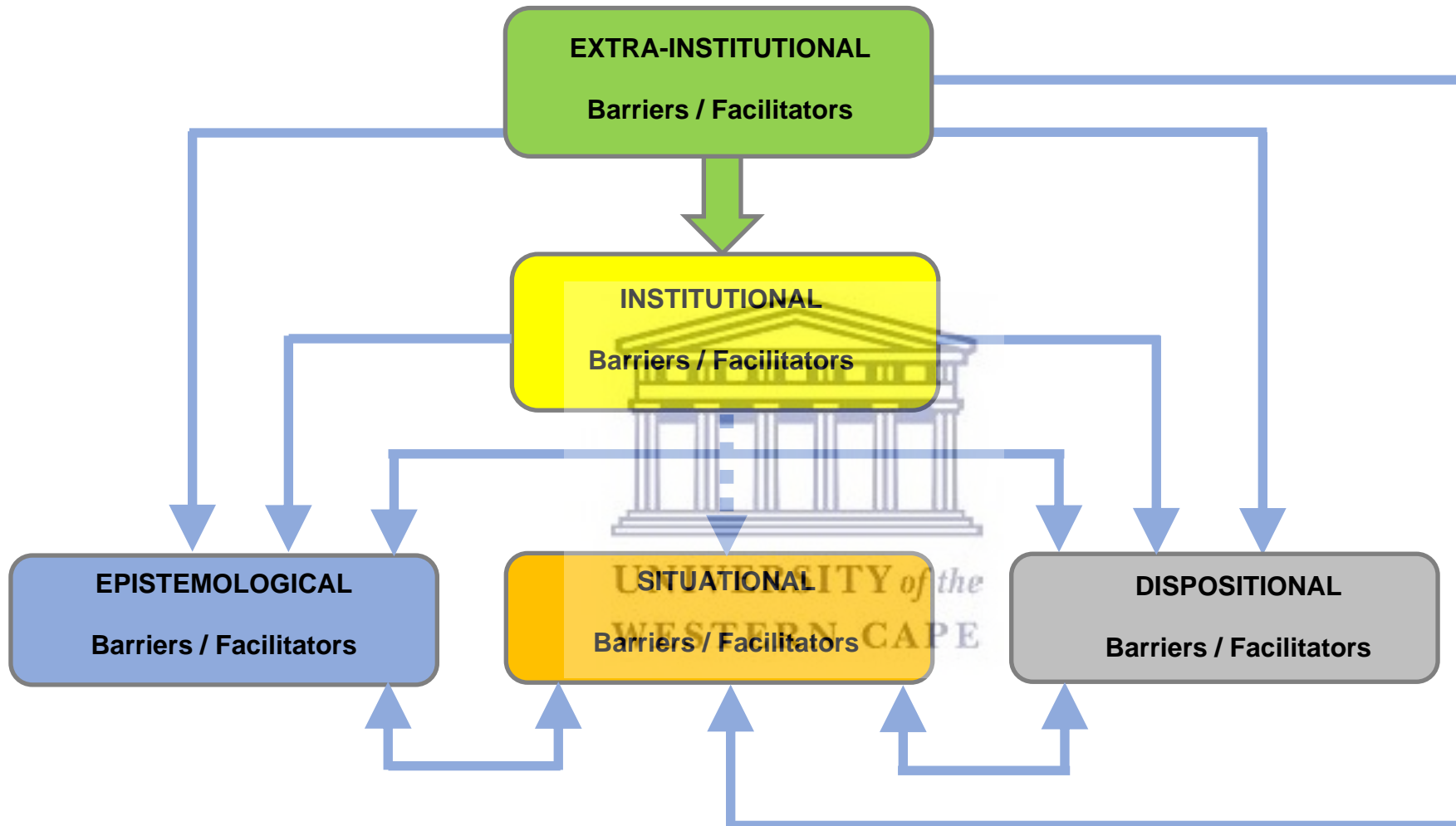
Figure 2.3.3.2.2

Directionalities of Interrelationships between Factorial Dimensions.

The second adaptation was to apply the formulation to serve as a descriptive frame

for the synthesis of a psychosocial profile of FGSs. In contrast to the models by Cross and

colleagues that sought to identify factors that serve as barriers and facilitators to academic

performance, the application therefore now shifts the focus to using the model to describe the

student him-/herself in terms of both his or her internal characteristics (dispositional aspects)

and external contexts (situational and epistemological aspects). The use of the framework in

this manner moves beyond global psychosocial descriptions to a more nuanced description of

the cohort generating the data, and is a logical outflow of the model.

The adaptation of the model for application in the synthesis of a psychosocial model

of FGSs is limited to the person him-/herself. The model therefore omits the institutional and

extra-institutional factor dimensions. The second adapted model therefore includes the

adapted factors as follows below.

2.3.3.3 Dispositional Factors

Dispositional (or attitudinal) factors will include individually held beliefs, values,

attitudes, or perceptions (Carroll et al., 2009), and the student's intrinsic nature and

confidence (Carroll et al., 2009; Cross, 1981; McClelland, 2014; Roberts, 2004). Also

included are psychological aspects of the student (Garland, 1992), as well as the student's

personal background (Rezabek, 1999).

2.3.3.4 Situational Factors

Situational factors will include the student's life circumstances, including the need to

spend time with family, care for dependents, and work responsibilities (Carroll et al., 2009;

Cross, 1981; Gibson & Graff, 1992), employment and health (Carroll et al., 2009; Cross,

1981; McClelland, 2014; Roberts, 2004), financial factors (Garland, 1992); learning

environment, time constraints, age (Rezabek, 1999; Roberts, 2004), and lastly, technological

factors (McClelland, 2014; Roberts, 1999; Schilke, 2001).

2.3.3.5 Epistemological Factors

Epistemological factors include only those epistemological factors that are characteristic of the student as a person and as an individual. As such, the factors will include those areas relating to student expectations and the students' conceptual frame (Garland, 1993; McClelland, 2014; Roberts, 2004), the level of prerequisite knowledge that the student possesses, and the level of personal interest in the course content as well as the perceived relevance of the course material to the student and the student's envisioned career path (Garland, 1999).

2.3.4 Rationale for the Use of the Adapted Model for the Present Research

The applicability of the selected theoretical model for the present research lies first and foremost in the prior use of the model in the study of both the barriers and facilitators to persistence in higher education among particular subgroups of students (e.g., mature-aged students, distance-learning students, and students following particular courses of study) within particular contexts (e.g., distance education and particular courses of study). The model therefore appears to be highly applicable to the present study given its focus on both the barriers and facilitators of retention among a particular subgroup of students, namely FGSs at an identified HDI.

The appropriateness of the selected theoretical model lies in its capacity to measure variables affecting academic performance across a range of factors and levels including the characteristics of the student him-/herself (dispositional factors), the student's context (situational factors), the academic preparedness of the student (epistemological factors), as well as characteristics of the institution itself (institutional factors). The latter allows for both a more in-depth and a broader consideration of influential variables which can be contrasted, for example, with Tinto's (1993) theory of *Dimensions of Institutional Action*, which outlines factors contributing to student attrition and retention relating mostly to influences that

manifest at the institutional level. The addition of extra-institutional factors for consideration further deepens and broadens the usefulness of the selected model in its allowance of a better understanding of factors that may exert an influence at the institutional level. The various iterations of the Chain of Response framework together seem to offer the kind of contextualised, integrative understanding that is missing from much of the current empirical research on FGSs.

The appropriateness of the model extends to its capacity to articulate into measurements beyond the level of cohorts to focus also on the level of the individual student. Historically only cohort level analyses were conducted, but this model lends itself to deriving variables affecting academic performance across the range of factors that enabled the synthesis of a psychosocial profile.

The adaptations to the model consolidated the expansion of the model in subsequent studies. This flexibility of the adapted model enabled the pursuit of the objectives of the study and informed the subsequent methodological choices related to design and instrumentation. This is further expanded upon in the methodology chapter.

In summary, the theoretical framework was applied at a conceptual and implementation or methodological level. The results from the study will also be interpreted in relation to the theoretical model to provide a formulatory sense of the study findings.

CHAPTER 3: Phase I – Scoping Review Methodology

3.1   Aims

The overall aim of Phase I of the doctoral study was twofold. First, the aim was to determine the scope of the international and local literature reporting on the barriers and facilitators participation, retention, and throughput among first-generation students (FGSs) in higher education (HE). Participation, retention and success all refer to the subjective and objective nature of a student's involvement in, and learning experience of, higher education measured through individual perceptions and material outcomes of achievement (Singh, 2011).

The second aim was to summarise and disseminate from the reviewed literature the key findings relating to the barriers and facilitators of participation, retention, and throughput reportedly experienced by FGSs.

3.2 Design

This phase incorporated a "scoping review". A scoping review, as described by Arksey and O'Malley (2005), rapidly "maps" all the key concepts and relevant literature that relate to a particular research topic. Scoping studies aim to cover a broad range of literature relating to the topic of interest. It provides comprehensive coverage of the available literature (Arksey & O'Malley, 2005). While scoping studies do not extensively analyse the designs of the studies reviewed (rather focusing on the breadth of its search), they do differ in how much detail is extracted from the literature. This depends on the purpose of the scoping review. Arksey and O'Malley (2005, p. 6-7) identify four purposes: (1) To examine the extent, range, and nature of research activity – for this purpose, not much detail is needed; (2) To determine the value of undertaking a full systematic review; (3) To summarise and disseminate research findings –for this purpose, the studies have to be described in more detail; and (4) To identify research gaps in the existing literature – this purpose is much like dissemination, but draws

conclusions from the existing literature. For the scoping review in the current study, the focus was on examining the extent, range, and nature of research activity on the barriers and facilitators of participation, retention, and throughput, as reportedly experienced by FGSs. The purpose was also to summarise and disseminate research findings on the barriers and facilitators of participation, retention, and throughput among FGSs. Finally, the present scoping review also had the purpose of identifying gaps in the international and South African literature as they pertain to the identified research questions.

A scoping review does not have the aim of critically appraising the reviewed studies as is the case with systematic reviews. The evaluative and critical engagement aspect in a scoping review relates to assessing the breadth of the existing literature on a given topic and identifying limitations in the literature that need to be addressed in future research. In this study, the researcher additionally situated and conceptualised the central findings in terms of the theoretical framework guiding the study. Evaluation of the scope of the existing evidence also informed the aims, research questions, and methodology guiding Phase II of the study.

3.3 Procedure

This phase adopted the guidelines for conducting a scoping review proposed by Arksey and O'Malley (2005) and Levac et al. (2010). These authors outlined five stages that were followed in the conceptualisation and execution of this phase, namely (1) identifying the research question; (2) identifying relevant studies; (3) selecting studies; (4) charting data; and (5) collating, summarising, and reporting findings.

3.3.1 Stage 1: Identification of Research Question

In this stage, clear research questions that are informed by the objectives should be formulated. These research questions, in turn, guide the search strategies used. The research questions for this study are:

1) What is the extent and nature of South African and international research on the barriers and facilitators to participation, retention, and throughput for first-generation students in higher education?

2) What barriers and facilitators of (1) participation; (2) retention; and (3) throughput in higher education have been identified for international and South African undergraduate first-generation students?

3.3.2 Stage 2: Identification of Relevant Studies

According to Arksey and O'Malley (2005), scoping studies are meant to gather information from a wide selection of sources. These include primary studies (published and unpublished) and reviews that deal with the particular research topic. For this study, inclusion and exclusion criteria were determined to promote the rigour of the search process. Relevant studies were sought and selected from suitable databases using well-formulated search terms.

Six databases were used when searching for the literature in this review, namely Google Scholar, PubMed, and EbscoHost with the selections of (1) Psych-Articles; (2) ERIC (Education Resources Information Centre); (3) Medline; and (4) Academic Search Complete.

Google Scholar contains the largest range of published literature. The use of Google Scholar thus ensured the broadest possible scope of search results. PubMed was included for its focus on biomedicine and the health fields, which include related disciplines, such as the behavioural sciences. Psych-Articles was selected as a database for its specialist focus on psychology-related material. ERIC was selected for its focus on education as a subject matter, which is highly relevant to the focus of this review. Medline is the primary component of EbscoHost. Finally, Academic Search Complete offers access to full-text journal articles and is an indexing and abstracting service. The database was selected for its focus on social sciences, education, and psychology.

Key search terms included "first generation students", "first-generation students", "support", "success", "failure", "retention", "attrition", "throughput", "performance", "facilitators", and "challenges".

The differing punctuation "first-generation students" (hyphenated) and "first generation students" (unhyphenated) were both used as the two versions of the term delivered somewhat different results. In general, the unhyphenated version of the term led to more search results.

The searches took the form of title searches. In other words, the keywords were required to be present in the titles of the studies reviewed. In addition to the aforementioned database searches, reference mining was used as an additional technique to identify studies.

Table 4.1.1 in Chapter 4 presents information on the databases used, the search terms, search result size, and citations of included studies.

3.3.3 Stage 3: Study Selection

3.3.3.1 Inclusion and Exclusion Criteria

The following inclusion and exclusion criteria were used for studies included in the scope review:

a) Time Period. Studies published between 2010 and 2020 were reviewed. The publication time period was selected for the recency of the evidence, as well as the proliferation of research on FGSs from 2010 onwards. Studies published prior to 2010 were excluded.

b) Types of Studies. Primary studies of any design were included, including quantitative studies, qualitative studies, mixed methods studies, and case studies. Studies that were not primary studies were excluded.

c) Target Populations. To be included in the scoping review, studies had to focus on

the barriers and facilitators of academic success (participation, retention, and throughput)among FGSs in HE. The review also included studies that compare FGSs and continuing-generation students (CGSs) in HE.

 d) Text Selection. The scoping review included peer-reviewed, full-text, and English-only journal articles, as well as grey literature consisting of doctoral dissertations, with the exception of two master's dissertations that were included. Studies other than peer-reviewed journal articles, books, and dissertations were excluded.

 The literature search in Stage 3 of the review followed three steps:

1. **A comprehensive database search:** The key search terms that were identified in Stage 2 were used to search for relevant literature in the chosen databases. By implementing the inclusion and exclusion criteria, relevant studies were identified first by perusing the titles of the studies emerging from the search.

2. **Title screening:** Unsuitable studies and duplicates were excluded following the title-sifting process.

3. **Abstract screening:** The abstracts of the remaining studies were assessed for suitability to the scoping review. Following this process, unsuitable studies were again excluded, and the final selection of studies to be included in the full-text review was identified.

Figure 3.3.3 illustrates the process followed for study selection.

Figure 3.3.3

Search and Screening Process

3.3.4 Stage 4: Data Charting and Collation

This stage requires the researcher to "chart" or summarise the selected studies by organising the material according to important themes and issues (Arksey & O'Malley, 2005; Levac et al., 2010). For this scope review, a "data chart" was created for the purpose of extracting and summarising the data from each study, reporting each study's author(s), aims, design, location, population, and key findings. The charting process forms part of what is traditionally considered data analysis in reactive studies. The data chart created for the present study can be viewed in Appendix E.

3.3.5 Stage 5: Findings Summary and Report

This is the final step of Arksey and O'Malley's (2005) framework, and involves the identification of common themes from the data charting process. This stage is an extension of data analysis and has a more interpretive stance. The resultant themes are usually presented in a report that answers the review questions and study objectives. For the purpose of this phase of the doctoral project, a narrative is presented in Chapter 4 to illustrate the results and core findings.

Preparing this presentation of findings involved a numerical analysis of the extent, nature, and distribution of the studies included in the review. This, therefore, had the aim of determining the scope of literature reporting on the barriers and facilitators to participation, retention, and throughput among FGSs in HE. The reporting on the reviewed studies included their geographical location, subject matter or focus, and design.

Levac et al. (2010) suggest that, in the narrative reporting of results, one should consider the best approach to stating the outcome or end product of each study and how the scoping review findings will be articulated to readers (e.g. through themes, a framework, or a table of strengths and gaps in the evidence). For the present scope review, the narrative presentation of findings was organised, firstly, according to the categories provided by the conceptual framework for the larger doctoral project. As such, the themes that emerged from the review were organised into the following eight categories: (1) dispositional barriers; (2) situational barriers; (3) epistemological barriers; (4) institutional barriers; (5) dispositional facilitators; (6) situational facilitators; (7) epistemological facilitators; and (8) institutional facilitators. The narrative write-up was then further organised into sub-themes as extracted from the reviewed studies' results (e.g. sub-themes under "situational barriers" included themes such as "familial factors" and "residency"). Table 4.1.3 in Chapter 4 provides an illustration of the organisation of themes derived from the metasynthesis process.

3.3.6 Validity of Phase I

To enhance the validity of the scoping review, the recommendations provided by Levac et al. (2010) were used. The supervisor who is familiar with scoping review methodology and this researcher extracted data from the first ten included studies using the data charting form. The reviewers then met to determine whether their approach to data extraction was consistent with the research questions and purpose. The researcher also consulted the supervisor where there was uncertainty about the extraction of data from

particular studies. This contributed to calibration and the supervisor fulfilling the function of external auditing.

CHAPTER 4

Phase I: Scoping Review Results

4.1 Process Results

4.1.1 Search Results and Study Selection

The Preferred Reporting Items for Systematic Reviews and Meta-analysis process

designed by Moher et al. (2009) was used to present the process data for the scoping review.

The flowchart was modified to remove the critical appraisal step, which does not form part of

the process of a scoping review. Figure 4.1.1 presents the search results and study selection

process.

Table 4.1.1 presents a summary of the number of search results per search term and

database. Most search results were delivered by Google Scholar, followed by EbscoHost, and

PubMed. Seven studies were sourced elsewhere, including through the process of reference

mining.

4.1.2 Data Extraction

4.1.2.1 Scope of Reviewed Studies

a) Geographic Location of Studies. As can be seen in Figure 4.1.2, an

overwhelming majority of the reviewed studies (94.6%) were conducted in the United States

of America (USA). Only three of the studies were conducted in South Africa (5.4%) and

none from other countries. These findings are strikingly similar to those of Heymann and

Carolissen (2011), despite dating back 10 years. In the authors' review of the literature on

first-generation students (FGSs), 56 of the 59 included studies (94.9%) were based on data

collected in the USA. The remaining three studies (5.1%) were from Canada, New Zealand,

and Israel (Heymann & Carolissen, 2011). In a 10-year time span, there is thus not much of a

shift in terms of the prioritisation of FGS research either locally or internationally in countries

other than the USA.

Figure 4.1.1

The Preferred Reporting Items for Systematic Reviews and Meta-analysis: The PRISMA

Statement (Moher et al., 2009) as applied to this Scoping Review
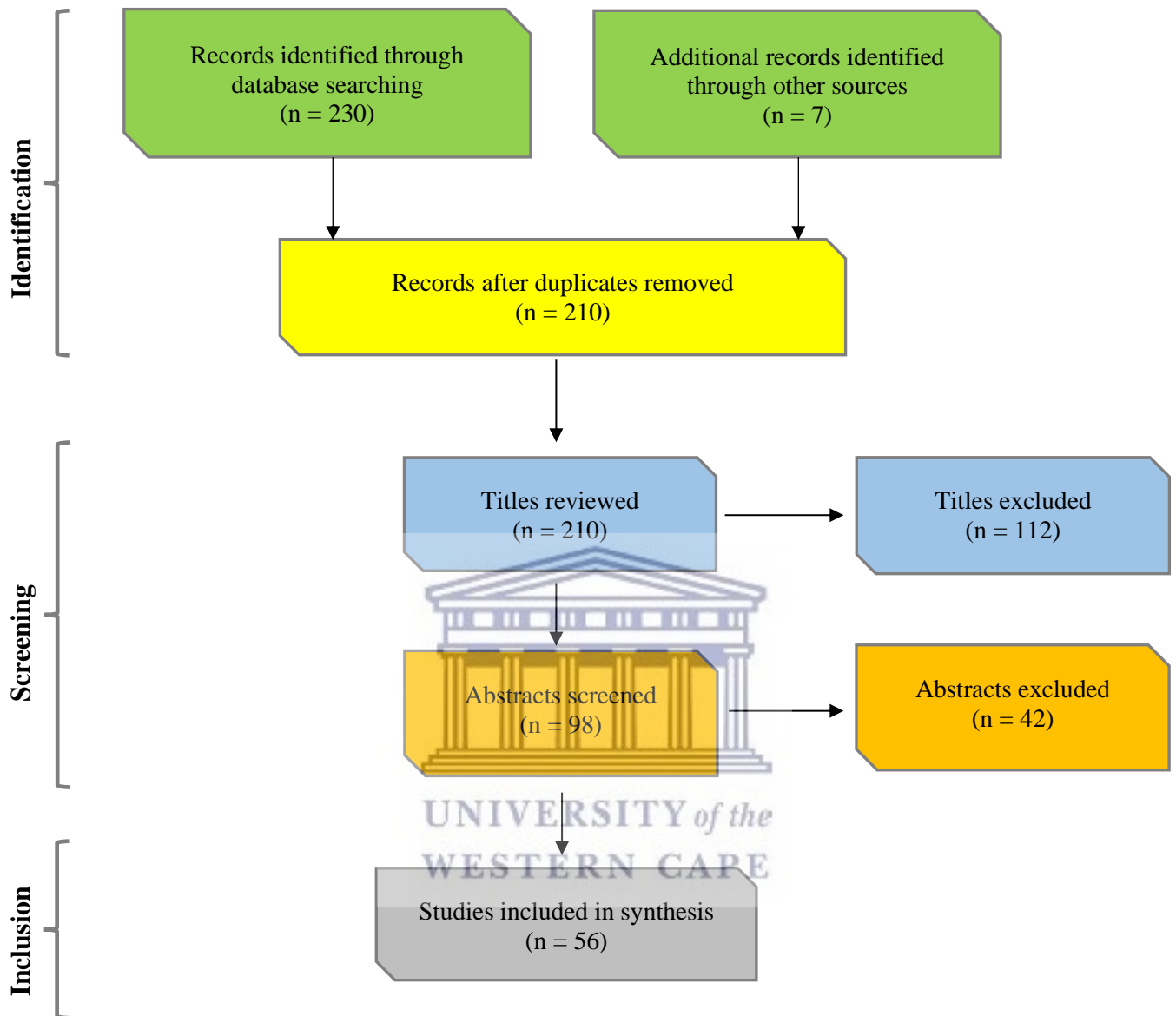
This is problematic because, as stated by Heymann and Carolissen (2011), the

existing literature on FGSs can be informative for understanding the experiences of FGSs in

South Africa. Other experiences of FGSs are, however, highly specific to the individual or

institutions at which they study. International studies can, therefore, not be relied on to truly

understand the complexities and nuances of being an FGS in South Africa.

Table 4.1.1

Search Results indicating Database, Search Terms, and Citations of Studies

Database	Search terms	Number of results	Number remaining after title screening	Number remaining after abstract screening	Number of full-text records for inclusion in review	Full-text records included in review
Google Scholar	First generation student/ First-generation student support	29	15	7	7	Allison (2015); Bryant (2016); Carpenter & Pena (2017); Carter (2018); Darby (2013); Freeman (2017); Mahan (2010)
	First generation student/ First-generation student success	63	25	13	13	Allard (2019); Brewer (2011); Bruner (2017); D'Allegro & Kerns (2010); D'Amico & Dika (2013); Lonn-Nichols (2013); Nall (2017); Reome (2012); Ricks (2016); Salas (2011); Salunga (2018); Sparks (2017); Woods-Warrior (2014)
	First generation student/ First-generation student failure	0	0	0	0	N/A
	First generation student/ First-generation student retention	21	10	5	5	Davis (2015); Palbusa (2016); Pellew (2016); Radunzel (2018); Swecker, Fifolt & Searby (2013)
	First generation student/ First-generation student attrition	0	0	0	0	N/A
	First generation student/ First-generation student throughput	0	0	0	0	N/A
	First generation student/ First-generation student performance	5	2	1	1	Mrozinske (2016)

	First generation student/ First-generation student facilitators	0	0	0	0	N/A
	First generation student/ First-generation student barriers	6	1	1	1	Falcon (2015)
	First generation student/ First-generation student challenges	43	12	6	6	Afeli, Houchins, Jackson & Montoya (2018); Balemian & Feng (2013); Katrevich & Aruguete (2017); Kizart (2014); Reid (2013)
	First-generation student/ First generation student South Africa	0	0	0	0	N/A
	First generation student/ First-generation student support	14	6	6	6	Garriott & Nisle (2018); Irlbeck, Adams, Akers, Burris & Jones (2014); Jenkins, Belanger, Connally, Boals & Durón (2013); Means & Pyne (2017); Plaskett, Bali, Nakkula & Harris (2018); Sy, Fong, Carter, Boehme & Alpert (2012)
EbscoHost	First generation student/ First-generation student success	19	6	3	3	Hui (2017); McCallen & Johnson (2019); Vuong, Brown-Weltey & Tracz (2010)
	First generation student/ First-generation student failure	0	0	0	0	N/A
	First generation student/ First-generation student retention	7	5	2	2	Pratt, Harwood, Cavazos & Ditzfeld (2019); Soria & Stebleton (2012)
	First generation student/ First-generation student attrition	0	0	0	0	N/A
	First generation student/ First-generation student throughput	0	0	0	0	N/A

	First generation student/ First-generation student performance	5	2	1	1	Garza & Fullerton (2018)
	First generation student/ First generation student facilitators	0	0	0	0	N/A
	First generation student/ First-generation student barriers	6	2	1	1	Stebleton & Soria (2013)
	First generation student/ First-generation student challenges	6	1	1	1	Katrevich & Aruguete (2017)
	First-generation student/ First generation student South Africa	4	4	2	2	Alcock & Belluigi (2018); Norodien-Fataar (2018)
PubMed	First generation student/ First-generation student	2	0	0	0	N/A
Sourced elsewhere		7	7	7	7	Alcock (2017); Allan, Garriot & Kenne (2016); Blackwell & Pinder (2014); Covarrubias & Fryberg (2015); Potter, Jayne & Britt (2017); Pyne & Means (2013); Ridge (2016)
Total		**237**	**98**	**56**	**56**	

Figure 4.1.2

Geographic Location of Reviewed Studies

LOCATION OF STUDIES

South Africa
5%

USA
95%

UNIVERSITY *of the*
WESTERN CAPE
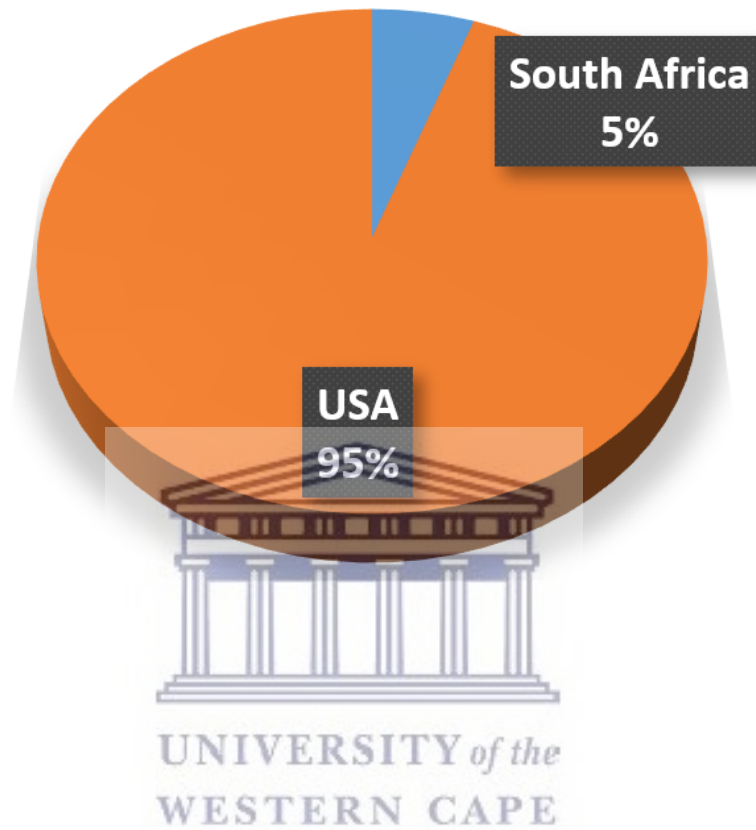
b) Scope of Studies Categorised by Focus Area

Table 4.1.2

Focus Areas of Reviewed Studies

Focus of Study	Number of Studies	Total
FGSs and CGSs comparisons		18
Academic performance	7	
Psychosocial factors	11	
Barriers		17
Participation	1	
Retention	6	
Throughput	2	
Academic performance	8	
Facilitators		23
Participation	2	
Retention	8	
Throughput	6	
Academic performance	7	
Effects of interventions		19
TRIO	5	
Living-Learning	1	
Communities of learning	1	
Mentoring	4	
Skills learning support programme	1	
Academic advising	5	
Value-Affirmation Initiative	1	
Reality Changers	1	
FGS descriptive data		86
Mental health	10	
Financial factors	14	
Academic preparedness	9	
Support needs	8	
Self-authorship and self-positioning	3	
a) Capital	7	
b) Family	8	
c) Ethnicity	5	
d) Residency	4	
e) Cultural factors	5	
f) Communication with faculty	8	
g) Institutional knowledge	5	

c) Evaluation of the Scope of Evidence. Table 4.1.2 presents the scope of the reviewed literature as it pertains to the barriers and facilitators of participation, retention, and throughput among FGSs in higher education (HE). It should be noted that the focus areas into which the studies were divided overlap. For example, one study may touch on barriers to retention, psychosocial comparisons between FGSs and continuing-generation students (CSGs), as well as the effects of an intervention such as mentoring. As another example, although focus area "effects of interventions" is allocated a distinct category, intervention studies also necessarily speak to barriers and facilitators of academic performance. The numbers presented, therefore, do not reflect the actual number of studies reviewed, but the subject focus areas captured across all reviewed studies.

Nineteen studies speak to the effects of intervention programmes on the academic performance of FGSs. In this focus area, the highest number of studies relate to the TRIO support programme in the USA, mentoring programmes, and academic advising.

Seventeen studies have as their focus the barriers and 23 studies the facilitators of participation, retention, throughput, and academic performance among FGSs. The focus areas of barriers and facilitators of participation and barriers to throughput enjoy the least attention in the reviewed literature. Barriers and facilitators of retention and academic performance are most frequently explored in the reviewed studies.

Studies that have as a component the comparison between FGSs and CGSs most frequently focus on two aspects, namely academic performance and psychosocial factors. The latter include factors such as socio-economic status (SES), mental health, self-efficacy, resilience, social support, ethnicity, place of residence, and work and family responsibilities.

The findings of a substantial number of studies (n = 86) include descriptive data relating to personal and contextual characteristics of FGSs. Examples of descriptors extracted

from these studies are mental health, financial context, institutional knowledge, support
needs, capital, academic preparedness for HE, and cultural factors.

These characteristics were often investigated in the studies in terms of their
functioning as barriers or facilitators of academic performance among FGSs in HE.

The body of literature relating to the barriers and facilitators of retention, throughput,
and academic performance among FGSs is broad and substantial. Apart from the number of
studies reviewed in the categories "Barriers" and "Facilitators" in Table 4.1.2, studies on the
effects of intervention programmes, studies that explore differences between FGSs and
CGSs, and studies providing descriptive and exploratory data on personal and contextual
characteristics of FGSs also address how the facets under investigation serve as barriers and
facilitators of participation, retention, throughput, and academic performance among FGSs in
HE.

The present scoping review revealed that the body of literature pertaining to the
barriers and facilitators of academic performance among FGSs is relatively well balanced.
There is a reasonable balance between studies addressing barriers compared to facilitators of
academic performance. The attention paid in the literature to facilitators of academic
performance rather than just focusing on the barriers is encouraging as it may represent a
shift from the "deficit perspective" that permeated earlier literature on FGSs. There has been
a tendency in the literature to present FGSs as less accomplished than their CGS peers and to
focus on FGSs' lack of skills and their inabilities (Green 2005; Yosso, 2005). This has been
problematic as this perspective limits the exploration of the strengths, resourcefulness, and
capital that FGSs possess and can draw from to enhance academic performance.

It would seem that there is a gap in the literature on the barriers and facilitators of
participation, specifically, by FGSs in HE. It is important to expand the research on factors

affecting participation in HE as an increase of access to HE among FGSs is a high priority, especially in the South African context.

The reviewed literature demonstrates a disproportionately skewed amount of research activity on FGSs in terms of location, with 94.6% of studies conducted in the USA. Only 5.4% of the reviewed studies were done in South Africa. FGSs are, therefore, disproportionately studied in predominantly one developed country, with much less activity occurring in developing countries. The scoping review thus revealed a substantially limited scope literature on FGS from South Africa and other developing countries. This underscores the rationale for the present doctoral study.

The reviewed studies disproportionately favoured quantitative methodologies (54.9%) above qualitative designs (35.3%), mixed methods designs (5.9%), and other designs that used a combination of methods but are not classified by the study authors as being mixed methods designs (3.9%). Heymann and Carolissen (2011) propose that quantitative studies do create an understanding of FGSs. However, to be useful on a practical level, these studies need to be balanced by qualitative needs analysis that "capture the stories of individual students in real-life environments" (pg. 1389).

The following is a summary of the evaluation of the scope of the existing literature on the barriers and facilitators of participation, retention, and throughput among FGSs in HE:

(1) There is a broad and substantial body of literature investigating the barriers and facilitators of retention, throughput, and academic performance among FGSs in HE.

(2) There is a substantial number of studies that aim to investigate the effects of intervention programmes, differences between FGSs and CGSs, and personal and contextual characteristics of FGSs on the participation, retention, throughput, and academic performance of FGSs in HE.

(3) There is a satisfactory balance in the literature investigating the barriers compared to the facilitators of academic performance among FGSs in HE.

(4) There is a significant gap in the literature – including the international literature – that investigates the barriers and facilitators of *participation* by FGSs in HE. This limitation needs to be addressed, especially in South Africa, to promote equality and redress past injustices related to inequity of access to HE.

(5) The scope of the existing literature on FGSs is disproportionately representative of studies conducted in one developed country, namely the USA.

(6) There is a significant gap in literature on FGSs from developing countries.

(7) There is a significant gap in the South African literature on the barriers and facilitators of academic performance among FGSs in HE.

(8) There is a somewhat disproportionate favouring of quantitative research designs in studies investigating the barriers and facilitators of academic performance among FGSs. An understanding of the needs and experiences of FGSs could be enhanced by employing more qualitative methods in a bid to complement the strengths that quantitative studies bring to the table.

4.1.3 Metasynthesis of Findings

The themes flowing from the metasynthesis process were organised under the factor categories provided by the study's theoretical framework. The sub-themes that were developed through the metasynthesis of findings are presented in Table 4.1.3.

Table 4.1.3

Themes derived from the Metasynthesis of Scope Review Results

BARRIERS TO PARTICIPATION, RETENTION, AND THROUGHPUT AMONG FGSs IN HE			
Dispositional	**Situational**	**Epistemological**	**Institutional**
1) Psychological factors	1) First-generation status	1) Challenges with academic performance	1) Limitations in communication and relationships with faculty
	2) Socio-economic and financial challenges	2) Limitations in academic readiness for HE	2) Lack of knowledge of HE institutions and processes
	3) Familial factors		
	4) Ethnicity and minority status		
	5) Residency		
	6) Cultural disparities		
	7) Limitations in social support		

FACILITATORS OF PARTICIPATION, RETENTION, AND THROUGHPUT AMONG FGSs IN HE			
Dispositional	**Situational**	**Epistemological**	**Institutional**
1) Personal practices and characteristics	1) Family encouragement and support	1) Academic advising	1) Support and mentoring programmes
2) Personal goals, aspirations, and motivation	2) Capital		2) Communication and relationships with faculty
3) Self-positioning and emergent identity			

4.1.3.1 Dispositional Barriers

a) Psychological Factors. The literature suggests that FGSs may be vulnerable to mental health challenges. For example, one study found that first-generation college students (FGCSs), low-SES students, and students with disabilities have stress levels that are much higher than average and anxiety levels that are just below the threshold for an anxiety diagnosis (Allison, 2015).

Garriott et al. (2017) found that there are unique cultural factors that FGCSs face that cause them to abstain from psychological services because of intragroup marginalisation and personal stigma that develops from the cultures they keep contact with (e.g. friend groups or family). This influences the mental well-being of these students. Garriot and Nisle (2018) found that FGSs experience increased stress levels, because they do not have effective ways to cope with limitations in school and family support while studying.

In a study comparing FGSs and non-FGSs, FGSs reported significantly stronger post-traumatic stress disorder symptoms than non-FGSs and significantly less life satisfaction. However, FGSs did not report significantly stronger depression symptoms than non-FGSs (Jenkins et al., 2013). Garriott and Nisle (2018) investigated the effect of institutional support, reflective coping1, and friend and family supports in the relationship between stress and perceived academic goal progress in FGSs and CGSs. Their findings demonstrated that stress was negatively associated with perceived academic goal progress by FGSs. The findings suggest that institutional supports may be a very important explanatory variable in the link between stress and perceived academic goal progress by FGSs. It was also found that first-generation status moderated the relation between stress and institutional supports with an inverse relation that was significant for the FGSs. Institutional supports may, therefore, play a

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[1]Reflective coping refers to "the tendency to examine causal relationships, plan, and be systematic in coping" (Heppner et al., 1995, p. 282, as cited in Garriott & Nisle, 2018). Reflective coping refers to one's capacity to approach, rather than avoid, challenges and draw upon previous experience to solve problems (Heppner et al., 1995, as cited in Garriott & Nisle, 2018).

more significant role in the stress of FGSs than is the case for CGSs. Furthermore, reflective coping significantly predicts perceived academic goal progress for both student groups. Support from family and friends also significantly predict perceived academic goal progress for both groups. Institutional supports explain the relation between stress and perceived academic goal progress for FGSs, but not for CGSs. Lower institutional supports may, therefore, be a significant mechanism through which stress predicts perceived academic goal progress for FGSs.

Sy et al. (2012) found that FGSs experience less emotional and informational support from their parents than non-FGSs. This is significant, especially, as it was found that, for FGSs in particular, parental support alleviates stress, while this is not the case for CGSs. This highlights parental support's particularly significant role in the mental health of FGSs and that the lack thereof can result in adverse psychological outcomes for FGSs.

Another study demonstrated that self-efficacy beliefs affect grade point average (GPA) and persistence rates of first-year students (Vuong et al., 2010). In a study by Stebleton and Soria (2012), FGSs reported more instances of feeling depressed, stressed, or upset than CGSs and experienced this as an obstacle to their academic success. Falcon (2015) found that lack of self-esteem and adjustment to college represent obstacles to college success among FGSs. However, a study by Freeman (2017) found that there are no statistically significant differences between FGSs and CGSs when it comes to resilience and negative career thoughts. Contrary to many other studies, Freeman (2017) found that CGSs have a higher perception of barriers than FGCSs.

4.1.3.2 Situational Barriers

a) **First-generation Status.** While the difficulties and challenges experienced by FGSs in HE have often been found to be attributable to associated aspects, such as low income, limited academic readiness, and limited social support, it has also been found that

first-generation status in and of itself has a significant effect on participation, retention, and throughput, even after controlling for the associated variables. To some degree, therefore, parental education alone can explain some of the academic challenges faced by FGSs.

For example, Radunzel (2018) found that compared with CGSs with at least one parent who has a bachelor's degree or higher, FGSs and CGSs with parents who have some college training are at greater risk of dropping out or transferring to another institution in the second year even after statistically controlling for other student attributes such as precollege academic readiness levels, financial resources, and demographic characteristics.

Allan et al. (2016) found that first-generation status has direct effects on academic satisfaction and GPA. Blackwell and Pinder (2014) found that the most common challenge experienced by FGSs was the status they identify with, including their status as an FGS.

b) SES and Financial Challenges. Lower SES has often been identified in the literature as a risk factor for attrition and poorer academic performance among FGSs. For example, Falcon (2015) found that financial challenges represent an obstacle to college success.

Pellew (2016) found that family income and housing status had a statistically significant effect on FGS retention. The average family income of FGSs who dropped out is significantly lower than that of CGSs who dropped out. FGSs with lower family income are, therefore, less likely to be retained in comparison to CGSs who have a higher average family income.

Mrozinske (2016) found that increased levels of unmet financial needs have been associated with reduced academic performance among FGSs. In addition, financially anxious FGSs have been shown to view their campus environment as less supportive. The results confirm that SES and financial stress significantly influence academic performance among FGSs.

Kizart (2014) found that the affordability of studying is also one of the challenges experienced by FGSs. In one study that investigated the risk factors for attrition among FGSs and CGSs, for the sample as a whole, retention is influenced most strongly by financial insecurity. Among both FGSs and CGSs, students at risk for attrition are concerned about funding their education and are often forced to take on the added burden of outside employment (Pratt et al., 2019). This risk factor is, however, experienced more frequently by FGSs. Moreover, Pratt et al. (2019) found that students who enter HE with concerns about their financial security are also the students who tend to leave before completing their programme of study. The risk factor of financial insecurity is disproportionately likely to be associated with FGCSs. Potter et al. (2017) found that first-generation status is positively associated with financial anxiety. Proxies for students' self-concepts, including financial comparisons to peers and perceived mastery, were the strongest predictors of financial anxiety.

Stebleton and Soria (2012) found that FGSs report statistically significant higher instances of competing job responsibilities than CGSs, and experienced this as an obstacle to their academic success. Hui (2017) found financial obligations to be one of the barriers experienced by FGCSs. Likewise, Reid (2013) found that FGSs face financial hardships and have to rely on support from family and friends, part-time work, work-study programmes, and student loans to get by financially.

Allan et al. (2016) found that social class directly affects FGSs' life satisfaction, academic satisfaction, and GPA. Blackwell and Pinder (2014) found that FGSs' most common challenge is the status they identify with, including their SES, immigration status, and social status.

The findings related to the relationship between SES and academic performance among FGSs are not consistent across all reviewed studies. For example, Afeli et al. (2018)

found that the FGS group in their study overall had a significantly lower SES than the CGS group, but no statistical difference in GPA. The study demonstrated that lower SES among FGSs does not necessarily lead to lower retention rates. In addition, Radunzel (2018) found that none of the finance-related variables measured (annual income, median neighbourhood household income, and number of hours planned to work) interact with parental education on attrition, meaning that their effects were similar between students whose parents had attended some college and students whose parents had completed a bachelor's degree. Lastly, D'Amico and Dika (2013) found that while CGSs had significantly higher family incomes, family income was not a significant predictor of retention or first-year GPA among FGSs and CGSs.

      c) Familial Factors. Studies demonstrate that FGSs are often troubled by familial concerns, including family responsibilities and obligations (Salas, 2011; Stebleton & Soria, 2012), pressure to contribute to the family financially (Salas, 2011), the family's lack of knowledge of the HE environment and the resulting limitation of the family to provide guidance to the student (Sy et al., 2012), lack of support from the family (Kizart, 2014), including perceived lower helpfulness (Palbusa, 2016), perceived less emotional and information support (Sy et al., 2012), and difficulties relating to family members (Hui, 2017).

FGSs have been found to experience family responsibilities as an obstacle to their academic success (Falcon, 2015; Salas, 2011; Stebleton & Soria, 2012). Family pressure and obligations are major reasons for attrition among community-college students (Jenkins et al., 2013). Family responsibilities can also impact FGSs' social interaction, especially when they receive less encouragement to pursue HE due to their family's educational background (Salas, 2011).

Katrevich and Aruguete (2017) found that FGSs may experience "achievement guilt" for being the first in their family to pursue HE and struggling with low grades throughout

their studies. In addition, they found that FGSs are likely to come from interdependent families, where family is extremely important to them and any individual strivings are selfish. Western universities focus extensively on student independence and thus create an environment more familiar to CGSs. This can lead to a feeling of isolation among FGSs upon entering HE.

Some other studies, however, have contrary results. For example, Palbusa (2016) found that a higher quality of communication with family about college predicts a higher first-year GPA for continuing-generation college students only and not for FGCSs. In another study, FGSs reported a lower level of "other competing responsibilities" than CGSs (Stebleton & Soria, 2012). Garriot and Nisle (2018) found that contrary to hypotheses, friend and family supports do not explain the relation between stress and perceived academic goal progress for FGCSs or CGSs.

d) Ethnicity and Minority Status. Various studies have connected ethnicity and minority status to risk of attrition among FGSs. In a study by Pellew (2016), ethnicity impacted the retention rate of FGSs. Specifically, the study showed that African American students, Hispanic students, and students who identified as no race or no identity were the least likely to be retained.

Falcon (2015) found that racial and ethnic disparity represents an obstacle to college success among FGSs. Moreover, African American, Hispanic, Native American, and low-income students had completed high school and attended HE at consistently lower rates than their White and higher income student counterparts in the USA over the past few decades.

However, some studies have had opposite findings. For example, D'Amico and Dika (2013) found that students of colour have a higher rate of persistence than White students. Also, Radunzel (2018) found that in terms of ethnicity, Asian and Hispanic students are less likely than White students to drop out or transfer in the second year from a four-year

institution, with this finding being more pronounced among FGSs than CGSs. In addition,

Hui (2017) found that ethnicity is not related to being on-track to graduate among FGSs.

e) Residency. Studies have shown that place of residence has a significant effect

on FGSs' academic performance (e.g., Hui, 2017). In a study by D'Amico and Dika (2013), it

was found that among FGSs, out-of-state FGSs are more likely to earn better grades.

Although in-state FGSs have a lower first-year GPA, being from in-state and potentially

entering college with social connections may contribute to these students' potential to return

to college after the first year (D'Amico & Dika, 2013).

Garza and Fullerton (2018) found that FGSs who attend colleges at a greater distance

from home are more likely to graduate. However, there does not seem to be a significant

relationship between distance from home and a student's GPA in most years of enrolment.

However, Pellew (2016) found that commuter FGSs are the most likely to drop out compared to

residency FGSs, residency CGSs, and commuter CGSs. However, when comparing FGSs and

CGSs who live in residency, the FGS group was still more likely to drop out than the CGS group.

f) Cultural Disparities. As mentioned in a prior section, FGSs' origin from

interdependent families may cause them to feel that individual strivings are selfish. This may

cause a feeling of isolation at Western HE institutions that focus on student independence

(Katrevich & Aruguete, 2017).

FGSs at community college have more difficulty moving from high school to HE

because their experience often involves substantial cultural, academic, and social transitions

(Jenkins et al., 2013). These students may have increased stress related to academic

acculturation, the process of adapting to HE culture, and often must interact with two

different cultures: home culture with less-educated individuals and academic-focused college

culture.

g) Limitations in Social Support. The literature indicates that FGSs often experience less social support than their CGS counterparts. Perceived social support has been demonstrated to play a role in students' perception of barriers and negative career thoughts (Freeman, 2017). Barriers investigated include discrimination based on ethnicity and gender, barriers to HE, barriers expected upon entering HE, and overall perception of barriers and ability to overcome them. Negative career thoughts refer to the level of confusion experienced by a student when trying to make a career decision, as well as their ability to commit to a career or degree course choice. Perceived social support and resilience level predicted 9.1% of the variance in students' perception of barriers and 15.3% of the variance in negative career thoughts (Freeman, 2017). Kizart (2014) found that socialisation is one of the challenges experienced by FGSs. Jenkins et al. (2013) found that FGSs report significantly less support from family and friends, but not a significant other, than CGSs. Pratt et al. (2019) found that risk of attrition is significantly related to students' anticipated difficulty in forming relationships with their on-campus peers. While this risk factor is related to attrition in both FGSs and CGSs, it is experienced more frequently among FGSs. Pratt et al. (2019) found that students who enter HE with concerns about their social belongingness are more likely to drop out. The variable of social belongingness is disproportionately likely to be associated with FGCSs.

Findings relating to the social support experienced by FGSs are, however, not entirely consistent. For example, Freeman (2017) found that there are no statistically significant differences between FGSs and CGSs in terms of perceived social support. Similarly, Palbusa (2016) found that FGCSs do not differ from CGSs in frequency of communication or perceived emotional support. Contrary to their hypotheses, Garriott and Nisle (2018) found that friend and family supports do not explain the relation between stress and perceived academic goal progress for FGCSs or CGSs. Furthermore, the strength of associations of

family and friend supports for attending HE, institutional supports, and reflective coping with perceived academic goal progress was similar among FGSs and CGSs. Thus, the availability and use of both environmental and internal coping resources appear to play an equally important role in perceived academic goal progress for both these student groups (Garriott & Nisle, 2018).

Nonetheless, several studies point to the importance of social support and integration for the academic success of FGSs in HE. For example, Mrozinske (2016) found that social integration is significantly positively related to academic performance among FGSs. Reome (2012) found that the development of mature, adult relationships assisted FGSs toward successful degree attainment. Support from friends was one of the factors found by Ricks (2016) to facilitate FGSs' coping with the transition to college.

4.1.3.3 *Epistemological Barriers*

a) Challenges with Academic Performance. There is a substantial body of literature indicating that FGSs often face challenges related to academic performance, retention, and throughput (e.g., D'Amico & Dika, 2013; Kizart, 2014; Mrozinske, 2016; Palbusa, 2016; Pratt et al., 2019; Ricks, 2016; Vuong et al., 2010). For example, Pratt et al. (2019) found that being an FGCS was associated with disproportionally high first-to-second-year attrition rates.

Studies have shown that FGSs face obstacles in the classroom as they adjusted to the new level of rigor that accompany HE (Kizart, 2014; Mrozinske, 2016; Ricks, 2016). Managing time and meeting due dates are examples of such academic difficulties (Ricks, 2016). Mrozinske (2016) found that academic integration was significantly positively related to academic performance among FGSs. It was also found that lack of confidence in their academic ability is significantly related to students' risk of attrition (Pratt et al., 2019). While

this risk factor is related to attrition among both FGSs and CGSs, it is experienced more frequently by FGSs.

Pellew (2016) investigated the effect of degree course on the retention of FGSs and found that a nursing degree course is more likely to be at risk of attrition compared to a humanities degree course. FGSs are more likely to drop out based on their unique degree course in comparison to their CGS peers.

b) Limitations in Academic Readiness for HE. The literature indicates that FGSs often have lower levels of academic readiness for HE than their CGS counterparts, and this significantly affects academic performance in HE. For example, Falcon (2015) found that a lower level of college readiness is one of the obstacles reported by FGSs. Hui (2017) demonstrated that FGCSs face multiple barriers during their HE studies, including unpreparedness for HE.

FGSs have been found to report higher instances of weak maths and English skills than CGSs, and experience this as an obstacle to their academic success (Stebleton & Soria, 2012). Windham et al. (2014) found that community college reading placement test scores positively correlate with retention.

The academic readiness of FGSs at community college can also be affected by their tendency to take less difficult classes in high school than CGSs and require more remedial course work in college (Falcon, 2015). Balemian and Feng (2013) found that first-generation AP[2] and SAT[3] test-takers tend to have less core academic preparation than non-first-generation test-takers. About a third of first-generation test-takers report taking algebra in 8th grade compared to about half of non-first-generation test-takers. About two-thirds of first-

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[2] Advanced placement (AP) examinations are offered by the College Board and are taken each May by students in the USA. The tests are the culmination of year-long AP courses. All AP exams (with few exceptions) have a multiple-choice and free-response section. They offer university-level courses and exams that the student can take while still in secondary school.

[3] The SAT subject tests are high school-level tests designed to assess high school learners' proficiency in the curricula.

generation test-takers report taking advanced math courses compared to about three-quarters of non-first-generation test-takers. These findings are significant as it has been shown that greater academic preparation is significantly related to academic performance among both FGSs and CGSs (D'Amico & Dika, 2013).

Radunzel (2018) examined first-generation status in relation to two types of attrition: transferred to another institution and dropped out. Participants represented three student groups, namely FGSs, CGSs with at least one parent who has some college experience but didn't complete a bachelor's degree, and CGSs with at least one parent who earned a bachelor's degree. It was found that academic readiness is negatively related to dropout and transfer from a four-year college for all three groups.

In a study by Bruner (2017), the variable academic readiness (defined as having ACT[4] scores in a range of 21 and above) and academic non-readiness (defined as having ACT scores in a range of 20 and below) affected the relationship between FGCSs' participation in a first-year living and learning community[5] and academic success. Of FGSs who participated in a first-year living and learning community, those who were academically ready had a higher GPA at the completion of the first year of college than those who not academically ready.

The literature appears to indicate that the number and types of college entrance exams and tests taken differ between FGSs and CGSs, and that this variable has an effect on the students' academic performance. Balemian and Feng (2013) found that average AP scores tend to be lower among first-generation test-takers. While SAT scores for first-generation

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[4] The ACT (originally an abbreviation of American College Testing) is a standardised test used for college admissions in the USA. The test covers four academic skill areas: English, mathematics, reading, and science reasoning.

[5] Living and learning communities serve a variety of purposes for HE institutions. One of the primary purposes is to provide a seamless academic and social transition for students to the HE environment. To accomplish this central mission, "learning communities are intentionally structured around curricular and co-curricular components with the goal that students will form a community sooner during their collegiate experience and develop deep connections with faculty members and fellow students" (Bruner, 2017).

test-takers tend to be lower too, scores among first-generation test-takers who take both AP and SAT tests are higher than first-generation test-takers who take the SAT only (Balemian & Feng, 2013). While AP participation among first-generation test-takers has been increasing over time, non-first-generation test-takers generally take more exams per student. In addition, performance gaps between first-generation and non-first-generation test-takers have remained persistent over time (Balemian & Feng, 2013).

In a study by D'Amico and Dika (2013), it was found that the strongest predictor of first-year GPA and a significant predictor of retention for both FGCSs and CGSs is a higher predicted GPA, a statistic used during the admissions process and the course degree selected upon enrollment. However, while FGCSs are less likely to return for the second year of study than their CGS counterparts, this difference is not statistically significant. Pratt et al. (2019) found that students who enter HE concerned about their academic competence are more likely to drop out. The variable of academic competence is also disproportionately likely to be associated with FGCSs.

4.1.3.4 Institutional Barriers

a) Limitations in Communication and Relationships with Faculty. The literature shows that FGSs tend to have less communication and less of a relationship with faculty members. This has been associated with lower academic performance. For example, Covarrubias and Fryberg (2015) indicate that FGCSs have lower interactions with their professors due to family responsibilities. Soria and Stebleton (2012) found that FGSs have less communication with faculty than is the case for CGSs, and that this translates into lower retention rates among FGSs. Their study found a positive correlation between student–faculty interaction and student persistence. Engle and Tinto (2008, as cited in Soria & Stebleton, 2012) ascribe the lower interaction with faculty to a lack of social capital. The authors argue

that students who lack social capital may not be aware of the many benefits that academic and social engagement can bring to their development and success.

Katrevich and Aruguete (2017) demonstrated that personal contact with faculty members predicts persistence and retention in HE. FGSs in the study, however, reported lower overall faculty engagement than the CGS participants.

b) Lack of Knowledge of HE Institutions and Processes. FGSs tend to lack knowledge about HE institutions and processes. FGSs may, for example, lack knowledge of bursaries and student loans (Katrevich & Aruguete, 2017). A common experience among the FGSs in one study was the feeling of isolation and loneliness at the beginning of their HE journey that stemmed from confusion over HE processes (Ricks, 2016). Despite their social and family support, they are constantly faced with questions, confusion, and challenges. FGSs are confused about academic policies, degree requirements, and the financial aid process.

Pratt et al. (2019) demonstrated that FGCSs are challenged by not having enough knowledge about college. Some FGCSs are so overwhelmed by the lack of knowledge and unknowns surrounding HE that they are less likely to enrol in college even if they meet the admission requirements.

Lonn-Nichols (2013) found that primary differences between first- and second-generation college students at two-year and four-year institutions typically include the student's ability to understand how to navigate the institution and be successful in obtaining resources that support academic and social integration and student achievement. Reome (2012) found that better understanding of HE-level work, classroom expectations, and the financial aid process assists FGSs in successful degree attainment. This underscores the disadvantages caused by limitations in knowledge about HE institutions and processes for FGSs.

4.1.3.5 *Dispositional Facilitators*

a) Personal Practices and Characteristics. In a study by Darby (2013), FGCSs reported that academic self-efficacy has an impact on their HE enrollment and matriculation. In a study that investigated the factors that help FGSs cope with the transition to HE, engagement with spirituality, self-determination, optimism, self-care, and writing poetry were mentioned by FGSs (Ricks, 2016). Palbusa (2016) investigated the conceptions of both FGSs and CGSs of the characteristics of a good HE student. For the overall sample, the five most important (i.e. highest rated) characteristics and behaviours that a good student should have are time management, getting papers done, doing well on quizzes and exams, studying for quizzes and exams, and writing papers that satisfy faculty's requirements. The study found that the number of social skills and self-care behaviours that both FGSs and CGSs use to describe a good college student predicts first-year GPA. However, there is no significant relation between conceptions of a good college student's characteristics and first-to-second-year retention. Falcon (2015) found that HE assimilation and particular personal characteristics facilitate HE success among FGSs, including self-efficacy and being hard working, goal-oriented, independent, and mature.

Allard (2019) studied the effect of 22 so-called "high-impact practices" (HIPs)[6] on the HE success of FGSs who participated in the TRIO support programme in the USA. Among the 22 HIPs, those that correlate most positively with GPA are: students who had informal conversations with faculty or staff; students who asked questions in class; students who participated in peer tutoring; students who had a sense of shared viewpoints; and students who were acquainted with those of different ethnicities. Allard (2019) argues that although

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[6] HIPs were self-reported by participants in the Survey of Program Participants Experiences (SPPE). Specifically, participants indicated the activities they were engaged in while in the Trio programme. HIPs included learning programmes or communities, first-year seminars, writing-intensive courses, collaborative assignments and projects, undergraduate research, diversity and global learning, service learning or community-based learning, internships, and capstone courses or projects (Allard, 2019).

these items are not statistically significant, based on the literature, these particular HIPs hold practical significance to the academic experiences of FGSs who are more academically engaged while studying. Hui (2013) found that one strategy used by FGSs to succeed is active involvement in planning their course of study to maximise efficiency.

b) **Personal Goals, Aspirations, and Motivation.** FGSs are motivated by a variety of factors to pursue and be successful in HE. From a grounded theory research framework, Carter (2018) examined the needs and aspirations of 10 FGSs, and found that they displayed abstract needs and aspirations, such as a dream, as well as concrete aspirations, such as a job with benefits. The main theme that emerged was the abstract level of the self's dream or goal. The next most common theme focused on the family at an abstract level in the aspiration to honour prior generations and to provide an example for future generations. The third most common theme focused again on the self, specifically the concrete financial needs of the individual. The fourth most common theme was the student's focus on the concrete financial needs of the family. The fifth theme reflected the deeply personal notions of "purpose in life" and "a reason to belong".

Darby (2013) found that intrinsic and extrinsic motivation play a role in the HE enrolment and matriculation of FGSs. Ricks (2016) found that self-determination helps FGSs cope with the transition to college. Irlbeck et al. (2014) found that self-motivation plays a role in FGSs' decision to enrol in HE. Although FGSs were found by Hui (2017) to experience significant barriers to success in HE, they were motivated to succeed by many factors, primarily believing that an HE degree is necessary for a better life.

c) **Self-positioning and Emergent Identity.** Carpenter and Pena (2017) investigated the importance of self-authorship among FGSs. The authors define self-authorship as an "orientation to knowledge construction and evaluation based on balancing an understanding of the contextual nature of knowledge with interpersonally grounded goals,

beliefs, and values". The findings suggest that FGSs have the capacity to self-author. The authors note three conditions that support self-authorship among these students, namely (1) difficult life events; (2) epistemological dissonance and reconstruction of meaning (i.e. participants were forced to reexamine their needs and find new ways of constructing meaning in a manner that better aligns with their internal needs, as well as learning to voice their convictions, beliefs, and values); and (3) role modelling (e.g. by a professor, counsellor, or other staff member). These conditions make it possible for FGSs to develop a stronger sense of self. Carpenter and Pena (2017) conclude, however, that even though the results indicate that undergraduate FGSs may develop an adequate level of self-authorship, the fact that FGSs are still dropping out of HE suggests that self-authorship may only be a contributing factor to academic success and does not fully explain the aspects of student success.

Alcock and Belluigi (2018) investigated South African FGSs' self-positioning and identity in relation to the university, their course degree, and their home backgrounds. The results indicated that these students had started to develop a strong sense of their academic identity and the related identity of a professional community of practice. As mentioned before, all the participants adopted the empowering capital provided by their positioning as members of the university community.

Alcock (2017) drew from positioning theory to explore how South African FGSs in an extended programme at a university of technology develop an identity that is associated with being an HE student and with a particular academic field of study. Positioning theory explores the students' experiences of the relationships within and between their home and campus environments, including both past and present educational experiences and how both students and the university's position possibly influence each other's behaviour. The students participating in the study demonstrated through their self-positioning how they started to develop a strong sense of their academic identity. Many of the participants seemed to express

a sense of identity shift in terms of their transition from rural environments to new urban student environments. Results also seemed to show that the participants were able to position themselves in ways that enhanced their agency, which in turn gave rise to their developing sense of academic identity. In many instances, the participants were able to speak with self-pride about the ways in which they positioned themselves as different to the environments from which they had originated. This sense of self-worth seemed to enable the growth of a positive academic identity among the participants as they transitioned to the HE environment.

4.1.3.6 Situational Facilitators

a) Family Encouragement and Support. Studies reported in a prior section of this discussion have indicated that FGSs often experience limitations in support from family, and that this significantly impedes these students' academic progress. The studies described in this section, however, indicate the facilitative influence on the academic progress of FGSs when family support is indeed experienced.

FGSs who perceive higher levels of parental emotional support have less stress than those who do not (Sy et al., 2012). In a study by Darby (2013), FGCSs report that parental support had an impact on their HE enrolment and matriculation. Another study found that family encouragement and support in both the FGS's pre-HE and HE experiences emerged as one of the most important influences on degree attainment (Mahan, 2010). Further, the study revealed that mothers, in particular, play an important role in their FGS's success. Mothers provide key motivational encouragement and support, regardless of their lack of familiarity with the HE experience (Mahan, 2010).

Reome (2012) found that among the experiences that contributed to FGS degree attainment are having a support system in place at home. In another study, the overwhelming majority of the FGS participants describe their family as having a major role in the decision to enrol in HE (Ricks, 2016). Encouragement from family, teachers, high school sport

coaches, and counsellors play a significant role. The same study found that calling or visiting family assisted FGSs in coping with the transition to HE. Darby (2013) found that parental support has an impact on the HE enrolment and matriculation of FGSs. Irlbeck et al. (2014) found that parental, teacher, and family encouragement leads to FGSs' HE enrolment. In addition, parental support is one of the four major types of support used by FGSs in the study. Falcon (2015) found that family support facilitated HE success among FGSs. In a single case study of a female Hispanic, low-income FGS at a predominantly White institution, Pyne and Means (2013) found that family play a crucial role in her life to encourage her to overcome all obstacles. This underscores the significance of relationships and familial support for FGSs in HE.

        b) Capital. While studies have indicated that FGSs have significantly lower access to the respective forms of capital than CGSs (e.g. Garriott & Nisle, 2018; Hudley, 2015; Moschetti & Ridge, 2016), the literature also indicates the value of this aspect to the retention, throughput, and general HE experience of FGSs. Mainly three forms of capital are described by Bourdieu (1983, 1986).

        Firstly, "economic capital" refers to material assets that are "immediately and directly convertible into money and may be institutionalized in the form of property rights" (Bourdieu, 1986, pg. 242). Economic capital includes all kinds of material resources (e.g. financial resources and land or property ownership) that can be used to acquire or maintain better health.

        Secondly, Bourdieu (1983) defines "social capital" as the actual or potential resources that are, essentially, linked to membership in social groups or networks. It is thus a resource that is connected to group membership and social networks (Bourdieu, 1986). Membership in groups and involvement in the social networks developing within these groups and in the social relations arising from the membership can be used to improve individuals' social

position in a variety of different fields. Sander (2006) further explains that social capital emphasises specific benefits that flow from the trust, reciprocity, information, and cooperation associated with social networks. In the simplest of terms, social capital can be understood as the mutual benefits attained by individuals as a result of belonging to social groups and networks.

Thirdly, Bourdieu (1986) describes "cultural capital" as a person's education (knowledge and intellectual skills) that provides an advantage in achieving a higher social status in society. He proposes that cultural capital exists in three different forms. Firstly, in the objectified state, cultural capital includes cultural goods, books, and works of art. In the embodied state, cultural capital relates to language, mannerisms, and preferences. In the institutionalised state, qualifications and educational credentials are of relevance. The possession of cultural capital is thus characterised by the experience and skill to be able to deploy the appropriate knowledge in any given situation: a job interview, a conversation with a neighbour, building a work network and so on (Bourdieu, 1986).

In terms of Bourdieu's theory of capital, the term *habitus* refers to the embodiment of social structures that permeate the mind and body and produce dispositions, values, beliefs, and tastes (Bourdieu, 1990a). Moreover, all forms of capital held by an individual contribute to their habitus. The habitus develops through socialisation within the family and institutions of education. When capital is present in the habitus, the individual must activate their capital to benefit from its rewards (Ridge, 2016). Those with an advantageous habitus can activate their capital by seeking others who hold similar advantages.

Ridge (2016) found from both the qualitative and quantitative data of her study that social capital is of importance in navigating and progressing through academia. The more social capital a student holds, the more likely they are to be academically successful and happy while studying. Furthermore, it greatly impacts their ability to socially integrate and

navigate college. The quantitative and qualitative data from the study mutually confirm that students who activate social capital are less likely to drop out and more likely to complete their degree within six years of matriculation.

Norodien-Fataar (2018) set out to investigate the educational engagement practices of disadvantaged South African FGSs at a university of technology. The study explored the affective, cognitive, and conative[7] dimensions of these students' habits, skills, and dispositions (their habitus) as interrelated aspects important to understanding how they develop their dispositions to learn. The results demonstrate that the students' learning dispositions were produced through the active and strategic exercise of affective, conative, and cognitive interrelated embodied dimensions. The findings highlight the disjuncture between the students' home environment and the university field upon their entry into HE. This resulted in them experiencing a deep sense of disconnection. To counteract this feeling of disconnection between their HE environment and habitus, they accessed peer networks for social and educational support. Norodien-Fataar (2018) argues that FGSs are, therefore, able to build practices through a series of embodied activities that enable them to engage with their learning. These embodied practices consist of forming connections with peers and developing feelings of connection to, and belonging at, the university. These affective qualities contribute to the constructive learning dispositions that students cultivate by developing routines and the discipline to learn. To enhance and deepen their learning, the students turned to information and communication technology to assist them in acquiring the concepts and skills necessary for learning on their science degree courses. Their use of mobile technologies and social media tools in enhancing their academic skills and generating activities to learn indicates the importance of the embodied aspects of learning in the construction of students' learning habitus. The acquisition of their learning habits was central

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[7] "Conative" refers to particular practices or activities performed by an individual (Norodien-Fataar, 2018).

to allowing them to concentrate on those core learning practices and activities that facilitate active participation in HE study, which in turn enabled them to adapt, shift, and change their learning practices at the university. These practices illustrate the capacity of FGSs to accumulate the social and cultural capital necessary for success in HE (Norodien-Fataar, 2018).

In another South African study (Alcock & Belluigi, 2018), results indicate that the FGS participants adopted the empowering capital provided by their positioning as group members of the university community. This was particularly evident in these students' dissociation from those aspects of behaviour that they perceive as socially locating their home communities as "disadvantaged". This includes behaviours characterised by participants as being "unproductive" and behaviours such as spending money on alcohol and drugs.

As mentioned in a prior section, McCallen and Johnson (2019) found that faculty play a significant role in FGSs' success, specifically via the provision of intellectual capital and institutional resources critical to navigating the HE environment. FGSs have also reported that cultural capital had an impact on their HE enrolment and matriculation (Darby, 2013).

4.1.3.7 *Epistemological Facilitators*

a) Academic Advising. Several studies have demonstrated that academic advising and support facilitate academic success among FGSs. For example, a study by Swecker et al. (2013) found that academic advising plays a crucial role in FGS retention. Mahan (2010) found that participation in an academic support programme is a key factor that facilitates FGSs' successful degree attainment. Reome (2012) found that accessing and using academic support services contribute to it too.

Several studies of broader student support programmes that contain an academic support component, such as the TRIO support programme in the USA, have also indicated

positive academic outcomes for the programme participants (e.g. Bryant, 2016; Plaskett et al., 2018; Reome, 2012; Wibrowsky et al., 2017).

4.1.3.8 Institutional Facilitators

a) Support Programmes and Mentoring. Various studies have demonstrated that support and mentoring programmes have a facilitative effect on FGS academic success. For example, Salas (2011) found that support programmes assist low-income FGCSs with finding a community on campus, offer validating experiences that foster involvement, and promote a sense of belonging that encourages retention and persistence.

A survey study conducted by Bryant (2016) showed that the TRIO[8] programme positively influences retention from year one to two and helps to improve the academic skills and abilities of FGS participants. Additionally, annual performance reports show that FGS participants compare favourably to non-participating FGSs in retention and degree attainment in six-year courses.

In another study of the effects of the TRIO programme, Nall (2017) found that the programme assists FGSs in excelling academically, socially, and culturally, which in turn increases retention. Another study of the TRIO programme indicates that involvement in the programme assists participants with progression through HE life by providing mentorship, book stipends, and grants, as well as opportunities for fellowship with other success-driven FGCSs (Kizart, 2014).

Bruner (2017) indicates that participating in a first-year living and learning community has a positive effect on persistence from the first to the second year for FGCSs.

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[8] The Federal TRIO Programs (TRIO) are outreach and student services programmes in the USA designed to identify and provide services for individuals from disadvantaged backgrounds. TRIO includes eight programmes targeted assist low-income individuals, FGCSs, and individuals with disabilities to progress through the academic pipeline from middle school to postgraduate studies. The Student Support Services (SSS) programme within the broader TRIO provides academic tutoring, which can include instruction in reading, writing, study skills, mathematics, science, and other subjects; advice and assistance in HE course selection; information on student financial aid programmes, benefits and resources for locating public and private scholarships; and assistance in completing financial aid applications.

The relationship between participation in the living and learning community and retention iss moderated by academic readiness, with those FGSs who enter HE with academic readiness (defined as having an ACT score of 21 and above) achieving a higher GPA than those who enter without academic readiness (defined as having an ACT score of 20 or below) (Bruner, 2017).

Visiting an advisor or counsellor was found by Ricks (2016) to be one of the factors that assist FGSs in their transition to HE. Salunga (2018) found that the Reality Changers programme[9], a pre-HE intervention programme in the USA, impacts positively on FGSs' college-going identity, college-staying identity, and success in their studies by contributing to 1) increased self-efficacy; 2) increased HE knowledge; and 3) persistence mindset. Sparks (2017) investigated the effect of mentoring on the intent to graduate, HE GPA, and levels of thriving among FGSs and CGSs at a public university. The study found that mentoring does not contribute significantly to students' intent to graduate nor their HE GPA among either student group. However, mentoring contributes significantly to students' thriving levels, with psychological and emotional support and academic subject knowledge support accounting for the most thriving among the students as a whole. Psychological and emotional support and existence of a role model contribute significantly to FGSs' levels of thriving. The findings may also indicate that CGSs more readily access social and other support networks compared to FGSs.

Woods-Warrior (2014) studied the effect on FGS retention and academic outcomes of three programmatic strategies, namely lower- and upper-level student integration[10], faculty

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[9] Reality Changers is a non-profit organisation based in the USA that provides tutoring and mentoring services to high school students, and primarily serves aspiring FGCSs in San Diego county.

[10] "Lower- and upper-level student integration" is operationally defined as classroom settings in which students from all years of studying coexist (Woods-Warrior, 2014).

mentorship[11], peer mentorship[12], and communities of learning (CoL)[13]. The results indicate that of the three retention strategies, faculty mentorship and students' participation in CoL activities most greatly impact their engagement. None of the three strategies are directly correlated to retention, but all three may act as mediators to improve engagement, which has been linked historically to retention.

Irlbeck et al. (2014) found that FGSs used two main institutional programmes to aid their academic success, namely at least one departmental or institutional organisation and religious groups.

Plaskett et al. (2018) investigated match quality between mentor and mentee in a programme that connects incoming students with mentors from areas similar to the major cities from which the mentees matriculated. The study focused on mentoring relationship's instrumentality (logistical, academic, and social-emotional needs that mentors assist with) and relationality (the quality of the mentoring relationship). It was found that mentoring relationships are capable of producing a variety of instrumental benefits for the mentees. For example, mentors help them apply for scholarships and other forms of financial aid, help them select classes and strengthen their study skills, and help them make friends and connect with people and organisations on campus. However, mentees see the greatest instrumental benefits when they have a strong relationship with their mentor (e.g. they develop shared empathy, trust, respect, and closeness). It was found that the best matches integrate these two factors, in an approach the authors call relational instrumentality. That is, the mentees are most successful when their mentors don't just help them meet their immediate needs but also

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[11] "Faculty mentorship" is operationally defined as a set of formal activities in which a member of the institutional faculty is engaged with a student in academic and non-academic activities external to the classroom setting (Woods-Warrior, 2014).
[12] "Peer mentorship" is operationally defined as a set of formal activities in which one student is engaged with another in academic and non-academic activities external to the classroom setting (Woods-Warrior, 2014).
[13] "Communities of learning (CoL)" are operationally defined as sets of linked or clustered courses enrolling a common cohort of students (Woods-Warrior, 2014).

bond with them personally. In these cases, the mentors may become proxies for the family's influence.

A longitudinal study was conducted of a skills learning support programme (SLSP), which is aimed at supporting FGSs in terms of their motivational beliefs, their use of self-regulatory strategies, and academic performance (Wibrowsky et al., 2017). The study compared FGSs who had participated in the programme with FGSs who had not. Findings reveal that FGSs who enrolled in the SLSP gain higher levels of motivation and study skills during their study years. In addition, participants exhibit levels of academic performance similar to or higher than CGSs. However, these differences in the two groups diminish by the time students graduate.

Harackiewicz et al. (2014) investigated the effect of a support programme designed to assist low-income FGSs, known as the Values-Affirmation Intervention. This intervention was pioneered by Cohen et al. (2006, as cited in Harackiewicz et al., 2014) and designed to close achievement gaps by buffering students against the possibility of confirming stereotypes about their group, known as "stereotype threat" (Steele, 1997). Steele (1997) argues that individuals experience apprehension when confronted with personally relevant stereotypes that threaten their social identity or self-esteem, and that this apprehension impairs performance on challenging academic tasks. To combat threats to the self, Steele and Liu (1983) developed a technique to promote self-integrity and self-worth via a writing intervention called self-affirmation or values affirmation (VA). Results of the study indicate that for FGSs, VA significantly improves immediate final course grades and retention, as well as overall GPA for the semester. The intervention halves the achievement gap between FGSs and CGSs for course grades and increases retention in the critical gateway course studied by 20%.

Davis (2015) found that there are no statistical differences in perceptions, satisfaction, or preferences between FGSs and CGSs on the Developmental-Prescriptive Advising Scale (used to measure students' perception of the nature of the advising relationship with their academic advisor) or its sub-scales. While research suggested FGSs should receive and want more prescriptive advising, this study failed to support this assumption.

b) Communication with Faculty. While the literature reports that FGSs often have less communication with faculty, there are indications of the positive effects when such communication does take place regularly. For example, Nall (2017) found that the connection FGSs have with faculty and staff is key in their persistence. Similarly, Brewer (2011) found that FGS engagement with faculty or staff early in their HE is critical to success. The author proposes that this engagement or relationship should continue throughout the student's study years. Allard (2019) found that the practice of engaging in informal conversations with faculty or staff is among the practices that correlate most positively with FGSs' GPA. Soria and Stebleton (2012) had a similar finding that informal interaction, such as speaking with faculty members outside of the class setting, correlates positively with student learning and development.

Reome (2012) found that collaborating with faculty and staff contributes to FGSs' degree attainment. Irlbeck et al. (2014) demonstrated that support from advisers or professors is one of the four major types of support used by FGSs to facilitate academic success. McCallen and Johnson (2019) found that institutional agents, specifically faculty, play a significant role in FGSs' HE success. This success is specifically facilitated through the provision of intellectual capital and institutional resources critical to navigating the HE environment.

4.3 Conclusion

Chapters 3 and 4 were dedicated to the presentation of Phase 1 of the doctoral study. Phase I consisted of a scoping review of the barriers and facilitators of participation, retention, and throughput among FGSs in HE.

The scoping review highlighted that South African literature on FGSs is limited. FGSs in the USA have access to various government and institutional intervention and support programmes (e.g. TRIO and Reality Changers) that are aimed at facilitating retention and throughput among FGSs. South Africa, however, has a unique socio-political history and a lower SES than the USA. Many HE institutions in South Africa consequently do not have the means to offer similarly broad state-sponsored intervention and support programmes at the same scale as is the case in the USA.

The current literature, though substantial, does not capture the nuances of FGSs in South Africa. The limited availability of South African literature on FGSs also means that the very different nature of the HE sector in South Africa and the comparatively larger proportion of FGSs enrolling at historically disadvantaged institutions (HDI) in South Africa are not adequately reflected. Differences between the historical contexts of South Africa and the USA may have a bearing on the factors that facilitate retention and throughput among FGSs. This underscores the necessity to conduct more research on South African FGSs and reemphasises the importance of the current study.

The scoping review findings contributed significantly to the remainder of the study. In terms of Phase II (the cross-sectional survey) methodology, findings from the scoping review informed the selection of items for inclusion in the demographic questionnaire as well as the selection of quantitative research instruments.

Lastly, the scoping review findings contributed to the identification of implications of the overarching study for research, intervention, and illumination of the confounded, nuanced, and context-dependent conceptualisation of the construct of the FGSs.

CHAPTER 5: Phase II – Survey Study Methodology

5.1 Aims and Objectives

The aim of the study is twofold:

Aim 1

To identify the barriers and facilitators of academic performance in a sample of first-generation students (FGSs) at a historically disadvantaged institution (HDI)

Objective 1.1: To assess relationships between psychosocial variables, demographic

variables, generational status, and academic performance

Objective 1.2: To assess for predictive relationships between psychosocial variables,

demographic variables, generational status, and academic performance

Objective 1.3: To identify the barriers and facilitators of academic performance of

undergraduate FGSs at the University of the Western Cape (UWC).

Aim 2

To develop a psychosocial profile of FGSs at an HDI

Objective 2.1: To assess *differences* between FGSs and continuing-generation students (CGSs)

in terms of demographic factors, psychosocial factors, and academic performance and

thereby determine which factors render FGSs a distinct student population

Objective 2.2: To compile a psychosocial profile of undergraduate FGSs at an HDI in the South

African higher education (HE) sector.

5.2 Design

This phase of the doctoral project employed a survey design and incorporated an electronic survey. Survey research is appropriate for describing the current status of specified characteristics of a given population and for discovering relationships among variables (Graziano & Raulin, 2000). Survey research was the most appropriate design for this particular study as it involves the use of standardised questionnaires to collect data about people and their preferences, thoughts, and behaviours in a systematic manner (Bhattacherjee, 2012). This approach was deemed appropriate as it allows the researcher to collect data from a larger sample of students, who can complete the survey at their own leisure (Babbie & Mouton, 2000; Fricker & Schonlau, 2002). Surveys have also been found to be economical in terms of time and costs (Evans & Mathur, 2005). The survey was cross-sectional, i.e. it was administered once to the sample (De Vaus, 2002). A cross-sectional survey means that measurement is done at one given point (Clark-Carter, 2005).

5.3 Research Setting

The University of the Western Cape (UWC) in Cape Town, South Africa served as the research setting. UWC is considered to be an appropriate setting for the study because, as an HDI, UWC has proportionally more students from previously disadvantaged groups. These groups typically include a sizeable proportion of FGSs. In particular, the study focused on FGSs and CGSs following health sciences programmes in the Faculty of Community and Health Sciences (CHS) at UWC. As indicated in the literature review, students following health sciences programmes appear to be particularly vulnerable to attrition (e.g. Deary et al., 2003; Dyrbye et al., 2010; Huff & Fang, 1999). It is, therefore, important to obtain greater knowledge on and insight into the barriers and facilitators of academic performance for FGSs following such degree courses. The CHS Faculty offers professional undergraduate programmes that include the fields of social work, nursing, physiotherapy, occupational

therapy, dietetics, complementary health science, and non-professional health science, such as sport and recreation science. Psychology training also occurs in the faculty. Among these degree courses are three- and four-year programmes – in the case of the latter, the fourth year is considered to be equivalent to an Honours degree programme. Data was collected from September 2019 until December 2019. Data collection therefore occurred prior to the Covid-19 outbreak, and teaching at the time of data collection thus occurred in-person.

5.4 Population and Sample

Inclusion criteria for the survey study required that participants were: (1) undergraduate students of the CHS Faculty at UWC, and registered for psychology as a subject taken as a service-level module in degree courses of other faculties (the Psychology department is situated in the CHS Faculty, and the subject is a module for a large cross-section of the university's degree courses); and (2) registered for the academic year in which data collection took place.

Simple random sampling was employed during the survey. Simple random sampling is a type of probability sampling technique. With the simple random sample, there is an equal chance (probability) of selecting each unit from the population when creating the sample (Stanek et al., 2004). The sampling frame, therefore, consisted of all undergraduate students registered in the CHS Faculty either for a degree or registered for psychology as a service-level subject.

During data analysis procedures, two grouping variables were used. The sample was divided into a first-generation and a continuing-generation group.

Eligible students were identified through the consultation of lists of students who registered for a degree course in the CHS Faculty, as well as students registered for undergraduate psychology modules. The resulting sampling frame included 2,410 students. The final sample consisted of 481 students. This constituted a response rate of 20%, which is

consistent with the typical response rate for online surveys, as reported by Nulty (2008). Nulty (2008) identified that the average range of response rates for online surveys is between 20% and 33%. Babbie (2011) states that there is no consensus on response rates, so the aforementioned are merely suggested response rates.

The final sample consisted of 291 participants who were FGSs and 190 who were CGSs.

5.5 Procedures

Following the receipt of ethical clearance, as well as permission from the registrar to conduct research with UWC students, the preparation of the data collection process commenced.

The survey was administered electronically and hosted in Google Forms, a web-based survey application. Prior to activating the electronic survey, it was piloted by the researcher and supervisor to assess the ease of the administration and accuracy of the survey, as well as the look and feel of the survey on different devices.

All eligible students in the sampling frame received an electronic invitation that contained a brief description of the study, a copy of the ethics clearance letter, inclusion criteria, a description of what participation would entail, and the link to the survey. Also included in the email invitation was the study consent form, although, in practice, the participants provided their informed consent electronically when accessing the survey online.

To increase the response rate to the survey, two incentives were used. First, weekly reminders were sent to eligible students who had not completed the survey. Following the original email invitation, weekly reminders were sent on three occasions. The sending of reminders was ceased after a sufficient sample size was attained and in response to time constraints for data collection. Second, Laguilles et al. (2011) found that lottery incentives can positively impact online survey response rates. This finding is consistent with previous

web survey experiments (e.g. Deutskens et al., 2004; Goritz & Wolff, 2007). Students who participated were entered into a lottery for a cellular voucher valued at R250.00. Participants were informed of the lucky draw in the initial email and with each reminder email. Thus, reasonable efforts were made to increase the response rate. The winner of the cellular voucher was contacted via email and the voucher was electronically transferred to them.

Data was extracted from the Excel output file, which is the format in which the results were recorded by the web-based survey application. Once the data collection was complete, the recoding of the raw data took place. Following this, the data was exported into a statistical analysis program and the data analysis commenced.

5.6 Instruments

The study used a demographic questionnaire, as well as three self-report instruments, namely the Multidimensional Scale of Perceived Social Support (MSPSS), the General Health Questionnaire-12 (GHQ-12), and the General Self-efficacy Scale (GSE). Given that this sample is English proficient, no translation was required.

5.6.1 Demographic Questionnaire

A demographic questionnaire was constructed to obtain data from each participant in terms of significant demographic variables identified in the literature: (1) age; (2) gender; (3) ethnicity; (4) first language; (5) English proficiency; (6) use of financial support or aid; (7) mother and father's tertiary education history; (8) degree course being studied; (9) year of study; (10) final Grade 12 grade point average (GPA); (11) employment status; (12) number of hours working per week; (13) living arrangements; (14) involvement in extra-curricular campus activities; (15) time spent on family responsibilities; (16) experience of financial stress; (17) average percentage of the final marks for the last completed university semester.

The answer options for some of the questionnaire items were quantified to allow their use as continuous variables in certain methods of statistical analysis. See Appendix I for the

full demographic questionnaire, as well as the methods of quantification of certain question items.

5.6.2 Academic Performance Information

Students were asked in the demographic questionnaire to indicate the range of the average percentage obtained for their modules in the last completed semester. The ranges for selection were: 40–50%, 50–60%, 60–70%, 70–80%, 80–90%, 90–100%, and below 40%. In addition, data was collected on participants' academic performance at UWC from transcripts reflected on the university's mark administration system. This was done in a bid to enhance the accuracy of the marks for use in the analysis. This information could be collected for students who provided their student numbers during the data collection process. In relation to the latter method of academic performance data collection, a student's mark for each of their completed modules was collected and then the marks were averaged to obtain one final average mark. Due to the omission of student numbers by a significant number of participants, the use of the latter method resulted in a significantly smaller sample size. The academic performance information obtained via the first method was therefore used for statistical analysis.
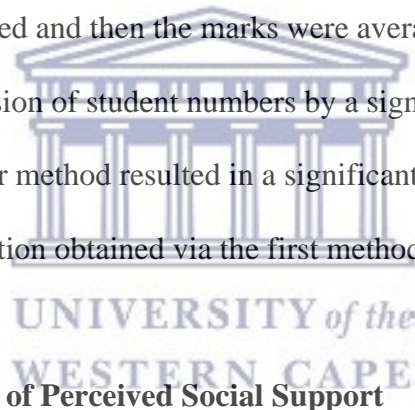
5.6.3 Multidimensional Scale of Perceived Social Support

The Multidimensional Scale of Perceived Social Support (MSPSS) by Zimet et al. (1988) is a 12-item scale that measures perceived social support relating to three domains: (1) family; (2) friends, and (3) a significant other. The instrument also provides a full-scale score representing overall perceived social support. Respondents rate 12 statements on a Likert scale ranging between 1 and 7, with 1 being Very strongly disagree and 7 being Very strongly agree. Mean scores for each of the family, friends, and significant other sub-scales are calculated as follows:

- Significant other sub-scale: Sum across items 1, 2, 5, and 10, then divide by 4.

- Family sub-scale: Sum across items 3, 4, 8, and 11, then divide by 4.

- Friends sub-scale: Sum across items 6, 7, 9, and 12, then divide by 4.

- Total scale: Sum across all 12 items, then divide by 12.

Any mean scale score ranging from 1 to 2.9 can be considered low support; a score of 3 to 5 is considered moderate support; a score from 5.1 to 7 is considered high support (Zimet et al., 1988). In the current study, however, the scores were used as continuous variables and results of the measure were not classified according to low, moderate, or high support.

The initial study describing the development of the MSPSS indicated that it was a psychometrically sound instrument (Zimet et al., 1988). Canty-Mitchell and Zimet (2000), Edwards (2004), and Zimet et al. (1990) found the instrument to have good internal reliability across subject groups. In addition, strong factorial validity was demonstrated, confirming the three-sub-scale structure of the MSPSS (Zimet et al., 1990).

A measure of social support was included in the present study based on empirical evidence that FGSs often experience challenges in attaining social support (Jenkins et al., 2012; Jenkins et al., 2013; Kizart, 2014; London, 1992; Palbusa, 2016; Sy et al., 2012; Terenzini et al., 1994). This is of particular importance for the present study as there are firmly established links in the literature between limitations in social support and poorer academic performance, lower retention rates, and higher attrition rates among FGSs (Katrevich & Aruguete, 2017; Mrozinske, 2016; Pratt et al., 2019; Reome, 2012; Ricks, 2016). The MSPSS, in particular, was favoured for the present study as its measurement of social support in three distinct domains provides the researcher with more nuanced information on the experiences of social support across different types of social relationships. The psychometric properties of the MSPSS have been investigated when applied to a sample of South African youth. Results indicated good internal consistency and construct validity.

The measure was concluded to be a sound psychometric instrument that can be applied to South African youth.

The reliability and internal consistency statistics for each of the quantitative instruments as they performed in the present study are presented in Section 5.6.6 that follows the description of all the instruments.

5.6.4 The General Self-Efficacy Scale (GSE)

Self-efficacy has been defined as one's belief in one's ability to succeed in specific situations or accomplish a task (Luszczynska & Schwarzer, 2005). Self-efficacy was measured using the General Self-efficacy Scale (GSE) developed by Schwarzer et al. (1997) and consisting of 10 items. Respondents rate 10 statements on a Likert scale with scores ranging from 1 to 4. For scoring purposes, all responses are added up to a sum score, with a possible total score ranging from 10 to 40 points. A mean score can also be generated.

In a multi-cultural validation study, consistent evidence was found for associations between perceived self-efficacy (as measured by the GSE) and variables such as behaviour-specific self-efficacy, health behaviours, well-being, and coping strategies, confirming the validity of the psychometric scale (Scholz et al., 2002). Schwarzer et al. (1997) found the questionnaire to have internal consistencies ranging between 0.81 and 0.91 as differing between the three versions of the scale used in Germany, Costa Rica, and China. In addition, correlations with depression, anxiety, and optimism provided some further evidence for construct validity.

A measure of self-efficacy was included in the present study based on empirical evidence that self-efficacy beliefs affect GPA and persistence rates of FGSs in HE (Vuong et al., 2010). Lower self-efficacy and self-esteem among FGSs represent an obstacle to HE success (Falcon, 2015). The GSE, in particular, was chosen for this study based on the measure's broad scope of validation cross-culturally. Originally created in Germany, the

GSE has been adapted to 28 languages and has been found to be configurably equal across 28 countries (Luszczynska et al., 2005; Schwarzer & Jerusalem, 1995). Thus, the GSE satisfies the requirements for multi-cultural evaluation methods (Damásio et al., 2016). The GSE has been used in South Africa to examine the influences of organisational climate on hardness, self-efficacy, and job satisfaction in a military setting and was found to have a Cronbach alpha of 0.88, thus indicating that it was a reliable tool in a South African context (Luzipo & Van Dyk, 2018).

5.6.5 General Health Questionnaire-12

The original General Health Questionnaire (GHQ) was developed by Goldberg (1972) as a measure of psychological distress. The GHQ-12, specifically was created by Politi et al. (1994) as a shortened version of the original 60-item instrument and is widely used as a screening instrument for detecting psychological strain in the general population (Kalliath et al., 2004).

The GHQ-12 is a Likert-type rating scale, ranging in scores from 0 to 3 for each question, including responses from "better than usual" to "much less than usual". The wording of the answer options for each item does, however, differ. See Appendix H for a representation of the full instrument.

The 12-item version of the GHQ was found to be a reliable instrument, with a Cronbach's alpha of 0.81 (Politi et al., 1994). The instrument was found to have a sensitivity of 0.68. Validity of the GHQ-12 was demonstrated in its ability to discriminate between subjects with and without emotional disturbance as measured by the Minnesota Multiphasic Personality Inventory.

Numerous authors have suggested that the GHQ-12 contains underlying factors rather than being purely unidimensional. Authors propose either two or three clinically meaningful and distinct factors (e.g. Andrich & van Schoubroeck, 1989; Graetz, 1991; Martin, 1999;

Politi et al., 1994; Werneke et al., 2000; Worsely & Gribbin, 1977). Other authors have found

that the GHQ-12 is, in fact, ultimately a unidimensional measure (e.g. Hankins, 2008; Smith

et al., 2010; Ye, 2009). There is much inconsistency between authors' opinions of whether

the GHQ-12 is uni- or multi-dimensional. Among those authors who support the notion of

multi-dimensionality, there is also disagreement over the number and nature of the constructs

represented by these underlying factors. Various studies have, however, found through

confirmatory factor analysis that the three-factor model identified by Graetz (1991) gave the

best goodness-of-fit when compared to alternative factor compositions (Cheung, 2002;

Kalliath et al., 2004). The current consensus across most studies is that the GHQ-12 measures

psychiatric dysfunction in three domains, namely social dysfunction (6 items), anxiety and

depression (4 items), and loss of confidence (2 items) (Graetz, 1991; Hankins, 2008). Given

the number of studies that have confirmed Graetz's (1991) three-factor structure of the GHQ-

12, the same factor structure was applied in this study.

A measure of mental distress was included in the present study due to evidence in the

literature of associations between first-generation status and vulnerability to psychological

difficulties. This includes higher instances of feeling depressed, stressed, or upset than CGSs

(Stebleton & Soria, 2012), higher anxiety levels (Allison, 2015), significantly stronger post-

traumatic stress disorder symptoms, and less life satisfaction (Jenkins et al., 2013). These

difficulties, in turn, have been shown to represent a significant obstacle to academic success

and retention (Stebleton & Soria, 2012). The GHQ-12 was favoured as a measure of mental

distress due to its three-factor structure that gives the researcher a more nuanced

understanding of different manifestations of psychological distress than would be the case

with a one-factor measure that assesses mental health generally. The instrument's sub-

domains of depression and anxiety, loss of confidence, and social dysfunction speak directly

to some of the psychological difficulties of FGSs identified in the literature. In addition, the

more general GHQ enjoys high acclaim among researchers and the 12-item GHQ is an internationally well-validated instrument of self-reported mental distress in the general population (Goldberg et al., 1997). The GHQ-12 has been shown to be a very robust measure of psychological health. The GHQ-12 has furthermore been validated by the National Institute of Public Health and Statistics Sweden. Furthermore, a multi-national study of the psychometric properties and factor structure of the GHQ-12 as a screening tool for anxiety and depressive symptoms in young adults was done with the inclusion of Ethiopia, an African country. The study demonstrated cross-cultural comparability of the GHQ-12 for assessing common psychiatric disorders such as symptoms of depressive and anxiety disorders among young adults in an African country. A South African study of stress among medical doctors found an overall Cronbach's alpha coefficient for the GHQ-12 of 0.847, indicating reliability of the measure in a South African sample (Govender et al., 2012). A systematic scoping review of anxiety and depression in athletes assessed using the GHQ-12 identified six relevant South African studies Unfortunately, the majority of these studies do not report the psychometric properties of the GHQ-12 in their respective samples. The findings of the scoping review study do, however, indicate a generous use of the GHQ-12 in South African studies. Lastly, a study investigating psychological distress among South African healthcare workers early in the Covid-19 pandemic administered the GHQ-12 along with five other measures. The internal consistency coefficient of the instruments were not reported individually, but all instruments' alpha values were between 0.775 and 0.908, reflecting favourably on the reliability of the GHQ-12 in a South African sample.

5.6.6 Descriptive and Internal Consistency Statistics for Quantitative Instruments

This section reports on the descriptive statistics and internal consistencies of the instruments used for the cross-sectional survey in the present study: the GSE, MSPSS, and

GHQ-12. Descriptive and inferential statistics were used to assess the internal consistency of the instruments applied in the survey.

Table 5.6.6 reports the descriptive statistics and alphas for these instruments.

Table 5.6.6

Descriptive Statistics and Reliabilities for the GHQ-12, GSE, and MSPSS (n = 481)

Scale	n	Mean	SD	Alpha
GHQ-12 full scale	12	17.00	7.78	0.89
GHQ-12 social dysfunction	6	8.83	3.77	0.76
GHQ-12 depression and anxiety	4	5.85	3.11	0.80
GHQ-12 loss of confidence	2	2.31	1.66	0.60
MSPSS full scale	12	4.71	1.24	0.90
MSPSS friends	4	4.63	1.55	0.92
MSPSS family	4	4.62	1.58	0.90
MSPSS significant other	4	4.88	1.61	0.89
GSE total	10	30.65	4.81	0.86

The GHQ-12 full scale obtained a reliability coefficient of 0.89. This compares favourably to the reliability coefficient of 0.81 found by Politi et al. (1994).

The obtained alpha of 0.60 for the GHQ-12 loss of confidence sub-scale is not quite on par with the alpha of 0.85 found in a study by Shevlin and Adamson (2005). This may be partly understood in the fact that the sub-scale consists of only two items. The alphas obtained in the present study for social dysfunction (0.76) and depression and anxiety (0.80) fared better in comparison to the findings of 0.80 and 0.85 by Shevlin and Adamson (2005).

The reliability coefficient of 0.90 for the MSPSS full-scale measure is consistent with Canty-Mitchell and Zimet's (2000) result of 0.93. Likewise, the present study's findings of alphas of 0.90 for the family sub-scale, 0.92 for the friends sub-scale, and 0.89 for the significant other sub-scale measure favourably against Canty-Mitchell and Zimet's (2000) findings of 0.91, 0.89, and 0.91 respectively.

The reliability coefficient of 0.86 for the GSE in the present study is comparable to alphas ranging between 0.76 and 0.90 in samples from 23 nations as reported by Schwarzer (2002).

5.7 Data Analysis

Data was analysed using IBM's Statistical Package for the Social Sciences (SPSS) version 23.

5.7.1 Descriptive Statistics and Frequency Distributions

Descriptive statistics were used to compile the demographic profile of the participants. Descriptive statistics are appropriate for this purpose as they increase the familiarity with the sample by summarising its characteristics (Clark-Carter, 2004). Descriptive statistics, particularly frequencies, provided a summary of the sample in terms of the participants' demographic composition.

5.7.2 Inferential Statistics

Tests of association, difference, and prediction were used in the data analysis. To determine whether the data generated by this sample supported the planned analysis and use of inferential statistics, tests of data normality were conducted.

5.7.2.1 Normality

Tests for normality were conducted for the data generated by the GHQ-12, GSE, and MSPSS. This involved administration of the Shapiro–Wilk test, a test of normality in frequentist statistics (Shapiro & Wilk, 1965). It tests the null hypothesis that a sample came from a normally distributed population. If the p value is less than the chosen alpha level, then the null hypothesis is rejected and there is evidence that the data tested is not normally distributed. If the p value is greater than the chosen alpha level, then the null hypothesis cannot be rejected.

The Shapiro-Wilk test provides better power than the Kolmogorov–Smirnov test (Steinskog et al., 2007). Power is the most frequent measure of the value of a test for normality. Some researchers recommend the Shapiro–Wilk test as the best choice for testing the normality of data (Steinskog et al., 2007). The Shapiro-Wilk test was therefore deemed appropriate to test for data normality in the present study.

Tests for normality regarding the GHQ-12 revealed a significant result (Shapiro–Wilk's test = $p < 0.05$), indicating that the data was not normally distributed. However, visual inspection of the resulting histogram and Q-Q plot revealed that data points fell close to the line. Based on the visual investigations and Q-Q plot, the data was deemed to be normally distributed.

Similar results were found for both the GSE (Shapiro–Wilk's test = $p < 0.05$) and MSPSS (Shapiro–Wilk's test = $p < 0.05$). However, similar to the above, visual inspection of the histogram and normal Q-Q plot for both the GSE and MSPSS indicated normality. Like most statistical significance tests, if the sample size is sufficiently large, the Shapiro–Wilk's test may detect even trivial departures from the null hypothesis (i.e. although there may be some statistically significant effect, it may be too small to be of any practical significance). Thus, additional visual investigation of the effect size is typically advisable, e.g. a Q-Q plot in this case (Field, 2009). Given the determination through visual inspection that data normality was adequate, the data was deemed to support the use of inferential statistics.

The test statistic is more sensitive than visual inspection. If one studies the histogram, it appears relatively normally distributed with a slight skew. For example, the GHQ-12 scale and sub-scales have a slight positive skew, meaning that the answers are clustering slightly on the lower end of the scale. For the MSPSS and GSE, the scales are negatively skewed, meaning participants have higher scores (responses clustering on the high-score end of the distribution). Lower mean scores on the GHQ-12 indicate less psychological distress than

higher mean scores. In terms of the MSPSS and GSE, higher mean scores indicate higher perceived social support and higher self-efficacy.

A possible explanation for the slight skews observed for the quantitative instrument data in this study relates to response bias, which exists in several forms. Some forms of response bias are not applicable to the present study due to an absence of actual contact between the researcher and participants.

Types of response bias that may be relevant include, firstly, demand characteristics. This form of bias occurs when the participants are influenced simply by being part of the study. This happens when participants actually change their behaviour and opinions as a result of taking part in the study itself (Paulhus, 1991).

Acquiescence bias is a form of response bias where participants respond in agreement with questions in the survey as a result of wanting to please the researcher (Smith, 2004). Smith (2004) found that high acquiescence bias in responses to personally relevant items is found in nations that measure high on family collectivism. Given this study's South African context and the sample, many of this study's participants originate from collectivist families and cultures. Acquiescence bias can, therefore, partly explain why participants reported higher social support and self-efficacy and lower psychological distress.

Social desirability bias occurs when participants answer sensitive questions with socially desirable, rather than truthful, answers (Paulhus, 1991). Smith's (2004) suggestion around the influence of collectivist culture on acquiescence bias seems also applicable to social desirability bias. According to Fernández et al. (2000), communicating good feelings to other people is more typical of collectivistic than individualist cultures. Stephan et al. (1996) found that individualistic participants anticipate feeling more comfortable expressing emotion than collectivistic participants. Collectivist participants express less to all types of groups, while the opposite occurs with individualistic participants (Stephan et al., 1996). It may, therefore,

be that participants of the present study believed it to be more socially desirable to under-report psychological distress as measured by the GHQ-12, to report positively in terms of self-efficacy as measured by the GSE questions, and to report favourable levels of social support as a result of cultural context.

On the other hand, it may be that participants in the present study, in fact, did not experience elevated psychological distress, lack of self-efficacy, or lower social support. South African students are, after all, resilient. Reed et al. (2018) found that overall, South African FGSs are more resilient than Canadian FGSs. In addition, South African FGSs were found to be more generally resourceful than FGSs and CGSs in Canada. Findings from the present study of a slight clustering of scores at the low end of the GHQ-12 and at the higher ends of the MSPSS and GSE may, therefore, not be artefacts produced by response bias. Social support may also, actually, be experienced as satisfying in this study's sample. Triandis et al. (1985) found that allocentrism[14] is positively correlated with social support (both quantity and satisfaction with it) and with low levels of alienation and anomie. Allocentric people are more likely to receive social support that acts as a buffer against life change stresses. If it is the case that the MSPSS scores are a true reflection of social support experienced in this sample, then it follows that self-efficacy is also enhanced as a result. The more social support a person receives, the higher their self-efficacy is. Wang et al. (2015) state that studies show a positive correlation between a person's self-efficacy and the social support they receive.

Linear Relationship. A primary assumption of inferential statistics, such as correlation and linear regression, is linearity, i.e. a linear relationship between variables (Leard Statistics, 2015). Linearity is first established to determine whether a relationship

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[14] Allocentrism is a collectivistic personality attribute whereby people centre their attention and actions on other people rather than themselves (Triandis et al., 1985).

exists between the independent variables collectively and the dependent variable (Cohen et al., 2003). For this study, this was done by plotting the predicted values against the studentised residuals. Next, the linear relationship between each independent variable and the dependent variable was established by investigating the partial regression plots. Categorical linearity cannot by assessed using this method (Leard Statistics, 2015).

Equality of Variance. The assumption of homoscedasticity rests on the premise that the variance is equal for all values of the predicted dependent variable (Leard Statistics, 2015). Homoscedasticity was assessed in this study by visual inspection of a plot of studentised residuals compared to unstandardised predicted values (Cohen et al., 2003).

Multi-collinearity. Multi-collinearity analysis was conducted to determine tolerance values, with values greater than 0.01 indicating sufficient multi-collinearity (Hair et al., 2014).

Regression Residuals. Lastly, normality was established by investigating the distribution of prediction residuals in the regression analysis (Ricker, 2019). The regression assumptions showed that regression residuals were normally distributed. In short, the data satisfied the assumptions for the use of inferential statistics and would support the proposed analyses.

5.7.2.2 *Correlation*

Relationships between all variables included in the study were tested by means of a correlation matrix as per Aron et al. (2009). Correlations are used in the analysis of cross-sectional survey data (Field, 2009). Walker and Maddan (2012) recommend that the type of variables determine the correlation coefficient to be used. The Pearson product-moment correlation coefficient is computed when two continuous variables are correlated (Mukaka, 2012). For this study, the matrix was computed to determine the significant correlates of (1) generational status; (2) academic performance; (3) self-efficacy as measured through the GSE

scores; (4) social support as measured through the MSPSS scores; and (5) psychological distress as measured through the GHQ-12 scores. Significance was tested at a 0.05 alpha level. Significant correlates of the outcome variables were considered as possible covariates. These covariates were considered in the subsequent regression analysis.

5.7.2.3 *Chi-square Analysis*

A number of chi-square analyses were performed to test for possible associations between generational status and socio-demographic variables that are categorical in nature. Chi-square tests are indicated for any examination of the relationship between two variables that are scaled at the nominal level. The variables can be dichotomous or have a few non-ordered categories (Gliner et al., 2002).

Chi-square tests were, therefore, judged to be suitable for analysis in this study as both generational status and the variables to be tested for independence are categorical in nature. Chi-square analyses were done to test for associations between generational status and employment status, place of residence, use of financial aid, year level of study, degree course of choice, gender, and self-identified racial group.

5.7.2.4 *Multivariate Analysis of Variance*

Multivariate analysis of variance (MANOVA) was used in this study to determine differences in the psychosocial and demographic variables between the FGS and CGS groups. Multivariate tests (to calculate the Hotelling's trace coefficient) were administered to measure overall group differences in terms of these variables.

The one-way MANOVA is used to determine whether there are any differences between two or more independent groups (in this case, the FGS and CGS groups) of a categorical (i.e. nominal or ordinal) independent variable in terms of two or more continuous dependent variables (in this case, the demographical, psychosocial, and academic performance measures) (Rencher & Christensen, 2012). This was, therefore, an appropriate analysis to

determine differences as the FGS and CGS groups represent categorical independent variables that were measured in relation to more than two continuous dependent variables.

5.7.2.5 Regression Analysis

Assumption Testing for Regression Analysis. When conducting a regression analysis, the assumptions are tested during the regression procedure. This is done since many of the assumptions are checked using the residuals of the regression, which can only be calculated after the regression equation has been calculated (Leard Statistics, 2015). Assumption testing in this study revealed independence of observations as assessed by a Durbin-Watson statistic of 1.75. The Durban-Watson number can range between 0 and 4, but a value of approximately 2 indicates there is no correlation between residuals (Cohen et al., 2003).

A primary assumption of linear regression is linearity, or a linear relationship between variables (Leard Statistics, 2015). For this study, linearity was first established to determine whether a relationship exists between the independent variables collectively and the dependent variable as suggested by Cohen et al. (2013). This was done by plotting the predicted values against the studentised residuals. In the visual inspection, the residuals showed a horizontal band in the scatterplot, indicating a linear relationship between the independent variables collectively and dependent variable (Cohen et al., 2013).

Next, the linear relationship between each independent variable and the dependent variable was established by investigating the partial regression plots. Continuous variables (i.e. GHQ-12 social dysfunction and MSPSS significant other) were found to have a linear relationship.

The assumption of homoscedasticity rests on the premise that the variance is equal for all values of the dependent variable (Leard Statistics, 2015). There was homoscedasticity in this study, as assessed by visual inspection of a plot of studentised residuals versus

unstandardised predicted values as per Cohen et al. (2013). All plots in the scatterplot were evenly distributed with no trend emerging. Multi-collinearity was not identified as a problem for any of the variables included in the regression analysis, with all tolerance values being greater than 0.01 as recommended by Hair et al. (2014).

Finally, normality was established by investigating the distribution of prediction residuals as per Denis (2019). Inspection of the histogram, P-P plot, and Q-Q plot revealed that the residuals showed normality. Since the data met all the assumptions required for a regression analysis, the regression results are interpreted below.

The Stepwise Analysis. Stepwise linear regression is used to determine whether specified independent variables significantly predict a dependent variable (Aron et al., 2009). Stepwise regression uses bidirectional elimination in which a combination of forward and backward selection is employed, thereby adding and removing variables at each step to find the best model fit. A stepwise regression analysis was done in this study to identify significant predictors of academic performance from specified demographic and psychosocial variables.

Analysis was performed for the FGS and CGS groups separately, as well as for the whole sample. Thirteen variables were used. The regression yielded four models, of which model four accounted for the most variance with an R^2 of 0.18. The regression identified a model containing four predictors of academic performance, having removed the following nine predictors: generational status, hours worked, extra-curricular activities, financial stress, social support from family, social support from friends, anxiety and depression, a loss of confidence, and general stress. The removed variables, including generational status, did not provide unique explanation for the variance in academic performance that tested significant. The lack of significant unique contribution from these 13 variables suggests that there is a high level of shared variance among them.

For the FGS group separately, stepwise regression resulted in a five-predictor model that tested significant at a 0.01 alpha level. The model explained 20% ($R^2 = 0.20$) of the variance in university academic performance in FGSs.

For the CGS group, stepwise regression resulted in a model containing three predictors of academic performance that tested significant at a 0.01 level. The model explained 27% ($R^2 = 0.27$) of the variance in academic performance.

5.8. Ethical Considerations

Ethics clearance for the study was granted by the Humanities and Social Science Research Ethics Committee (HSSREC) of the University of the Western Cape (ethics clearance letters can be viewed under Appendix B). Permission to conduct the study at UWC was obtained from the registrar (the permission letter can be viewed under Appendix A). Participants were provided with an information sheet (please see Appendix C) that explained what the survey study and participation would entail. The informed consent process stressed that all participation was voluntary and that participants were allowed to withdraw at any time without fear of any negative consequences (please see Appendix D). Informed consent was obtained from participants. Completed questionnaires and transcripts were anonymized by assigning codes. Confidentiality was maintained and data collected was stored securely in password protected files. Participation in the study did not pose any significant risks to participants. Participants were invited to approach the researcher for a referral to appropriate social or counselling services should such needs have arisen from exposure to the research process. There were no instances of such a request. Electronic data files were password-protected and will be retained for a period of five years. Any "hard copy" data was stored in locked filing cabinets for the minimum required period of five years.

The Protection of Personal Information Act, 2013 (Act 4 of 2013) relates to section 14 of the Constitution which provides that everyone has the right to privacy

(www.thepresidency.gov.za). The act promotes the protection of personal information processed by public and private bodies and seeks to balance the right to privacy against otherrights, such as access to information. Within this research study, every attempt was made to keep the identities and other personal information of participants confidential. Participants were identified by codes assigned to them. Both electronic and hard copy data are being stored in password protected files and locked filing cabinets, respectively.

CHAPTER 6: Phase II – Survey Study Results
6.1 Introduction

This chapter is dedicated to a discussion of the findings of the survey study conducted in Phase II of the overall study. The results of the statistical analyses are organised according to the objectives of the survey phase of the study.

6.2 Sample Composition and Descriptive Statistics

Table 6.2.1 highlights the demographic composition of the sample in terms of gender, ethnicity, and home language. Descriptive statistics are also provided for each student group and the sample as a whole.

In terms of generational status, 60.5% (n = 291) of participants were first-generation students (FGSs), while 39.5% (n = 190) were continuing-generation students (CGSs). For the whole sample, more participants were female (74.8%) than male (25.2%). In terms of racial composition, 42.2% of the participants self-identified as Black, 48.6% as Coloured, 1% as Indian, and 7.9% as White. In terms of home language, the vast majority of participants reported English (39.7%), isiXhosa (30.1%), and Afrikaans (18.1%) as their home language, collectively accounting for 87.8% of participants' home language. The latter is consistent with the demographics of the Western Cape province where the University of the Western Cape is located.

Table 6.2.1

Demographic Composition of the Sample in terms of Gender, Ethnicity, and Home Language (n = 481)

Variable	Category	FG		CG		Whole sample	
		n	**%**	**n**	**%**	**n**	**%**
Gender	Male	84	28.9	37	19.5	121	25.2
	Female	207	71.1	153	80.5	360	74.8
Ethnicity	Black	128	44.0	75	39.5	203	42.2
	Coloured	140	48.1	94	49.5	234	48.6
	Indian	4	1.4	1	.5	5	1.0
	White	18	6.2	20	10.5	38	7.9
Home language	English	103	35.4	88	46.3	191	39.7
	Afrikaans	60	20.6	27	14.2	87	18.1
	English/Afrikaans	1	0.3	3	1.6	4	0.8
	Kaaps Afrikaans	1	0.3	1	0.5	2	0.4
	isiXhosa	102	35.1	43	22.6	145	30.1
	Zulu	11	3.8	8	4.2	19	4.0
	Sepedi	2	0.7	5	2.6	7	1.5
	Setswana	1	0.3	6	3.2	7	1.5
	Swati	1	0.3	2	1.1	3	0.6
	Northern Sesotho	1	0.3	1	0.5	2	0.4
	Southern Sesotho	-	-	1	0.5	1	0.2
	Sesotho	2	0.7	-	-	2	0.4
	SiSwati	2	0.7	-	-	2	0.4
	Tshivenda	-	-	2	1.1	2	0.4
	Pedi	-	-	1	0.5	1	0.2
	Swazi	1	0.3	-	-	1	0.2
	Tsonga	1	0.3	-	-	1	0.2
	German	-	-	1	0.5	1	0.2

Table 6.2.2 indicates that in terms of employment, 74.6% of participants do not work, 2.5% work full-time, and 22.9% work part-time. In terms of participation in extra-curricular activities, the majority of participants (75.3%) reported no participation at all. A larger percentage of CGSs (21.6%) than FGSs (13.4%) reported residing on campus.

Table 6.2.2

Composition of the Sample in terms of Employment Status, Place of Residence, Involvement in Extra-curricular Activities, Family Responsibilities, Use of Financial Aid, and Financial Stress (n = 481)

Variable	Category	FG		CG		Whole sample	
		n	%	n	%	n	%
Employment	Not working	213	73.2	146	76.8	359	74.6
	Working full-time	67	23.0	43	22.6	12	2.5
	Working part-time	11	3.8	1	0.5	110	22.9
Residence	On-campus	39	13.4	41	21.6	80	16.6
	Off-campus	251	86.6	149	78.4	400	83.2
Extra-curricular activities	Does not participate	225	77.3	137	72.1	362	75.3
	Some activities	59	20.3	47	24.7	106	22.0
	Many activities	7	2.4	6	3.2	13	2.7
Time spent: Family responsibilities	None	39	13.4	27	14.2	66	13.7
	A little	148	50.9	95	50.0	243	50.5
	A lot	104	35.7	68	35.8	172	35.8
Financial aid	Using financial aid	231	79.4	117	61.6	348	72.3
	Not using financial aid	59	20.3	73	38.4	132	27.4
Level of financial stress	None	9	3.1	11	5.8	20	4.2
	A little	28	9.6	47	24.7	75	15.6
	Moderate	82	28.2	62	32.6	144	29.9
	A lot	172	59.1	70	36.8	242	50.3

In terms of time spent on family responsibilities, 13.7% of participants reported spending no time on family responsibilities, 50.5% reported spending a little time on family responsibilities, with 35.8% of participants reporting a lot of time spent on family responsibilities.

The vast majority of participants reported that they use financial aid (72.3%), as opposed to 27.4% of students not using financial aid. In terms of the experience of financial stress, the majority of participants reported experiencing a lot of financial stress (50.3%).

More of the FGSs (59.1%) than CGSs (36.8%) rated their level of financial stress as "a lot of financial stress".

Table 6.2.3

Composition of the Sample in terms of Parental Education, Study Year Level, and Degree Course (n = 481)

Variable	Category	FG		CG		Whole sample	
		n	**%**	**n**	**%**	**n**	**%**
Father: Highest qualification	No Grade 12	174	60.2	25	13.3	199	41.7
	Grade 12	115	39.8	32	17.0	147	30.8
	Tertiary qualification	-	-	105	55.9	105	22.0
	Postgraduate qualification	-	-	26	13.8	26	5.5
Mother: Highest qualification	No Grade 12	177	60.8	26	13.7	203	42.2
	Grade 12	114	39.2	28	14.7	142	29.5
	Tertiary qualification	-	-	111	58.4	111	23.1
	Postgraduate qualification	-	-	25	13.2	25	5.2
Year level	1st year	118	40.7	80	42.1	198	41.2
	2nd year	65	22.4	45	23.7	110	22.9
	3rd year	76	26.2	48	25.3	124	25.8
	4th year	22	7.6	15	7.9	37	7.7
	5th year	9	3.1	2	1.1	11	2.3
Degree course	Bachelor of Arts	141	48.6	85	45.2	226	47.0
	Nursing	44	15.2	24	12.8	68	14.1
	Social work	41	14.1	18	9.6	59	12.3
	Sport and recreational science	14	4.8	13	6.9	27	5.6
	Occupational therapy	6	2.1	11	5.9	17	3.5
	Physiotherapy	10	3.4	7	3.7	17	3.5
	Complementary health science	11	3.8	5	2.7	16	3.3
	Bachelor of Science	4	1.4	9	4.8	13	2.7
	Dietetics	2	0.7	8	4.3	10	2.1
	Library science	8	2.8	2	1.1	10	2.1
	LLB Law	6	2.1	2	1.1	8	1.7
	Management	2	0.7	-	-	2	0.4
	Natural medicine	1	0.3	-	-	1	0.2
	Theology	-	-	1	0.5	1	0.2

Chinese medicine	-	-	1	0.5	1	0.2
Education	-	-	1	0.5	1	0.2
Industrial psychology	-	-	1	0.5	1	0.2
Unknown	-	-	1	0.5	1	0.2

Table 6.2.3 illustrates that the majority of students have fathers who did not complete Grade 12 (41.7%). Similarly, with regards to the mother's highest level of qualification, the majority of students have mothers who did not complete Grade 12 (42.2%). For the CGSs, 55.9% of these students' fathers had a higher education (HE) qualification, while 58.4% of these students' mothers had an HE qualification. Interestingly, 24.8% had fathers only with an HE qualification compared to 31.1% who had mothers only with an HE qualification. Among CGSs, 40.5% had both parents with an HE qualification.

As can be seen in Table 6.2.3, most participants (41.2%) were in their first year of study and registered for a Bachelor of Arts with psychology (47%), followed by nursing (14.1%), and social work (12.3%).

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Table 6.2.4

Composition of the Sample in terms of Grade 12 Performance, University Academic Performance, and English Proficiency (n = 481)

Variable	Category	FG		CG		Whole sample	
		n	**%**	**n**	**%**	**n**	**%**
Grade 12: Final average mark	40–50%	7	2.4	7	3.7	14	2.9
	50–60%	51	17.5	31	16.3	82	17.0
	60–70%	156	53.6	104	54.7	260	54.1
	70–80%	65	22.3	43	22.6	108	22.5
	80–90%	12	4.1	5	2.6	17	3.5
Last completed semester: Self-reported university mark	Under 40%	7	2.4	2	1.1	9	1.9
	40–50%	22	7.6	10	5.3	32	6.7
	50–60%	96	33.0	52	27.4	148	30.8
	60–70%	103	35.4	81	42.6	184	38.3
	70–80%	52	17.9	40	21.1	92	19.1
	80–90%	11	3.8	5	2.6	16	3.3
English proficiency	Poor	3	1.0	-	-	3	0.6
	Average	98	33.8	35	18.4	133	27.7
	Good	189	65.2	155	81.6	344	71.7

Table 6.2.4 indicates that in terms of Grade 12 final average mark, most participants (54.1%) had achieved between 60% and 70%. This was similar for both FGSs (53.6%) and CGSs (54.7%).

In terms of self-reported academic performance at university in the last completed semester, the descriptive statistics suggest that more than twice the percentage of FGSs than CGSs (2.4% versus 1.1%) reported obtaining under 40% for their average mark. Also, more FGSs than CGSs reported obtaining an average mark of between 40 and 50%, which is also within the failing academic range.

In terms of participants' self-rated English proficiency, the majority of participants from the entire sample reported "good" English proficiency (71.7%). A larger percentage of

FGSs than CGSs reported "average" English proficiency, while a larger percentage of CGSs (81.6%) than FGSs (65.2%) reported "good" English proficiency.

6.3 Assessment of Relationships between Psychosocial Variables, Demographic Variables, Generational Status, and Academic Performance

Pearson's correlation analysis was performed to assess associative relationships between psychosocial variables, demographic variables, generational status, and academic performance.

6.3.1 Correlation Analysis

6.3.1.1 Correlations between all Variables for the Entire Sample

A correlation analysis was administered for the whole sample to assess associative relationships between all variables included in the study. The results appear in Table 6.3.1.

Correlates of Generational Status. The correlation analysis (Table 6.3.1) was used to determine statistically significant correlates of generational status. Generational status was significantly correlated with age ($r = -0.10$, $p < 0.05$). The inverse correlation is the result of the coding of CGSs as 1 and FGSs as 2. The inverse correlation thus indicates that as we move from continuing-generation to first-generation status, students were older. In other words, FGS participants tended to be older. The size of the correlation was small ($r = -0.10$).

English proficiency correlated positively with generational status ($r = 0.18$, $p < 0.01$), indicating reported English proficiency increased as we moved from the FGS to CGS group. The size of this correlation was small. Generational status was significantly correlated with the use of financial aid ($r = -0.20$, $p < 0.01$), with the correlation being small. The inverse correlation indicates that the use of financial aid increased as we moved from continuing-generation to first-generation status.

Table 6.3.1

Correlation Matrix between all Variables in the Study for the Whole Sample (n = 481)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1. Age	–																					
2. Gender	−.03	–																				
3. English	.04	.10*	–																			
4. Financial aid	.07	−.02	.14**	–																		
5. Generation	−.10*	.11*	.18**	−.20**	–																	
6. Grade 12 marks	−.17**	.09*	.13**	−.10*	−.02	–																
7. Employed	.12*	.07	.15**	.13**	−.07	.04	–															
8. Hours worked	.10*	.04	.13**	.11*	−.05	.04	.79**	–														
9. Living on-campus	−.05	.03	−.06	−.11*	.11*	−.01	−.11*	−.09	–													
10. Extra-curricular	.00	−.23**	−.02	.10*	.06	−.07	.07	.08	.08	–												
11. Family responsibility	.19**	.02	.06	.12**	−.01	−.06	.03	.06	−.20**	.06	–											
12. Financial stress	.12**	.01	−.16**	−.13**	−.24**	−.08	−.02	.01	−.08	−.07	.21**	–										
13. University marks	.08	.01	.14**	−.05	.07	.30**	.02	.06	−.01	.08	−.03	−.09*	–									
14. GHQ-12 soc dysfunction	−.16**	.18**	−.05	−.01	.02	.02	−.04	.06	.10*	−.10*	.01	.15**	−.22**	–								
15. GHQ-12 depr and anxiety	−.13**	.13**	−.07	−.09*	−.01	.04	−.10*	−.02	.09*	−.07	.02	.22**	−.20**	.76**	–							
16. GHQ-12 loss of confidence	−.14**	.10*	−.10*	−.01	−.06	.03	−.09	−.02	.04	−.12*	.02	.21**	−.21**	.67**	.75**	–						
17. GHQ-12 total	−.16**	.16**	−.07	−.04	−.01	.03	−.08	.02	.09*	−.10*	.02	.21**	−.23**	.93**	.93**	.84**	–					
18. MSPSS family	.00	.01	.07	.04	.13**	.09*	−.01	−.11*	−.06	.07	−.04	−.21**	.15**	−.34**	−.32**	−.31**	−.36**	–				
19. MSPSS friends	−.04	.07	.08	.02	.07	.15**	.07	.01	−.11*	.06	.04	−.12*	.10*	−.20**	−.28**	−.25**	−.26**	.40**	–			
20. MSPSS significant other	.05	.07	.09*	.12**	.11*	.06	.03	−.01	−.06	.05	.17**	−.10*	.15**	−.18**	−.18**	−.17**	−.20**	.44**	.43**	–		
21. MSPSS total	.01	.06	.10*	.08	.13**	.13**	.04	−.05	−.10*	.08	.07	−.18**	.17**	−.30**	−.33**	−.31**	−.34**	.79**	.77**	.80**	–	
22. GSE total	.17**	−.11*	.16**	.00	.05	.07	.11*	.07	−.09	.13**	.04	−.03	.24**	−.44**	−.45**	−.41**	−.48**	.25**	.18**	.14**	.24**	–

** p < .01
* p < .05

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Place of residence was significantly correlated with generational status ($r = 0.11$, $p <$ 0.05). The positive correlation indicates that as we moved from FGS to CGS the likelihood of living on campus increased. This size of the correlation was small. Generational status was significantly correlated with financial stress ($r = -0.24$, $p < 0.01$), with the correlation being small. The positive correlation suggests that levels of financial stress increased as we moved from continuing-generation to first-generation status.

6.3.1.2 Correlations between all Variables in the FGS Group

A correlation analysis was administered for the FGS group to assess associative relationships between all variables included in the study. The results appear in Table 6.3.2.

Correlates of Academic Performance (Table 6.3.3). Academic performance in the FGS group was significantly positively correlated with English proficiency ($r = 0.21$, $p < 0.01$), Grade 12 performance ($r = 0.28$, $p < 0.01$), perceived social support from a significant other ($r = 0.13$, $p < 0.05$), perceived social support from family ($r = 0.20$, $p < 0.01$), overall perceived social support ($r = 0.13$, $p < 0.05$), and self-efficacy ($r = 0.25$, $p < 0.01$). Academic performance, therefore, increased as English proficiency, Grade 12 marks, overall social support, social support from a significant other, social support from family, and self-efficacy increased.

Poorer academic performance was associated with psychological distress ($r = -0.23$, $p < 0.01$), loss of confidence ($r = -0.24$, $p < 0.01$), social dysfunction ($r = -0.21$, $p < 0.01$), depression and anxiety ($r = -0.19$, $p < 0.01$), financial stress ($r = -0.15$, $p < 0.05$), and family responsibility ($r = -0.22$, $p < 0.01$). This means that academic performance decreased as overall psychological distress, loss of confidence, social dysfunction, depression and anxiety, family responsibility, and financial stress increased, and vice versa.

Table 6.3.2

Correlation Matrix between all Variables in the Study for the FGS Group (n = 291)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. Age	–																				
2. Gender	−.01	–																			
3. English	.11	.10	–																		
4. Financial aid	.10	−.04	**.16****	–																	
5. Grade 12 marks	**−.12***	.07	.10	−.04	–																
6. Employed	**.14***	**.17****	**.20****	.10	.05	–															
7. Hours worked	.11	**.15***	**.20****	.03	.08	**.80****	–														
8. Living on campus	.00	−.02	**−.18****	**−.15***	−.05	−.07	−.06	–													
9. Extra-curricular	.03	**−.25****	.02	**.13***	−.04	.06	.03	.05	–												
10. Family responsibility	**.20****	.03	**,13***	**.14***	−.08	.05	.09	**−.19****	.05	–											
11. Financial stress	.07	.00	−.04	−.04	−.05	−.01	.04	.02	−.10	**.24****	–										
12. University marks	.09	−.02	**.21****	−.05	**.28****	.03	.09	−.04	.09	**−.22****	**−.15***	–									
13. GHQ-12 social dysfunction	**−.19****	**.12***	−.06	.08	.08	.02	**.13***	.10	−.09	.03	**.12***	**−.21****	–								
14. GHQ-12 depression and anxiety	**−.18****	.07	−.07	.03	.09	−.03	.05	.03	−.04	.06	**.19****	**−.19****	**.76****	–							
15. GHQ-12 loss of confidence	−.20	.09	−.09	.06	.11	−.04	.03	.01	**−.12***	.06	**.15****	**−.24****	**.70****	**.76****	–						
16. GHQ-12 total	**−.21****	.11	−.08	.06	.10	−.01	.09	.06	−.09	.05	**.17****	**−.23****	**.93****	**.91****	**.85****	–					
17. MSPSS family	−.01	−.04	.04	−.06	.09	.01	−.08	−.10	.07	−.09	**−.24****	**.20****	**−.38****	**−.30****	**−.32****	**−.37****	–				
18. MSPSS friends	.00	.06	.04	−.00	.09	.08	.02	−.06	.05	−.01	**−.15***	.07	**−.24****	**−.28****	**−.25****	**−.28****	**.37****	–			
19. MSPSS significant other	.03	.10	.06	.12	.04	.05	.02	−.03	.03	**.14***	**−.15****	**.13***	**−.21****	**−.15****	**−.18****	**−.20****	**.41****	**.44****	–		
20. MSPSS total	.01	.05	.06	.02	.10	.06	−.01	−.08	.06	.02	**−.23****	**.13***	**−.35****	**−.32****	**−.32****	**−.36****	**.76****	**.77****	**.80****	–	
21. GSE total	**.21****	**−.15***	**.19****	−.06	.10	**.13***	.07	−.11	**.15***	.01	−.02	**.25****	**−.47****	**−.47****	**−.46****	**−.51****	**.24****	**.21****	**.13***	**.25****	–

** p < .01 * p < .05

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Table 6.3.3

Significant Correlates of Academic Performance in the FGS Group (n = 291)

Correlates of academic performance	Pearson's *r*
English proficiency	.21**
Grade 12 marks	.28**
Financial stress	−.15*
Family responsibility	−.22**
MSPSS family	.20**
MSPSS significant other	.13*
MSPSS total	.13*
Self-efficacy	.25**
GHQ-12 total	−.23**
GHQ-12 loss of confidence	−.24**
GHQ-12 social dysfunction	−.21**
GHQ-12 depression and anxiety	−.19**

** p < .01
 * p < .05

Correlates of the GHQ-12 (Table 6.3.4). There were significant positive correlations between social dysfunction and gender ($r = 0.12$, $p < 0.05$), hours worked ($r = 0.13$, $p < 0.05$), and financial stress ($r = 0.12$, $p < 0.05$). Social dysfunction, therefore, increased as working hours and financial stress increased respectively. In addition, social dysfunction decreased as we moved from male to female FGSs. Social dysfunction correlated negatively with age ($r = −0.19$, $p < 0.01$), academic performance ($r = −0.21$, $p < 0.01$), perceived social support from family ($r = −0.38$, $p < 0.01$), friends ($r = −0.24$, $p < 0.01$), and a significant other ($r = −0.21$, $p < 0.01$), overall perceived social support ($r = −0.35$, $p < 0.01$), and self-efficacy ($r = −0.47$, $p < 0.01$). This means that social dysfunction increased as academic performance, support from family, friends, and a significant other, overall social support, and self-efficacy decreased, and vice versa.

Table 6.3.4

Significant Correlates of Psychological Distress in the FGS Group as measured by the GHQ-12 (n = 291)

Correlates of the GHQ-12	GHQ-12 total	GHQ-12 social dysfunction	GHQ-12 depression and anxiety	GHQ-12 loss of confidence
Gender	−	.12*	−	−
Hours worked	−	.13*	−	−
Financial stress	.17**	.12*	.19**	.15**
Age	−.21**	−.19**	−.18**	−
Extra-curricular activities	−	−	−	−.12*
Academic performance	−.23**	−.21**	−.19**	−.24**
MSPSS family	−.37**	−.38**	−.30**	−.32**
MSPSS friends	−.28**	−.24**	−.28**	−.25**
MSPSS significant other	−.20**	−.21**	−.15**	−.18**
MSPSS total	−.36**	−.35**	−.32**	−.32**
Self-efficacy	−.51**	−.47**	−.47**	−.46**

** $p < .01$
* $p < .05$

The depression and anxiety sub-scale score was significantly negatively correlated with age ($r = -0.18$, $p < 0.01$), academic performance ($r = -0.19$, $p < 0.01$), perceived social support from family ($r = -0.30$, $p < 0.01$), friends ($r = -0.28$, $p < 0.01$), and a significant other ($r = -0.15$, $p < 0.01$), overall social support ($r = -0.32$, $p < 0.01$), and self-efficacy ($r = -0.47$, $p < 0.01$). This indicates that depression and anxiety increased as age, academic performance, support from family, friends, and a significant other, overall social support, and self-efficacy decreased, and vice versa. A significant positive correlation between depression and anxiety and financial stress ($r = 0.19$, $p < 0.01$) indicates that depression and anxiety increased as financial stress increased.

There were significant negative correlations between loss of confidence and involvement in extra-curricular activities ($r = -0.12$, $p < 0.05$), academic performance ($r = -0.24$, $p < 0.01$), social support from family ($r = -0.32$, $p < 0.01$), friends ($r = -0.25$, $p < 0.01$), and a significant other ($r = -0.18$, $p < 0.01$), overall social support ($r = -0.32$, $p < 0.01$

0.01), and self-efficacy ($r = -0.46$, $p < 0.01$). Loss of confidence, therefore, increased as involvement in extra-curricular activities, academic performance, social support from family, friends, and a significant other, overall social support, and self-efficacy decreased, and vice versa. Loss of confidence was significantly positively correlated with financial stress ($r = 0.15$, $p < 0.01$), indicating that loss of confidence and financial stress increased in accordance with one another.

Overall psychological distress was significantly negatively correlated with age ($r = -0.21$, $p < 0.01$), academic performance ($r = -0.23$, $p < 0.01$), social support from family ($r = -0.37$, $p < 0.01$), friends ($r = -0.28$, $p < 0.01$), and a significant other ($r = -0.20$, $p < 0.01$), overall social support ($r = -0.36$, $p < 0.01$), and self-efficacy ($r = -0.51$, $p < 0.01$). Overall psychological distress, therefore, increased as age, academic performance, social support from family, friends, and a significant other, overall social support, and self-efficacy decreased, and vice versa. A significant positive correlation between overall psychological distress and financial stress ($r = 0.17$, $p < 0.01$) indicates that overall psychological distress increased as financial stress increased.

All the GHQ-12 sub-scales (social dysfunction, depression and anxiety, and loss of confidence), as well as the GHQ-12 full scale, were significantly intercorrelated.

Correlates of the MSPSS (Table 6.3.5). There were significant negative correlations between overall perceived social support and financial stress ($r = -0.23$, $p < 0.01$), social dysfunction ($r = -0.35$, $p < 0.01$), depression and anxiety ($r = -0.32$, $p < 0.01$), loss of confidence ($r = -0.32$, $p < 0.01$), and overall psychological distress ($r = -0.36$, $p < 0.01$). Financial stress, social dysfunction, depression and anxiety, loss of confidence, and overall psychological stress, therefore, increased as overall social support decreased, and vice versa. Significant positive correlations between overall social support and self-efficacy ($r = 0.25$, $p < 0.01$), as well as overall social support and academic performance ($r = 0.13$, $p < 0.05$)

indicates that self-efficacy and academic performance increased as overall social support increased.

There were significant negative correlations between social support from family and financial stress ($r = -0.24$, $p < 0.01$), social dysfunction ($r = -0.38$, $p < 0.01$), depression and anxiety ($r = -0.30$, $p < 0.01$), loss of confidence ($r = -0.32$, $p < 0.01$), and overall psychological distress ($r = -0.37$, $p < 0.01$). Social dysfunction, depression and anxiety, loss of confidence, and overall psychological distress, therefore, increased as perceived social support from family decreased, and vice versa. Social support from family correlated positively with academic performance ($r = 0.20$, $p < 0.01$) and self-efficacy ($r = 0.25$, $p < 0.01$). Social support from family, therefore, increased as academic performance and self-efficacy increased, and vice versa.

Table 6.3.5

Significant Correlates of Perceived Social Support in the FGS Group as measured by the MSPSS (n = 291)

Correlates of the MSPSS	MSPSS total	MSPSS family	MSPSS friends	MSPSS significant other
Financial stress	−.23**	−.24**	−.15*	−.15**
Academic performance	.13*	.25**	−	.13*
Family responsibility	−	−	−	.14*
Self-efficacy	.25**	.25**	.21**	.13*
GHQ-12 total	−.36**	−.37**	−.28**	−.20**
GHQ-12 loss of confidence	−.32**	−.32**	−.25**	−.18**
GHQ-12 social dysfunction	−.35**	−.38**	−.24**	−.21**
GHQ-12 depression and anxiety	−.32**	−.30**	−.28**	−.15**

** $p < .01$
* $p < .05$

Social support from friends was significantly negatively correlated with financial stress ($r = -0.15$, $p < 0.05$), social dysfunction ($r = -0.24$, $p < 0.01$), depression and anxiety ($r = -0.28$, $p < 0.01$), loss of confidence ($r = -0.25$, $p < 0.01$), and overall psychological distress ($r = -0.28$ $p < 0.01$). Financial stress, social dysfunction, depression and anxiety, loss of confidence, and overall psychological distress, therefore, increased as social support from friends decreased, and vice versa. A significant positive correlation between support from friends and self-efficacy ($r = 0.21$, $p < 0.01$) indicates that self-efficacy increased as social support from friends increased.

Social support from a significant other was significantly negatively correlated with financial stress ($r = -0.15$, $p < 0.01$), social dysfunction ($r = -0.21$, $p < 0.01$), depression and anxiety ($r = -0.15$, $p < 0.01$), loss of confidence ($r = -0.18$, $p < 0.01$), and overall psychological distress ($r = -0.20$, $p < 0.01$). This indicates that financial stress, social dysfunction, depression and anxiety, loss of confidence, and overall psychological distress increased as social support from a significant other decreased, and vice versa. Significant positive correlations between support from a significant other and self-efficacy ($r = 0.13$, $p < 0.05$), family responsibility ($r = 0.14$, $p < 0.05$), and academic performance ($r = 0.13$, $p < 0.05$) indicate that support from a significant other increased as family responsibility, academic performance, and self-efficacy increased.

All the MSPSS sub-scales, as well as the MSPSS full scale, intercorrelated significantly.

Correlates of the GSE (Table 6.3.6). There were significant positive correlations between self-efficacy and age ($r = 0.21$, $p < 0.01$), English proficiency ($r = 0.19$, $p < 0.01$), being employed ($r = 0.13$, $p < 0.05$), involvement in extra-curricular activities ($r = 0.15$, $p < 0.05$), academic performance ($r = 0.25$, $p < 0.01$), family support ($r = .24$, $p < 0.01$), support from friends ($r = .21$, $p < 0.01$), support from a significant other ($r = .13$, $p < 0.01$), and

overall social support ($r = .25$, $p < 0.01$). Self-efficacy, therefore, increased as age, English proficiency, involvement in extra-curricular activities, academic performance, family support, support from friends, support from a significant other, and overall social support increased. In addition, self-efficacy increased as we moved from unemployed to employed status.

There were significant negative correlations between self-efficacy and gender ($r = -0.15$, $p < 0.05$), social dysfunction ($r = -0.47$, $p < 0.01$), depression and anxiety ($r = -0.47$, $p < 0.01$), loss of confidence ($r = -0.46$, $p < 0.01$), and overall psychological distress ($r = -0.51$, $p < 0.01$). Self-efficacy, therefore, decreased as social dysfunction, depression and anxiety, loss of confidence, and overall psychological distress increased, and vice versa. The inverse correlation between gender and self-efficacy is the result of the coding of male FGSs as 1 and female FGSs as 2. The inverse correlation indicates that as we move from female to male, self-efficacy increased among FGSs.

Table 6.3.6

Significant Correlates of Self-efficacy in the FGS Group as measured by the GSE (n = 291)

Correlates of the GSE	Pearson's r
Age	.21**
Gender	−.15*
English proficiency	.19**
Employment	.13*
Extra-curricular activities	.15*
Academic performance	.25**
MSPSS family	.24**
MSPSS friends	.21**
MSPSS significant other	.13**
MSPSS total	.25**
GHQ-12 social dysfunction	−.47**
GHQ-12 depression and anxiety	−.47**
GHQ-12 loss of confidence	−.46**
GHQ-12 total	−.51**

** p < .01
* p < .05

6.3.2 Predicting Academic Performance

This aspect of the statistical analyses focused on identifying significant predictors of academic performance as represented by participants' average HE marks obtained from the UWC marks system. A stepwise linear regression analysis was performed to identify predictors of academic performance. Analysis was performed for the whole sample, as well as for the FGS and CGS group separately.

6.3.2.1 *Whole Sample Regression*

A stepwise linear regression analysis was performed on the whole sample to identify predictors of academic performance. A total of 13 variables were entered into the regression analysis. The regression yielded four models, of which model four accounted for the most variance with an R^2 of 0.18. These results are presented in Table 6.3.7. The regression identified a model containing four predictors of academic performance, having removed the following nine predictors: generational status, hours worked, extra-curricular activities, financial stress, social support from family, social support from friends, anxiety and depression, a loss of confidence, and general stress. The removed variables, including generational status, did not add a unique explanation of the variance in academic performance that tested significant. The lack of significant unique contribution from these variables is in the context of all 13 variables and suggests that there is a high level of shared variance among them.

Stepwise regression identified a model containing four predictors of academic performance that tested significant ($F_{4,291} = 15.99$, $p < 0.01$). Collectively, the four variables in the model explained 18% of the variance ($R^2 = 0.18$) in academic performance. All four predictors emerged as significant controlling for the variables in the model.

Table 6.3.7

Models yielded by the Initial Regression Analysis of the Whole Sample

Model	Variables entered	R	R Square	R Square Change	F Change	Sig. F Change
1	Grade 12 marks	.328	.11	.11	35.25	.00
2	GHQ-12 social dysfunction	.386	.15	.04	14.30	.00
3	MSPSS significant other	.406	.17	.02	5.61	.02
4	Family responsibility	.422	.18	.01	4.64	.03

Table 6.3.8 presents results of the stepwise regression for the whole sample. Grade 12 performance emerged as the strongest predictor of academic performance ($\beta = 0.33$, $p < 0.01$) controlling for the three remaining predictors. The second strongest predictor was GHQ-12 social dysfunction, which negatively predicted academic performance ($\beta = -0.21$, $p < 0.01$). MSPSS support from a significant other was also a significant predictor of academic performance ($\beta = 0.13$, $p < 0.05$). Finally, family responsibility predicted academic performance ($\beta = -0.11$, $p < 0.05$).

Predictors of academic performance were also tested for each generational group separately.

Table 6.3.8

Significant Predictors of Academic Performance in the Whole Sample (n = 481)

Predictor	β	t-value	Sig
Grade 12 marks	.32	5.92	.00
Social dysfunction	-.17	-3.22	.00
Support from a significant other	.16	2.88	.00
Family responsibility	-.12	-2.15	.03

6.3.2.3 FGS Group Regression

Stepwise regression for the FGS group resulted in a five-predictor model that tested significant at a 0.01 alpha level ($F_{5,178} = 8.94$, $p < 0.01$). The model explains 20% ($R^2 = 0.20$) of the variance in academic performance in FGSs. The retained predictors were Grade 12 marks, GHQ-12 social dysfunction, financial stress, family responsibility, and perceived social support from a significant other. The predictors retained in the model are presented in Table 6.3.9.

Table 6.3.9

Predictors of Academic Performance for FGSs (n = 291)

Predictor	Cum.R²	B	t-value
Grade 12 marks	.08	.26	3.87**
GHQ-12 social dysfunction	.13	−.16	−2.25*
Financial stress	.16	−.12	−1.72
Family responsibility	.18	−.19	−2.65**
MSPSS significant other	.20	.15	2.00*

** p < .01
* p < .05

Grade 12 marks significantly predicted academic performance at a 0.01 alpha level ($\beta = 0.26$, $p < 0.01$) controlling for MPSS significant other, GHQ-12 social dysfunction, family responsibility, and financial stress. The β value indicates that for a standardised one-unit change in Grade 12 marks, there was a corresponding increase of 0.26 in academic performance.

Perceived social support from a significant other significantly and positively predicted academic performance ($\beta = 0.15$, $p < 0.01$), controlling for Grade 12 marks, GHQ-12 social dysfunction, financial stress, and social responsibility. The β value indicates that for a one-

unit increase in perceived social support from a significant other, there was a corresponding increase of 0.15 in academic performance.

GHQ-12 social dysfunction negatively predicted academic performance ($\beta = -0.16$, $p < 0.05$), controlling for Grade 12 marks, financial stress, family responsibility, and MSPSS significant other. The β value indicates that for every one-unit increase in social dysfunction, there is a corresponding decrease of 0.16 units in academic performance.

Family responsibility also negatively predicted academic performance ($\beta = -0.19$, $p < 0.01$), controlling for Grade 12 marks, GHQ-12 social dysfunction, financial stress, and MSPSS significant other. The Beta value indicates that a one-unit increase in family responsibility resulted in a corresponding decrease of 0.19 units in academic performance.

Financial stress did not emerge as a significant predictor, but it was retained in the model as it contributed to explaining the variance in the overall model.

6.3.2.4 CGS Group Regression

For the CGS group, stepwise regression resulted in a model containing three predictors. The model consisting of hours worked, Grade 12 marks and GSE self-efficacy explained 27% of the variance ($R^2 = 0.27$) in academic performance. The model tested significant at a 0.01 alpha level ($F_{3,107} = 13.05$, $p < 0.01$). The predictors of academic performance for the CGS group are presented in Table 6.3.10.

Table 6.3.10

Predictors of Academic Performance for CGSs (n = 190)

Predictor	Cum.R²	B	t-value
Grade 12 marks	.16	.41	4.92**
Hours worked	.22	−.24	−2.94**
GSE total	.27	.23	2.79**

** p < .01, *p < .05

For CGSs, Grade 12 marks positively predicted academic performance ($\beta = 0.16$, $p < 0.01$), controlling for GSE total and hours worked. The Beta value indicates that a standardised one-unit increase in Grade 12 marks, would correlate to a corresponding increase of 0.16 units in academic performance.

GSE total also positively predicted academic performance ($\beta = 0.23$, $p < 0.01$), controlling for hours worked and Grade 12 marks. The Beta value signifies that a one-unit increase in general self-efficacy had a corresponding increase of 0.23 units in academic performance.

Lastly, number of hours worked negatively predicted academic performance ($\beta = -0.24$, $p < 0.01$), controlling for Grade 12 marks and GSE total. The signage of the Beta value indicates that a one-unit increase in the number of hours worked resulted in a corresponding decrease of 0.24 units in academic performance.

6.4 Assessment of the FGS and CGS Groups Separately in terms of Demographic Factors, Psychosocial Factors, and Academic Performance

To be able to synthesise a psychosocial profile of undergraduate FGSs at UWC, it was necessary to investigate factors in terms of which FGSs and CGSs differ and thereby determine what makes the sample's FGSs a distinct student group and sets them apart from their CGS counterparts. To do so, two main techniques of statistical analysis were used, namely chi-square tests of independence and multivariate analysis of variance (MANOVA). What follows is an outline of the results of these statistical analyses.

6.4.1 Chi-square Tests of Independence

A number of chi-square tests were performed to test for possible associations between generational status and socio-demographic variables. The findings of the chi-square tests are presented in Table 6.4.1.

A statistically significant association was found in terms of financial aid ($\chi^2_{(1,\ n = 480)}$ = 18.81, $p < 0.01$), indicating that FGSs (79.7%) used financial aid at a higher rate than CGSs (61.6%). Results indicated a small effect size for this relationship ($\varphi = 0.20$, $p < 0.01$).

In terms of place of residence, a significantly larger percentage of FGSs (52.3%) than CGSs (31.0%) reported residing off campus ($\chi^2_{(1,\ n = 480)} = 5.50$, $p < 0.05$). This association had a small effect size ($\varphi = 0.11$, $p < 0.05$).

Gender and generational status were significantly associated ($\chi^2_{(1,\ n = 481)} = 5.39$, $p < 0.05$). Results indicate that there were more males among the FGSs (28.9%) than among the CGSs (19.5%). The effect size of this association was small ($\varphi = 0.11$, $p < 0.05$).

Null findings were reported for generational status and year of study ($\chi^2_{(4,\ n = 480)} = 4.90$, $p = 0.30$), generational status and degree course ($\chi^2_{(10,\ n = 471)} = 24.40$, $p = 0.86$), and generational status and employment status ($\chi^2_{(2,\ n = 480)} = 5.10$, $p > 0.05$).

Lastly, a chi-square test was done to determine whether the generational groups differed in terms of self-identified racial groups. The chi-square test was conducted without the inclusion of Indian participants ($n = 5$) as the chi-square cross-tabulation had two cells (25%) with expected values less than 5. The results with the rest of the sample were not significant ($\chi^2_{(2,\ n = 475)} = 3.32$, $p > 0.05$).

6.4.2 MANOVA

MANOVA was administered to determine differences between the FGS and CGS groups for a range of psychosocial and demographic variables, as well as academic performance. The results of Hotelling's trace coefficient test revealed a significant multivariate main effect for generational status ($F_{14,469} = 50.73$, $p < 0.01$; Hotelling's $T^2 = 1.90$, partial $\eta^2 = 0.66$). The results are presented in Table 6.4.2.

Table 6.4.1

Chi-square Tests of Independence between Generational Status and Categorical Variables (n = 481)

	FG		CG		χ²(2)
	n	**%**	**n**	**%**	
Use of financial aid					18.81**
Yes	231	48.1	117	24.4	
No	59	12.3	73	15.2	
Residence					5.50*
Off-campus	251	52.3	149	31.0	
On-campus	39	8.1	41	8.5	
Gender					5.39*
Male	84	17.5	37	7.7	
Female	207	43.1	153	31.9	
Year level					4.90
1st year	113	23.5	85	17.7	
2nd year	71	14.8	39	8.1	
3rd year	72	15.0	52	10.8	
4th year	25	5.2	12	2.5	
5th year	9	1.9	2	0.4	
Degree course					24.40
Bachelor of Arts	141	29.3	85	17.7	
Bachelor of Science	4	0.8	9	1.9	
Social work	41	8.5	18	3.7	
CHS #	11	2.3	5	1.0	
Dietetics	2	0.4	8	1.7	
Library science	8	1.7	2	0.4	
LLB Law	6	1.2	2	0.4	
Nursing	44	9.1	24	5.0	
Occupation therapy	6	1.2	11	2.3	
Physiotherapy	10	2.1	7	1.5	
SRES ##	14	2.9	13	2.7	
Employment status					5.10
Unemployed	213	44.3	146	30.4	
Part-time	67	13.9	43	8.9	
Full-time	11	2.3	1	0.2	
Racial self-identification					3.32
Black	128	26.9	75	15.8	
Coloured	140	29.5	94	19.8	
White	18	3.8	20	4.2	

** $p < .01$, * $p < .05$
\# Complementary Health Sciences
\#\# Sport and Recreational Science

According to results from the MANOVA, significant univariate main effects were obtained for overall perceived social support, social support from a significant other, social support from family, parents' highest qualification level, financial stress, age, and English proficiency.

CGSs reported significantly higher estimates of overall perceived social support, as measured by the full-scale MSPSS ($F_{1,469} = 9.23$, $p < 0.01$) than FGSs. CGSs reported significantly higher support from a significant other ($F_{1,469} = 6.06$, $p < 0.05$) and from family ($F_{1, 469} = 8.02$, $p < 0.01$) than FGSs.

The FGS group reported significantly more financial stress ($F_{1, 469} = 29.35$, $p < 0.01$) than the CGS group.

For the CGS group, both the mothers' ($F_{1, 469} = 434.22$, $p < 0.01$) and fathers' ($F_{1, 469} = 429.85$, $p < 0.01$) highest educational qualifications were significantly higher than for the FGS group.

Null findings were reported in relation to both Grade 12 marks and academic performance.

The FGS group had a significantly higher mean age than the CGS group ($F_{1, 469} = 4.40$, $p < 0.05$). The CGSs rated significantly higher than the FGSs on self-rated English proficiency ($F_{1, 469} = 16.34$, $p < 0.01$).

Table 6.4.2

MANOVA to assess Differences between FGS and CGS Groups in relation to Demographic and Psychosocial Variables, as well as Academic Performance (n = 481)

Variable	FG		CG			
	Mean	SD	Mean	SD	F	Eta-Squared
GHQ-12 total	17.09	8.03	16.97	7.47	.03	.00
GHQ-12 social dysfunction	8.79	3.93	8.96	3.56	.23	.00
GHQ-12 depression and anxiety	5.89	3.15	5.82	3.07	.05	.00
GHQ-12 loss of confidence	2.41	1.70	2.19	1.61	2.01	.00
MSPSS total	4.57	1.27	4.92	1.17	9.23	.02 **
MSPSS significant other	4.73	1.66	5.10	1.51	6.06	.01 *
MSPSS friends	4.52	1.62	4.78	1.43	3.29	.01
MSPSS family	4.45	1.63	4.86	1.48	8.02	.02 **
GSE	30.42	5.09	30.89	4.37	1.08	.00
Father's highest qualification	.40	.49	1.70	.87	429.85	.48 **
Mother's highest qualification	.40	.49	1.71	.87	434.22	.48 **
Grade 12 marks	3.08	.81	3.05	.80	.15	.00
Working hours	4.90	10.35	3.90	9.37	1.14	.00
Family responsibility	1.22	.67	1.21	.67	.00	.00
Financial stress	2.43	.80	1.99	.92	29.35	.10 **
Extra-curricular activities	.24	.48	.31	.53	1.88	.00
Age	22.62	5.90	21.56	4.50	4.40	.01 *
English	1.65	.49	1.82	.39	16.34	.03 **
University marks	3.71	1.05	3.86	.94	2.38	.01

** p < .01
* p < .05

6.5 Conclusion

This chapter reported the statistical analyses performed in alignment with the aims and objectives of the overall study. The findings from this chapter are used in the following two chapters to address the two primary aims of the survey study. Firstly, the statistical results are used to identify the barriers and facilitators of academic performance among FGSs

in South Africa. Secondly, the results are used to synthesise a psychosocial profile of South

African FGSs.

PHASE II: CHAPTER 7

Identifying the Barriers and Facilitators of Academic Performance Among South African First-Generation Students at an Identified HDI

This chapter addresses Aim 1 of the survey study (Phase II), namely, to identify the barriers and facilitators of academic performance among South African FGS at an identified HDI. The chapter systematically presents each of the barriers and facilitators identified through the statistical analysis and compares the findings against the existing literature, and categorizes each of the barriers and facilitators according to the factor dimensions proposed by the study's theoretical framework (that is, dispositional, situational, epistemological, institutional, and extra-institutional factors).

Interpretation of Statistical Findings Toward Identification of Barriers and Facilitators of Academic Performance

Identification of the barriers and facilitators of academic performance in this study was facilitated by conducting mainly two statistical analysis procedures: (1) Pearson's correlation analysis and (2) multiple regression analysis. This excludes the identified factors that fall within the institutional and extra-institutional dimensions. The latter were essentially propositions of potential influential factors based firmly on knows facts about UWC and South Africa, the study's theoretical framework, and the reviewed literature.

In relation to the empirical findings categorized under the dispositional, situational, and epistemological dimensions, however, the matter of establishing causation needs to be addressed. In cases where measured variables emerged as significant predictors of academic performance as indicated by regression analysis, causation is firmly established as regression analysis establishes causation in that a variable is statistically determined to predict another variable (Freedman, 1997).

In the case of correlation analysis, however, while a significant association between variables is established, these associations do not necessarily imply causation (Curtis & Dempsey, 2015). For example, while the finding of significant positive correlations between social support and academic performance might suggest that an increase in social support is accompanied by an increase in academic performance, the inverse may also be true: a person may enjoy higher social support as a result of favourable academic performance. This may for example manifest in the form of approval, acknowledgement, and praise following perceived "good" academic performance of the student. In such cases, where the researcher conceptualized these factors as barriers and facilitators of academic performance, this was done on the basis of inferred causation (Curtis & Dempsey, 2015). Correlational research "can be used to inform causal inferences and thus evidence-based practice" (Thompson et al., 2005, p. 182). One method guiding such a process is the use of logic and theory "in support of making a… plausible causal inference" (Thompson et al., 2005, p. 182). The availability of temporal information is assumed in most theories of causality (Granger, 1988; Spohn, 1983; Suppes, 1970;). Temporal information may allow the use of the principle of "temporal succession" toward inferring causation (Pearl & Verma, 1995). Temporal succession means that a variable preceding and adjacent to an associated variable qualifies as a potential cause of the latter variable. Adjacency is however not a requirement should it be clear that one variable is "confined to be earlier" than the associated variable (Pearl & Verma, 1995, p. 6). The application of inferred causation principles however does not mean that the researcher suggests either (1) that the causative relationship may not also exist inversely (Asamoah, 2014) (e.g., it is indeed plausible that social support may increase academic performance, and also that favourable academic performance may increase social support); or (2) that there is not a host of additional variables that could also contribute to the derived levels of a significant correlate (Asamoah, 2014).

7.1 Dispositional Barriers and Facilitators

Depression and anxiety, loss of confidence, self-efficacy, and overall psychological distress emerged as dispositional barriers and facilitators of academic performance among FGS in the present study. These variables can be considered dispositional factors as they relate to the students' intrinsic nature and confidence (Carroll et al., 2009; Cross, 1981; McClelland, 2014; Roberts, 2004) as well as psychological aspects of the student (Garland, 1992).

7.1.1 Mental Health

Results from the current study indicated a significant negative correlation between the GHQ Depression and Anxiety sub-scale and academic performance among FGS, indicating that academic performance decreased as depression and anxiety increased, and vice versa. Statistically, this means that poorer mental health may contribute to poorer academic performance, and also that poorer academic performance could contribute to poorer mental health. Based on theory as well as the extant body of literature (Thompson et al., 2005), however, it would seem highly plausible that a decrease in mental health could contribute to decreased academic performance. The reviewed literature suggests that FGS may struggle with mental health challenges, including stress levels that are much higher than average and anxiety levels that are just below the threshold for an anxiety diagnosis (Allison, 2015). Increased stress levels were also a pertinent finding in other studies (Garriott & Nisle, 2018; Stebleton & Soria, 2012). Garriot and Nisle (2018) ascribe the latter to a lack of effective ways to cope with limitations in school and family support while in college. Stebleton and Soria (2012) found statistically significant instances of feeling depressed or upset among FGS compared to CGS. FGS describe the experience of psychological distress as an obstacle to academic success (Garriott & Nisle, 2018; Vuong et al., 2010).

Results of the study indicate that academic performance decreased as overall psychological distress increased, and vice versa. The extant literature demonstrates established links between psychological distress and poorer academic performance, including higher instances of feeling depressed, stressed, or upset than CGS (Stebleton & Soria, 2012), difficulties adjusting to college (Falcon, 2015), significantly stronger PTSD symptoms, and less life satisfaction than found among CGS (Jenkins et al., 2013).

FGS also sometimes abstain from seeking psychological assistance due to unique cultural factors, which puts their mental well-being at risk (Garriott et al., 2017).

Parental support has been identified as playing a particularly significant role in the mental health of FGS (Sy et al., 2012).

The abovementioned experiences of psychological distress are experienced by FGS as an obstacle to academic success (Garriott & Nisle, 2018; Vuong et al., 2010).

7.1.2 Loss of Confidence and Self-Efficacy

The current study found that loss of confidence was negatively correlated with academic performance, indicating that loss of confidence decreased as academic performance increased, and vice versa. This indicates that loss of confidence could contribute to lower academic performance, but also that lower academic performance could contribute to loss of confidence and decreased self-efficacy. A process of inferred causation based on theory, the existing literature, and logic (Thompson et al., 2005) was applied to derive at the conclusion that loss of confidence and decreased self-efficacy could potentially have played a causal role in lower academic performance and thus served as barriers and facilitators of academic performance. The causality of these factors can however not be categorically suggested. The reviewed literature indicates that self-efficacy beliefs and lack of self-esteem affect GPA and persistence rates of FGS (Darby, 2013; Falcon, 2015; Vuong et al., 2010), with lack of self-esteem identified as an obstacle to college success (Falcon, 2015).

7.2 Situational Barriers and Facilitators

Situational factors that served as barriers and facilitators to academic performance among the FGS in the present study included family responsibility, financial stress, perceived social support from family, perceived social support from a significant other, overall perceived social support, and social dysfunction.

These variables can be considered to be situational factors as they relate to the student's life circumstances such as the need to spend time with family and care for dependents (Carroll et al., 2009; Cross, 1981; Gibson & Graff, 1992), and financial factors (Garland, 1992). Social support is also considered to be a situational factor as it relates to the life circumstances of the student (Carroll et al., 2009; Cross, 1981; Gibson & Graff, 1992).

7.2.1 Family Responsibility

Results from the present study indicated that family responsibility emerged as a significant predictor of academic performance in the FGS group's regression model, with the relationship being negative. This suggests that the degree of family responsibility has a causative relation to academic performance, with increased family responsibility contributing to lower academic performance. The literature indicates that FGS are often troubled by family responsibilities and obligations (Salas, 2011; Stebleton & Soria, 2012), which are experienced as an obstacle to their academic success (Falcon, 2015; Salas, 2011; Stebleton & Soria, 2012). Napoli and Wortman (1998) found family pressures and obligations to be a major reason that community college students leave school.

7.2.2 Financial Stress

Results indicate that for the FGS group, academic performance decreased as financial stress increased, and vice versa. While financial stress was not a significant main effect predictor in the regression model of academic performance, it emerged as contributing to the overall model. This indicates a likely causal relationship, with higher financial stress

contributing to decreased academic performance. Increased levels of unmet financial needs, financial stress, socio-economic challenges, family income, housing status, financial obligations, and financial insecurity have been associated in the literature with academic performance among FGS in HE (Hui, 2017; Mrozinske, 2016; Pellew, 2016; Pratt et al., 2019).

D'Amico and Dika (2013) however found that family income was not a significant predictor of retention or FYGPA (first-year grade point averages) among the FGS or NFGS groups.

7.2.3 Perceived Social Support

Perceived social support from family, a significant other, and overall perceived social support were positively related to academic performance in the FGS group, indicating that academic performance and family social support increased and decreased in accordance with one another. As explained at the beginning of this chapter, this indicates that increased social support could contribute to academic performance, and that increased academic performance could contribute to increased perceived social support. The researcher used a process of inferred causation based on theory, extant literature, and logic (Thompson et al., 2005) to suggest that perceived social support could potentially serve causatively as a barrier and facilitator of academic performance, however, causality cannot be categorically suggested. Family and parent support have been identified in the scoping review as facilitative and supportive factors in relation to enrolment in HE, academic performance (Darby, 2013; Falcon, 2015; Pyne & Means, 2013; Reome, 2012), and perceived academic goal progress among FGS (Garriott & Nisle, 2018). Sy et al. (2012) found that family encouragement and support in both the FGS student's pre-college and college experiences was one of the most important influences upon degree attainment.

Academic performance increased in accordance with social support from a significant other in the present study. While the reviewed literature did not address the effects of support

from a significant other in particular, it did touch on the supportive and facilitative effects on academic performance when support from others is forthcoming. Facilitative effects have been observed in support from family (Darby, 2013; Falcon, 2015;; Reome, 2012; Sy et al., 2012) as well as academic staff (Allard, 2019; Brewer, 2011; Irlbeck et al., 2014; McCallen & Johnson, 2019; Nall, 2017; Reome, 2012; Soria & Stebleton, 2012).

Results indicated that perceived overall social support correlated positively with academic performance, suggesting that academic performance and overall perceived social support increase and decrease in accordance with one another. This is consistent with a finding by Freeman (2017) that perceived social support affects FGS' experience of their studies as well as their perception of barriers to academic goal attainment. Academic performance, retention, and risk of attrition among FGS have been associated with anticipated difficulty in forming relationships with on-campus peers (Pratt et al., 2019) and level of social integration (Hodges-Payne, 2006; Mrozinske, 2016), which may increase motivation to do well at college (Hodges-Payne, 2006). Reome (2012) found that the development of mature, adult relationships assisted FGS toward successful degree attainment. Ricks (2012) found that support from friends was a facilitative factor for FGS in coping with the transition to college.

7.2.4 Social Dysfunction

Regression analysis indicated that social dysfunction emerged as a significant predictor of academic performance, with the relationship being negative. Increases in social dysfunction therefore predicted decreased academic performance in the present study. Pratt et al. (2019) found that risk of attrition was significantly related to students' anticipated difficulty in forming relationships with their on-campus peers. While this risk factor was related to attrition in both the FGS and non-FGS groups, it was experienced more frequently in the FGS group. Pratt et al. (2019) found that students who enter tertiary education with

concerns about their social belongingness are more likely to leave the university before completing their program of study. The variable of social belongingness was disproportionately likely to be associated with FGS.

7.3 Epistemological Barriers and Facilitators

Grade 12 marks, degree course, and English proficiency emerged as epistemological barriers and facilitators to academic performance among FGS in the present study. As Grade 12 performance and English proficiency represent aspects of prerequisite knowledge of the student, they are classified as being epistemological factors (Garland, 1992). Course of study is also an epistemological factor as it represents the subject matter that is being studied (Garland, 1992).

7.3.1 Grade 12 Performance

Results indicate that academic performance at university was significantly predicted by Grade 12 performance, with the relationship being positive. Grade 12 performance represents pre-college academic performance and academic preparedness for HE. The present study's finding is therefore consistent with literature indicating a strong association between pre-college academic performance and college academic performance (Balemian & Feng, 2013; D'Amico & Dika, 2013; Falcon, 2015; Hui, 2017). Moreover, greater academic preparation has been associated with better performance in HE and found to be negatively related to attrition (Radunzel, 2018).

7.3.2 Degree Course

Results of the study indicated that for FGS, there was a significant difference in academic performance across different degree courses of study. While this was a significant multivariate effect, tests of univariate effects indicated a difference in academic performance only between Library Science and Physiotherapy, with students performing higher in the

Physiotherapy than the Library Science courses. Lourens and Smit (2003) found in a South African study that the main subject of study was among the most significant predictors of success in the first year of studying. Pellew (2016) found that academic major played a more significant role in the retention of FGS when compared to CGS. Moreover, FGS following a nursing major were more at risk of attrition than those students who followed a humanities major.

Several authors have referenced higher attrition rates among students studying programs in medicine (Deary et al., 2003; Dyrbye et al.*,* 2003; Huff & Fang, 1999; Iputo & Kwizera, 2005; Lazin & Neumann, 1991), allied health education (Gupta, 1991), and nursing (Dyrbye et al., 2003; Mulholland *et al*., 2008; Stott, 2007).

Further research on the effect of degree course or academic major on academic performance would be useful as it may allow targeted interventions and support for students following particular degree courses.

7.3.3 English Proficiency

This study indicated a significant positive correlation between English proficiency and academic performance among FGS, indicating that the two variables increased and decreased in accordance with one another. English proficiency can in this case be strongly suggested to have a causative influence on university academic performance based on temporal succession (Pearl & Verma, 1995). Students enter university with a particular level of English proficiency and as such, English proficiency precedes university academic performance. The latter would mean that higher English proficiency contributes to higher university academic performance studies. One does need to consider, however, that the process of exposure to university studies can influence and/or change a student's level of English proficiency as well. The notion of higher English proficiency being associated with higher academic performance is however consistent with other findings that weaker English

skills are linked to poorer academic performance among FGS (Stebleton & Soria, 2012). First-generation students in a study by Bui (2002) reported statistically significant higher instances of weak English skills as a barrier to their academic success.

7.4 Institutional Barriers and Facilitators

7.4.1 Introduction

The approach followed in the consideration of institutional and extra-institutional factors that might serve as barriers and facilitators of academic performance among FGS differs from the approach followed in the preceding sections addressing the dispositional, situational, and epistemological factor dimensions. Firstly, the identification of institutional and extra-institutional variables of interest was not based on empirical measurement, but was grounded in pre-existing factual knowledge of the University of the Western Cape as the focus institution, as well as factual knowledge relating to South Africa as the extra-institutional landscape within which the study is embedded.

Secondly, the appraisal of the identified institutional and extra-institutional factors as either barriers or facilitators of academic performance was not based on empirical measurement. Moreover, the study did not, for example, empirically measure the impact of the historically disadvantaged status of UWC on the academic performance of the study's sample. Similarly, the study did not empirically measure the impact of South Africa's socio—political history on students' academic performance. The appraisal of identified factors as either barriers or facilitators is grounded in the theoretical framework of the study as well as the reviewed literature relating to these factors. The presentation and conceptualization of institutional and extra-institutional barriers and facilitators is therefore propositional, not empirical, albeit that these propositions are arguably highly plausible given its basis in factual contextual knowledge, and its close alignment to theory and empirical evidence across the existing body of literature.

In relation to the extra-institutional barriers and facilitators in particular, this dimension of course is a newly proposed dimension added to the theoretical framework. This means that these propositions are highly theoretical as the existing literature and previous iterations of the theoretical framework did not account for factors conceptualized as being situated within an extra-institutional factor dimension. At the same time, however, the proposed extra-institutional factor conceptualizations as functional barriers and facilitators are not altogether separated from existing theory or literature. Moreover, identified institutional barriers and facilitators are highly suggestive of the extra-institutional factors that would have created and maintained the identified institutional influences. For example, it is the unique socio-political history of South Africa that played a causative role in the establishment of UWC as a disadvantaged institution.

The reader is therefore urged to keep in mind that the conceptualizations of institutional and extra-institutional barriers and facilitators in the following two sections are propositions, not empirical findings.

7.4.2 Institutional Barriers and Facilitators

Among the proposed institutional barriers are included the university's history as a preciously disadvantaged institution as well as a student population consisting of a significant proportion of previously disadvantaged individuals.

Among institutional facilitators are included the fact that the university offers foundational courses and student support services which include academic, therapeutic, and disability support.

The afore-mentioned factors can be considered as institutional factors as they relate to the structure of the institution (Carroll et al., 2009; Cross, 1981; Gibson & Graff, 1992;), the availability of foundational courses and course pacing, and the offering of financial aid (Rezabek, 1999).

7.4.2.1 Status as Previously Disadvantaged Institution

The setting in which the present study took place was the University of the Western Cape (UWC). UWC was founded in 1959 as a constituent college of a larger university in South Africa. The university had no autonomy under the auspices of the larger university. At that point in time, the university offered limited training for lower to middle-level positions in schools, the civil service, and was created for a separated "Coloured" student community only. The establishing of UWC was a direct effect of the Extension of University Education Act, 1959. This law accomplished the segregation of higher education in South Africa. Coloured students were only allowed at a few non-White universities (UWC, n.d.).

In 1970, the institution gained university status and was able to award its own degrees and diplomas, and in the 1980's, the university rejected its political heritage and declared itself an institution whose doors were open to students of all racial groups. UWC subsequently gained autonomy from direct political control (UWC, n.d.). In 1982, the university rejected the apartheid ideology formally in its mission statement. During the next year, the university gained the same autonomy as White universities through the *University of the Western Cape Act*. Rector Jakes Gerwel made UWC an "intellectual home of the left", with attention to social and political issues. The university attracted increasing numbers of students from disadvantaged communities. Apart from coloured people, more and more Black students enrolled. UWC retained the status of an autonomous university during the education restructuring of 2002.

The institution was under-funded and is thus a previously disadvantaged institution. This would have been further exacerbated by the fact that the university initially did not have the status of being a research-intensive university, which would have meant that the university had limited access to government subsidies based on research outputs.

UWC has however evolved from a teaching institution to an institution that has taken significant strides in developing into a research-intensive university (O'Connell, 2011). While the university is today better able to increase government funding via its research outputs, its disadvantaged history still means that it possesses more limited resources than is the case for many other South African universities. This is of significance given that much of the institution's student population consists of previously disadvantaged groups, which creates a need for financial assistance. Moreover, a large proportion of the university's student population are first-generation students. In the current sample, 60.5% of participants were first-generation students, while 39.5% were continuing generation students. First-generation students experience higher levels of financial stress (Afeli et al., 2018; Blackwell & Pinder, 2014; D'Amiko & Dika, 2013; Kizart, 2014; Potter et al., 2017; Pratt et al., 2019; Reid, 2013; Stebleton & Soria, 2012), which has been found to adversely affect academic performance. An institution's capacity to provide its students with financial assistance can therefore affect academic outcomes.

7.4.2.2 *Offering of Foundational Courses*

Studies have demonstrated the benefits of foundational or bridging courses for first-generation students. Studies of summer bridge programs have demonstrated that these programs placed participants at an advantage when it came to their adjustment into college-level work (Durant, 2014) and that participants were retained at a high rate (Ackermann, 1991). Participants also displayed higher academic grade point averages (Ackermann, 1991; Hicks, 2005).

A feature of UWC which is facilitative of academic performance is its offering of foundational courses to promote adequate preparation for the degree programs in which students are enrolled. One example of this is the EED Programme, which offers a range of foundational academic literacy courses in various faculties. EED aims to help students

acquire and develop fluency, accuracy, and confidence in reading, writing, speaking, and listening in English. In addition, it aims to develop academic literacy in English which will develop the skills necessary to read academic texts, summarise them, take effective notes, classify information, do independent research, and write structured academic essays. The program furthermore focuses on information literacy, which includes computing skills, critical and creative thinking skills, study, time-management and life skills, the ability to apply knowledge and skills flexibly and in a variety of contexts. The EED programme is presented as several faculty-specific courses (www.uwc.ac.za).

7.4.2.3 Offering of Student Support Services

Numerous studies have demonstrated that support programs, mentoring programs, and academic advising initiatives have a facilitative effect on the academic performance, retention, and throughput of first-generation students (Bruner, 2017; Bryant, 2016; Harackiewicz et al., 201 4; Mahan, 2010; Nall, 2017; Plaskett et al., 2018; Reome, 2012; Ricks, 2016; Salas, 2011; Salunga, 2018; Swecker et al., 2013; Wibrowsky et al., 2017).

The offering of student support services by UWC represents an institutional facilitator of academic performance among its FGS students. The Centre for Student Support Services (CSSS) at UWC seeks to enhance student learning on multiple levels. The focus is to engage students' potential to assist them in achieving personal and academic goals (www.uwc.ac.za). The CSSS provides broad student-centred development and professional services, programmes, training opportunities and resources aimed at enhancing students' academic experiences, graduate attributes, and quality of life. The CSSS conducts research and engages with national and international issues and debates to provide a cutting-edge student development and support. The CSSS includes therapeutic services, academic support, and support for students with disabilities (www.uwc.ac.za).

7.4.2.4 Student Population – Historical Disadvantage

While this is not suggested to be the case for all UWC students, UWC's student population consists of a large percentage of previously disadvantaged and historically defined minority groups. In the present study, 91.8% of participants were from historically defined minority groups. UWC also has a large first-generation student population. In the present study, 60.5% of participants were FGS.

The disadvantaged background of many of these students means that many students need resources such as financial aid. In addition, increased levels of unmet financial needs, financial stress, socio-economic challenges, family income, housing status, financial obligations, and financial insecurity have been demonstrated to affect academic performance among FGS in HE (Hui, 2017; Mrozinske, 2016; Pellew, 2016; Pratt et al., 2019). Likewise, Pratt et al. (2019) found that concern among FGS about funding their education and being forced to take on employment put students academically at risk.

7.5 Extra-Institutional Barriers and Facilitators

As was the case in relation to institutional barriers and facilitators, the extra-institutional factors identified in this section did not emerge from statistical analysis, but were identified based on factual knowledge of the extra-institutional context of the study. Again, the selection of particular barriers and facilitators in this factor dimension was informed by consultation of the literature as well as the study's theoretical framework.

As factors that have a direct bearing on the functioning of the institution that are beyond the control of the institution, the extra-institutional barriers to academic progress in FGS in the present study's focus institution include the socio-political history of South Africa, current-day social student movements such as "Fees must fall", the socio-economic status of South Africa as a developing country, and public health issues such as the Covid-19 pandemic. Extra-institutional facilitators include the focus of policy and legislation in South

Africa to increase access to tertiary education for previously disadvantaged groups. Additionally, the National Student Funding Scheme (NSFAS) is a facilitative factor not only in relation to access to tertiary education, but also of academic performance of FGS given this study's finding that financial stress is a significant predictor of academic performance among FGS.

7.5.1 Socio-Political History of South Africa

The apartheid history of South Africa had a direct effect on UWC in the sense that the institution was originally a non-autonomous university providing limited training to a targeted racial group. As this aspect was covered at length in a previous Section 7.4.1 of this discussion, the discussion here will be limited to highlighting how the country's socio-political history functions as an extra-institutional barrier to the academic performance of FGS given that it has a direct relation to the resources that the institution is able to offer its students.

7.5.2 Socio-Economic Status of South Africa

As a developing country with limited economic means, the government faces restrictions in terms of the funding, subsidies, and resources it is able to offer educational institutions. This, in turn, contributes to the financial stress of students, which emerged in the present study as a significant predictor of academic performance among FGS. The latter was discussed more elaboratively in section 7.2.2.

7.5.3 Increased HE Access Mandate and National Student Financial Aid Scheme (NSFAS)

While the country's socio-political history can serve as an extra-institutional barrier, current-day efforts to prioritize access to and equity in higher education is a pronounced strength of the South African higher education landscape. This includes addressing the current issues of low participation in higher education, high attrition rates, and low

completion rates (Higher Education South Africa, 2014). The same goals were expressed in the White Paper for post-school education and training (Higher Education & Training, 2013). The government has made great strides in providing disadvantaged students with the financial means to participate in tertiary education. The National Student Financial Aid Scheme (NSFAS) provides bursaries for students with a household income of R350 000 or less (www.nsfas.org.za). NSFAS is a government entity under the Department of Higher Education and Training which was established according to the NSFAS Act (Act 56 of 1999). The NSFAS scheme provides financial support for students, covering support for accommodation, transport, a living allowance, book allowances, and personal incident/care allowances (www.nsfas.org.za). The NSFAS scheme therefore functions as a facilitative extra-institutional factor which promotes participation and retention in tertiary education with a specific interest in assisting disadvantaged students.

7.5.4 The Covid-19 Pandemic

While the data collection for the present study was completed prior to the onset of the Covid-19 pandemic, the expected impact of this issue on students generally, and FGS in particular, bears consideration. The Covid-19 pandemic also warrants consideration as the HE landscape is fast approaching two years of disruption in its modes of teaching, and there is no certainty regarding when these disruptions might come to an end.

Soria et al. (2020) found that during the Covid-19 pandemic, FGS were more likely than CGS to experience financial hardships, food and housing insecurity, higher rates of mental health disorders, more difficulty adapting to online instruction, concerns about payment of their study fees, and they were less likely than CGS to live in safe environments free from abuse. FGS experienced challenges related to lack of adequate study spaces and lack of technology necessary to complete online learning and were also less likely to be able to meet during scheduled virtual class times than was the case for CGS.

South African students could be expected to also experience significant challenges stemming from the Covid-19 pandemic. Indeed, South African students at UWC, in particular, have been found to have "unprecedented" levels of anxiety, loneliness, and reduced life satisfaction to such an extent that they suggest a "looming mental health crisis" (p. 265) among young adults in South Africa (Padmanabhanunni & Pretorius, 2021; Pretorius & Padmanabhanunni, 2021). The levels of anxiety, loneliness, and reduced life satisfaction were significantly higher than those encountered in previous studies in other contexts, as well as in studies of similar populations conducted during the COVID-19 pandemic.

A further prominent concern about the effect of the pandemic on FGS is the resulting limitations in the ability to acquire social and cultural capital due to campus shutdowns and the move to online learning. Social capital represents resources connected to group membership and social networks (Bourdieu, 1986), and cultural capital represents the experience and skill to be able to access and use the knowledge that is appropriate to a given situation (Bourdieu, 1986). Campus shutdowns and the resulting move to online learning mean that FGS find themselves isolated from their peers and university staff. They are unable to obtain substantial guidance on university matters from family at home as the family per definition would not have experience and knowledge related to the HE context. This means that FGS are severely limited in their ability to acquire cultural capital. FGS are also robbed of the opportunity to acquire the social capital and resources such as information that could otherwise be gained from being integrated into the university setting, peer networks, and through contact with staff or advisors. Individuals who are connected to a social group obtain social capital by exchanging information, providing mutual support, and feel less isolated as a result. According to Ridge (2016), social capital decreases a student's risk of attrition. Essentially, the lack of knowledge of tertiary institutions and processes (Katrevich & Aruguete, 2017; Lonn-Nichols, 2013; Pratt et al., 2019; Ricks, 2016) that already exists for

FGS under "normal" conditions is now substantially amplified and exacerbated by the online mode of learning and teaching. This would arguably lead to increased stress, anxiety, uncertainty, confusion, decreased motivation, and a diminished ability to perform optimally. All these consequences of the move to online learning ultimately put FGS at a greater risk of attrition.

FGS are particularly vulnerable to adverse outcomes from the move to emergency remote / online learning due to Covid-19. The future trajectory of the pandemic is not clear. What is clear however is that FGS do have special needs during this time, which need to be addressed as far as the institution's resources allow.

7.5.5 Present-Day Socio-Political Student Movements[15]

Like other South African universities, UWC has been affected by sporadic student protests since 2015. The reasons for the protests change over time. They began with the Fees Must Fall movement where the main goal was to get university fees to be state-funded and then grew to include issues surrounding student safety and accommodation. These protests often led to the shutdown of academic activities at the university. Academic activities were also suspended from 5 February 2020 to 7 February 2020 due to a delay in financial clearance which left many students unable to register for the new year. Students demanded the right to register for the new year's studies despite historical debt and were also dissatisfied with a lack of accommodation on the university's campus.

The discussion of these student movements does not have the purpose of making value judgements of these movements. Rather, it is discussed to highlight the effects of the

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[15] Kindly note that with the mention of student protests here it is specifically with reference to protests that turn violent, destructive, and intimidating, resulting in forced shutdowns of campus. Peaceful student protests th erefore do not fall under this description as they do not disrupt and cause shutdowns of the campus. Also, student protests are categorized under "Extra-Institutional" factors even through the protests happen within the bounds of the institution. This is because the protests are driven by broader socio-political discourse and relate to demands made on government, which falls outside of the institution's control.

resultant campus shutdowns and the consequent move to online learning, especially in relation to FGS. As explained in Section 7.5.4, FGS are arguably more vulnerable to the adverse effects of the isolation and inability to acquire social and cultural capital that are caused by the move to online learning. The ultimate result is a higher risk of attrition.

"Fees Must Fall" also had a financial impact on institutions of higher learning. In response to the protests, there were no tuition fee increases for 2016 (Kwasi-Agyeman, 2020). This led to a significant funding gap between the costs of higher education provision and the financial resources available (Moolman & Jacobs, 2018, as cited in Kwasi-Agyeman, 2020). While government did release some funds to offset the shortfall, it was not enough as some institutions nonetheless had to account for up to 30 percent of it (Moolman & Jacobs, 2018, as cited in Kwasi-Agyeman, 2020). This ultimately further challenges the resourcefulness and means available to the institution to support its students toward successful degree completion.

7.6 Conclusion: Identifying the Barriers and Facilitators of Academic Performance among South African Undergraduate First-Generation Students

Figure 7.6 provides a diagrammatical representation of the barriers and facilitators that were identified. Grade 12 marks, English Proficiency, and Degree Course are indicated under both barriers and facilitators as they could serve as either depending on their standing (e.g., low Grade 12 marks would be a barrier while high Grade 12 marks would be a facilitator).
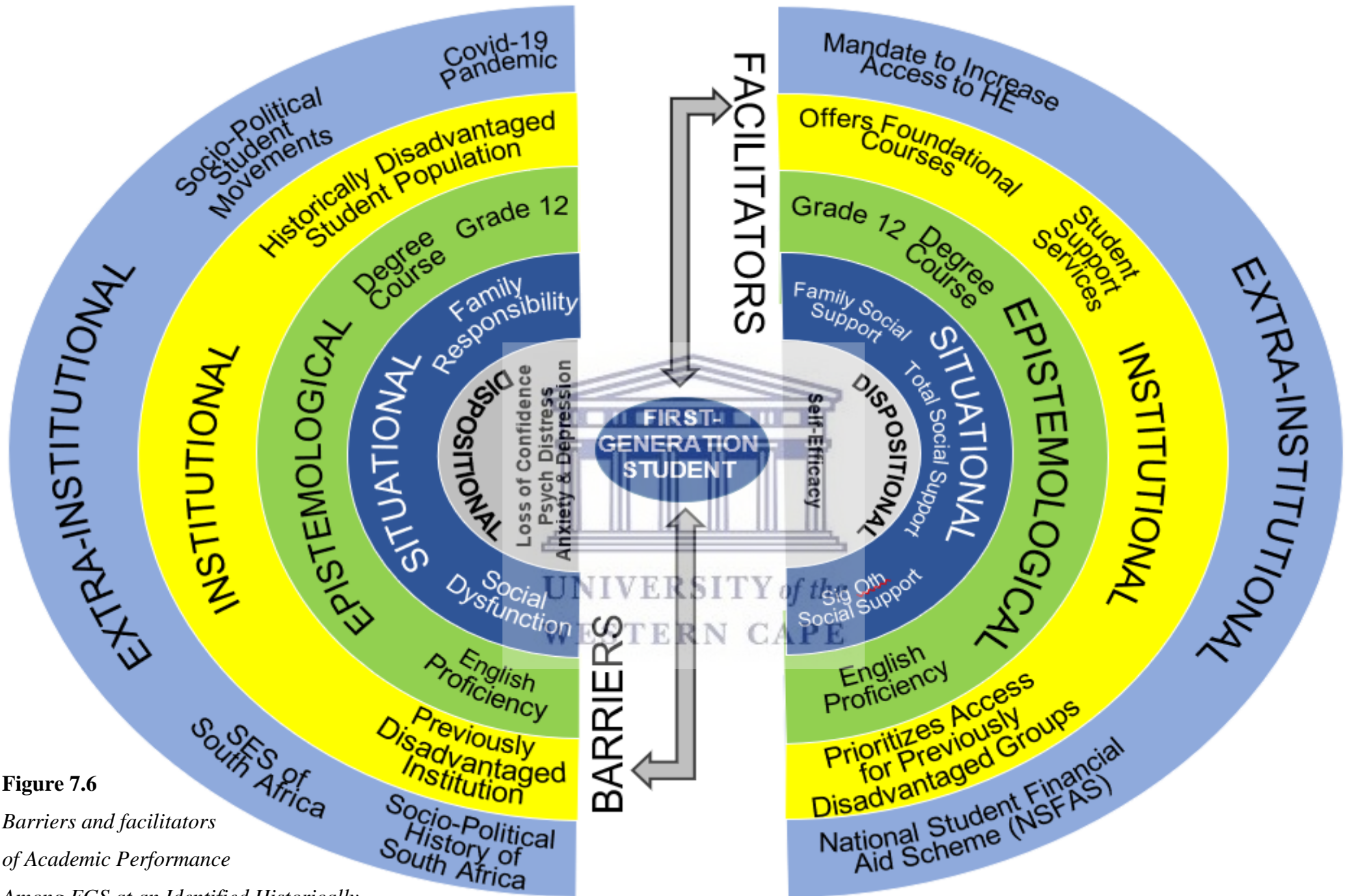
Figure 7.6

Barriers and facilitators

of Academic Performance

Among FGS at an Identified Historically

Disadvantaged Institution.

CHAPTER 8: Phase II – Synthesising a Psychosocial Profile of South African First-

Generation Students

8.1 Introduction

This chapter addresses Aim 2 of the survey study (Phase II of the overall doctoral study), namely to synthesise a psychosocial profile of South African first-generation students (FGSs) at an identified historically disadvantaged institution (HDI). As with Chapter 7, this chapter presents each of the identified characteristics, compares the findings against the existing literature, and categorises each of the characteristics according to the factor dimensions as provided by the study's theoretical framework (i.e., the dispositional, situational, and epistemological factors).

Here are instances where factors identified and discussed in Chapter 7 overlap with those presented in this chapter. For the sake of clarity, the reader is urged to note that factors discussed in Chapter 7 are discussed in their capacity of serving as either a *barrier or facilitator* of academic performance among FGSs. Factors discussed in Chapter 7 are, essentially, correlates or predictors of academic performance among the FGSs in the sample, and the discussion of factors focuses on their influence on university academic performance. Chapter 8, on the other hand, focuses on the identification of factors that emerged as *psychosocial characteristics* of FGSs in the survey study based on statistically significant differences between the FGS and continuing-generation student (CGS) groups in the sample. Some of these characteristics are also associated with academic performance, while others are not, but the focus on associations with academic performance is attended to in Chapter 7. While there are, therefore, instances where factors are discussed in both Chapters 7 and 8, the context in which they are discussed differs between the two chapters in accordance with the two central aims of the survey study.

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8.2 Dispositional Factors

Dispositional factors that arose from the data as setting FGSs apart from CGSs were age and gender. In Chapter 2, in the context of the development of a psychosocial profile of FGSs, dispositional factors were defined as including aspects of a student's nature and personal background (Carroll et al., 2009; Cross, 1981; McClelland, 2014; Roberts, 2004). The variables of age and gender, therefore, seem best classified as dispositional factors.

Results from the survey study indicate that the FGS group had a significantly higher mean age (22.6 years) than the CGS group (21.6 years). This is consistent with findings of various studies (e.g. Choy, 2001; Fernandez, 2021; Nomi, 2005; Postsecondary National Policy Institute [PNPI], 2021). Depending on the personal circumstances of the student, a higher age as an FGS may pose some challenges. For example, Chen (2005) found that older FGSs tend to come from families with lower family incomes and a minority background. They have more dependents and are more likely to be married than their CGS peers. These responsibilities compete with the amount of time these students can spend on their studies. Likewise, in the present study, higher age was significantly associated with being employed, and family responsibility increased in accordance with age.

In the present study, higher age, however, appeared to offer some protective effects. Increases in age were associated with decreases in social dysfunction, depression and anxiety, and overall psychological distress. In addition, self-efficacy increased in accordance with age. Age, therefore, can serve as either a barrier or facilitator.

Results from the survey study indicate that there was a significantly higher ratio of males in the FGS group compared to the CGS group. There were no additional gender differences related to generational status. Gender-related differences found in existing studies highlight either a higher or lower percentage of female FGSs compared to female CGSs (Hicks, 2006) or focuses on comparing female-to-male ratios within and between FGS and

CGS groups (Jenkins et al., 2013). Cho et al. (2008) did not find significant gender differences between the FGS and CGS groups in their study.

8.3 Situational Factors

8.3.1 Perceived Social Support

Results from the survey study indicate that CGSs scored significantly higher than FGSs on the measure of perceived social support from a significant other. There is limited literature on perceived social support from a significant other among FGSs. One such study did not find significant differences between the FGS and CGS groups in terms of perceived social support from a significant other (Jenkins et al., 2013). The higher score in perceived social support from a significant other in the present survey study may be attributed to the slightly higher mean age of the FGS group, suggesting those participants are more likely to be in intimate relationships.

Perceived social support from family was found in the current study to be significantly lower for FGSs compared to CGSs. FGSs are often troubled by family responsibilities and obligations (Salas, 2011; Stebleton & Soria, 2012), pressure to contribute financially to the family (Salas, 2011), the family's lack of knowledge of the higher education (HE) environment and the resulting limitation in the family's ability to provide guidance to the student (Sy et al., 2012), lack of support from the family's side (Kizart, 2014), including less perceived helpfulness (Palbusa, 2016) and less perceived emotional and information support (Sy et al., 2012). FGSs may also experience difficulties relating to family members (Hui, 2017). Families of FGSs do not have appropriate references for HE studies. Even though they may be supportive, the nature and quality of their support is not directed or appropriate for the FGS in relation to their studies. All these factors may contribute to lower perceived social support from the family.

FGSs may receive less encouragement to pursue HE from family due to their family's educational background (Salas, 2011). Interdependence is a particular characteristic typical of the family culture of FGSs. The interdependent family systems of FGSs can lead to views that the individual strivings and ambitions of a student are "selfish" (Katrevich & Aruguete, 2017). The culture of interdependence also often conflicts with the focus on student independence, which is characteristic of the culture at Western universities. While the latter may create favourable conditions for CGSs at HE institutions (HEIs), FGSs may experience feelings of isolation when entering HE. This cultural "conflict" between the family and HE contexts may create feelings in FGSs of insufficient social support from the family.

Multivariate analysis of variance indicated that CGSs scored significantly higher than FGSs on the measure of overall perceived social support. The main effect for perceived social support was supported by existing literature, which indicates lower social support for FGSs in relation to relationships with faculty members due to family responsibilities, as well as lower social support in relationships with friends (Jenkins et al., 2013) and peers (Katrevich & Aruguete, 2017; Soria & Stebleton, 2012).

FGSs may experience socialisation to be a challenge, which can negatively affect their ability to access social support (Kizart, 2013). Lotkowski et al. (2004) found that greater work responsibilities and living off-campus negatively impact FGSs' ability to engage with the HEI and the interaction opportunities offered by it. This is unfortunate as participation in campus activities creates the potential for building relationships with peers. Freeman (2017), on the other hand, found no statistically significant difference between FGSs and CGSs in terms of perceived social support. Similarly, Palbusa (2016) found that FGSs and CGSs were similar in terms of perceived emotional support.

8.3.2 Financial Stress

Financial stress was found in the current study to be significantly higher among FGSs than CGSs. Other studies have found that FGSs tend to be from families that have a lower socio-economic status (SES) than CGSs' families (Afeli et al., 2018; D'Amiko & Dika, 2013). Blackwell and Pinder (2014) found that the most common challenge for FGSs is the status they identify with, including their SES.

Kizart (2014) found HE affordability to be a significant challenge experienced by FGSs. Consequently, FG status is positively associated with financial anxiety (Potter et al., 2017). Reid (2013) found that FGSs face financial hardships and have to rely on support from family and friends, part-time work, work-study programmes, and student loans to get by financially. Pratt et al. (2019) found that academically at-risk students are concerned about funding their education and are often forced to take on employment, which adds an extra burden. The authors also indicate that financial insecurity is disproportionately associated with FGSs. Stebleton and Soria (2012) found that FGSs scored significantly higher than CGSs on a measure of competing job responsibilities; this is experienced as an obstacle to academic success.
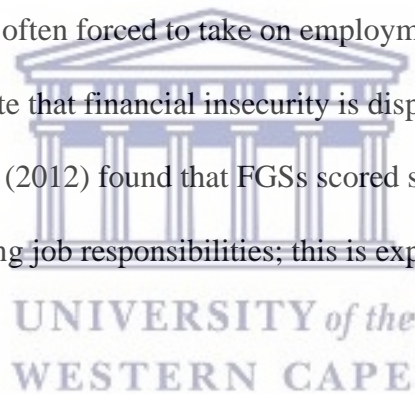
8.3.3 Use of Financial Aid

Results of the survey study indicated that FGSs used financial aid at a significantly higher rate than CGSs. This finding is consistent with the reviewed literature. According to Magallanes (2020), a lack of financial resources is the most common challenge FGSs face that impact their overall academic studies, and this causes worry among FGSs (Banks-Santilli, 2014; Bui, 2002). Because most FGSs have low SES, they struggle to get by financially and to pay tuition. Parents may not be prepared for the reality of the financial strain brought about by HE (Banks-Santilli, 2014). Financial aid is what allows most of these FGSs with low SES to attend HE and graduate (Balemian & Feng, 2013; Borrero, 2011;

Engle, 2007; Strand, 2013). According to Furquim et al. (2017), FGSs are more likely to apply for financial aid, borrow, and take out larger loans than their CGS peers. Some FGSs depend on their families, but several FGSs in a study by Furquim (2013) depended on government aid and scholarships. FGSs may, however, struggle with uncertainty around how to use financial aid and how debt accrual or student loan applications work (Banks-Santilli, 2014).

While access to financial aid allows FGSs the opportunity to pursue HE, it comes with disadvantages. For example, FGSs who receive financial aid and engage in work-study programmes are more vulnerable to attrition than CGSs (D'Allegro & Kerns, 2010). Furquim et al. (2017) add that the disadvantage of incurring study debt beyond students' HE years also lies in the material outcome of study debt.

8.3.4 Residence

Data analysis in the survey study indicated that significantly higher ratio of FGSs resided off-campus than was the case for CGSs. This is consistent with the findings of several studies (e.g. Billson & Terry, 1982; Mehta et al., 2011; Pascarella et al., 2004).

Off-campus accommodation has been found to present students with socio-economic, housing, and safety-related concerns (Ngwenya, 2016; Peralta & Klonowski, 2017). Living off-campus comes with other disadvantages as well. For example, Pascarella et al. (2004) note that living off-campus makes it more challenging for FGSs to establish relationships via on-campus structures, such as residence halls. Off-campus students are also more limited in their ability to engage in extra-curricular activities, which are opportunities for interaction and relationship-building with peers.

8.3.5 Parental Education

Parental education levels were higher in the CGS group than the FGS group in the current study.

Difficulties experienced by FGSs in HE have often been found to be attributable to factors such as low income, limited academic readiness, and limited social support. It has, however, been found that first-generation status *in and of itself* has a significant effect on participation, retention, and throughput, even after controlling for a range of variables typically associated with risk of attrition among FGSs (Allan et al., 2016; Radunzel, 2018). Parental education alone, therefore, explains some of the variance in academic performance among FGSs.

This may be partly a result of the benefits gained from interacting with parents and others who have HE experience (Hurtado & Gauvain, 1997; Kuh et al., 2005). Parents who attended HE can pass on knowledge, advice, and emotional support that help their children navigate the transition to HE. These interactions can enhance a student's awareness, understanding, and proficiency in the codes of conduct, rules, and practices of the HE setting (Palbusa & Gauvain, 2017). Having HE-educated parents essentially provides the student with cultural capital. Cultural capital refers to a person's knowledge and intellectual skills and is characterised by the experience and skill to be able to use knowledge that is appropriate and facilitative in specific situations (Bourdieu, 1973). Cultural capital imparted onto students by HE-educated parents therefore allows the student to use knowledge, skills, and understanding of the HE environment in service of efficient engagement and successful degree attainment.

8.4 Epistemological Factors

8.4.1 English Proficiency

The CGS group in the present study scored significantly higher than the FGS group on self-rated English proficiency. This is consistent with reviewed studies (e.g. Bui, 2002; Verdin & Godwin, 2015). FGSs have often been found to have a first language other than English (Bui, 2002). According to the PNPI (2021), nearly 20% of FGSs in the United States

of America (USA) have a first language other than English. FGSs have also been found to be less likely to speak only English at home (Verdin & Godwin, 2015). It has been found that the parents of FGSs and FGS themselves are more likely to primarily speak a language other than English at home (Verdin & Godwin, 2015; Warren, 2017). Bui (2002) also highlights that many FGSs are immigrants who are non-native English speakers. Siyengo (2015) states that in the South African context, the language of teaching and learning generally occurs in the FGS's second language. This may pose academic challenges.

8.4.2 University Academic Performance

Contrary to the majority of documented studies (e.g. D'Amico & Dika, 2013; Kizart, 2014; Mrozinske, 2016; Palbusa, 2016; Pratt et al., 2019; Ricks, 2016; Vuong et al., 2010) that represent one of the most prominent trends in the literature on FGSs, the current study did not find a statistically significant difference between the FGS and CGS groups in relation to university academic performance. The absence of an association between generational status and academic performance is a significant departure from the dominant literature and will be critically considered and discussed in Chapter 9 along with other key findings.

8.5 Conclusion

This chapter was dedicated to Aim 2 of the survey study, namely the synthesis of a psychosocial profile of the FGSs in the present study. The chapter presented the identification of demographic, social, psychological, and academic factors that were found to characterise the FGS participants and distinguish them from their CGS counterparts.

In summary, the psychosocial profile of the FGSs is composed of the following:

(1) At the dispositional level, the profile identifies a higher mean age among FGSs and a higher incidence of male gender among FGSs compared to CGSs.

(2) At the situational level, the profile identifies lower social support from a significant other and family, lower overall social support, a higher rate of off-campus residency, a higher

rate of financial aid use, higher financial stress, and lower parental education level among FGSs.

(3) At the epistemological level, the profile identifies lower English proficiency, similar degree course choice, similar Grade 12 academic performance, and similar university academic performance among FGSs.

Figure 8.5.1 illustrates the psychosocial profile that was synthesised.

Figure 8.5.1

Psychosocial Profile of South African FGSs at an Identified HDI
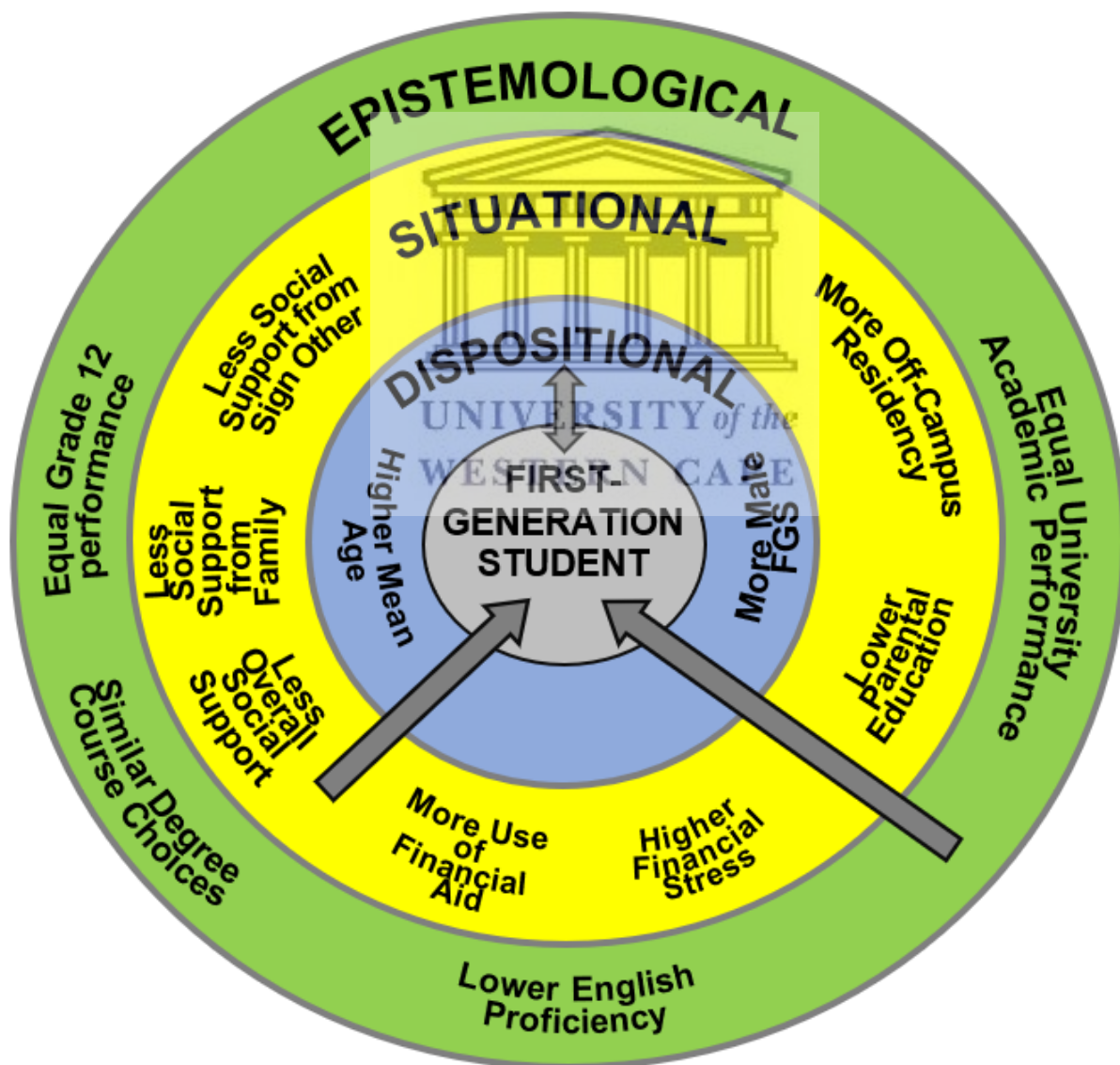
CHAPTER 9: Discussion

9.1 Key Findings: Fundamentally More Similar than Different

The relevance of research on first-generation students (FGSs) has mostly been framed in terms of its significance to higher education (HE) outcomes among this type of student. The traditional "deficiency-based" research on FGSs compared to continuing-generation students (CGSs) has led to the following fundamental conceptualisations: (1) FGSs as demographically different; (2) FGSs as entering HE with a heightened risk profile that is associated with factors such as lower socio-economic status (SES), limited academic readiness for HE, limited social support, difficulties with cultural adaptation, and comparatively higher levels of psychological disturbance; and (3) FGSs as performing poorer academically and having lower retention rates and higher attrition rates.

The present study did indeed find significant psychosocial differences between the sample's FGS and CGS groups that are consistent with the reviewed literature. Studies have found that FGSs tend to be from families that have a significantly lower SES than the families of CGSs (Afeli et al., 2018; D'Amiko & Dika, 2013). Consequently, FGSs experience challenges related to HE affordability (Kizart, 2014), financial anxiety (Potter et al., 2017), financial insecurity (Pratt et al., 2019), and reliance on part-time work, HE work-study programmes, and student loans (Reid, 2013). Competing job responsibilities (Stebleton & Soria, 2012) and financial worries (Pratt et al., 2019) have been associated with academically at-risk students and obstacles to academic success. According to Furquim et al. (2017), FGSs are more likely to apply for financial aid, borrow, and take out larger loans than their CGS peers. Findings from the present study are consistent with the abovementioned studies in its identification of higher financial stress, as well as more use of financial aid among FGSs compared to CGSs. Also consistent with the cited studies, is this study's result showing that

increased financial stress is significantly correlated with decreased academic performance among FGSs, and vice versa.

Despite the abovementioned differences identified between FGSs and CGSs, the findings of the present study, ultimately, do not convincingly support the three common conceptualisations of FGSs. An exploration and critical consideration of this finding follows.

9.1.1 Salient Meanings attached to FG Status

As would be the case by definition, parental education levels were significantly higher among the CGS group compared to the FGS group in the study. Contrary to overwhelming evidence in the literature (Allan et al., 2016; D'Amico & Dika, 2013; Kizart, 2014; Mrozinske, 2016; Palbusa, 2016; Pratt et al., 2019; Radunzel, 2018; Ricks, 2016; Vuong et al., 2010), this study finds that FG status and parental education level did not have any statistically significant association with academic performance in the FGS group. The significance of FG status in its contribution to poorer academic outcomes has been predominantly attributed in the literature to the following factors:

(1) Particular demographic and psychosocial characteristics associated with FG status have been found to contribute to poorer academic outcomes, including lower retention and throughput and higher attrition rates.

(2) The salience of FGS identity varies between students, contexts, and resultant effects. For some, high salience of FGS identity adds a significant amount of pressure to perform to do their families and communities proud. High salience of FGS identity can also lead to higher identification with their minority or non-traditional status, which can hinder social integration (Orbe, 2004). In a study by Orbe (2014), students who attended less prestigious HE institutions (HEIs) and were surrounded by more fellow FGSs reported less salience of their FG status, while students of colour, students with lower SES, and non-traditional female students most often described a high saliency regarding their FG status.

(3) FG status in and of itself has been found to adversely affect academic performance even after statistically controlling for other student attributes such as HE academic readiness levels, financial resources, and demographic characteristics (Ishitani, 2003; Radunzel, 2018). Because FG status is defined by the parent(s)' lack of HE, these findings suggest that parental education alone has substantial potential to affect FGSs' academic performance. There are several ways in which parental education may affect FGS academic performance. Literature describing the benefits of having HE- educated parents was presented in Chapter 8.

Given the above discussion, the critical question then is, what factors among the FGS sample in the present study served to limit the adverse impact of FG status on academic performance? A reasonable place to start would be to critically consider the previously mentioned salient conceptualisations of FGSs, namely (1) FGSs as demographically different; and (2) FGSs as entering HE with a heightened risk profile for adverse academic outcomes because of associated demographic and psychosocial factors. These include but are not limited to SES, limited academic readiness for HE, limited social support, difficulties with cultural adaptation, and comparatively higher levels of psychological distress.

9.1.2 FGSs as "Demographically Different"

9.1.2.1 Race, ethnicity, and minority status

"Race" refers to superficial physical differences that a particular society considers significant, while "ethnicity" describes shared culture (Wirth, 1945).

Various studies have demonstrated that FGSs are disproportionately represented by racial or ethnic minority groups (Bui, 2002; Engle & Tinto, 2008; Redford & Hoyer, 2017). The US Department of Education (2014) identified that half of all FGSs are racial or ethnic minorities. Numerous studies have also reported associations between ethnicity, academic performance, retention, and attrition among FGSs in HE (e.g. Falcon, 2015; Pellew, 2016).

Specifically, African American, Hispanic, and Native American FGSs, as well as FGSs who identified as no race/no identity are the least likely to complete their studies (Pellew, 2016).

In the present study, however, no statistical differences were found between the FGS and CGS groups in terms of racial identity, and racial identity did not have a statistical association with university academic performance. This departure from the international literature can be understood as a result of interrelationships between extra-institutional and institutional factors in the present study's research setting. At the extra-institutional level, the socio-political history of South Africa contributed significantly to the nature and functioning of the HEI that served as this study's research setting. A historical account of the influence of South Africa's socio-political history on the establishment and future trajectory of the University of the Western Cape (UWC) was discussed in Chapter 7. One consequence was that over time, UWC attracted increasing numbers of students from disadvantaged communities. Apart from Coloured people, increasingly more Black students enrolled. The student enrolment profile of UWC has largely remained unchanged. One can look towards the official vision of UWC to partly understand its predominant enrolment pattern. UWC (n.d.) describes its vision as follows:

> *(It is) committed to nurturing the cultural diversity of South Africa,*
> *and responding in critical and creative ways to the needs of a society*
> *in transition. Drawing on its proud experience in the liberation*
> *struggle, the University is aware of having a distinctive academic role*
> *in helping build an equitable and dynamic society.*

Additionally, enrolment in HE in South Africa is racially profiled as it links to access and historical privilege and disadvantage. UWC is an HDI and by definition will have a greater enrolment from minority groups.

An exploration of the concepts of "minority" and "majority" groups needs to be presented before proceeding with the discussion. Wirth (1945) defines a minority group as any group of people who are treated differentially and unequally due to their physical or cultural characteristics, and consequently regard themselves as objects of collective discrimination. The term describes a group that is subordinate or lacks power in society, regardless of skin colour. These definitions are to be clearly distinguished from *numerical* minority groups. Minority and majority status of groups are not designated by the number or size representing a specific group. In fact, larger groups can sometimes be considered minority groups due to their lack of power, precisely as was the case in apartheid South Africa. During apartheid, a numerically smaller White group held the power in society with the consequent oppression of Black groups that were numerically much larger. The core defining characteristic of a minority group is a lack of power in society.

When applying the latter to the UWC student population, one might suggest that the largest proportion of the student population – namely those of Coloured and Black racial identity – represents minority groups in a *historical sense* due to the apartheid history of discrimination, inequity, and lack of power under White political rule.

The term "historical" should, however, not be misunderstood. It cannot and may not be used to categorically suggest the eradication of disadvantage and inequality following the fall of apartheid. On the contrary, the lack of social mobility and resources caused by apartheid in the past are often transferred intergenerationally and still exert considerable influence in contemporary South Africa. The reduced capacity of accumulating resources in the past limits the capacity for forward mobility among many, if not most, Black South Africans in the present day.

FG status is an excellent example of the above. FGSs often experience certain challenges in HE because their parent(s) did not attend HE, likely often due to a lack of

resources resulting from discrimination, oppression, and inequality. While the present-day FGS is thus indeed afforded the opportunity to attain an HE, they can still experience various forms of disadvantage that are hinderances on the academic journey. Challenges related to the latter were elaboratively explored in Phase I of the study. There are numerous permutations resulting from the disadvantaged family backgrounds of many FGSs. The significance, however, is that these correlates of disadvantage potentially put FGSs at risk of adverse academic outcomes, including lower retention and throughput rates and higher attrition rates.

The UWC student population shares many commonalities, including ethnicity that relates to culture, racial identification, and socio-historical background. These institutional-dispositional-situational associations and shared commonalities allow UWC students to identify with a *numerical majority status*, while at the same time possessing *minority identities*. A clear distinction between these two concepts needs to be drawn.

In addition, a sizeable proportion of UWC students are FGSs. In fact, the present study's sample reflected a numerical FGS majority compared to the CGS group (60.5% of participants were FGSs versus 39.5% CGS). FGSs in the present study's institutional context are thus less likely to identify with conceptualisations such as being "non-traditional", "different", or of "minority status". This is important given Orbe's (2004) finding that some FGSs are not comfortable disclosing their FG status to others. Especially FGSs who are attending more selective HEIs find it "embarrassing" to originate from families without HE degrees. These students believe that FG status is associated with a negative stigma. Some FGSs disclose their FG status only once they learn that others are FGSs or appear empathic to their situation.

The abovementioned institutional-situational interrelationships experienced by FGSs at UWC would be expected to advance the acquisition of social capital, which is acquired through connections to social groups such as peer networks at HEIs. Social capital benefits

group members by facilitating information exchange, providing mutual support, and decreasing their risk of attrition (Ridge, 2016). This may in part also explain why the present study's findings did not mirror those of international research that often demonstrates poorer academic outcomes, including lower retention rates and higher attrition rates among FGSs compared to CGSs. The present study demonstrates that the unique socio-political history of South Africa in interaction with UWC's socio-political background has resulted in vastly differing meanings and implications attached to the constructs of FG status, racial identity, and minority and majority status.

9.1.2.2 Age

Consistent with the literature, the FGS group in the study had a significantly higher mean age compared to the CGS group (Chen, 2005; Choy, 2001; NCES, 2014). Findings from this study are, however, not consistent with suggestions that higher age among FGSs may lead to poorer academic performance due to additional responsibilities (Chen, 2005). While dispositional-situational interrelationships demonstrated that increases in age were associated with increased employment rates and increased family responsibility in the FGS group, there were no statistically significant differences between the FGS and CGS groups in terms of either family responsibility or employment status. The latter may explain why age was not significantly associated with academic performance in the present study.

9.1.3 The "Heightened FGS Risk Profile"

As previously discussed, FGSs have come to be characterised as possessing demographic and psychosocial attributes that put them at higher risk of adverse academic outcomes, including poorer academic performance, lower retention, and higher attrition rates. This relates to what has been termed a "deficit perspective", a tendency to present FGSs as less accomplished than their CGS peers and to focus on FGSs' lack of skills, challenges, and inabilities (Green 2005; Yosso, 2005).

The equal levels of academic performance between the FGS and CGS groups in this study undermine the abovementioned conceptualisations. What follows is a brief consideration of this finding.

a) Contrary to findings in the literature of higher levels of psychological difficulties experienced by FGSs compared to CGSs (Allison, 2015; Garriot & Nisle, 2018; Jenkins et al., 2013; Stebleton & Soria, 2012; Sy et al., 2012), the present study did not find significant differences between the two groups on measures of overall psychological distress, anxiety and depression, or loss of confidence. The respective forms of psychological distress did, however, correlate negatively with academic performance among FGSs, indicating that academic performance and psychological distress increased and decreased in accordance with one another.

b) The literature has linked FG status to lower self-esteem (Falcon, 2015), lack of confidence in academic ability (Pratt et al., 2019), and lower self-efficacy (Elliott, 2014; Hellman, 1996; Hellman & Harbeck, 1997; Ramos-Sánchez & Nichols, 2007). Contrary to these findings, the present study's FGS group did not report lower self-efficacy or higher loss of confidence than their CGS peers.

c) Studies have demonstrated that socialisation and social integration are experienced as a greater challenge by FGSs compared to CGSs (Kizart, 2014; Pratt et al., 2019). The literature has also linked poorer academic performance and risk of attrition among FGSs to difficulties socialising, difficulties with social integration, anticipated difficulties forming relationships with on-campus peers, and the inability to develop mature relationships (Hixenbaugh et al., 2012; Jenkins et al., 2013; Kizart, 2014; Pratt et al., 2019; Reome, 2012). While there was a situational-epistemological interrelationship consisting of a negative correlation between social dysfunction and academic performance in the present study's FGS group, these students did not report significantly higher levels of social dysfunction compared

to their CGS peers. FGSs in the present study did, however, report lower overall perceived social support, as well as lower perceived social support from family and a significant other compared to CGSs. Decreases in these factors were related to decreases in academic performance among the FGS group.

d) As a result of financial challenges, FGSs are often forced to take on the burden of outside employment (Pratt et al., 2019), part-time work, or HE work-study programmes (Reid, 2013). FGSs also report statistically significant higher instances of competing job responsibilities compared to CGSs (Stebleton & Soria, 2012). FGSs in the present study, however, did not report significantly more work hours or higher employment rates compared to the CGS group. In addition, contrary to the reviewed literature (Hui, 2017; Pratt et al., 2019; Reid, 2013; Stebleton & Soria, 2012), the present study does not support a link between working hours or employment status and academic performance among the FGS group.

e) Studies have found that more FGSs live off-campus compared to CGSs (Billson & Terry, 1982; Mehta et al., 2011; Pascarella et al., 2004), resulting in experiences of isolation and marginalisation, which negatively affects long-term persistence in HE (Jehangir, 2009). While the present study confirmed a higher rate of off-campus residency among FGSs compared to CGSs, it does not support an association between off-campus residency and academic performance.

f) The literature indicates that FGSs often have lower levels of academic readiness for HE than their CGS counterparts (Hui, 2017), which contributes to lower academic performance among FGSs in HE (D'Amico & Dika, 2013; Falcon, 2015; Radunzel, 2018). The present study, on the contrary, found no statistical differences between the two groups in terms of Grade 12 performance, which represents academic readiness for HE and pre-HE academic performance.

Comparisons drawn between the literature cited above and findings of the present study essentially suggest that FGSs in the current study presented with a significantly reduced risk profile for poorer academic outcomes compared to findings in the literature.

9.1.3.1 FGS Academic Performance

Contrary to the majority of documented studies (e.g. D'Amico & Dika, 2013; Kizart, 2014; Mrozinske, 2016; Pratt et al., 2019; Palbusa, 2016; Ricks, 2016; Vuong et al., 2010), the current study did not find a statistically significant difference between the FGS and CGS groups in relation to HE academic performance. This finding has been critically discussed in Section 5.1.3.

9.1.3.2 Protective and Resiliency Factors

In the context of the present study, the finding that FG status was not significantly associated with poorer academic outcomes can be explained by (1) the lack of significant associations between demographic and psychosocial factors and academic performance among FGSs; and (2) the absence in the present study's FGSs of most attributes that have been associated in the literature with a heightened academic risk profile among FGSs.

Apart from the reasons already discussed, other factors may reduce or limit adverse outcomes because of FG status. This includes higher resilience levels compared to CGSs (Alvarado et al., 2017), which has been found to facilitate academic performance among FGSs (Reed et al., 2018). Additional factors include cultural capital, aspirations to achieve, resistance, resistance to the continued status quo, family and community support and expectation, and life experiences that assist in learning (O'Shea, 2015, 2016). Reed et al. (2018) found that, overall, South African FGSs are more resilient than Canadian FGSs, more resourceful than CGSs in Canada, and generally more resourceful than Canadian FGSs (Reed et al., 2018).

Norodien-Fataar (2018) notes that South African FGSs at a university of technology were able to access peer networks for social and educational support and thereby adopted cultural capital through group membership of the HEI community. This capacity among FGSs was confirmed in another South African study by Alcock and Belluigi (2018).

The scoping review in Phase I identified particular personal characteristics, practices, and aspirations that contribute to academic success among FGSs. Among these are academic and general self-efficacy (Darby, 2013; Falcon, 2015), engagement with spirituality, self-determination, optimism, self-care, and writing poetry (Ricks, 2016), social skills and self-care (Palbusa, 2016), college assimilation, and being hard working, goal oriented, independent, and mature (Falcon, 2015). Motivation as facilitator of academic performance includes self-determination (Ricks, 2016), self-motivation (Irlbeck et al., 2014), and motivation stemming from believing that an HE degree is necessary for a better life (Hui, 2017). Motivation to succeed in HE may originate from aspirations to honour prior generations and provide an example for future generations, personal and family financial needs, and personal notions of "purpose in life" and "a reason to belong" (Carter, 2018).

Table 9.1.3 provides a comparison of the FGS risk profile salient in the literature against the findings of this study. In instances where the FGS group differed significantly from the CGS group in terms of a risk factor, the relevant factor was not considered a risk factor if it did not also statistically significantly affect academic performance. Conversely, if a factor was statistically significantly related to academic performance but was not also statistically significantly different between the two groups, the relevant factor was not considered a risk factor. Therefore, only factors that were significantly different between the groups and adversely affected academic performance were marked as actual risk factors in the table.

Table 9.1.3

Comparison of FGS Risk Profile between the Literature and Findings from the Present Study

	Literature	Present study
Demographic Differences		
Ethnic or racial minority *	✓	x
Age #	✓	x
FG Risk Profile		
First-generation status #	✓	x
Social support ##	✓	✓
Residency #	✓	x
Extra-curricular involvement *	✓	x
Employment *	✓	x
Family responsibility **	✓	x
Financial challenges ##	✓	✓
Psychological distress **	✓	x
Loss of confidence and self-efficacy **	✓	x
Academic Performance		
Lower academic performance	✓	x

*   No difference between FGS and CGS groups and no significant association with academic performance.

** No difference between FGS and CGS groups, but a significant association with academic performance.

\#   Significant difference between FGS and CGS groups, but no significant association with academic performance.

\#\# Significant difference between FGS and CGS groups, as well as a significant association with academic performance.

9.2 Implications of the Study Findings: "FGS" is a Highly Confounded Construct

If there is one deduction to be made from this study's findings, it is that the construct "first-generation student" is highly complex and nuanced in its inextricable entanglement with context. While the study identified several consistencies with the existing literature, findings include several noteworthy departures from the dominant literature. Ultimately, the FGS and

CGS groups in this study were significantly different from one another in several ways. Considering the study of FGSs as being predominantly aimed at the identification of implications for academic outcomes in the HE context, however, the groups were fundamentally more similar than distinct. Moreover, the two groups were found to be more similar than different in terms of (1) demographic characteristics; (2) academic risk profile; and (3) academic performance outcomes. These have been the dominant focus areas in the investigation of FGSs in the HE context.

9.2.1 Context as the Foundation for Interpretation

Essentially, the concept of FGS becomes confounded by a disregard of context. A fundamental fallacy is committed in passively and non-vigilantly consuming and considering as sufficiently informative the meanings ascribed to such a context-dependent construct when these meanings originated in contexts that are radically different from the context within which we wish to better understand the FGS.

The paucity of research in locations and contexts other than that of the United States of America (USA), therefore, ultimately confounds the construct of FGS. Considerable efforts should be made to study FGSs across various extra-institutional and institutional contexts. Failing to do so would perpetuate the limitations of current understandings of FGSs and ultimately undermine the context-dependent nature of the construct. The significance of such institutional issues would not have emerged if this study had been conducted across institutions with aggregated data results. The present study thus illustrates the importance of studying FGSs at an institutional level and avoiding aggregated data across institutions. In the South African context, the racialised patterns of enrolment and the historical challenges linked to apartheid make it important to make the institution the unit of analysis.

9.2.2 "Difference Bias"

With "difference bias", the researcher refers to the tendency to traditionally conceptualise FGSs in terms of their differences from CGSs. This is a natural consequence of the way humans understand their world. Any particular thing or phenomenon certainly is inevitably partly defined or understood in terms of its opposition to another phenomenon used as a basis for comparison. This in itself is not a problem. On the contrary, the measurement of difference is essential to societal advancement and progress. Medical treatments can only be deemed effective when they demonstrate a different outcome compared to non-treatment. The point is the need to guard against "difference bias" in consuming scientific literature and in the methodological design of our studies.

This study has ultimately demonstrated that the understanding of FGSs purely in terms of how they differ from CGSs is reductionist and limiting as it obscures additional information and understandings that could otherwise have been discovered. It was the lack of specific differences – and thus the presence of similarities – between the FGSs and CGSs in this study that mobilised a shift towards focusing on possible FGS strengths and resiliency factors. In this way, a focus on strengths among FGSs enriches not only the interpretation of this study's findings, but also holds significant implications for priority focus areas both in future research and intervention design.

9.2.3 Multiple Definitions

A final factor contributing to a confounded conceptualisation of FGSs lies in the widely varying definitions of the concept. The literature demonstrates a troublesome lack of consensus in terms of how an FGS is defined. The problem created is that these variations hold substantial implications for FG status. There are, for example, vastly different implications in the ability to transfer cultural capital from a parent(s) who did not attend an

HE at all (Billson & Terry, 1982; Mehta et al., 2011) versus a parent(s) who did attend an HE for some period of time, despite not having progressed to graduation (Choy, 2001; Hicks, 2003; McConnell, 2000; Prospero & Vohra-Gupta, 2007). In the first instance, the parent has no direct experience or knowledge of processes, policies, or structures of HEIs whatsoever. The result is that the parent is not capable of providing informational guidance to aid the student's transition to an unknown landscape. Consequently, the student is not provided with the cultural capital needed to successfully navigate the HE environment. Additionally, because of inexperience and lack of understanding of HE studies, the parent may be limited in their ability to provide understanding and emotional support to the student with the additional possibility of disagreements or conflict based on the discontinuity between the home and HE cultures and competing demands that may result. In the instance of the second definition, however, whether the parent(s) had attended an HEI for six months or two years, they will have gained a substantial understanding and knowledge of the fundamentals of the HE environment in terms of its processes, policies, structures, resources, and so forth. Such a parent is able to provide the student with a decent degree of cultural capital in the form of informational guidance, understanding, and emotional support.

When consuming FGS literature, we should, therefore, be vigilant of how authors define FG status and mindful of implications those definitions hold for the FGS participants within the HE context.

9.3 Implications for Research: A Directed South African FGS Research Agenda

A gap in the literature relating to South African FGSs generally was identified in Phase I of the study. It is clear that the South African FGS research agenda needs to be prioritised and advanced. This should, however, be guided by identified priority focus areas.

An integration of study findings from the scoping review, the cross-sectional survey data, consultation of the literature, and application of the study's theoretical framework contributed

to the identification of priority focus areas for research. In addition, three particular implications arising from the study findings informed the identification of priority focus areas in the study of South African FGSs:

(1) Recognition of the significant role of context as co-constructor of the meanings attributed to the concept of "first-generation student";

(2) Identification of a critical urgency to investigate protective or resiliency factors among South African FGSs;

(3) Assessment of the scope of evidence in Phase I that highlighted (3a) a general lack of South African research on FGSs, (3b) a disproportionate origin of FGS studies from developed countries, particularly the USA, and (3c) a gap in both the local and international literature on the barriers and facilitators of participation in HE by FGSs.

A fourth consideration relates to the radical impact of the current Covid-19 pandemic at an institutional level (e.g. campus shutdown), the epistemological level (e.g. shift to an online mode of delivery and reduced academic support), the situational level (e.g. access to technology and reduced social integration and support), and the dispositional level (e.g. loss of confidence, psychological distress, and anxiety and depression).

The abovementioned observations resulted in the determination of the following priority focus areas for research on South African FGSs:

a) Prioritisation of institution-level research

b) A strength-based approach

c) Investigation of factors affecting the participation of South African FGSs in HE

d) Investigation of the effects and needs created by the move to online learning as a result of the Covid-19 pandemic

e) Investigation of the association between accessing various types of support and academic performance

9.3.1 Prioritisation of Institution-level Research

Section 9.2.1 focused extensively on the importance of placing significance on the study of FGSs within context, both in the methodology of the study as related to research setting, population, and sample, and in the ultimate interpretation of findings. South African research on FGSs is in its infancy and, as a result, the landscape for potential exploration is vast.

It is recommended that FGS studies in the near future be conducted at the institutional level. The earlier demonstration of the substantially different findings between the present South African study and that of another South African study that was based in a different institutional context illustrates that we first need to build an understanding of the implications of FG status as it interacts with different institutional contexts. Progressing from that understanding, we can then study South African FGSs at the extra-institutional level and draw from our institution-level study findings to determine which features of FG status can be generalised to the broader South African context and which features demonstrate a tendency to be specific to the institutional context. This could include a focus on institutions that differ in terms of:

- Institution type, i.e. university, college, or university of technology

- Student enrolment profile

- Socio-historical background of the institution

- Institutional resources

- Private versus public institutions

- Size of the student body

- Subject area of course offerings

- Modes of course delivery

- Part-time versus full-time offerings

9.3.2 A Strength-based Approach

Prior sections of this chapter have discussed the limitations of imposing the "deficit-based approach" to the study of FGSs when conceptualising them as less capable, more challenged, and non-traditional compared to CGSs.
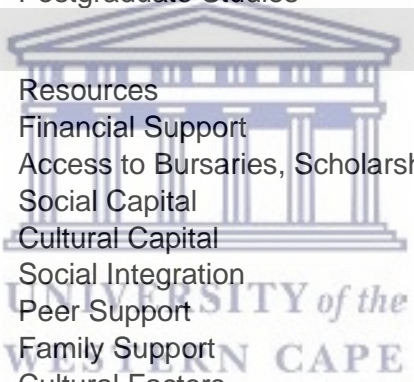
A significant implication emerging from this study's findings relates to the critical urgency of learning more about the protective and resiliency factors possessed by South African FGSs in particular institutional contexts.

A sharp focus of future research should be to investigate factors that could contribute to resilience. Potential resiliency factors for investigation should be identified at each of the institutional, dispositional, situational, and epistemological levels. Studies could be enriched and deepened by taking forward the empirical investigation of the effects of inter- and intra-factorial interrelationships on academic performance among FGSs.

Regard for context is again significant in the proposition of studying FGS resiliency and strengths. Reed et al. (2018) argue that the characterisation of FGS is culturally specific, and academic outcomes are predicted by students' culturally specific levels of resourcefulness and resilience. The authors argue that the positives students bring to HE should be considered. Table 9.3 presents possible focus areas for identification of protective and resiliency factors among FGSs in South African HE.

Table 9.3

Proposed Focus Areas for Identification of Protective and Resiliency Factors among FGSs in South African HE

IDENTIFICATION OF PROTECTIVE / RESILIENCY FACTORS AMONG SOUTH AFRICAN FGSs
Epistemological
⇒ Academic Preparedness for HE   ⇒ English Proficiency   ⇒ University Academic Performance   ⇒ Degree Course   ⇒ Access to Technology, Learning Materials   ⇒ Experience of the Course   ⇒ Perceived Course Difficulty   ⇒ Student Expectations   ⇒ Perceptions of Relevance of the Course   ⇒ Student Attributes: Year of Study   ⇒ Post-Graduate Students: Explore Supportive Factors that Facilitated Academic Success Allowing Advancement to Postgraduate Studies
Situational
⇒ Resources   ⇒ Financial Support   ⇒ Access to Bursaries, Scholarships, NSFAS   ⇒ Social Capital   ⇒ Cultural Capital   ⇒ Social Integration   ⇒ Peer Support   ⇒ Family Support   ⇒ Cultural Factors   ⇒ Conducive Study Environment   ⇒ Engagement with the Institution
Institutional
⇒ Institutional Literacy   ⇒ Student Resources and Services   ⇒ Student Campus Activities   ⇒ Academic Counselling Services   ⇒ Health Clinic   ⇒ Psychotherapeutic Services   ⇒ Student Enrolment Profile   ⇒ Socio-Historic Background of the Institution   ⇒ Foundational Courses   ⇒ Communication and Relationships with Staff   ⇒ Equal Opportunity

Dispositional	
	⇒ Intrinsic Motivation
	⇒ Extrinsic Motivation
	⇒ Aspirations and Goals
	⇒ Optimism
	⇒ Self-Efficacy and Confidence
	⇒ Self-Determination
	⇒ Independence
	⇒ Personality Factors
	⇒ Physical Health
	⇒ Mental Health
	⇒ Age
	⇒ Gender
	⇒ Ethnicity
	⇒ Study Habits
	⇒ Time Management
	⇒ Salient Identities

9.3.3 Factors Affecting the Participation of South African FGSs in HE

Assessment of the scope of the available literature reporting on the barriers and facilitators of participation, retention, and throughput among FGSs revealed that there is a notable gap in both the local and international literature focusing on the barriers and facilitators of *participation* in HE among FGSs. Given the mandate to increase access to HE for previously disadvantaged groups, this is a very important focus area that needs to be investigated. Ignorance about impediments to accessing HE among previously disadvantaged groups creates the risk that these obstacles remain unknown and consequently do not receive attention and intervention. This would undermine efforts to address equity in the South African workforce and critical skills shortage (Scott et al., 2007).

9.3.4 Investigation of the Effects and Needs Created by the Move to Online Learning as a Result of the Covid-19 Pandemic

As discussed in previous sections of the dissertation, the Covid-19 pandemic leaves FGSs, especially, vulnerable to adverse effects on their mental well-being, situational consequences,

and academic integration. It would be important to study the effects, as well as the needs created by the pandemic at the institutional, situational, epistemological, and dispositional levels. This could assist HEIs in identifying resources that can be mobilised to assist students and promote optimal academic performance.

9.3.5 Investigation of the Association between Accessing Various Types of Support and Academic Performance

Findings from the scoping review in the current study suggest that involvement in intervention programmes and mentoring significantly enhances the academic performance and retention of FGSs. It is important to investigate how the use of institutional support resources in the South African context impact on the academic performance and retention of FGSs.

9.4 Implications for Intervention Design

The findings of this study highlight the fact that FG status is a nuanced and complex concept of which the meaning varies widely. The meaning of the concept is highly dependent on the context within which it is studied and subsequently conceptualised. The present study illustrates that institutional-situational, institutional-epistemological, and institutional-dispositional interrelationships, as well as intra-factorial relationships, function intricately to collectively weave together FGS profiles, experiences, and performance outcomes that are unique to specific HEIs.

The second significant implication for intervention design arose from findings suggesting that this particular FGS population possessed attributes, skills, strengths, or contextual supports that to some extent negated the effect of a particular FGS risk profile most frequently identified in the dominant literature. The implication is that FGS intervention programmes must have a highly substantive focus on the identification, further development, and optimisation of already existing FGS strengths. Given the abovementioned

considerations, the following steps are proposed. What follows is a condensed version of a recommended process of identifying focus areas for intervention among FGSs. The complete and expanded version can be viewed in Appendix J.

9.4.1 Identifying Predictors and Correlates of Academic Performance

Statistically significant correlates and predictors of academic performance arising from the data represent the needs and strengths, or barriers and facilitators, of academic performance among the institution's FGSs. These factors, therefore, create the aims of the intervention programme.

9.4.2 Constructing a Needs Profile

The identification of significant predictors and correlates of academic performance allows for the determination of factors that facilitate or hinder academic performance. Barriers and facilitators of academic performance are reconceptualised as representing particular needs and strengths. These then can become the focus areas to be included in the intervention plan.

In the present study, needs were identified through an integrated approach in which consideration was given to the empirical findings of the study, knowledge of the extra-institutional and institutional contexts of the study, consultation of relevant literature, and application of the theoretical framework guiding the study. Findings further suggest that academic risk is dependent on context. Findings suggest that, in South Africa (and potentially other developing contexts with similar histories), greater attention needs to be given to promoting institutional literacy and psychoeducation and skills development and to increasing awareness of referral support mechanisms among FGSs.

9.4.2.1 Institutional Literacy

With "institutional literacy", the researcher refers to knowledge and understanding of processes, structures, policies, resources, and other information related to a particular HEI.

The following focus areas of information dissemination are suggested for enhancing the institutional literacy among FGSs:

- Information relating to university processes, policies, structures, administrative processes, administrative services and divisions, and student support services

- Financial aid and work-study opportunities

- Campus activities, extra-curricular activities, networking opportunities, clubs, and societies

Information about the abovementioned aspects is widely disseminated through various means in this study's focus institution (UWC Communication, Facebook, and Instagram sites and the official website). Hence, it may not purely be literacy around information that is the issue, but also a lack of engagement with what is already available. FGSs may be unaccustomed to the modes of dissemination of the information, and this could be a contributing factor to their challenges with institutional literacy. The concept "impact literacy" suggests that involving users in developing literacy frameworks may be more impactful compared to a one-way transfer of information (Bayley et al., 2018). This suggests that the institutional literacy of FGSs can be enhanced by involving them in the creation and dissemination of institutional information. The investigation of this strategy represents a possible area of future research.

9.4.2.2 *Psychoeducation and Skills Development*

- Information on FG status. This intervention is aimed at destigmatising, demarginalizing, and normalising the FG identity and experience.

- Interpersonal communication skills

- Social skills

- Conflict management skills

- Assertiveness training

- Financial planning and management skills

- Stress management skills

- Time management skills

9.4.2.3 Appropriate Referral Support

I. **Academic Support.** Available supports include individual academic advising, academic skills workshops, including time management and study skills training, and a writing centre that supports especially postgraduate students in their academic writing.

II. **Psychotherapeutic Support Services.** Intervention programme facilitators should endeavour to identify students in psychological distress and provide information on the on-campus therapeutic student support services.

III. **On-campus Health Clinic.** Should a participant experience physical health difficulty, they can be referred to the on-campus health clinic.

The previously mentioned concept of "impact literacy" is again of significance in relation to information on available institutional resources. This information is widely available at the study's focus institution. FGSs' literacy around this information may therefore be enhanced if they are actively involved in the creation and dissemination of said information.

9.4.3 Constructing a Strengths Profile

Imposing the "deficit-based approach", which conceptualises FGSs according to the challenges and limitations they face, limits intervention strategies for the amelioration of challenges to the exclusion of a focus on the development and reinforcement of FGS strengths and resilience. A resilience approach, on the other hand, emphasises assets and resources as the cornerstones for change (Fergus & Zimmerman, 2005). Interventions to promote resilience in youth need to focus on developing assets and resources for those exposed to risk rather than concentrating on risk amelioration (Fergus & Zimmerman, 2005; Luthar & Cicchetti; Yates et al., 2003).

In terms of interventions aimed at the development of resilience, Fergus and Zimmerman (2005) suggest that the development of internal assets is key. According to Fergus and Zimmerman (2005), internal assets essential to develop include (1) social skills for connecting to peers; (2) self-efficacy for health-promoting behaviours; (3) academic skills; and (4) involvement in extra-curricular and community activities. Olsson et al. (2003) stress the importance of identifying what resources should be the target of intervention and determining how to convey these resources. The abovementioned intervention strategies can be applied and – where necessary – adapted for application in interventions for FGSs.

9.4.3.1 Identifying Student Strengths

FGS strengths in the present study were identified in the following ways: (1) consultation of the empirical data to identify statistically significant correlates and predictors of academic performance; (2) consultation of the empirical data to identify statistically significant inter- and intra-factorial interrelationships between significant correlates of academic performance; (3) consideration of knowledge and information available on South Africa as the extra-institutional context of the study and UWC as the institutional context of the study; (4) consultation of the literature; and (5) application of theoretical propositions from the study's theoretical framework.

A factor can be conceptualised as a strength when it (1) functions as a facilitator of academic performance; (2) demonstrates significantly high values or levels of measurement in the FGS population; or (3) is a function of the magnitude of facilitative influence it exerts on academic performance. For example, self-efficacy may be classified as a strength if it is a facilitator of academic performance and/or if the FGS population displays significantly high self-efficacy levels and/or if self-efficacy has a substantial magnitude of facilitative influence on academic performance.

9.4.3.2 Analysing Student Strengths

Studying the significant inter- and intra-factorial relationships between significant correlates of academic performance may identify particularly significant facilitative factors among the institution's FGSs. Studying the interrelationships indicates the potential of certain facilitative factors to exert an influence on academic performance not only in isolation but also in an additive or synergistic manner by means of mutual reinforcement between the two factors. Conversely, studying interrelationships between barrier and facilitator correlations provides an indication of facilitators that could reduce the potential adverse impact of identified barriers on the academic performance of FGSs. It should, however, be stressed that these interrelationships do not suggest a causal effect on academic performance.

9.4.3.3 Maximising Student Strengths

Among the primary implications of the findings of this study for intervention design is that interventions must have a substantive focus on the identification and further development, optimisation, and maximisation of existing student strengths. This means the creation of interventions that are focused not only on decreasing adverse influences but also have the express purpose of increasing the levels of a facilitator and the magnitude of influence it exerts on academic performance.

9.4.4 Summary

The starting point for intervention design is to conduct an empirical study of the institution's FGS population. The study aims should include determining statistically significant correlates and predictors of academic performance. Barriers and facilitators of academic performance should then be identified by studying the nature of correlations and predictive relationships between academic performance and relevant variables. The next step

involves the "translation" of barriers and facilitators into needs and strengths, which subsequently inform the aims of intervention strategies.

Interventions focused on needs aim to provide or develop the resources, knowledge, or skills required to facilitate academic success. Strategies to meet the needs required for the facilitation of academic performance may include interventions aimed at minimising the adverse influence of a barrier or at increasing the levels of a facilitator or the magnitude of influence it exerts.

The identification of strengths informs strategies aimed exclusively at the further development, advancement, and optimisation of already existing strengths. These strengths may operate at the dispositional, situational, epistemological, or institutional level. Most often, however, they operate and exert their effects through their interrelationships with factors from other factor dimensions or other factors present within the same factor dimension.

Figure 9.4 illustrates the process of identifying focus areas for intervention for FGSs based on findings from the present study.
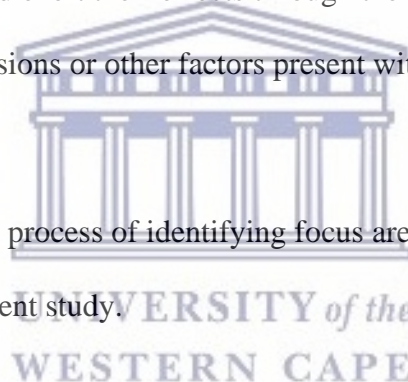
Figure 9.4

The process of identifying key focus areas for intervention for FGSs.
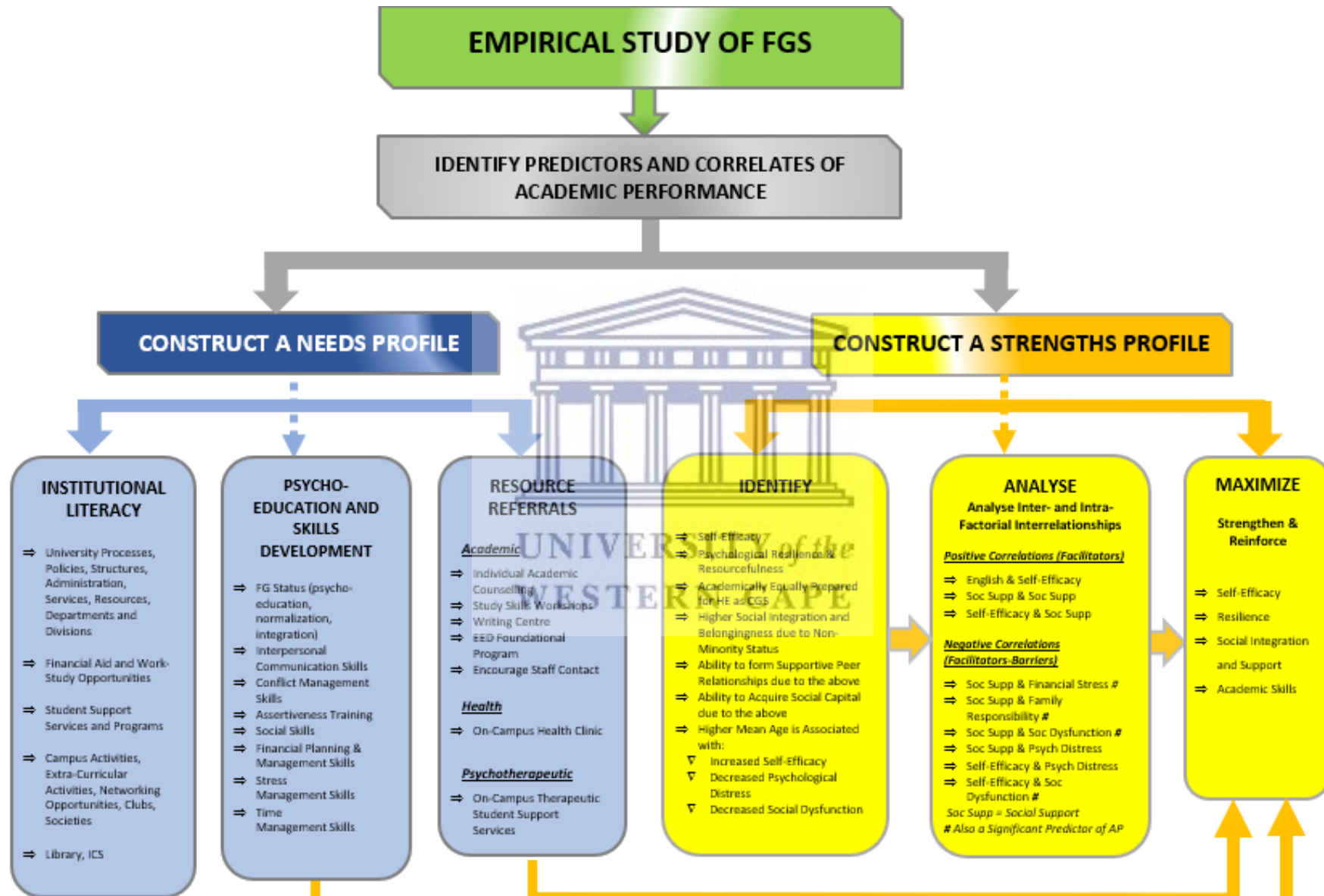
9.5 Contributions and Significance of the Study

9.5.1 Contribution to the Knowledge Base of FGSs in South Africa

To the researcher's knowledge, this study stands out as one of very few that represent this degree of breadth and depth in the study of FGSs in South Africa. The contributions of the study are outlined below. The study used a multi-methodological approach to empirically study the FGS phenomenon. The study was conducted at an institutional level, which enabled a more nuanced investigation that provides insight into the experiences of FGSs that otherwise would have been lost in aggregated data.

A comprehensive scoping review of 56 selected studies from the past ten years was conducted. One outcome of this phase of the study was the synthesis and dissemination of findings related to the barriers and facilitators of participation, retention, and throughput among FGSs. While the literature on South African FGSs was very limited, Phase I of the study, therefore, contributes to the knowledge base of FGSs by providing a comprehensive review and synthesis of the most recent evidence on FGSs as related to the research question. Researchers are able to refer to the scoping review if they seek an overview of the latest evidence on the topic.

Given that much of the existing research on FGSs has focused on the barriers to academic success, Phase I of the study uniquely contributes to the knowledge base on FGSs by additionally exploring facilitators of participation, retention, and throughput among FGSs. The additional evaluation of the scope of evidence during the scoping review, as well as the abovementioned consolidation of the literature contributes to the identification of gaps in the literature as related to the research question.

Quantitative measures and an extensive demographic questionnaire were applied to assess a broad range of demographic, psychosocial, and academic performance information

among this study's FGS group. The selected data analysis methods allowed the identification of barriers and facilitators of academic performance among these FGSs. The identified barriers and facilitators were presented and discussed in Chapter 7.

This contributes a rich body of evidence to the knowledge base of South African FGSs. Wide-ranging implications for research and intervention design were identified and discussed in this chapter. Given its identification of factors that either promote or hinder academic performance, this aspect of the study holds great significance for intervention design. The identified barriers and facilitators essentially represent the needs and strengths required to optimise academic performance. Identification of needs allows the determination of resources, knowledge, and skills required to decrease the impact of adverse influences and to maximise the impact of facilitative influences. Identification of strengths allows the formulation of interventions that have the express purpose of facilitating academic success.

The study involved the synthesis of a psychosocial profile of South African FGSs at an identified HDI, which was presented in Chapter 8. The findings of this aspect of the study hold significant implications for future research, as well as intervention design in HE settings.

Specific implications worth highlighting include: (1) FG status is not a universally generalisable concept by any means; (2) context acts as an active co-constructor of the meanings created in relation to the subject studied; (3) defining a construct in terms of its differences from a related construct is reductionist and obscures findings that could otherwise have proven highly informative and significant; (4) regard for the relevant extra-institutional and institutional contexts must form the foundation from which studies are designed and findings are interpreted, and (5) studies of FGSs in South Africa need to be conducted across as many different HEIs as possible.

The study's contribution to advancing knowledge of the demographic, psychosocial, and academic performance characteristics of FGSs advances our insight into the implications of FG status for academic outcomes in the HE environment in South Africa.

The psychosocial profile provides knowledge of both the needs and strengths that these students bring to the HE environment. This contributes to identifying the resources that need to be mobilised to realise the ideal of forward mobility and social advancement among the previously disadvantaged and oppressed. Governmental agencies such as the Department of Higher Education, policy makers, and HEIs should prioritise the provision of resources and the development of existing potential among FGSs to truly increase access beyond the point of "participation" to also include academic success.

9.5.2 Contribution to the Advancement of Research on FGSs in South Africa

Assessment of the scope of the available literature on the barriers and facilitators of participation, retention, and throughput among FGSs allowed the identification of current strengths and gaps in the knowledge base and the consequent identification of priority focus areas for future research on FGSs in South Africa. Chapter 4 presented the assessment of scope, while implications for future research were presented in this chapter.
In the discussion of the implications of the study findings for research, a directed South African FGS research agenda was proposed. This study, therefore, contributes to the identification of priority focus areas in the study of South African FGSs.

Five central recommendations were made in terms of future research on South African FGSs, as listed below.

1. Prioritisation of institution-level research

2. A strength-based approach

3. Investigation of factors affecting the participation of South African FGSs in HE

4. Investigation of the effects and needs created by the move to online learning as a result of the Covid-19 pandemic

5. Investigation of the association between accessing various types of support and academic performance

9.5.3 Contribution to the Development and Enhancement of a Theoretical Framework Proven to be Highly Applicable to the Study of FGSs in South Africa

This study applied a comprehensive formulation of the Chain of Response Model that included all subsequent revisions by a number of authors, as well as further adaptations for the present study (discussed in Chapter 2). This formulation was used as the theoretical framework for the present study of South African FGSs and guided instrumentation and methodological decisions.

The hypothesised interrelationships and directionalities of associations between the dispositional, situational, and epistemological factor dimensions are supported by the study's statistical findings. Moreover, findings support the propositions that epistemological and situational factors mutually influence one another, that epistemological and dispositional factors mutually influence one another, and that situational and dispositional factors mutually influence one another. Statistical findings also support the proposed intra-factorial relationships within particular factor dimensions.

Institutional and extra-institutional factors were not empirically investigated in the study. Instead, they were informed by an integration of knowledge about the socio-historical background of South Africa, the socio-historical background of the focus HEI, the reviewed literature, and propositions of the theoretical framework. Interrelationships between the identified institutional and extra-institutional factors and the remaining factor dimensions were therefore theorised. Figure 9.5.3 illustrates significant correlations that emerged in the study between the respective factor dimensions, as well as the directionalities of influence.

All the variables included in the diagram are significant correlates of academic performance in the FGS group and thus serve as barriers or facilitators of academic performance. The diagram includes the theorised influences of the institutional and extra-institutional factors identified in Chapter 7.

The reader is encouraged to view Appendix K, which consists of a series of tables that, firstly, indicate statistically significant interrelationships between factors across the three empirically measured factor dimensions (dispositional, situational, and epistemological). Secondly, statistically significant intra-factorial relationships within the dispositional, situational, and epistemological dimensions are presented. The tables provide particulars of the specific variables that intercorrelated and the factorial dimensions under which they were categorised (dispositional, situational, or epistemological). The tables also specify which variables serve as barriers and which as facilitators of academic performance among FGSs in the study. Only variables that were statistically significant correlates or predictors of university academic performance are included in the table.

Lastly, the tables in Appendix L present proposed inter-factorial interrelationships between the extra-institutional, institutional, dispositional, situational, and epistemological factor dimensions.

The framework was essentially found to be highly applicable to the study of FGSs in South Africa and serves as a rich, comprehensive, and nuanced backdrop for the description, conceptualisation, and critical engagement with empirical findings from the study. The theoretical framework played a pivotal part in all aspects of the study, from its initial conceptualisation to the organisation of the metasynthesis conducted in Phase I.

The framework additionally guided methodological decisions related to Phase II, including the selection of the research setting, selection of instruments, population and

sampling, and methods of statistical analysis of the quantitative data. The theoretical

framework further informed the presentation and discussion of key findings. The critical

discussion and derivations of resulting implications were strongly informed by the theory.

Lastly, the theory contributed to the identification of recommendations for future

research and intervention design.

Figure 9.5.3

Interrelationships between Identified Barriers and Facilitators from the Extra-institutional, Institutional, Epistemological, Situational, and Dispositional Factor Dimensions
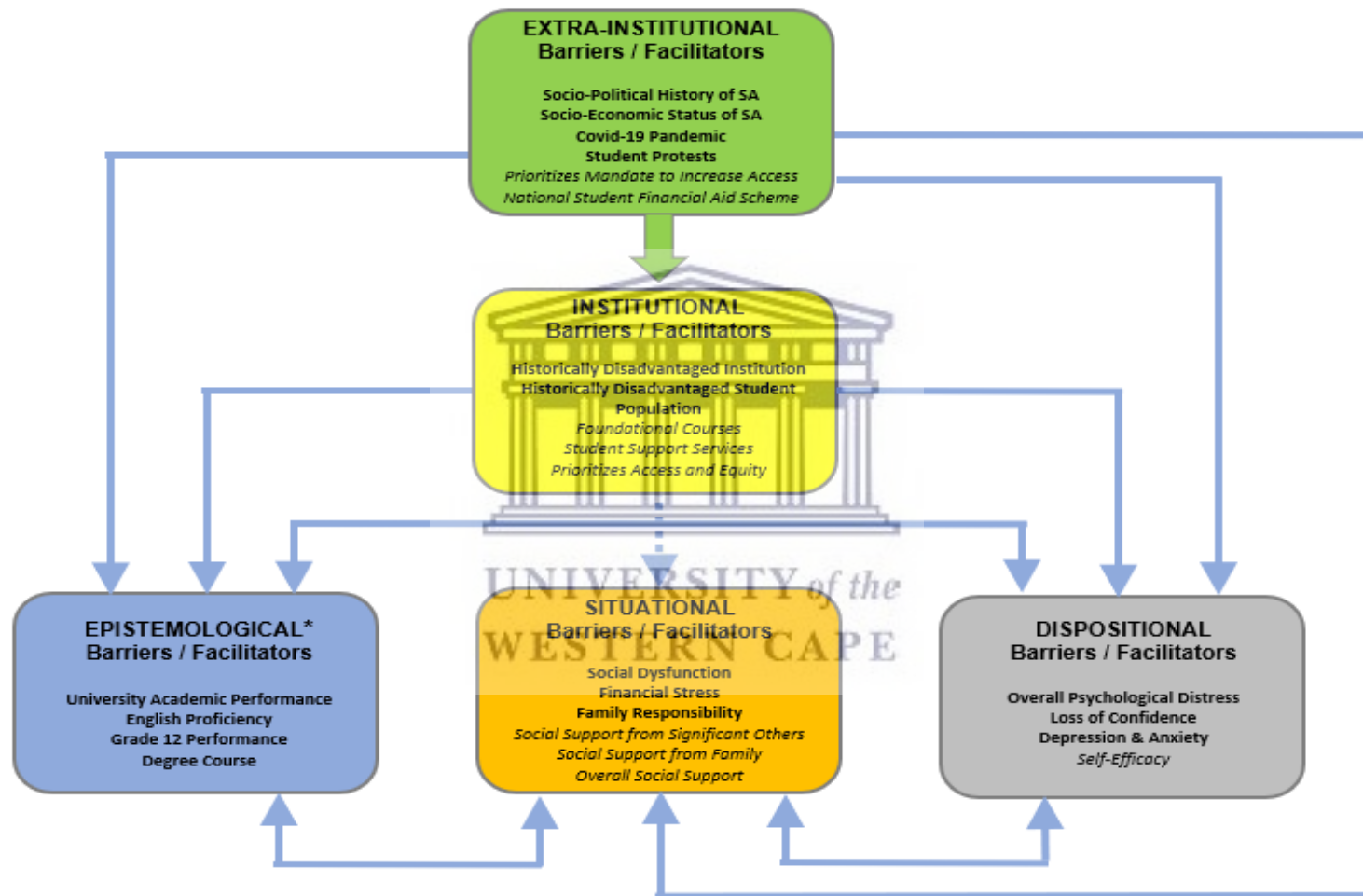
Italicised factors emerged as facilitators of academic performance.

Non-italicised factors emerged as barriers to academic performance.

* Epistemological factors can serve as either barriers or facilitators, e.g. academic performance increases with higher Grade 12 marks and higher English proficiency, and vice versa.

9.5.4 Contribution to Intervention Design

The study significantly contributes to intervention design by essentially developing a "blueprint" according to which interventions can be developed by following a series of sequential steps. A condensed version of a proposed intervention design process based on this study's findings was presented in Chapter 5. The expanded and full intervention programme can be viewed in Appendix J.

The guide for intervention design arose from the consideration of two highly significant implications of the study's findings:

1) Intervention design should have as its cornerstone an empirical knowledge and understanding, firstly, of the needs and strengths that are unique to the FGSs of that HEI. Secondly, an understanding is required of how the interaction of the institution's characteristics ultimately affects student academic outcomes through its interrelationships with the extra-institutional, dispositional, situational, and epistemological characteristics of the FGS population.

2) Findings from this study suggest that this particular FGS population possesses attributes, skills, strengths, or contextual supports that, to a significant extent, negated the effects of a particular FGS risk profile most frequently identified in the dominant literature. The implication for intervention design is that FGS intervention programmes must have a highly substantive focus on the identification, reinforcement, and optimisation of already existing FGS strengths.

CHAPTER 10

Conclusion

This dissertation presented a two-phase doctoral study of undergraduate first-generation students at an identified HDI in South Africa. The purpose of this study was firstly to determine the scope of the available evidence related to the barriers and facilitators of participation, retention, and throughput among first-generation students in higher education. Secondly, the study aimed to summarize and disseminate the findings from the literature reporting on the barriers and facilitators of participation, retention, and throughput among first-generation students in higher education. The study further had the purpose of investigating the barriers and facilitators of academic performance among undergraduate first-generation students at an identified HDI in South Africa. Lastly, the purpose of the study was to synthesize a psychosocial profile of undergraduate first-generation students at an identified HDI in South Africa.

10.1 Central Findings

The scoping review illustrated a paucity of South African research on the barriers and facilitators of participation, retention, and throughput among first-generation students in higher education. This finding highlighted the importance of conducting research on South African FGS. The latter was in fact further underscored by the present study's findings of the context-bound nature of the permutations of first-generation status. The present study demonstrated significant differences in the demographic, psychosocial, and academic performance between FGS in the salient international literature and those studied in the present South African study. This highlights that the meaning of the FGS concept is not universal, and that South African research is essential towards understanding and ultimately advancing the academic success of our students in HE.

The scoping review furthermore identified from the reviewed literature the dispositional, situational, epistemological, and institutional barriers and facilitators of participation, retention, and throughput.

Phase II of the study identified dispositional, situational, and epistemological barriers and facilitators of academic performance among undergraduate FGS at an identified HDI. In addition, institutional and extra-institutional barriers and facilitators were proposed as related to the context in which the study was conducted.

Phase II also involved the synthesis of a psychosocial profile of FGS at an identified HDI. At the dispositional level, the profile identified a higher mean age among FGS and a higher incidence of male gender among FGS compared to CGS. At the situational level, the profile identified lower social support from a significant other and family, as well as lower overall social support, a higher rate of off-campus residency, more use of financial aid, higher financial stress, and lower parental education level. At the epistemological level, the profile identified lower English proficiency, similar degree course choices, similar Grade 12 academic performance, and similar university academic performance.

Numerous inter-and intra-factorial interrelationships were found between significant correlates of academic performance among FGS, providing support for the propositions proposed in the adapted theoretical framework guiding the study. The theoretical framework proved to be highly applicable and appropriate in the context of studying FGS in HE.

10.2 Study Implications

Implications of the present study firstly involved the conceptualization of the first-generation concept itself. The study demonstrated that "first-generation" is a highly complex and nuanced concept which is essentially context-bound. Context should serve as the foundation for the interpretation of the concept itself as well as the interpretation of the findings of FGS studies. The study illuminated the importance of studying South African

FGS at an institutional level. The enrolment patterns in South African HEI's are often racialized and based on both historic and current socio-political dynamics.

Another implication of the present study is the need to move away from the "deficit model" both in studying FGS and in designing interventions aimed toward facilitating academic success in HE. FGS and CGS were ultimately more similar than different in the present study. Firmly established "vulnerabilities", risk factors, and poorer academic performance in the dominant international literature were not demonstrated by the FGS the current study. This implies the need to move to a strengths-based approach in our continued attempts to better understand and support South African FGS.

10.3 Recommendations

10.3.1 Recommendations for Future Research

This study led to the formulation of recommendations for future research on South African FGS in HE. Recommendations include the prioritization of institution-level research; investigation of factors affecting participation in HE among FGS; investigating the needs related to online learning among FGS due to Covid-19; and an emphasis of investigating the strengths and resiliency factors among South African FGS in HE.
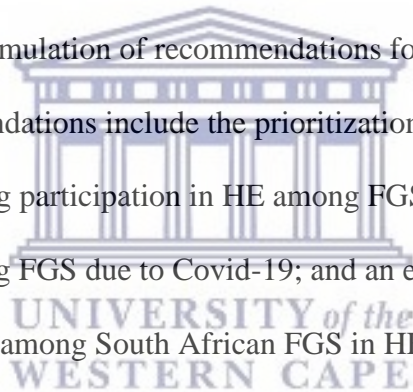
10.3.2 Recommendations for Interventions

Predictors and correlates of academic performance among FGS at South African HEI's should be the foundation of intervention design. The latter should inform the identification of particular needs among FGS in higher education. Addressing these needs may include, but is not limited to (1) institutional literacy around aspects such as university processes, structures, policies, and resources; (2) psychoeducation and skills development, including interpersonal communication skills, financial planning, stress management skills, etc.; and (3) referral of students to appropriate structures offering resources and support.

Interventions should also be informed by identified strengths among FGS in South Africa, including aspects such as self-efficacy, resiliency, support networks, cultural capital, etc. Interventions should then focus on reinforcing and optimizing these strengths towards enhancing academic success among FGS. Interventions should therefore have a two-pronged approach: the fulfilment of student needs in tandem with the optimization of student strengths. This implies a move away from a deficit approach towards a strength-based approach in the consideration of interventions for this student group.

10.4 Limitations of the Study

The institutional focus of the present study has been argued as being a pronounced strength as it served to highlight the importance of interpreting the first-generation concept within context. The contextual study of FGS can yield dramatically differing results owing to differing extra-institutional and institutional contexts, and it is important to keep in mind the resulting nuanced nature of the concept. This however also represents a limitation of the study, particularly in the limitations on generalizability created by the institutional focus of the study. The particular focus on an HDI means that results cannot necessarily be generalized to other types of tertiary institutions, for example those that are characterized by historical privilege and advantage. Indeed, as argued before, there is a need for institutional-level research on FGS in South Africa. This however needs to be expanded across as many distinct types of tertiary institutions as possible. It would however also be a recommendation for future research that the focus of FGS studies move from the institutional to broader contexts to obtain an understanding of commonalities shared among South African FGS in general.

The number of research instruments used needed to be limited to encourage participation and participants' completion of the entire survey. Completion of the survey may

be discouraged when a survey is perceived as being too lengthy. This also relates to the time constraints involved in the completion time lines for a dissertation. Given time limitations, the aim is to collect as much data as possible within as short a time period as possible. Creating surveys that are perceived as too lengthy would create the need for more time allowed in the data collection process as the rate of response would be slower. One would ideally have wanted to include more measures related to aspects such as resilience, academic motivation, self-determination, independence, etc. It would be a recommendation for future research to include instruments measuring the afore-mentioned aspects.

The highly disproportionate representation of student sub-groups in relation to particular variables made meaningful statistical analysis challenging. The variables of year level and degree course being studied were particularly disproportionately represented by participants. We found, for example, substantially more participants in the earlier years of study as opposed to those in later years. This limited the scope of statistical analysis of the influence of year level on academic performance among FGS. A second variable involved the degree course that was studied. Some degree courses had to be omitted from analysis due to the low numbers of students representing certain courses. A recommendation for future research is to effectively investigate the effect of degree course on academic performance among FGS. This would require a more balanced representation of enrolments in the respective courses. The sample was also heavily weighted towards females.

Data obtained in Phase 2 of the study could potentially have been richer and more informative if Phase 2 did not consist solely of a quantitative design, but with an additional qualitative exploratory design.

Because participants' student numbers were not consistently provided, the candidate was unable to access the actual student results and instead had to rely on categorised self-

reported academic performance. Self-reported academic results may be somewhat less

accurate than academic results as they are present on the university marks systems.

Lastly, the scoping review may have omitted potentially informative studies as a

result of the inclusion only of sources that are available in the English language.

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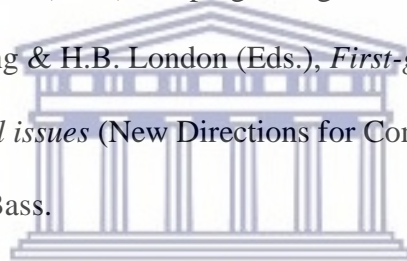
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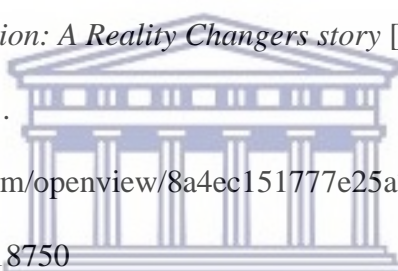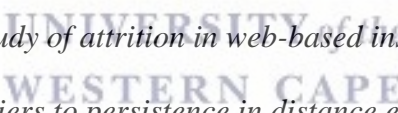
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APPENDICES

APPENDIX A: Registrar's Permission to Conduct Research with University of the Western Cape Students

UNIVERSITY of the
WESTERN CAPE

12 July 2017

RE: PERMISSION TO CONDUCT RESEARCH AT THE UNIVERSITY OF THE WESTERN CAPE

Name of Researcher	:	Mariska Pienaar
Research Topic	:	Establishing a psychosocial profile of South African first generation students and the needs associated with the facilitation of participation, retention, and throughput in South African higher education
Date of Issue	:	12/07/2017
Reference number	:	UWCRP120717MP

As per you request, we acknowledge that you have obtained the necessary permissions and ethics clearances and are welcome to conduct your research as outlined in your proposal and communication with us.

Please note that while we give permission to conduct such research (i.e. interviews and surveys) staff and students at this University are not compelled to participate and may decline to participate should they wish to.

Should you wish to make use of or reference to the University's name, spaces, identity, etc. in any publication/s, you must first furnish the University with a copy of the proposed publication/s so that the University can verify and grant permission for such publication/s to be made publicly available.

Should you require any assistance in conducting your research in regards to access to student contact information please do let us know so that we can facilitate where possible.

Yours sincerely

DR AHMED SHAIKJEE
DEPUTY REGISTRAR: ACADEMIC ADMINISTRATION
OFFICE OF THE REGISTRAR

UWCRP120717MP

FROM HOPE TO ACTION THROUGH KNOWLEDGE

APPENDIX B: Ethics Clearance Letters

OFFICE OF THE DIRECTOR: RESEARCH
RESEARCH AND INNOVATION DIVISION

UNIVERSITY of the
WESTERN CAPE

Private Bag X17, Bellville 7535
South Africa
T: +27 21 959 4111/2948
F: +27 21 959 3170
E: research-ethics@uwc.ac.za
www.uwc.ac.za

20 August 2018

Ms M Pienaar
Psychology
Faculty of Community and Health Science

Ethics Reference Number: HS17/1/38

Project Title: Establishing a psychosocial profile of South African first generation students and the needs associated with the facilitation of participation, retention, and throughput in South African higher education

Approval Period: 10 August 2018 – 10 August 2019

I hereby certify that the Humanities and Social Science Research Ethics Committee of the University of the Western Cape approved the methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report in good time for annual renewal.

The Committee must be informed of any serious adverse event and/or termination of the study.

UNIVERSITY *of the*
WESTERN CAPE

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

PROVISIONAL REC NUMBER - 130416-049

FROM HOPE TO ACTION THROUGH KNOWLEDGE.

UNIVERSITY *of the* **WESTERN CAPE**

60 YEARS *of hope, action & knowledge*

14 October 2021

Ms M Pienaar
Psychology
Faculty of Community and Health Sciences

HSSREC Reference Number:	HS17/1/38
Project Title:	Establishing a psychosocial profile of South African first generation students and the needs associated with the facilitation of participation, retention, and throughput in South African higher education
Approval Period:	**21 May 2021 – 21 May 2024**

I hereby certify that the Humanities and Social Science Research Ethics Committee of the University of the Western Cape approved the methodology, and amendments to the ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report by 30 November each year for the duration of the project.

For permission to conduct research using student and/or staff data or to distribute research surveys/questionnaires please apply via:
https://sites.google.com/uwc.ac.za/permissionresearch/home

The permission letter must then be submitted to HSSREC for record keeping purposes.

The Committee must be informed of any serious adverse events and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

NHREC Registration Number: HSSREC-130416-049

FROM HOPE TO ACTION THROUGH KNOWLEDGE.

APPENDIX C: Study Information Sheet

UNIVERSITY OF THE WESTERN CAPE
Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2838 Fax: 27 21-959 3515
E-mail: mapienaar@uwc.ac.za

INFORMATION SHEET

Project Title: ESTABLISHING A PSYCHOSOCIAL AND NEEDS PROFILE OF FIRST-GENERATION UNDERGRADUATE STUDENTS AT AN IDENTIFIED HISTORICALLY DISADVANTAGED INSTITUTION

What is this study about?

This is a research project being conducted by Mariska Pienaar at the University of the Western Cape. We are inviting you to participate in this research project because you are a first-generation student following a health science degree course in the Faculty of Community and Health Sciences at the University of the Western Cape. The purpose of this research project is to gain a better understanding of the psychosocial challenges experienced by South African first-generation students, and the resources needed to facilitate higher rates of participation, retention, and throughput of first-generation students in South African higher education.

What will I be asked to do if I agree to participate?

You will be asked to complete an online survey consisting of questions around your demographic details, and seven research questionnaires exploring factors such as your general health, your experiences of social support, achievement motivation, financial distress/well-being, etc. The online survey should take around 90 minutes to complete. After completion of the online survey, you may be asked whether you might be interested to participate in the next phase of the study, which will consist of group interviews where the researcher will ask you and your fellow participants questions relating to your unique experiences of being a first-generation student. The group interview process should be of approximately 90 minutes' duration.

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, you will not need to provide your name for the purposes of the online survey. However, you will be asked to provide an e-mail address where the researcher might be able to contact you, should you be selected for the group interview phase of the research. The survey will take place on a secured online platform and the data you provide will therefore be confidential. (1) Your name will not be included on the surveys and other collected data; (2) a code will be placed on the survey and other collected data; (3) through the use of an identification key, the researcher will be able to link your survey to your identity; and (4) only the researcher will have access to the identification key. In addition, locked filing cabinets and

storage areas will be used to store data, password-protected computer files will be used. If we write a report or article about this research project, your identity will be protected. This study will use focus groups therefore the extent to which your identity will remain confidential is dependent on participants in the Focus Group maintaining confidentiality.

What are the risks of this research?

All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the investigator learn more about the difficulties experienced by South African first-generation students. We hope that, in the future, other people might benefit from this study through improved understanding of how South African first-generation students can be supported to facilitate their chances of being successful in their studies.

Do I have to be in this research, and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by Mariska Pienaar in the Department of Psychology at the University of the Western Cape. If you have any questions about the research study itself, please contact Mariska Pienaar at: Department of Psychology, University of the Western Cape, Robert Sobukwe Road, Bellville; Tel 021 959 2838; Email: mapienaar@uwc.ac.za

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Dr Michelle Andipatin
Head of Department: Psychology
University of the Western Cape
Private Bag X17
Bellville 7535
mandipatin@uwc.ac.za

Prof José Frantz
Dean of the Faculty of Community and Health Sciences
University of the Western Cape
Private Bag X17
Bellville 7535
chs-deansoffice@uwc.ac.za

APPENDIX D: STUDY CONSENT FORM

UNIVERSITY OF THE WESTERN CAPE
Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2838, Fax: 27 21-959 3515
E-mail: mapienaar@uwc.ac.za

CONSENT FORM

Title of Research Project:

ESTABLISHING A PSYCHOSOCIAL AND NEEDS PROFILE OF FIRST-GENERATION
UNDERGRADUATE STUDENTS AT AN IDENTIFIED HISTORICALLY
DISADVANTAGED INSTITUTION

The study has been described to me in language that I understand. My questions about the study

have been answered. I understand what my participation will involve, and I agree to participate

of my own choice and free will. I understand that my identity will not be disclosed to anyone.

I understand that I may withdraw from the study at any time without giving a reason and

without fear of negative consequences or loss of benefits.

Participant's name…………………………………….

Participant's signature………………………………..

Date………………………………………………….

APPENDIX E: Scoping Review Data Chart

Table E

Scoping Review Data Extraction Sheet Presenting Study Citation, Aims, Location, Sample, Design, and Main Findings

STUDY	AIMS	LOCATION AND SAMPLE	DESIGN	MAIN FINDINGS
Blackwell, E., & Pinder P. J. (2014).	To explore and to understand how first-generation minority college students are motivated to overcome their family histories to achieve a college education.	USA Three FGS and two third-generation college students.	Qualitative 18 35.3% Both = 2 3.9% Mixed = 3 5.9%	First-generation college students were not encouraged by family to attend college but their inner drive to attend college to achieve a better way of life for themselves led to them being the first in their families to attend and to graduate from college.
Covarrubias, R., & Fryberg, S. A. (2015).	examined family achievement guilt among an ethnically diverse sample of FGCs and continuing-generation college students (CGCs), those whose parents attended college.	USA 53 FGS and 68 CGS	Quantitative 28 54.9%	FGS reported more guilt than CGS, and Latinos reported more guilt than Whites.
Jenkins, S. R., Belanger, A., Connally, M. L., Boals, A., & Durón, K. M. (2013)	The authors compared first- and non-first-generation undergraduate students' social support, posttraumatic stress, depression symptoms, and life satisfaction.	USA 1,647 students from undergraduate psychology courses at a large state-supported university. 368 participants were FGS.	Quantitative Comparison FGS vs CGS Ito psychosocial factors	First-generation students reported significantly less support from family and friends, but not a significant other, than did non-first-generation students. FGSs reported significantly stronger PTSD symptoms than did non-first-generation students. First-generation students did not report significantly stronger depression symptoms. First-generation students reported significantly less life satisfaction.
Pratt, I. S., Harwood, H. B., Cavazos, J. T., & Ditzfeld, C. P. (2019)	Investigated the risk factors to attrition among first-generation college students.	USA First-time, full-time college students (N = 3,118 of which 23% were FGS) at a large midwestern state university.	Quantitative Barriers to retention	Being an FGCS was associated with disproportionally high freshman-to-sophomore year attrition rates. For the student body as a whole, retention was influenced by several important factors, the largest of which was financial insecurity. At-risk students
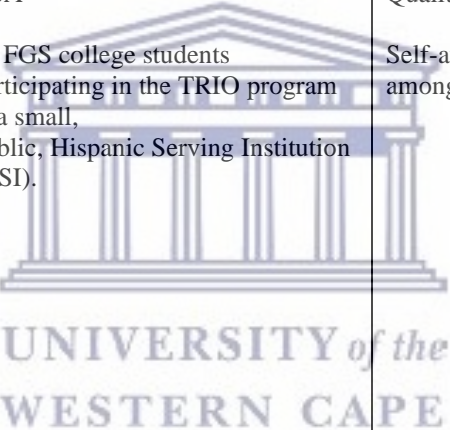
				were concerned about funding their education and were often forced to take on the added burden of outside employment. In addition to financial stress, at-risk students were less confident about their academic ability and reported anticipating difficulty in forming relationships with their on-campus peers. In other words, students who are stepping onto campus concerned about their financial security, academic competence, and social belongingness are also the students who are tending to leave the university before completing their program of study. These same variables are disproportionately likely to be associated with FGCS. Thus, although the nature of the challenges may be similar for FGCS and non-FGCS, FGCS may be more prone to the experience.
Salas, A.F. (2011)	Examining the obstacles to degree completion among a sample of low-income college students in Southern California. Also examined the role of a federally funded, TRIO Student Support Services (SSS) program designed to increase the retention and persistence of first-generation, low-income students at a large, public university.	USA The participants (n =20) were divided into two groups: 10 students who had participated in a 5-week summer bridge program, and 10 students with similar characteristics but who did not actively participate in the SSS (TRIO Student Support Program) program	Qualitative Barriers to throughput Effects of interventions	Familial concerns were prominent among FGS. Many of them felt that they should financially support their families, which increased the likelihood of FGS dropping out of college/university. FGS may feel a sense of obligation to their family's well-being, and therefore feel that they have to provide financial support. From the perspective of the first-generation and low-income college students in the study, support programs assisted them with finding a community on campus, offered validating experiences that fostered involvement, and promoted a sense of belonging that encouraged retention and persistence.
Reid, J. (2013)	Explored students' perceptions influencing their advancement from high school to college, reasons for pursuing higher education, and 1st-year college experiences.	USA Ten first-generation college students from a student support services program.	Qualitative Barriers to participation and retention	Data revealed FGCS did not have the tools needed for college success. Students faced financial hardships and had to rely on support from family and friends, part-time work, college work-study programs, and student loans.
Pellew, R. (2016)	Investigate how factors such as family income, expected family	USA	Quantitative	Ethnicity and ethnicity impacted the retention rate of FGS. Specifically, the study showed that African

| | (financial contribution) EFC, academic major, student living space, and ethnicity affected FG students' retention. | Non-First-Generation Students (n=100) and FGS (n=321) followed from the Fall 2009 through the Spring 2015 semesters. | Barriers and facilitators of AP and retention | Americans, Hispanics, and students who identified as no ethnicity/no identity were the least likely to be retained. The findings suggest that the factors that had a statistically significant effect on student retention were family income, housing status, academic major, and ethnicity. For the first-generation student population, the average family income of the students who were not retained during the twelve-semester period was $24,585 and that accounted for 70.8 % of the overall first-generation student population. Non-first-generation students had a 55% dropout rate with an overall average family income of $60,087. Data analysed showed statistically significance, meaning that family income played a part in students' retention but its impact on each group is assumed to be different, which is why there is a greater dropout rate for first-generation students The results showed that between a resident and a commuter student, the commuter student was more likely to drop out. Statistical significance existed as it related to the dropout rate based on academic major between the first-generation and non-first-generation students. A nursing major was more likely to be at risk of being retained compared to a humanities major. A statistically significant relation was found between family income, EFC and FGS retention. First-generation commuter students were the most likely to drop out of college than all three of the other groups of students, namely FGS residency students, non-FGS residency students, and non-FGS commuter students. However, when comparing FGS and non-FGS who lived in residency, the FGS group were still more likely to drop out of college than the non-FGS group. |

Allison, K. D. (2015)	Assessment of stress and anxiety levels among FGCSs, students of low-SES, and students with disabilities,	USA 55 participants from three student populations including: students of FGCS status, low-SES students, and students with disabilities.	Quantitative FGS mental health	Results showed that FGCSs, low-SES students, and students with disabilities had stress levels that are much higher than average and had anxiety levels that are just below the threshold for an anxiety diagnosis.
Allan. B.A, Garriot. P.O & Kenne. C.N. (2016).	Examined social class and FGS as predictors of institutionalized, citational, and interpersonal classism and classism as a predictor of life satisfaction, academic satisfaction, and grade point average (GPA).	USA 1,225 college students from a public university	Quantitative Barriers to AP .	Social class and first-generation status predicted institutionalized classism and interpersonal classism, and social class predicted citational classism. In turn, institutionalized classism and citational classism negatively predicted life satisfaction, and institutionalized classism negatively predicted academic satisfaction. Indirect effects were significant from social class to life satisfaction via institutionalized and citational classism, from social class to academic satisfaction via institutionalized classism, and from first-generation status to life satisfaction via institutionalized classism. Social class also had direct effects to life satisfaction, academic satisfaction, and GPA, and first-generation status had direct effects to academic satisfaction and GPA.
Potter, D., Jayne, D., & Britt, S. (2017)	Examines generational status as a predictor of financial anxiety among college students.		FGS and financial anxiety	First-generation student status was positively associated with financial anxiety. Proxies for students' self-concepts, including financial comparisons to peers and perceived mastery were the strongest predictors of financial anxiety.
Balemian, K., & Feng, J. (2013)	Study aimed to: • take a close look at first-generation test takers to better understand the needs and challenges they face on their path to college	USA Five years of graduating cohort data (2008-2012). Sample included U.S. test-takers only and only those test-takers who took the AP, SAT or both the AP & SAT. SAT analyses include test-takers who took either the SAT Reasoning or SAT Subject	Quantitative FGS academic preparedness	First-generation test-takers tend to have less core academic preparation than non-first-generation test-takers. About 1/3 of first-generation test-takers reported taking Algebra in 8th grade compared to about 1/2 of non-first-generation test-takers. About 2/3 of first-generation test-takers reported taking advanced math courses compared to about 3/4 of non-first-generation test-takers.

		Test. First-generation/non-first-generation analyses only included those test-takers who answered the parental education questions on either the SAT or AP student questionnaire.		While AP participation among first-generation test-takers has been increasing over time, participation as well as performance gaps between them and non-first-generation test-takers remain persistent. While SAT scores for first-generation test-takers tend to be lower, scores among first generation test-takers who took both AP and SAT scored higher than first-generation test takers who the SAT only.
	• focus on college-bound test takers who took the AP and/or the SAT • examine a variety of data elements including student socio-economic background, high-school characteristics, course-taking patterns, and college plans and aspirations • provide insight into particular needs of first-generation students and offer recommendations			
Katrevich, A., & Aruguete, M. (2017)	To examine the support needs of FGS in a mathematics course when compared to CGS. Investigating which support systems best predict performance and persistence in FGS.	USA 160 students in the statistics and calculus course at a US public university. 46% of the students were FGS.	Quantitative Facilitators of AP and persistence	The results show that that FGS reported lower overall faculty engagement, and that personal contact with the faculty members predicted persistence and retention in college/university. It was also found that FGS are likely to come from interdependent families, where family is extremely important to them, and any individual strivings are selfish, Western universities focus extensively on student independence, and therefore create an environment more familiar to CGS. FGS, when entering PSE, may feel isolated. FGS may lack knowledge of bursaries and student loans.
Carter, M. R. (2018)	This study evaluated the needs and aspirations of first-generation college students at the point-of-entry of enrolment	USA 10 FGS college students	Qualitative FGS needs and aspirations	Emergent themes presented from the grounded theory research on the ten FG student participants of the SSS program revealed that students displayed abstract needs and aspirations, such as a dream, as

	into the TRIO SSS program as participants of the summer bridge program.			well as concrete aspirations, such as a job with benefits. The main theme that emerged was the abstract level of the self's dream or goal. The next most common theme focused on the family at an abstract level in the aspiration to honour prior generations and providing an example for future generations to follow. The third common theme focused again on the self, and more specifically the concrete financial needs of the individual. The fourth most common theme was the students' focus on the concrete financial needs of the family. The fifth theme reflected the deeply personal notions of "purpose in life" and "a reason to belong."
Carpenter. A.M & Pena. E.V. (2017).	Investigated the importance of self-authorship among FGS.	USA 14 FGS college students participating in the TRIO program at a small, public, Hispanic Serving Institution (HSI).	Qualitative Self-authorship among FGS	The authors define self-authorship as an "orientation to knowledge construction and evaluation based on balancing an understanding of the contextual nature of knowledge with interpersonally grounded goals, beliefs, and values". The findings suggest that FGS have the capacity to self-author. The authors note three conditions that supported self-authorship among these students, namely: (1) difficult life events; (2) epistemological dissonance and reconstruction of meaning – that is, participants were forced to reexamine their needs and find new ways of constructing meaning in a manner that better aligned with their internal needs as well as learning to voice their convictions, beliefs, and values; and (3) role modelling (e.g., from a professor, counsellor, or other staff member). These conditions made it possible for FGS to develop a stronger sense of self. Carpenter and Pena (2017) conclude, however, that even though the results have indicated that undergraduate FGS may develop an adequate level of self-authorship, the fact that FGS are still dropping out of college/university suggests that self-authorship may only be a contributing factor to academic success and does not fully explain the aspects that are involved in student success.

Vuong, M.; Brown-Weltey, S.; Tracz, S. (2010)	The study explored four areas: the relationship between self-efficacy scores and academic success as defined by GPA and persistence rates, the academic success and persistence rates between first-generation and second-and-beyond-generation college sophomore students, the effects of the demographic factors of gender and ethnicity on self-efficacy, and the relationship between institution size and self-efficacy.	USA First-generation and second-generation college sophomores from 5 of the 23 California State University campuses.	Quantitative Facilitators of AP and retention Compare FGS vs CGS	Findings show that self-efficacy beliefs affect GPA and persistence rates of sophomore students and second-generation college sophomores outperform their first-generation peers.
Alcock, A., & Belluigi, D. Z. (2018)	Investigated FGS' self-positioning and identity in relation to the university, the discipline, and their home backgrounds.	South Africa 7 FGS in an Art and Design course at a majority Black university of technology.	Qualitative (Participants were asked to use photographs that represent their narratives and were subsequently interviewed in relation to their photographs). FGS self-positioning	Results suggest that participants had started to develop a strong sense of their academic identity and the related identity of a professional community of practice. All the participants adopted the empowering capital provided by their positioning as group members of the university community, particularly evident through their dissociation from those aspects of behaviour that they perceived as socially locating their home communities as "disadvantaged." Utilizing this evaluative knowledge meta-cognitively during their transition to university, they positioned themselves in ways that affirmed the aspirational potential of the privilege for social mobility as offered by belonging to a university of technology.
Palbusa, J. M. A. (2016)	This study examined conceptions of a good college student, parent-student communication about college, academic achievement, college student retention, and college	USA 344 first generation and non-first-generation undergraduates	Quantitative Facilitators of AP and retention. Compare FGS vs CGS	Findings revealed that for the overall sample, the five most important (i.e., highest rated) characteristics and behaviours that a good student should have were time management, getting papers done, doing well on quizzes and exams, studying for quizzes and exams, and writing papers that satisfy professor's requirements.

				Results further showed that the number of social skills and self-care behaviours that students used to describe a good college student predicted first year GPA. In addition, there was no significant relation between conceptions of a good college student characteristics and first-to-second year retention. Other findings revealed that first-generation college students did not differ from non-first-generation college students in frequency of communication or perceived emotional support. However, first-generation students had lower GPAs and reported lower perceived helpfulness and quality of parent-adolescent communication. Higher quality of communication about college predicted higher GPAs in the first year in college for non-first-generation college students but not for first-generation students.
generation status among first-year college students.				
Alcock, A. (2017)	Investigated what storylines FGSs draw on to construct their experiences of home and campus. The study drew from positioning theory to explore how South African students in an extended program at a university of technology derived at the formation of academic identity.	South Africa	Qualitative Self-positioning	The students participating in the study demonstrated through their self-positioning how they started to develop a strong sense of their student academic identity. Many of the participants seemed to express a sense of identity shift in terms of their transitions or migrations from the rural environments familiar to them as they made sense of their new urban student environments. Results also seemed to show that the participants were able to position themselves in ways that enhanced their agency which in turn gave rise to their developing sense of academic identity. In many instances the participants were able to speak with self-pride about the ways in which they positioned themselves as different to the environments from which they originated. This sense of self-worth seemed to enable the growth of a positive academic identity among the participants as they integrated into the university environment.
Norodien-Fataar, N. (2018)	Investigated the educational engagement practices of	South Africa	Qualitative	The results demonstrate that FGS students' learning dispositions were produced through the active and strategic exercise of affective, conative, and

	disadvantaged FGS at a university of technology. Discusses the learning dispositions of first-generation disadvantaged students at a university in South Africa's Western Cape Province. Explores the affective, cognitive, and conative (practices) dimensions of the students' habitus as interrelated aspects crucial to understanding how they develop their dispositions to learn.	7 FGS from low socio-economic backgrounds. Participants were senior Applied Sciences students in the fourth year of an extended degree program who participated in a mentoring program.		cognitive interrelated embodied dimensions. The findings highlighted the disjuncture between the students' habitus and the university field upon their entry into the university. This resulted in them experiencing a deep sense of disconnection. To counteract this feeling of disconnection between students' university environment and their habitus, they accessed peer networks for social and educational support. The author argues that FGS were therefore able to build practices through a series of embodied activities that enabled them to engage with their learning during their programs of study. These embodied practices consisted of forming connections with peers and developing feelings of connection to, and belonging at, the university. These affective qualities contributed to the constructive learning dispositions that students cultivated by developing routines and the discipline to learn. To enhance and deepen their learning, the students turned to ICTs to assist them in acquiring the concepts and skills necessary for learning on their Science courses. Their use of mobile technologies and social media tools in enhancing their academic skills and generating activities to learn indicates the importance of the embodied aspects of learning in the construction of students' learning habitus. The acquisition of their learning habitus was central in allowing them to concentrate on those core learning practices and activities that facilitated active participation in university study, which in turn enabled them to adapt, shift, and change their learning practices at the university. These practices illustrate the capacity of FGS to accumulate capital to engage in their learning to obtain the social and cultural capital necessary for success at university.
Reome, D. (2012)		USA	Qualitative	

	Investigated how first-generation college students describe the experiences that contributed to their degree attainment.	10 first-generation students enrolled in their final semester at a community college	Facilitators of throughput.	The experiences that contributed to first-generation student degree attainment included: having a support system in place at home, developing mature, adult relationships and collaborating with college faculty and staff, completing internship or volunteer work, accessing and utilizing academic support services and better understanding college level work, classroom expectations, and the financial aid process.
Sy, S. R., Fong, K., Carter, R., Boehme, J., & Alpert, A. (2012)	This study compares first-generation and continuing-generation female college students in terms of: (a) level of parents' emotional and informational support; (b) level of students' stress; and (c) the relationship between both types of parent support and students' stress during the transition to college.	USA Survey data from an ethnically diverse sample of 339 young women about to enter college.	Quantitative Compare FGS vs CGS on psychosocial factors	Results indicate FGS perceive less emotional and informational parent support than do continuing-generation students. FGS who perceive higher levels of parent emotional support have less stress than those who do not. However, neither type of parent support significantly predicted stress levels for continuing-generation students.
Garza, A. N., & Fullerton, A. S. (2018)	Explored how distance from home impacts the educational performance of FGS.	USA Utilized data from the Beginning Postsecondary Students Longitudinal Study (BPS:04/09) of FGS who were enrolled in four-year degree programs.	Quantitative Barriers and facilitators of AP and throughput	Found that FGS who attended colleges at a greater distance from home are more likely to graduate from college with a bachelor's degree. However, there was a lack of strong support for the relationship between distance from home and a student's GPA in most years of enrolment.
Pyne.K.B & Means. D.R. (2013).	Explores in a single case study of a FGS the key incidents prior to matriculation and throughout two semesters, focusing on those connected to racial, ethnic, and socioeconomic identities, as well as social and academic interactions and relationships.	USA Female, first-generation, low-income Hispanic student during her 1st year at a highly selective, private, predominantly White university.	Qualitative Facilitators of retention	The study suggests that FGS are more likely to come from disadvantaged groups. Findings indicated that family played a crucial role in the participant's life to encourage her to overcome all obstacles that came her way, indicating the centrality of relationships and familial support when at college/university.

Ridge, B.N. (2016)	This thesis analyses students' capital acquisition through college experiences.	USA 14 FGS students at an elite university divided into three cohorts: First year students, second through fourth-year students, and degree holders.	Qualitative and quantitative FGS capital	FGS have significantly lower access to the respective forms of capital than do CGS. Results from both the qualitative and quantitative data of the study revealed that social capital matters in terms of navigating and progressing through academia. The more social capital a student holds, the more likely they are to be academically successful and happy while in college. Furthermore, it greatly impacts their ability to socially integrate and navigate college. The quantitative and qualitative data from the study are mutually confirmatory in the finding that students who activate social capital are less likely to drop out and more likely to complete their degree within six years of initial matriculation.
Allard, D. (2019)	The aim of the study was to explore the influence of participation in a high-impact program (TRIO program), which fosters so-called "high-impact practices, on the college success of FGS of colour at a predominately White institution.	USA FGS participants who were active in the support program between the academic years of 2012 to spring 2018. The participants per year were as follows: Since 2013 – 1 Since 2014 – 6 Since 2015 – 9 Since 2016 - 14 Since 2017 - 28	Quantitative Effects of interventions	A statistically significant negative correlation between GPA and the increase of academic support program attendance as well as students who worked with other Trio students outside of the program to prepare assignments. Among the twenty-two high-impact practices that were measured, those that correlated most positively with student GPAs were: students who had informal conversations with faculty/staff; students who asked questions in class; students who participated in peer tutoring; students who had a sense of shared viewpoints; and students who were acquainted with those of different ethnicity. Although these items were not statistically significant, based on the literature, these particular HIPs hold practical significance to the academic experiences of FGS who are more academically engaged on the college campus.

McCallen, L. S., & Johnson, H. L. (2019)	Contextualizes proximal and structural characteristics shaping the opportunities of underrepresented students by drawing on multidisciplinary theoretical frameworks to consider the influence of social capital on the success of first-generation college students in the context of a large, public urban university. Analysed the association between student outcomes and perceived social support from institutional and protective agents.	USA First-generation college students enrolled at three 4-year campuses of the City University of New York	Mixed methods FGS capital	Convergent qualitative and quantitative findings indicate institutional agents, specifically college faculty, play a significant role in first-generation students' college success by imparting intellectual capital and institutional resources critical to navigating the higher education environment.
Woods-Warrior, E. (2014)	This study collected and analysed institutional data to determine the impact of three programmatic strategies on student retention and academic outcomes for FGS. The strategies are lower/upper-level student integration, faculty mentorship, peer mentorship, and Communities of Learning (CoL)	USA 75 first-year, full-time FGS currently enrolled in the retention program at a private, 4-year historically Black college.	Quantitative Effects of interventions	The results indicate that of the three retention strategies studied, faculty mentorship and students' participation in CoL activities most greatly impacted their engagement. None of the three strategies were direct correlates to retention, however, all three may act as mediators to improve engagement, which has been historically linked to retention.
Plaskett, S., Bali, D., Nakkula, M. J., & Harris, J. (2018)	Examined a program that connects incoming students with mentors from areas similar to those within the major city from which the mentees matriculate.	USA Mentors and mentees were selected on the basis of being from high-poverty school districts in a large urban centre graduating predominantly first-generation and/or low-income college students who are thus at heightened risk for dropping out of college. (The paper	Qualitative Effects of interventions	Found that mentoring relationships were capable of producing a variety of instrumental benefits for the incoming students. For example, mentors helped them apply for scholarships and other forms of financial aid, helped them select classes and strengthen their study skills, and helped them make friends and connect with people and organizations on campus. However, mentees saw the greatest instrumental benefits when they had a strong relationship with their mentor (e.g., they developed shared empathy, trust, respect, and closeness). It was

		does not report participant numbers)		found that the best matches integrated these two factors, in an approach the authors call *relational instrumentality.* That is, the incoming students were most successful when their mentors didn't just help them meet their immediate needs but also bonded with them personally.
Harackiewicz, J., Canning, E., Tibbetts, Y., Giffen, C., Blair, S., Rouse, D. and Hyde, J. (2014).	Examining the effect of a support program that was designed to assist low-income and FG students, known as the Values-Affirmation Intervention (VA), which is implemented to address the social-class achievement gap and promote retention.	USA 798 U.S. students (154 first-generation) in an introductory biology course for majors.	Quantitative Effects of interventions	For FGS, values affirmation significantly improved final course grades and retention in the 2nd course in the biology sequence, as well as overall grade point average for the semester. This brief intervention narrowed the achievement gap between first-generation and continuing-generation students for course grades by 50% and increased retention in a critical gateway course by 20%. The values affirmation intervention pioneered by Cohen, Garcia, Apfel, and Master (2006) was designed to close achievement gaps by buffering students against the possibility of confirming stereotypes about their group, known as "stereotype threat" (Steele, 1997). Steele argued that individuals experience apprehension when confronted with personally relevant stereotypes that threaten their social identity or self-esteem, and that this apprehension impairs performance on challenging academic tasks. To combat threats to the self, Steele & Liu (1983) developed a technique to promote self-integrity and self-worth via a writing intervention called self-affirmation or values affirmation (VA). The VA intervention involves students writing about their most important values, which can help them cope with identity threat (Fein & Spencer, 1997; Sherman, Nelson, & Steele, 2000). When individuals affirm their core personal values in a threatening environment, they can reestablish a perception of personal integrity and worth, which bolsters them against challenges and reduces stress (McQueen & Klein, 2006; Sherman & Cohen, 2006).

Salunga, N. G. C. (2018)	Aim to understand the role and impact of a precollege intervention program, Reality Changers, on first-generation student college-going identity, college-staying-identity, and student success.	USA 25 FGS participating in the Reality Changers program.	Qualitative Effects of interventions	Results demonstrated that the Reality Changers program impacted positively on the students' college-going identity, college-staying identity, and success in their studies by contributing to 1) increased self-efficacy, 2) increased college knowledge, and 3) persistence mindset.
Swecker, H.K., Fifolt, M., & Searby, L. (2013)	Investigate the relationship between the number of meetings with an academic advisor and retention of first-generation students, as represented by enrolment status and academic standing at a large, public research institution in the Southeast.	USA First-time, full-time, first-generation students ($N = 437$) who matriculated in Fall 2009.	Quantitative Effects of interventions	Results indicate that academic advising may play a crucial role in student retention. Leaders within HE can emphasise academic advising and increase the number of personnel that should be available to meet with FGS. Authors propose that proactive advising should be implemented, where the adviser makes the initial contact with the advisee.
Soria, M. & Stebleton, M.J. (2012)	Determine whether FGS were less likely to persist from first-year to second-year as compared to CGS, and whether there were differences in their levels of academic engagement.	USA 30 The survey was administered to 28,237 students across a large, public university located in the Midwest of the United States	Quantitative Compare FGS and CGS AP	FGS had lower levels of academic engagement than CGS, and this translated into lower retention rates. A positive correlation was found between student-faculty interaction and student persistence. Informal interaction – i.e., speaking with faculty members outside of class – was also positively correlated with student learning and development.
Nall, B. Q. (2017)	Discover the impact that a Student Support Services (SSS) program had on the first-generation and low-income students.	USA This study was comprised of 53 students who were freshmen and eligible for the SSS program. The treatment group only consisted of 27 first-time freshmen who were identified as first-generation and or low- income student status and participated in the university's Student Support Services (SSS)	Mixed-methods design Effects of interventions	The connection students have with faculty and staff is key in their persistence toward degree completion. The SSS program continues to achieve its goal in providing services that assist students in excelling academically, socially and culturally, and this impacts retention. Relationships between students and staff – particularly through support services - significantly impact on students' decision to persist to the next year.

		program. The control group consisted of 26 first-time freshmen with the same identification who chose to participate in the SSS program.		
Bryant, N. (2016)	Exploratory study which examined the programmatic elements of the TRIO Student Support Services (SSS) and their impact on the academic skills and abilities of FGS.	USA SSS annual performance reports from the US Department of Education were used to compare the retention and graduation rates for students enrolled in SSS versus non-SSS students.	Quantitative Effects of interventions	The survey results showed that the SSS program positively influenced retention from year-one to year-two and helped to improve participants' academic skills and abilities. Additionally, annual performance reports showed that SSS students compared favourably to non-SSS students when examining retention and six-year graduation data.
Brewer, M. R. (2011)	Investigated factors during the student's time in higher education that helped him or her become engaged in such a way as to prevent departure from the university.	USA 7 first-generation college graduates who had completed a bachelor's degree or applied for graduation in no more than six years at a small, private university.	Qualitative Facilitators of retention	Results revealed that first-generation students are a very distinct population whose experiences before and during college influence their chances of success. The study revealed that FGS engagement with faculty or staff early is critical to success. This engagement or relationship should continue throughout the student's college career, as this greatly impacts success.
Bruner, B. L. (2017)	The purpose of this study was to examine the effect of participation in a first-year living learning community on academic success. Academic success was defined in terms of the grade point average at the conclusion of the first year of college, and persistence to the beginning of the second year of college for first-generation college students in comparison to their continuing generation college student peers.	USA 840 first-year first-generation and continuing-generation college students at a public university.	Quantitative Effects of interventions	Findings indicated that first-generation college students who participated in a first-year living learning community were more than twice as likely as first-generation college students who did not participate to persist to the beginning of the second year of college. The variable academic readiness, defined as academically ready with ACT scores in a range of 21 and above and academically not ready with ACT scores in a range of 20 and below, affected the relationship between first-generation college students' participation in a first-year living learning community and academic success. FGS who were academically ready for college and participated in a first-year living learning community had a higher average grade point at the completion of the

				first year of college than first-generation college students who were academically not ready and participated in a first-year living learning community.
Lonn-Nichols, C. (2013)	Investigated the relation between institutional characteristics and types of student engagement among first-generation and second-generation college graduates from a four-year public college who transferred from a two-year public college.	USA One male and one female FGS and one male and one female non-FGS.	Qualitative Compare FGS vs CGS ito institutional knowledge	Primary differences between first and second-generation college students at two-year and four-year institutions are typically inclusive of the student's ability to understand how to navigate the institution and be successful in obtaining resources that support academic and social integration and student achievement.
Sparks, L. O. (2017)	The purpose of this study was to identify which aspects of mentoring contribute to intent to graduate, college GPA, and levels of thriving in FGS at a public university.	USA 416 first-generation and continuing generation juniors and seniors at a public university.	Quantitative Effects of interventions	Students' mentoring scale scores did not contribute significantly to the variation in their intent to graduate nor their college GPA, regardless of whether the student was a first-generation or continuing-generation student. However, mentoring contributed significantly to students' thriving levels, with Psychological and Emotional Support and Academic Subject Knowledge Support scale scores accounting for the most variance in thriving, after controlling for student demographics, campus experiences, and generation status. Psychological and Emotional Support and Existence of a Role Model scale scores contributed significantly to first-generation students' levels of thriving. Mean scores on the total College Student Mentoring Scale contributed significantly more to the variation in all thriving scales for continuing-generation students than for first-generation students. However. Psychological and Emotional Support and Academic Subject Knowledge Support scale scores accounted for the most variance in thriving among continuing-generation students.

Mahan, C. P. (2010) 40	Explore factors first generation college graduates identify as impacting their successful baccalaureate degree attainment.	USA 13 FGS representing the 2001-2004 University of Maryland Student Support Services cohorts.	Quantitative and qualitative Facilitators of throughput	Participants perceived several factors as significantly affecting their successful degree completion. These factors include academic preparation, college enrolment patterns, peer influence or participation in peer enclaves and perceived ability to pay. Family encouragement and support in both the student's pre-college and college experiences emerged as one of the most important influences upon first generation degree attainment. Further, results revealed that mothers, in particular, play an important role in their first-generation student's success. Mothers provide key motivational encouragement and support, regardless of their lack of familiarity with the college experience. Another key factor that plays a positive role in the first-generation student's successful graduation is participation in an academic support program.
Radunzel, J. (2018)	A multi-institutional study examining retention and transfer at the second year in relation to academic readiness, financial resources, college intentions, enrolment attributes, and other demographic characteristics to determine whether the predictors and their effects differ between FG and CG students beginning at 4-year institutions.	USA Data were available for 111,177 ACT-tested students entering college for the first time in fall 2012, 2013, or 2014 at one of 23 4-year institutions from two state systems.	Quantitative Barriers and facilitators of retention	Compared with their CG-BD (at least one parent earned a bachelor's degree) peers, FG and CG-SC (at least one parent had some college experience but neither completed a bachelor's degree) students tended to be at greater risk of dropping out or transferring to another institution in the second year even after statistically controlling for other student attributes such as precollege academic readiness levels, financial resources, and demographic characteristics. Academic readiness was negatively related to dropout and transfer for all three parental education groups (that is, [1] neither parent attended a higher education institution (labelled first-generation or FG), [2] at least one parent had some college experience but neither completed a bachelor's degree (labelled continuing generation—some college or CG-SC), or [3] at least one parent earned a bachelor's degree (labelled continuing generation—bachelor's degree or higher or CG-BD).

				Having intentions of living on campus was found to be negatively related to dropout when compared with returning in the second year and positively related to transferring to another institution. Analyses by parental education revealed that the negative association with dropout was seen among CG students only, while the positive association with transfer was seen among FG and CG-SC students only. Parental education was found to interact with gender and ethnicity on student attrition. For gender, there were smaller differences in dropout rates between female and male students among FG students. For ethnicity, Asian and Hispanic students were found to be less likely than White students to dropout and transfer in the second year with this finding being more pronounced among FG students than among CG students. None of the financial-related variables—annual income, neighbourhood median household income, or number of hours planned to work—interacted with parental education on student attrition, meaning that their effects were similar across the parental education groups
Mrozinske, E. C. (2016)	This study investigated the relationship between academic and social integration on the academic performance of first-generation first-year students. Furthermore, this study examined if ethnicity, gender, or socioeconomic status moderate the relationship between academic and social integration and academic performance.	USA 40 Archival data from MAP-Works survey (EBI, 2014) collected from 1,204 FGS students in the fall 2013	Quantitative Barriers and facilitators of AP	The results confirmed that academic preparation, socioeconomic status, financial stress, ethnicity, social integration, and academic integration significantly influence academic performance. Academic and social integration scores were mapped on a matrix to create four profiles that further revealed the adverse impact of high social integration on academic performance particularly when considering gender.
Ricks, J. R. (2016)	Explored the strengths, support systems, and coping skills that	USA	Qualitative	The overwhelming majority of the participants described their family as having a major role in the

| | assisted first-generation college students through the successful transition to college and beyond. | 10 first-generation college seniors enrolled at a historically Black university. Participants qualified for graduation with a bachelor's degree. | Facilitators of throughput | decision to attend college. Encouragement from family as well as teachers, high school sports coaches, and counsellors played a significant role. A common experience among the first-generation participants was the feeling of isolation and loneliness at the beginning of their college journey. Despite their social and family support, they were constantly faced with questions, confusions, and challenges. FGS were confused about academic policies, degree requirements, and the financial aid process. Some also faced obstacles in the classroom as they adjusted to the new level of rigor that accompanied higher education. Managing time and meeting due dates were examples of academic difficulties the students experienced upon entering college.
Factors that helped the participants cope included engaging with their spirituality, self-determination, support from friends, optimism, self-care, visiting an advisor or counsellor, writing poetry, and calling or visiting family. |
| Davis, D. A. (2015) | Investigated the relationship of advising styles, generational status, and the influence of advisors on intent to persist. | USA

FGS and CGS enrolled in a required first-year experience course were surveyed. 45.1% of participants were FGS. | Quantitative

Effects of interventions | There were no statistical differences in perceptions, satisfaction, or preferences between FGS and CGS (continuing-generation students) on the Developmental—Prescriptive Advising Scale (DPA), used to measure the nature of the advising relationship that the student currently perceives they are experiencing with their academic advisor) or the sub-scales in the study. There was also no statistical difference in number or length of advising sessions. Since there was no statistically significant difference in perceptions and preferences of, as well as satisfaction with, academic advising by generational status, the hypothesis that first generation college students would have different views and desires of their advising experience
was not supported. |

D'Amico, M. M., & Dika, S. L. (2013)	To determine which factors were the best predictors of first-to-second-year retention and first-year college grade point averages of both FGCSs and non-FGCSs at a public, urban doctoral institution with a diverse student population.	USA 1440 FGSs and 1531 non-FGS First-time, first-year students from two fall semester cohorts who completed the first-year (freshman) survey at summer orientation at a diverse, public, urban doctoral institution	Quantitative Facilitators of retention	While FGCSs had lower retention and significantly lower GPAs than non-FGCSs, the pattern of predictive factors varied by group. Greater academic preparation was significant for all groups. Minority students were more likely to persist than White students. Out-of-state residency was a predictor of higher GPA, but also a predictor of FGCS attrition. While FGCSs were less likely to return for the second year of college than their non-FGCS counterparts, this difference was not statistically significant. Therefore, this study confirmed the previously established finding that one's status as a FGCS may present a barrier to academic performance in college. Those from college educated families had significantly higher family incomes; however, family income was not a significant predictor for retention or FYGPA (first-year grade point averages) among the FGCS or non-FGCS groups. The strongest predictor of FYGPA and a significant predictor of retention for both FGCSs and non-FGCSs was a higher PGPA. There were no statistically significant differences in PGPAs between FGCSs and non-FGCSs. Among FGS, out-of-state FGS were more likely to earn better grades. Although FGS in-state students earned lower first-year GPAs than out-of-state students, being from in-state and potentially entering college with social connections may have contributed to these students' potential to return to college after the first year. Ethnicity played a role in predicting retention. In the FGCS and non-FGCS analyses, White students were less likely to persist than African-American students.
Freeman, V. F. (2017)	Gain a further understanding of first-generation college students (FGCS) in comparison to their non-FGCS peers. The study	USA 101 FGCS and 171 non-FGCS from a large, public university.	Quantitative Compare FGS vs CGS ito	The results indicated that there were no statistically significant differences between groups on resilience levels, perceived social support, and negative career thoughts. There were statistically significant

	examined both groups in relation to the following variables: resilience levels, perceived social support, perception of barriers, and negative career thoughts. Specifically, the goal was to understand how resilience levels and perceived social support were related to perception of barriers and negative career thoughts.		psychosocial factors	differences between groups on perception of barriers with non-FGCS perceiving more barriers than FGCS. The multiple regression revealed that resilience level and perceived social support predicted 9.1% of the variance in perception of barriers and 15.3% of the variance in negative career thoughts.
Kizart, C. (2014)	Examined first generation college students who persisted towards completing baccalaureate degrees with and without the assistance of TRIO, a federally funded program that assisted first-generation college students with obtaining a baccalaureate degree. Aimed to understand the challenges and perspectives of first-generation students who defied the odds of persisting beyond their first year of college.	USA 20 first-generation students from two universities who were beyond their first year of college and possessed a 2.0 or higher-grade point average (GPA). Half of participants participated in the Trio program while the other half did not. It was important to the study design to	Qualitative Effects of interventions	Various themes emerged regarding the challenges and perceptions of first-generation college students that included family support, college affordability, socialization, academic rigor, and mentorship. Further, these findings suggested that this generational cohort of first-generation students shared similar challenges and perspectives as they persisted towards completing baccalaureate degrees. Data indicated that involvement in programs such as TRIO seemed to assist participants with progression through college life by providing mentorship, book stipends, and grants, as well as opportunities to fellowship with other success-driven, first-generation college students.
Darby, M. A. (2013)	Investigate the strategies employed by senior level first-generation college students (FGCS) as it pertains to academic self-efficacy, parental support, and cultural capital and their role in college enrolment and matriculation. The examination also included additional emergent factors that	USA Six FGCS college seniors enrolled in a private university	Qualitative Facilitators of participation and retention	The findings of this study were as follows: FGCS reported that academic self-efficacy, parental support, and cultural capital had an impact on college enrolment and matriculation. In addition, intrinsic and extrinsic motivation played a role in their college enrolment and matriculation. The FCGS participants in this study self-identified as successful seniors on the road to baccalaureate attainment

	contributed to FGCS college enrolment and matriculation.			
Garriott, P. O., & Nisle, S. (2018)	This study examined stress, coping, and perceived academic goal progress among first- and continuing-generation college students.	USA 363 FGS and 325 CGS from two 4-year higher education institutions.	Quantitative Barriers and facilitators of academic goal progress; compare FGS vs CGS	Stress was significantly related to institutional supports for first- but not continuing-generation students. Institutional supports explained the relation between stress and perceived academic goal progress for first- but not continuing-generation college students. Reflective coping explained the relation between stress and perceived academic goal progress for first- and continuing-generation college students. Contrary to hypotheses, friend and family supports did not explain the relation between stress and perceived academic goal progress for first- or continuing-generation college students. First-generation status moderated the relation between stress and institutional supports, with the relation being inverse and significant for first-generation students. This finding suggests that institutional supports may play a more central role in first-generation students' stress during college compared to their continuing-generation counterparts The relation between stress and reflective coping was positive and significant for both first- and continuing-generation students. The use of reflective strategies appears to be weakly to moderately associated with stress for first- and continuing-generation college students. It is possible that first-generation students' capacity to draw from a greater number of experiences coping with stress helps explain their use of reflective coping strategies. The strength of associations of family and friend supports for attending college, institutional supports, and reflective coping with perceived academic goal progress was similar across first- and continuing-generation college students. Thus, the availability and use of both environmental and internal coping

				resources appears to play an equally important role in perceived academic goal progress for both these student groups.
				Although institutional supports explained the relation between stress and perceived academic goal progress for first-generation students in this study, the same was not true for continuing generation students. This finding indicates that lower institutional supports may be an important mechanism through which stress predicts perceived academic goal progress for first generation students.
				Without similar social and cultural capital as their peers for navigating higher education, first-generation students' access to, and use of, institutional supports may be more critical for their success in college than might be the case for CGS.
Irlbeck, E., Adams, S., Akers, C., Burris, S., & Jones, S. (2014)	Determine the motivations and support systems of first-generation college students within the College of Agricultural Sciences and Natural Resources (CASNR) at Texas Tech University (TTU).	USA Nine FGS from different departments in College of Agricultural Sciences and Natural Resources and one representative of the Texas Tech University's (TTU) first generation college student program.	Qualitative Facilitators of participation and AP	Factors that led to the first-generation students' enrolment at TTU, three main themes emerged from the data: parental and family encouragement, teacher encouragement, and self-motivation. FGS utilized at least one departmental/college organization and religious groups to aid in academic success. FGS depended on four major types of support, namely parental support, financial support, support from friends, and support from an adviser/professor.
Hui, M. M. (2017)	Investigated the profile of first-generation students who were on-track to graduate in four years. Examined to what extent there was a relationship between the following factors and being on-track to graduate in first-generation students: ACT score, ethnicity, gender, the number of AP tests taken, age at	USA 217 first-time, full-time FGS at the University of Arkansas. Of the 217 students, 17 participated in the focus groups, and one participated via video/phone interview.	Mixed method Facilitators of throughput	The study's results indicated that ethnicity and changing the major college of degree program are not related to being on-track to graduate, but other demographic factors like age, residency, and ACT score are significant. FGCS faced multiple barriers like unpreparedness, financial obligations, and relating to their family members, but they were motivated to succeed by many factors, primarily believing that a college degree was necessary for a better life.

	enrolment, in-state residency, and initial college of enrolment. Investigated what factors first-generation students on-track to graduate in four years perceived as barriers to their success.			The strategies used to succeed were active involvement in planning their course of study to maximize efficiency.
Stebleton, M. J., & Soria, K. M. (2012)	The purpose of this study was to examine the perceived academic obstacles of FGS in comparison to non-first-generation students at large, public research universities.	USA 50 145,150 students across six large, public universities. 26.4% of participants were FGS.	Quantitative Barriers to AP; compare FGS vs CGS ito academic barriers	FGS reported statistically significant higher instances than CGS of the following factors as obstacles to their academic success: competing job responsibilities; family responsibilities; weak math skills; weak English skills; inadequate study skills; and feeling depressed, stressed, or upset. The only measure on which first-generation students had statistically significant lower means than non-first-generation students was in the category of "other competing responsibilities".
Falcon, L. (2015) 53.	Investigated obstacles and facilitators to college success in FGS.	USA TOTAL 51	Literature review Barriers and facilitators of AP	Obstacles to college success included: (1) lower levels of college readiness: (2) financial challenges; (3) racial and ethnic disparity, with African American, Hispanic, Native American, and low-income students having completed high school and attended college at consistently lower rates than their White and higher income student counterparts in the USA over the past few decades; (4) lack of self-esteem, college adjustment, and family support. Factors that facilitate college success in FGS included: (1) college assimilation and family support; and (2) personal characteristics including self-efficacy, and being hard working, goal oriented, independent, and mature.

APPENDIX F: General Self-efficacy Scale (GSE)

Instructions:

This questionnaire consists of 10 statements. Please read each statement and indicate how you feel about each statement.

Question	Answer options	Score
1. I can always manage to solve difficult problems if I try hard enough.	Not at all true Hardly true Moderately true Exactly true	1 2 3 4
2. If someone opposes me, I can find the means and ways to get what I want.	Not at all true Hardly true Moderately true Exactly true	1 2 3 4
3. It is easy for me to stick to my aims and accomplish my goals.	Not at all true Hardly true Moderately true Exactly true	1 2 3 4
4. I am confident that I could deal efficiently with unexpected events.	Not at all true Hardly true Moderately true Exactly true	1 2 3 4
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.	Not at all true Hardly true Moderately true Exactly true	1 2 3 4
6. I can solve most problems if I invest the necessary effort.	Not at all true Hardly true Moderately true Exactly true	1 2 3 4
7. I can remain calm when facing difficulties because I can rely on my coping abilities.	Not at all true Hardly true Moderately true Exactly true	1 2 3 4
8. When I am confronted with a problem, I can usually find several solutions.	Not at all true Hardly true Moderately true Exactly true	1 2 3 4
9. If I am in trouble, I can usually think of a solution.	Not at all true Hardly true Moderately true Exactly true	1 2 3 4
10. I can usually handle whatever comes my way.	Not at all true Hardly true Moderately true Exactly true	1 2 3 4

APPENDIX G: Multidimensional Scale of Perceived Social Support (MSPSS)

Instructions:

We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

Question	Answer options	Score
1. There is a special person who is around when I am in need. (Significant other sub-scale)	Very strongly disagree Strongly disagree Mildly disagree Neutral Mildly agree Strongly agree Very strongly agree	1 2 3 4 5 6 7
2. There is a special person with whom I can share my joys and sorrows. (Significant other sub-scale)	Very strongly disagree Strongly disagree Mildly disagree Neutral Mildly agree Strongly agree Very strongly agree	1 2 3 4 5 6 7
3. My family really tries to help me. (Family sub-scale)	Very strongly disagree Strongly disagree Mildly disagree Neutral Mildly agree Strongly agree Very strongly agree	1 2 3 4 5 6 7
4. I get the emotional help and support I need from my family. (Family sub-scale)	Very strongly disagree Strongly disagree Mildly disagree Neutral Mildly agree Strongly agree Very strongly agree	1 2 3 4 5 6 7
5. I have a special person who is a real source of comfort to me. (Significant other sub-scale)	Very strongly disagree Strongly disagree Mildly disagree Neutral Mildly agree Strongly agree Very strongly agree	1 2 3 4 5 6 7

6. My friends really try to help me. (Friends sub-scale)	Very strongly disagree Strongly disagree Mildly disagree Neutral Mildly agree Strongly agree Very strongly agree	1 2 3 4 5 6 7
7. I can count on my friends when things go wrong. (Friends sub-scale)	Very strongly disagree Strongly disagree Mildly disagree Neutral Mildly agree Strongly agree Very strongly agree	1 2 3 4 5 6 7
8. I can talk about my problems with my family. (Family sub-scale)	Very strongly disagree Strongly disagree Mildly disagree Neutral Mildly agree Strongly agree Very strongly agree	1 2 3 4 5 6 7
9. I have friends with whom I can share my joys and sorrows. (Friends sub-scale)	Very strongly disagree Strongly disagree Mildly disagree Neutral Mildly agree Strongly agree Very strongly agree	1 2 3 4 5 6 7
10. There is a special person in my life who cares about my feelings. (Significant other sub-scale)	Very strongly disagree Strongly disagree Mildly disagree Neutral Mildly agree Strongly agree Very strongly agree	1 2 3 4 5 6 7
11. My family is willing to help me make decisions. (Family sub-scale)	Very strongly disagree Strongly disagree Mildly disagree Neutral Mildly agree Strongly agree Very strongly agree	1 2 3 4 5 6 7
12. I can talk about my problems with my friends. (Friends sub-scale)	Very strongly disagree Strongly disagree Mildly disagree Neutral Mildly agree Strongly agree Very strongly agree	1 2 3 4 5 6 7

APPENDIX H: General Health Questionnaire-12 (GHQ-12)

Instructions:
This questionnaire consists of 12 questions. Please indicate how you have been feeling, in general, over the past few weeks?

Question	Answer options	Score
1. Have you recently been able to concentrate on what you're doing?	Better than usual Same as usual Less than usual Much less than usual	0 1 2 3
2. Have you recently lost much sleep over worry?	Not at all No more than usual Rather more than usual Much more than usual	0 1 2 3
3. Have you recent felt you were playing a useful part in things?	More so than usual Same as usual Less useful than usual Much less useful	0 1 2 3
4. Have you recently felt capable of making decisions about things?	More so than usual Same as usual Less than usual Much less capable	0 1 2 3
5. Have you recently constantly felt under strain?	Not at all No more than usual Rather more than usual Much more than usual	0 1 2 3
6. Have you recently felt you couldn't overcome your difficulties?	Not at all No more than usual Rather more than usual Much more than usual	0 1 2 3
7. Have you recently been able to enjoy your normal day-to-day activities?	More so than usual Same as usual Less than usual Much less than usual	0 1 2 3
8. Have your recently been able to face up to your problems?	More so than usual Same as usual Less than usual Much less able	0 1 2 3
9. Have you recently been feeling unhappy or depressed?	Not at all No more than usual Rather more than usual Much more than usual	0 1 2 3
10. Have you recently been losing confidence in yourself?	Not at all No more than usual Rather more than usual Much more than usual	0 1 2 3

11. Have you recently been thinking of yourself as a worthless person?	Not at all	0
	No more than usual	1
	Rather more than usual	2
	Much more than usual	3
12. Have you recently been feeling reasonably happy, all things considered?	More so than usual	0
	About the same as usual	1
	Less than usual	2
	Much less than usual	3

APPENDIX I: Demographic questionnaire

Question	Answer options	Score
1. Please indicate your age.	Age in number of years	Number of years
2. Please indicate your gender.	Female Male	N/A
3. Please indicate your ethnicity.	Black Coloured Indian White	N/A
4. What is your home language?	Home language typed out	N/A
5. Please indicate how you would rate your ability in the English language, in terms of speaking, writing, and reading?	Poor Average Good	0 1 2
6. Are you currently studying with the help of financial aid, such as bursaries, study loans, or scholarships?	Yes No	N/A
7. Please indicate you father's highest level of education.	Did not complete Grade 12 Completed Grade 12 Completed a college, university of technology, university degree, diploma, or certificate Completed a postgraduate degree	0 1 2 3
8. Which degree course are you currently studying? If BA, please indicate your major subjects.	Degree course typed out	N/A
9. Please indicate your mother's highest level of education.	Did not complete Grade 12 Completed Grade 12 Completed a college, university of technology, university degree, diploma, or certificate Completed a postgraduate degree	0 1 2 3
10. Which year of study are you currently in?	1st year 2nd year 3rd year 4th year 5th year	N/A
11. What was your average percentage for your final marks in Grade 12?	40–50% 50–60% 60–70% 70–80% 80–90% 90–100%	1 2 3 4 5 6

12. Do you currently work?	Yes, I work part-time Yes, I work full-time No, I do not work	N/A
13. If you do currently work, about how many hours per week do you work? If you do not work, please write "0".	Number of hours	Number of hours
14. Do you currently live on-campus or off-campus?	On-campus Off-campus	N/A
15. Are you currently involved in any extra-curricular campus activities, such as sports or clubs?	Not at all Some activities Many activities	0 1 2
16. Many students have family responsibilities. How would you rate the time you spend on family responsibilities?	None A little time A lot of time	0 1 2
17. How would you describe your experience of your financial situation?	I experience a lot of financial stress I experience moderate financial stress I experience only a little financial stress I do not experience financial stress	3 2 1 0
18. Please indicate the average percentage of the final marks you obtained in your modules for the most recent COMPLETED semester.	Below 40% 40–50% 50–60% 60–70% 70–80% 80–90% 90–100%	1 2 3 4 5 6 7

APPENDIX J

Recommended Process of Identifying Key Focus Areas for Intervention Among FGS

Based on Findings from the Present Study

1. Identifying Predictors and Correlates of Academic Performance

The significant predictors of AP in the present study's FGS as determined by stepwise regression were Grade 12 performance, social dysfunction, perceived social support from a significant other, family responsibility, and financial stress. Significant correlates included English proficiency, self-efficacy, psychological distress, and perceived social support.

2. Constructing a Needs Profile

The identification of significant predictors and correlates of academic performance allows for the determination of factors that either facilitate or hinder academic performance.

These factors are then to become the focus areas to be included in the intervention plan. For the present study, the following three central needs were identified through studying the significant correlates and predictors of academic performance in the FGS group:

a) *Institutional Literacy*

b) *Psychoeducation and Skills Development.*

c) *Appropriate Referral Support*

2.1 Institutional Literacy

With "institutional literacy" is meant knowledge and understanding of processes, structures, policies, resources, and other information related to the particular tertiary institution. Acquiring institutional literacy is facilitative of adaptation and integration into the HE environment as well as the acquisition of social and cultural capital, which in turn are facilitative of academic performance. It is critical for efficient navigation of the transition to the HE context.

It has been discussed in various sections of the dissertation that FGS are at a disadvantage due to their lack of knowledge of tertiary institutions and processes. This is a consequence of the student's parents' lack of experience in the higher education environment and the resulting limitation in knowledge and guidance that can be provided to the student. Dissemination of the following information is suggested as critical to the student's ability to navigate the foreign and ultimately intimidating HE environment they are entering.

2.1.1 *Information Relating to University Processes, Policies, Structures, Administrative Processes, Administrative Services and Divisions, and Student Support Services*

This should form part of intervention programs relatively universally, as all FGS – given their parents' education – will likely have more limited knowledge of and guidance on university matters compared to their CGS peers. This is suggested even though in the present study generational status – and thus parental education – did not affect AP among FGS.

2.1.2 *Financial Aid and Work-Study Options.* Given this study's finding of higher financial stress among FGS, provision of information about financial aid options as well as work-study options offered by the university.

2.1.3 *Campus Activities, Extra-Curricular Activities, Networking Opportunities, Clubs, and Societies.* Provision of information on these activities is particularly important in its creation of opportunities for social integration, the building of peer networks, and social support.

2.2 Psychoeducation and Skills Development

2.2.1 *Information about First-Generation Status*

The intervention of psychoeducation related to first-generation status is aimed at destigmatizing, demarginalizing, and normalizing the first-generation identity and experience. This would simply represent a brief overview of what a first-generation means and how this has been found to affect their experiences in HE both in terms of their needs and

their strengths, and the significance of both for academic performance. This is for the purpose of normalizing what FGS in an intervention program might be experiencing without leaving them feeling "deficient" or "different". It has the potential of assisting students to make sense of and understand some of the things they may be experiencing in their transition to HE. Ideally, this should help the student to externalize possible negative experiences to their first-generation status rather than internalizing and attributing them to some or other "deficiency" or inadequacy within themselves. In terms of this, however, it is important to provide information from empirical data gathered on experiences from the FGS population specific to the institution in question.

2.2.2 *Interpersonal Communication Skills, Social Skills, Conflict Management Skills, and Assertiveness Training.*

Given lower perceived social support from family among FGS in the present study as well as significant correlations indicating that AP decreases in accordance with increases in social support, interventions can include a focus on interpersonal communication skills, conflict management, and assertiveness training. This is also applicable considering the finding that increases in family responsibility were significantly correlated with decreases in AP in the FGS group. These interventions could thus assist the student in expressing their needs in relation to the demands of their studies, their capacity to participate in family responsibilities, and explore possible renegotiations around these matters.

Psychoeducation and skills development to advance FGS' acquisition of social support and social capital in general, including social support from friends and a significant other are also relevant here. Applicable aspects of the intervention may include social skills, interpersonal communication skills, and conflict management. These interventions should ideally also serve to reduce social dysfunction, which is a statistically significant predictor of academic performance among the FGS in the study. Reducing social dysfunction is important

also as decreases in social dysfunction are associated with increases in self-efficacy and perceived social support.

2.2.3 Financial Planning and Management Skills and Stress Management Skills

Given this study's finding of higher financial stress among FGS as well as its predictive relationship to academic performance, the intervention aspects of stress management skills as well as the financial management and planning skills should be beneficial. The latter may develop basic budgeting skills and provide education related to limiting expenses and living "economically".

2.2.4 Time Management Skills

Effective time management is crucial to meeting academic demands as well as to mental well-being as it creates the potential for a more balanced life that allows times and spaces for self-care amidst a hectic schedule. The need for effective time management may become even more significant in situations where students might have competing responsibilities such as employment and family responsibilities.

2.3 Appropriate Referral Support

2.3.1 Academic Support

Students reporting academic difficulties should be provided with information about the on-campus academic support services. These include individual academic advising, academic skills workshops including time management and study skills training, and a writing centre that supports especially post-graduate students in their academic writing. Students may also be referred to one of the EED programs offered across several faculties.

2.3.2 Psychotherapeutic Support Services

Intervention program facilitators should endeavour to identify students in psychological distress and provide information of the on-campus therapeutic student support services. While the present study's FGS did not report higher levels of distress than the CGS,

psychological distress nonetheless occurs among any given group of students and has been significantly associated with decreased academic performance in this study.

2.3.3 On-campus Health Clinic

Should a participant experience physical health difficulties, they can be referred to the on-campus health clinic.

3. Constructing a Strengths Profile

3.1 Identifying Student Strengths

FGS strengths in the present study were identified in the following ways: (1) consultation of the empirical data to identify statistically significant correlates and predictors of AP; (2) consultation of the empirical data to identify statistically significant inter- and intra-factorial intrarelationships between significant correlates of AP; (3) consideration of knowledge and information available on South Africa as the extra-institutional context of the study and UWC as the institutional context of the study; (3) particular theoretical propositions that followed from the study's theoretical framework were employed in various ways to navigate towards the identification of FGS strengths in the context of this particular institution.

A core finding from this study was that the FGS sample displayed a much-reduced risk profile as compared to what has been found in numerous international studies. In Chapter 5 of the dissertation, we have identified that FGS displayed similar academic readiness, self-efficacy, psychological distress, social support from friends, and university AP compared to CGS. This suggests that there are resourcefulness and resiliency factors at play in this sample which, in terms of intervention programs, need to be identified, further developed, and capitalized on. Among potential sources of resilience were identified the institution-specific student enrolment profile as being relatively homogenous as well as FGS not representing a numerical minority. This potentially facilitates social integration, minimizes marginalization,

and reduces the saliency of FGS identity (which could potentially be a hinderance to a student's social integration and create experience of pressure related to studying). It was indeed discussed in Chapter 5 that SA FGS have been found in some studies to be resilient, resourceful, and able to acquire social and cultural capital through their campus peer network connections, belonging to and identifying with a university community, use of technology and other means of enhancing their own learning, etc.

The following strengths were identified or proposed as already existing among this study's FGS sample:

∇ Self-efficacy;

∇ Psychological resilience and resourcefulness;

∇ Higher social integration and belongingness due to non-minority status;

∇ Ability to form supportive peer relationships due to the above;

∇ Ability to acquire social capital due to the above;

∇ As evidenced by equal levels of Grade 12 academic performance, readiness for university and the potential needed to succeed academically;

∇ A slightly higher mean age among the FGS group compared to the CGS group was statistically significantly associated with:

$\Rightarrow$ Increased Self-Efficacy

$\Rightarrow$ Decreased Psychological Distress

$\Rightarrow$ Decreased Social Dysfunction

3.2 Analysing Student Strengths

Studying the significant inter- and intra-factorial relationships between significant correlates of academic performance may identify particularly significant facilitative factors among the institution's FGS. Studying the interrelationships indicates the potential of certain facilitative factors to exert an influence on academic performance not only in isolation, but

also in an additive or synergistic manner by means of the mutual reinforcement between the two factors. Conversely, studying interrelationships between barrier and facilitator correlations provides an indication of facilitators that may potentially serve to reduce the potential adverse impact of identified barriers on the academic performance of FGS. It should be stressed that these interrelationships do not suggest a causal effect on academic performance, but rather, they provide a "road map" from which the interventionist may prioritize focusing on particularly influential factors, guided by the notion that they may be facilitative of academic performance not only in isolation, but also synergistically.

The significant inter- and intra-factorial relationships between facilitators and barriers to academic performance across all the factorial dimensions in this study are presented in Appendices K and L.

Investigation of the interrelationships in this study identified self-efficacy and perceived social support (overall, family, and significant other perceived social support) as the most frequently observed facilitators not only in their promotion of academic performance, but also in their significant correlations to other facilitative factors as well as barriers to academic performance. Self-efficacy and perceived social support as two particularly important strengths would therefore be prioritized for reinforcement and maximization in this institution's FGS. The positive correlation between self-efficacy and social support suggests that the two factors increase and decrease in accordance with one another, and each are facilitative of academic performance in isolation as well. Self-efficacy further correlates negatively with social dysfunction as well as overall psychological distress, depression and anxiety, and loss of confidence, indicating that increases in self-efficacy may be associated with decreases in social dysfunction and psychological distress. Significant negative correlations suggest that increases in social support may be associated with decreases in financial stress, social dysfunction, and psychological distress.

An additional advantage of identifying these interrelationships is that a focus on the strengthening and reinforcement of the one factor, for example, social support, may potentially lead to a reinforcement of self-efficacy as well. Should there be limitations on the number of intervention strategies that are employable due to issues such as time, space, or other practicalities, the identification of significant relationships between facilitators and barriers to academic performance offer options around more "economic" intervention strategies. A focus on one identified factor may therefore contribute to strengthening (or limiting, in the case of barriers) another highly influential factor in tandem, without exclusively focusing intervention on both factors.

3.3 Maximizing Student Strengths

It is a conviction of the researcher that a focus on further developing and reinforcing existing strengths would provide far more effective intervention outcomes than attempts to reduce troubling experiences or behaviours that act as barriers to academic performance. This is suggested to be the case because (1a) reinforcing and maximizing an already existing strength would occur with less resistance and less time and thus provide both more "economic" and immediate outcomes; (2) experiencing a positive outcome in a more immediate manner would act on the reward pathway, produce reinforcement, and encourage further engagement with that aspect; (3) it is a function of evolution that living beings tend to choose a "path of least resistance" toward attaining a particular goal – this serves to conserve energy and provides for more efficient access to survival requirements such as food; (4) focusing on reducing a barrier does exactly that – it keeps one focused on the problematic issue which is not particularly pleasant or rewarding, especially if the issue is particularly stubborn in its resistance against change; (5) by focusing on the optimisation of already existing facilitative factors, the reduction of barriers to which they are correlated – to some extent or another – could potentially automatically happen in tandem.

With "strengths" is not meant solely those factors that measured as particularly high in the FGS group. Indeed, the FGS group did not score higher than the CGS group on any of the identified facilitative factors. But they also did not score higher than the CGS group on several identified barriers, which suggests, at least in comparison with findings in the literature, that FGS in this study scored higher *in relation or proportion to* the CGS group than is the case with many reviewed studies.

Reference to "strengths" includes those factors that were identified in Section 3.1 as potentially having a particularly potent effect on academic performance both in isolation as well as additively and synergistically by virtue of their significant correlation to one another as well as to academic performance.

When considering findings of this study from an integrated approach including studying the literature, the empirical data from this study, as well as the theoretical framework, there are however strong suggestions that FGS in this study do possess particular strengths, e.g., psychological resiliency and resourcefulness. The literature suggests numerous other factors in terms of personal characteristics, practices, and personal goals and aspirations that could contribute to academic success among FGS, however these factors were not measured in this study. Other strengths were identified in this study based on the likelihood that they would manifest by virtue of their connectedness to other factors such as those that function in the institutional factor dimension. Identified strengths that related either to the institutional or extra-institutional factor dimensions were thus identified through a combination of empirically and theoretically informed hypotheses that would appear to have a very reasonable probability of being valid. An example of the latter was the proposed capacity of FGS in the study to integrate socially, and to obtain social support and social capital. This would be a suggested effect of the institutional factor of non-minority status of

FGS within this particular institutional context that should eradicate or at least strongly reduce feelings of marginalization or "otherness".

Following integration of the strengths identified in Sections 3.1 and 3.2 above, the strengths were condensed to propose high priority focus areas for intervention. While this represents a condensed list, the reader might note that most of the more broadly described strengths in Section 3.1 are also represented by the factors mentioned below. In addition, the interventions proposed for each of the aspects that are mentioned below will necessarily also address and promote those strengths identified earlier in Section 3.1.

a) Self-Efficacy. Self-efficacy can be enhanced through numerous strategies included in the overall proposed intervention plan. Self-efficacy can be enhanced through the intervention relating to institutional literacy and just about any or all of the psycho-educational and skills development aspects. General self-efficacy is the belief in one's competence to cope with a broad range of stressful or challenging demands, whereas specific self-efficacy is constrained to a particular task at hand (Scholz & Schwarzer, 2005). Coping with stressful and challenging demands requires that one is capable of planning and controlling one's activities towards meeting demands and obligations. It is when there is a loss of control over one's dealings that feelings of overwhelm threaten to emerge. Development of skills such as time management and financial planning and management would enhance planning and provide a sense of being in control of one's obligations, task completions, and life in general.

b) Social Support and Integration. As demonstrated in an earlier section, social support is crucial to FGS as a function of its breadth and depth of influence not only on academic performance, on other barriers and facilitators of academic performance which may at times have an additive and increased facilitative effect on academic performance. It is however equally important to keep sight of the fact that social support and its interaction with

other facilitative factors are critical to student adjustment, integration, and mental well-being as well. As was the case with self-efficacy, social support too can be enhanced by several aspects included in the overall intervention plan. The intervention aspects that relate to the promotion of social integration and support were discussed in the earlier Section 2.2.2.

   c) Academic and Study Skills. Academic performance was added to the strengths list not because the FGS group scored particularly high on academic performance compared to the CGS group, but because, in comparison with the dominant literature, both equal Grade 12 and university academic performance are most often significantly lower among FGS compared to CGS. That means that comparatively, the FGS in this study do seem to proportionately have some measure of advantage when it comes to their academic readiness for HE, at least considered against FGS samples in the dominant literature. Whether it is considered as a strength in this sample or not, the real point is the aim of optimizing academic capability and performance as far as possible. It is after all what the study of FGS in the HE context centres around. The overall intervention plan includes reference to resources that aim to assist students with their academic performance. These include individual academic counselling, study skills workshops, a writing centre which assists especially post-graduate students with writing tasks. Academic support is also aimed to include contact between the student and lecturers or tutors. Communication with academic staff has been found to promote persistence toward degree completion (Nall, 2017; Reome, 2012; McCallen & Johnson, 2019), and Brewer (2011) highlights the importance of engagement with academic staff throughout a student's HE career. Even having only informal conversations with academic staff has been found to correlate positively with FGS' GPAs (Allard, 2019), and correlated positively with student learning and development (Soria & Stebleton, 2012). Academic performance will also be enhanced by increasing English proficiency. To this end, one of the referral resources that forms part of the intervention plan is the EED aimed at the

advancement of academic English literacy and offered across several faculties. The program was discussed in an earlier section of this chapter. Development of English proficiency may also contribute to increases in self-efficacy as the two variables are positively correlated.

Optimal academic performance and effective management of one's academic demands require planning, effective execution of the plan, and the consequent sense of control over one's study related obligations. The intervention plan's time management skills aspect can develop this ability.

Lastly, academic performance can be promoted by the practice of effective stress management skills, which is also offered as a skills development aspect of the overall intervention plan.

APPENDIX K

Statistically Significant Inter- and Intra-Factorial Inter-Relationships in relation to the Dispositional, Situational, and Epistemological Factor Dimensions

Table K.1

Statistically Significant Correlations between Epistemological and Dispositional Factors, Situational and Epistemological Factors, and Dispositional and Situational Factors.

Significant Correlations between Dispositional and Epistemological Factors			
DISPOSITIONAL BARRIERS	**DISPOSITIONAL FACILITATORS**	**EPISTEMOLOGICAL BARRIERS**	**EPISTEMOLOGICAL FACILITATORS**
–	Self-Efficacy	–	University Academic Performance
–	Self-Efficacy	–	English Proficiency
Loss of Confidence	–	–	University Academic Performance*
Depression & Anxiety	–	–	University Academic Performance
Overall Psychological Distress	–	–	University Academic Performance
Significant Correlations between Situational and Epistemological Factors			
SITUATIONAL BARRIERS	**SITUATIONAL FACILITATORS**	**EPISTEMOLOGICAL BARRIERS**	**EPISTEMOLOGICAL FACILITATORS**
Family Responsibility	–	–	English Proficiency
–	Family Social Support	–	University Academic Performance
–	Sign Other Support	–	University Academic Performance
–	Overall Social Support	–	University Academic Performance
Family Responsibility	–	–	University Academic Performance
Financial Stress	–	–	University Academic Performance
Social Dysfunction	–	–	University Academic Performance
Significant Correlations between Dispositional and Situational Factors			
DISPOSITIONAL BARRIERS	**DISPOSITIONAL FACILITATORS**	**SITUATIONAL BARRIERS**	**SITUATIONAL FACILITATORS**
Depression & Anxiety	–	Social Dysfunction	–
Loss of Confidence	–	Social Dysfunction	–
Overall Psychological Distress	–	Social Dysfunction	–
Depression & Anxiety	–	Financial Stress	–
Loss of Confidence	–	Financial Stress	–
Overall Psychological Distress	–	Financial Stress	–
–	Self-Efficacy	–	Sign Other Social Support
–	Self-Efficacy	–	Family Social Support
–	Self-Efficacy	–	Overall Social Support
–	Self-Efficacy	Social Dysfunction	–
Loss of Confidence	–	–	Sign Other Social Support
Depression & Anxiety	–	–	Sign Other Social Support
Overall Psychological Distress	–	–	Sign Other Social Support
Loss of Confidence	–	–	Family Social Support
Depression & Anxiety	–	–	Family Social Support
Overall Psychological Distress	–	–	Family Social Support
Loss of Confidence	–	–	Overall Social Support
Depression & Anxiety	–	–	Overall Social Support
Overall Psychological Distress	–	–	Overall Social Support

1. Grey shaded rows indicate negative correlations. White rows indicate positive correlations.
2. Each of the factors in the table was identified as a statistically significant barrier or facilitator of academic performance among the FGS in the sample.
3. The variable "English proficiency" can serve as either a barrier or facilitator as it correlates positively with university academic performance.
4. *University academic performance as a variable is not considered to be an epistemological *facilitator* as such, but rather the epistemological *outcome* – and thus nonetheless an epistemological factor - of the barriers and facilitators that exert an influence on it. University academic performance is included in the table for the purpose of illustrating the correlations between epistemological and other factors.

Table K.2

Statistically Significant Intra-Factorial Correlations in the Dispositional, Situational, and Epistemological Factor Dimensions.

Dispositional Intra-Factorial Correlations			
DISPOSITIONAL BARRIERS	**DISPOSITIONAL BARRIERS**	**DISPOSITIONAL FACILITATORS**	**DISPOSITIONAL FACILITATORS**
Loss of Confidence	Depression & Anxiety	–	–
Loss of Confidence	Overall Psychological Distress	–	–
Depression & Anxiety	Overall Psychological Distress	–	–
–	Depression & Anxiety	Self-Efficacy	–
–	Overall Psychological Distress	Self-Efficacy	–
–	Loss of Confidence	Self-Efficacy	–
Situational Intra-Factorial Correlations			
SITUATIONAL BARRIERS	**SITUATIONAL BARRIERS**	**SITUATIONAL FACILITATORS**	**SITUATIONAL FACILITATORS**
–	Family Responsibility	Sign Other Social Support	–
Financial Stress	Family Responsibility	–	–
Financial Stress	Social Dysfunction	–	–
–	–	Sign Other Social Support	Family Social Support
–	–	Sign Other Social Support	Overall Social Support
–	–	Family Social Support	Overall Social Support
–	Financial Stress	Sign Other Social Support	–
–	Financial Stress	Family Social Support	–
–	Financial Stress	Overall Social Support	–
–	Social Dysfunction	Sign Other Social Support	–
–	Social Dysfunction	Family Social Support	–
–	Social Dysfunction	Overall Social Support	–
Epistemological Intra-Factorial Correlations			
EPISTEMOLOGICAL BARRIERS	**EPISTEMOLOGICAL BARRIERS**	**EPISTEMOLOGICAL FACILITATORS**	**EPISTEMOLOGICAL FACILITATORS**
English Proficiency	Grade 12 Marks	–	–
English Proficiency	Uni Academic Performance*	–	–
Grade 12 Marks	Uni Academic Performance	–	–
Degree Course	Uni Academic Performance	–	–
–	–	English Proficiency	Grade 12 Marks
–	–	English Proficiency	Uni Academic Performance
–	–	Grade 12 Marks	Uni Academic Performance
–	–	Degree Course	Uni Academic Performance

1. Grey shaded rows indicate negative correlations. White rows indicate positive correlations.
2. Each of the factors in the table was identified as a statistically significant barrier or facilitator of academic performance among the FGS in the sample.
3. The variables "English proficiency" and "Grade 12" can serve as either barriers or facilitators as they correlate positively with university academic performance.
4. *University academic performance as a variable is not considered to be an epistemological *facilitator or barrier* as such, but rather the epistemological *outcome* – and thus nonetheless an epistemological factor - of the barriers and facilitators that exert an influence on it. University academic performance is included in the table for the purpose of illustrating how epistemological correlates contribute to academic performance.

Proposed Inter-Factorial Relationships between the Dispositional, Situational, Epistemological, Institutional, and Extra-Institutional Factor Dimensions.

Table L

Proposed Inter-Factorial Relationships between the Dispositional, Situational, Epistemological, Institutional, and Extra-Institutional Factor Dimensions.

Proposed Interactions between Extra-Institutional and Institutional Factors				
EXTRA-INSTITUTIONAL BARRIERS	*EXTRA-INSTITUTIONAL FACILITATORS*	*INSTITUTIONAL BARRIERS*	*INSTITUTIONAL FACILITATORS*	*ACADEMIC OUTCOME*
Socio-Political History of SA	–	Historically Disadvantaged Institution	–	Barrier
Socio-Political History of SA	–	Limitations in Capacity to Provide Institutional Resources	–	Barrier
Socio-Political History of SA	–	Historically Disadvantaged Student Population	–	Barrier
SES of SA	–	Limitations in Capacity to Provide Institutional Resources	–	Barrier
Student Protests **	–	Forced Move to Online Learning	–	Barrier
Student Protests	–	Limited Ability to Academically Support Students	–	Barrier
Covid-19 Pandemic	–	Forced Move to Online Learning	–	Barrier
Covid-19 Pandemic	–	Limited Ability to Academically Support Students	–	Barrier
–	Increased HE Access Mandates	–	Prioritization of Access and Equity	Facilitator
–	NSFAS	–	Promotion of Access and Equity	Facilitator
–	Increased HE Access Mandates	Prioritization of Student Success	Academic Support Services	Facilitator

** Kindly note that with the mention of student protests here it is specifically with reference to protests that turn violent, destructive, and intimidating, resulting in forced shutdowns of campus. Peaceful student protests therefore do not fall under this description as they do not disrupt and cause shutdowns of the campus. Also, student protests are categorized under "Extra-Institutional" factors even through the protests happen within the bounds of the institution. This is because the protests are driven by broader socio-political discourse and relate to demands made on government, which falls outside of the institution's control.

Proposed Interactions between Extra-Institutional and Epistemological Factors

EXTRA-INSTITUTIONAL BARRIERS	EXTRA-INSTITUTIONAL FACILITATORS	EPISTEMOLOGICAL BARRIERS	EPISTEMOLOGICAL FACILITATORS	ACADEMIC OUTCOME
Student Protests	–	Move to Online Mode of Learning	–	Barrier
Student Protests	–	Lack of Academic Support	–	Barrier
Student Protests	–	Limits Access to Learning Materials & Resources	–	Barrier
Covid-19 Pandemic	–	Move to Online Mode of Learning	–	Barrier
Covid-19 Pandemic	–	Lack of Academic Support	–	Barrier
Student Protests	–	Limits Access to Learning Materials & Resources	–	Barrier
–	NSFAS	–	–	Facilitator

Proposed Interactions between Institutional and Epistemological Factors

INSTITUTIONAL BARRIERS	INSTITUTIONAL FACILITATORS	EPISTEMOLOGICAL BARRIERS	EPISTEMOLOGICAL FACILITATORS	ACADEMIC OUTCOME
Historically Disadvantaged Institution	–	Limited Resources	–	Barrier
Student Population – Historical Disadvantage	–	Limited Resources	–	Barrier
–	Therapeutic Student Support Services	–	–	Facilitator
–	Foundational Courses	–	–	Facilitator
–	Academic Support	–	–	Facilitator

Proposed Interactions between Institutional and Situational Factors

INSTITUTIONAL BARRIERS	INSTITUTIONAL FACILITATORS	SITUATIONAL BARRIERS	SITUATIONAL FACILITATORS	ACADEMIC OUTCOME
Student Population – Historical Disadvantage	–	Financial Challenges	–	Barrier
Historically Disadvantaged Institution	–	Limited Resources	–	Barrier
–	Promotion of Access and Equity	–	Access to Higher Education.	Facilitator
–	Promotion of Access and Equity	–	Opportunity of Improved Social and Financial Circumstances and Career Options	Facilitator
–	Homogenous Student Population	–	Social Integration, Support, and Social Capital	Facilitator

Proposed Interactions between Institutional and Dispositional Factors

INSTITUTIONAL BARRIERS	INSTITUTIONAL FACILITATORS	DISPOSITIONAL BARRIERS	DISPOSITIONAL FACILITATORS	ACADEMIC OUTCOME
Student Population – Historical Disadvantage	–	Financial Stress	–	Barrier
Student Population – Historical Disadvantage	–	Stress and Pressure from Family Expectations	–	Barrier
Student Population – Historical Disadvantage	–	–	Motivation	Facilitator
–	Promotion of Access and Equity	–	Self-Efficacy	Facilitator
–	Therapeutic Student Support Services	–	Decreased Psychological Distress	Facilitator
–	Therapeutic Student Support Services	–	Increased Self-Efficacy	Facilitator
–	Academic support services	–	Increased Social Support	Facilitator
–	Academic support services	–	Decreased Psychological Distress	Facilitator