

Multi-dimensional student poverty at a South African university: a capabilities approach

By

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Declaration

I, Anesu Sam Ruswa declare the following:

- i. The Doctoral Degree research thesis that I herewith submit for the Doctoral Degree qualification: Philosophiae Doctor in Development Studies at the University of the Free State is my independent work, and I have not previously submitted it for a qualification at another institution of higher education.
- ii. I am aware that the copyright is vested in the University of the Free State.
- iii. All royalties as regards intellectual property that was developed during the course of and/or in connection with the study at the University of the Free State will accrue to the University of the Free State.

Signed:

Date: 23 November 2018

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Dedication

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Abstract

The thesis contributes to work in the conceptualisation and measurement of multidimensional student poverty in South Africa through exploring and measuring multidimensional student poverty at one South African university. Although a number of studies have examined student poverty in South Africa, very few have done so using a multidimensional theoretical approach backed by a socially just and reflexive methodology. The study weighed the merits of various approaches to multidimensional poverty and advocates for the human development approach, operationalised through the capabilities approach, as the most socially just theoretical lens through which student poverty can be conceptualised and measured. One of the main objectives of the study is to design a multidimensional student poverty index based on the understandings and experiences of students at a South African university. To that end, the study adopted and adapted the Alkire-Foster methodology, augmented with the Individual Deprivation Measure, thereby making a methodological contribution through the designing and implementation of a hybrid method. An exploratory sequential mixed methods inquiry was used in the data collection, data analysis and results theorisation phases of the research. Qualitative data was collected through iterative in-depth key informant interviews (three informants interviewed twice each) and four independent rounds of guided focus groups comprising thirty-two students (eight students in each of the three initial groups, and eight in the final follow-up focus group). Participatory methods were employed to determine dimensions of student poverty. Five broad dimensions and twenty-five indicators of student deprivations were identified from the data. The dimensions of deprivations identified are basic needs, learning resources, living arrangements, participation and psychological wellbeing. The qualitative data was analysed using Nvivo software and the results informed the design of the survey questionnaire, which was administered online and by means of hard copies at a South African university using Evasys, which is an electronic survey management platform. Two thousand three hundred and six (2306) students completed the survey. STATA, R, MS-VBA, and SPSS statistical software was used to analyse the quantitative data. Over and above the results showing the incidence and intensity of student poverty, an aggregate as well as sub-group decomposed multidimensional student poverty index and indices were presented. Multiple statistical and robustness tests were also carried out to test the validity of the index. The study shows that about 18% of the all students at the case study university are multidimensionally poor. More so, male students, students on the government-funded National Students Financial Aid Scheme (NSFAS), and off-campus students have the highest incidences of multidimensional poverty. The mixed methods and hybrid methodology advanced in this study offers more value

than purely qualitative or quantitative techniques as it captures both the depth and breadth of student poverty. Beyond making a contribution to how multidimensional student poverty can be measured, the study makes a significant contribution to how student poverty is conceptualised and understood in general, thereby giving policy makers a different frame through which to find normative solutions to the challenge of student poverty.

Chapter 1: Research Context

1.1 Setting the scene

The South African higher education landscape has shifted significantly since the advent of democracy in 1994 (Jansen, 1999; Chisholm, 2004; Bozalek & Zembylas, 2017). Strides have been made in transforming institutions to make them more inclusive to diverse student populations (Bentley, et al., 2006). Notable changes span from the redesigning of inclusive curricula (Mohamedbhai, 2014) to the altering of demographic compositions of the campuses by allowing students of all races to register at their institutions of choice (Badat, 2010). Whereas higher education used to be a privilege enjoyed by a few, largely homogenous and wealthy group of students pre-1994, the emergence of democracy facilitated the enrolment of a varied host of students who disrupted the status quo by introducing heterogeneity to a system. Post-democracy students brought with them a hoard of conundrums and complexities, part of which is the reality of poverty in higher education (Klasen, 2000).

Students in higher education come from a society which is vastly unequal and poor (Nwosu & Ndinda, 2018), and are in most cases poor themselves (Mayhew, et al., 2018). This introduces challenges within the higher education field regarding how to identify, assist and manage these poor students. As such, there is currently no agreed measure of student poverty in South Africa. I undertook this research project to understand the nature of the poverty that exists among and within students. The eventual aim of the study was to create a socially just measure or index, which could inform university management, the South African Department of Higher Education and Training (DHET), and other policy makers on the status, incidence and intensity of poverty among students.

1.2 Situating poverty within South African higher education

1.2.1 Global poverty: the case of Sustainable Development Goal 1

In 2015, the United Nations released the Sustainable Development Goals (SDGs) as a more globally focused and detailed successor of the Millennium Development Goals (Carter, et al., 2018, p. 514). The goals have informed the national development agenda in many countries including South Africa. 17 goals and 169 associated targets were set up (United Nations, 2016). In as much

as all the goals are relevant and important, my particular interest is in Sustainable Development Goal number one (SDG 1). SDG 1 is to end poverty in all its forms everywhere (*Ibid*). This particular goal has a universal appeal since poverty is an epidemic affecting many people all over the world. Foregrounding poverty in the SDGs, evidenced by making it the first goal, is testament to the centrality of poverty on the global agenda. The need to focus on poverty at a universal scale is further illustrated below:

While global poverty rates have been cut by more than half since 2000, one in ten people in developing regions are still living with their families on less than the international poverty line of US\$1.90 a day, and there are millions more who make little more than this daily amount. Significant progress has been made in many countries within Eastern and South-eastern Asia, but up to 42% of the population in Sub-Saharan Africa continues to live below the poverty line. (United Nations, 2016, p. 1)

Spotlighting poverty in the SDGs affirms that poverty is still one of the most urgent developmental crises in the world, calling for swift responses to reduce and eradicate it. The goal states that poverty is to be ended in all its forms everywhere, which suggests two things. Firstly, it suggests that poverty has numerous forms, implying that it is multidimensional in nature, and secondly, that it exists everywhere, even, by implication, among students. The United Nations (2016) puts forward that Sub-Saharan Africa has the highest poverty rates in the world inferring that there is a need for swift poverty interventions in the region.

1.2.2 Poverty in South Africa

Poverty is understood in multiple ways but one resonating conception is that poverty is an adverse and distinctly human characteristic that affects all humanity at different levels and in various degrees (Lotter, 2011). Wolff *et al.* (2015) argue that, beyond the reality of poverty being undesirable and deleterious, poverty also serves as an evaluative property of humanity, meaning that poverty can be used to proxy the wellbeing of a society. Slattery (2018) asserts that there is a direct correlation between a person's wellbeing and their poverty status and she further posits that poverty, understood as having a scarcity of resources, adversely affects one's health and lowers wellbeing.

We don't all need the same thing, though. In order to have and sustain well-being, it is necessary to make sure that people have what they need. This is equity. Having the needed resources to achieve well-being is noticed as lacking for people in poverty as compared to people who do not live in poverty, consequently leaving poor people less healthy and with compromised well-being because they have fewer resources (Slattery, 2018, p. 70)

South Africa is a typical example of this. Statistics show that absolute poverty is a lived reality for over half of the population in South Africa (Statistics SA, 2017). Statistics South Africa makes use of three poverty lines¹, which capture different degrees of poverty and allow the country to measure and monitor poverty at different levels² (Statistics SA, 2014). These are a food poverty line³, lower bound poverty lines (LBPL) and upper bound poverty lines (UBPL)⁴ which report that 25.2%, 40% and 55% of the population, respectively, live in poverty. According to the Poverty Trends in South Africa report of 2017⁵, 55% of the population (over 30 million people) were living in poverty in 2015 and most of them (64.2%) are black⁶ (Statistics SA, 2017). The report revealed that the incidence of poverty was highest among uneducated people where 79.2% of South African adults with no education lived in poverty, whereas only 35.6% of adults with only a matric qualification live in poverty. The figure was just 8.4% for adults with a higher education qualification (Statistics SA, 2017). This shows that education, especially higher education, is a powerful tool in combatting poverty. The relationship between conditions in higher education and poverty among students is a critical matter as it directly determines one's ability to succeed and break free from poverty like the 91.2% of all educated people who are not poor.

1.3 Intersection of poverty and higher education

The significance of higher education in alleviating poverty is categorical as is conveyed by Statistics SA (2017),

¹ Statistics South Africa measures absolute poverty as opposed to relative or subjective poverty

² <https://africacheck.org/factsheets/factsheet-south-africas-official-poverty-numbers/> last accessed 3 April 2018

³ Where the threshold is R531 per month per household which is about \$37 USD and 2100 calories per day per person

⁴ In 2017, the lower-bound poverty line was adjusted up to R758 per month and the UBPL to R1,138 per month per household

⁵ These are the most recent published poverty statistics at the time of writing this thesis.

⁶ 9 out of 10 of all black people are poor

There is an undeniable relationship between poverty and education. Studies have shown that the higher a person's qualification, the more likely they are to be employed and absorbed in the formal labour force, and therefore, are less susceptible to falling into poverty (Statistics SA, 2017, p. 61)

In as much as the value of higher education in reducing poverty after qualification is recorded, there is a dearth of poverty statistics within higher education. These statistics are more important at this time in the country's history (more so than ever before) since universities across the country now have the highest enrolments of black students (Matsolo, et al., 2018), who are shown in the statistics above to have a 90% chance of being poor or from a poor household (Statistics SA, 2017). The enrolment of formerly marginalised South African students into institutions of higher education has led to a transmission of general community struggles into institutions of higher education (Nwosu & Ndinda, 2018).

Literature bears record of datum that some communities still live in in abject poverty, so many years after democratisation (Aliber, 2003; Seekings & Nattrass, 2015; Jansen, et al., 2015). This is regardless of the fact there have been advances in reducing poverty in the country, as reported by the South African Human Rights Commission cited below:

In the two decades since South Africa's transition to democracy, the country has experienced considerable success in reducing poverty, both in money terms and in multi-dimensional forms of deprivation such as lack of access to important services such as water and sanitation... (SAHRC and UNICEF, 2014, p. 4)

Although broader societal poverty has been reduced by a number of policy interventions post-1994 (Rogan, 2015; Schotte, et al., 2017), the same cannot be ascertained with verity for poverty within higher education. The reason for this is that the full effect of these interventions and efforts on reducing student poverty in higher education, which is a microcosm of society as argued by Mayhew *et al.* (2018), is not fully known as very little research has been done on student poverty in South Africa.

1.4 Research problem

South Africa in general and higher education in particular is plagued by “profound inequalities” (Walker & McLean, 2013, p. 18). The impact of these inequalities hinders some students from either accessing or participating or succeeding in areas where others flourish (Wilson-Strydom, 2015; Lewin & Mawoyo, 2014; Letseka & Maile, 2008). Though efforts have been made to address inequalities in South Africa in general (David, et al., 2018), not much has been done to address inequalities within students in higher education. Consequentially, South African students took a red-letter stand against these inequalities through participating in nationwide protests from October 2015 to February 2016⁷ (Baragwanath, 2016). The protests started as remonstrations against colonial legacies, and apartheid statues and symbols in universities, and then quickly escalated to addressing issues of financial exclusion among students. The students were in a sense fighting to make the campuses more accessible to the previously marginalised as argued by Konik & Konik (2017), who advance that the protests were motivated by many other broader societal issues beyond those which were voiced. This is critical in understanding student needs beyond linear unidimensional terms (see Section 3.1.1, Classes of poverty measures) and in locating student poverty as an enactment of broader societal poverty.

As mentioned above, one of the most vocalised grievances during the protests was the need to address academic exclusion due to a lack of funding or financial poverty (Buttelli & Bruyns, 2017; Ndlovu, 2017). This was pronounced in a series of nationwide protests over study fees, termed #FeesMustFall (Luescher, et al., 2017). The students were initially protesting against tuition fee increments⁸ and later against paying tuition fees altogether (Motala, et al., 2018). While some students were demanding free education for the poor, the majority seemed to want free higher education for all (Langa, et al., 2016, p. 61). However, state funding for higher education has been declining in real terms (1.1% from 2000 to 2012) thus making free higher education for all non-affordable as argued by Langa *et al.* (2016)⁹.

⁷ <http://usascholarship.net/tag/south-africas-fees-must-fall-protests-are-about-more-than-tuition-costs> last accessed 23 July 2016

⁸ They managed to get the fees to be incremented by just 6% then by 0% and eventually the president announced that certain underprivileged students would not pay tuition fees at all see. <https://mg.co.za/article/2018-02-21-finally-how-government-plans-to-fund-free-education> last accessed 14 October 2018

⁹ The students won the battle and the government announced fee-free higher education for poor and working class students on 16.12.2017 see. <https://www.news24.com/SouthAfrica/News/zuma-announces-free-higher-education-for-poor-and-working-class-students-20171216> last accessed 1 June 2018

Interestingly, the protests over fees were predicated by nationwide student-led protests calling for the removal of colonial statues and symbols (e.g. #RhodesMustFall, #OpenStellenbosch and #ShutdownUFS) which the students argue perpetuate values of white supremacy and racial hegemony (Pillay, 2016). The interconnectedness of the fees debate and greater societal issues like racial hegemony as is the case in South African higher education suggests a link between financial poverty and other dimensions of deprivation (Pillay, 2016; Alkire, et al., 2015). The protests highlighted, among many other covert veracities, that there is a need to take a more nuanced look into student deprivations.

In addition, the protests underlined the plight of student poverty and engendered a lot of interest in the topic among policy makers and researchers like me (Council on Higher Education, 2016). Barr and Low (1988), Anderson *et al.* (1993), Levine & Nidiffer (1996), Thomas (2002), Breier (2010), and Goings & Ford (2018), among many others, have researched the causes and effects of poverty on students in different countries and contexts, but there has not been much work done to explore student poverty in South Africa. Although Walker *et al.* (2009), Spaul (2013), and van der Berg (2018) have looked at professional capabilities for poverty reduction, poverty and student inequalities, as well as education and poverty respectively in South Africa; more needs to be done to understand the full nature of student deprivations and poverty within the country. My study is a response to the scarcity of research into the status, incidence and intensity of student poverty in South African higher education. I aim to contribute conceptually and empirically to the body of literature on student poverty in South Africa. Beyond contributing to the knowledge, this study responds directly to the research questions discussed below.

1.5 Research Aim, Objectives and Questions

It is against this background (the research problem) that my study sought to examine the students' conceptualisation of poverty with the eventual aim of designing a multi-dimensional student poverty index based on student experiences and understanding at a South African (SA) university. I seek firstly to understand the nature of deprivations among students by exploring how students themselves experience and perceive student poverty. I do this by employing robust human-centred methodologies which foreground student voices within pragmatic and socially just research designs and paradigms (see Section 4.2). Beyond gaining insight into student conceptions of student poverty, I seek to identify dimensions and indicators of student poverty which I can then incorporate into a multidimensional student poverty index.

To achieve this aim, the following research questions were formulated and investigated:

1. How best can poverty be conceptualised, and measured in South African higher education?
2. Which contextual (economic, social, educational, etc.) factors shape and reflect multidimensional student poverty?
3. How can the above-mentioned contextual factors be incorporated in creating a South African based Multi-Dimensional Student Poverty Index (MSPI)?
4. How can this index help to understand and make recommendations to reduce poverty in higher education?

1.6 The rationale for the study

As earlier explained, poor students struggle to access, and flourish within, higher education. The immediate result of their struggle is traceable to the low retention and completion rates within higher education in South Africa (Mngomezulu, et al., 2017). Zewotir and North (2015) argue that students end up falling by the wayside either through voluntary drop-out or academic exclusion. Understanding the nature of student poverty will aid in reducing student poverty, and in turn, lower attrition rates.

Letseka & Maile (2008) posit that only 15% of a cohort of students in South African higher education graduate within three years¹⁰. Further statistics show that 52.1% graduate with their first degrees after an average of seven years and the remaining 47.9% never graduate (DHET, 2018). This is due to a number of reasons, one of them being very high dropout rates (Moodley & Singh, 2015). For instance, 24.5% of all first year students drop out after their first year, with the statistics much higher for marginalised groups like black students who have a first-year dropout rate of 32% (Murray, 2014). The extremely high higher education dropout rates are particularly worrying given that the students who make it to higher education institutions are only 12% of the cohort that entered Grade 1¹¹ (Grade One), meaning less than 3% of every Grade 1 cohort will graduate in record time. Paura & Arhipova (2014) identify the scarcity of resources, i.e. student poverty, as one of the causes of high dropout rates since various forms of deprivation have direct and adverse effects on the productivity of students.

¹⁰ This is now 14.4% as of October 2018

¹¹ Education Statistics from the South African Market website <https://www.southafricanmi.com/education-statistics.html> last accessed 14 October 2018

This research addressed this challenge by arguing for the formulation of a multidimensional perspective to student poverty through engaging critically with the voices and perceptions of the concerned students at a South African University, with the aim of designing a multidimensional student poverty index which will be used to identify poor students and give them the necessary support to lower dropout rates. That is, the study aims to identify and measure overt and covert manifestations of poverty within the student community which could directly or indirectly, be a hindrance to students being and doing what they have a reason to value (Badat, 2009). For many decades, the concept of poverty has been mostly identified with economic deprivation, that is, people are considered to be poor when they lack sufficient purchasing power (Akindola, 2009, p. 122) but that has led to many oversights. South African higher education literature bears record of studies which looked at student poverty through the lens of financial deprivation, such as work done by Letseka & Maile (2008), van der Berg (2008), Singh (2011), the Council on Higher Education (2016), and van Breda (2018). However, there is little information on how student poverty could be conceptualised apart from the financial perspective. I argue that this has to be re-evaluated because student poverty is multifaceted and too complex to be explored in a unidimensional way. The United Nations, giving a description of the poverty which is to be eradicated by 2030 by the Sustainable Development Goal 1, posits:

Poverty is more than the lack of income and resources to ensure a sustainable livelihood. Its manifestations include hunger and malnutrition, limited access to education and other basic services, social discrimination and exclusion as well as the lack of participation in decision-making. (United Nations, 2016, p. 1)

Many other studies have assumed comparable multidimensional approaches to measure poverty and created poverty indices in different places (Alkire, 2009; Wisner, et al., 2016) but there is no known or published index which captures the unique deprivations faced by South African students, especially in higher education. The most widely used poverty indices measure national poverty and neglect key dimensions which apply to students as they only focus on broad themes like health, education and living standards (Alkire, et al., 2015). Therefore, there is a need to create a measure adapted to the realities and expressed needs of students. Apart from broad poverty dimensions, the existing indices were developed focusing on the household as the unit of analysis but they scarcely pick up the nuances of the plight of individual students within and without households (Statistics

South Africa, 2014; Czerniewicz & Wiens, 2013). Therefore, there is a need for a student-centred index which makes the student both the unit of identification as well as the unit of analysis.

Furthermore, unveiling the nuanced nature of student poverty and helping students be and do what they have reason to value is critical, particularly in South Africa where a number of families pin their hopes of improving their financial fortunes and prospects of a better life on the university student (Schugurensky, 2010; Cloete & Maason, 2015). Understanding student poverty and recommending ways to alleviate it in a way contributes to broader societal wellbeing since the society will benefit from the instrumental public good outcomes of higher education. In as much as education has intrinsic value, the realities of most of the students in higher education demand that they maximise the instrumental value of education in order to better the economic conditions of their families and communities. That is, although higher education is widely viewed as both a private and public good (Castells, 1993), the material conditions in the country require that public good benefits of higher education be explored to a greater extent. Arguing about the role of higher education as a public good, Walker (2018) posits:

... To this end, I have set out three intersecting dimensions for higher education as a public good in South Africa: personhood self-formation knowledge, epistemic contribution, and a sufficiency of material resources, and have argued that unless all three are in place, claims to the public good on the part of higher education are somewhat hollow, and optimistic claims for the transformative power of higher education will be severely thinned out. (Walker, 2018, p. 567)

Walker (2018) sets out dimensions for higher education as a public good in South Africa. These dimensions are critical in the formation of public good professionals who can exit higher education institutions as change or transformation agents. The plurality of dimensions as suggested by Walker (2018) suggests that students can have deprivations in any one of those dimensions, further endorsing my argument that student poverty is multidimensional. As I shall expound throughout the thesis, beyond the conceptual contribution being made, I also make a methodological contribution to student poverty measurement. As alluded to above, there are few studies which appraise poverty measures within higher education in South Africa, be it at unidimensional or multidimensional levels (Noble, et al., 2006; Oyedemi, 2009), hence my study responds to that absence of empirically tested methods to measure and compare student poverty at various levels (van der Berg, 2008; Brock-Utne, 2007), by providing a theoretical and empirically sound measure.

1.7 Significance of the study

Study fees have been a topical issue in the media over the last few years due to the attention drawn by the student protests of 2015-2016¹². The media as well as government concur that student poverty and student funding are key areas, which need urgent attention¹³ from all public and private stakeholders¹⁴. In addition, the Department of Higher Education and Training (DHET) ratifies that it is working on a tight budget and does not have enough resources to assist all students financially, as cited below:

...there are inadequate financial resources to allow most school leavers, including Matriculants¹⁵, to successfully enter post school provision (DHET, 2012, p. 1)

The scarcity of resources entails that the few resources that are available should be managed efficiently, and all leakages and wasteful expenditures ought to be capped. For that reason, having a theoretically grounded robust student index will assist policy makers in allocating resources to those who are in need in a more efficient manner.

The government has injected significant resources into alleviating student poverty through a number of state-sponsored interventions (Council on Higher Education, 2016). One of the most common interventions is the National Students Financial Aid Scheme (NSFAS). NSFAS used to be a study loan offered to students from working class and poor families, but it was changed to a bursary in December 2017 with the announcement of free higher education¹⁶ for those who come from poor and working class households. The announcement came as a relief to students and the threshold for qualifying for NSFAS was adjusted to accommodate students who had been marginalised in the past. These were termed the 'missing middle'; meaning they were considered too rich for NSFAS but were too poor to qualify for any other loan. The previous threshold was a combined household income of R120000 per annum, which was adjusted in 2017 to a combined household income of R350 000 per annum. This was a positive step in alleviating student poverty and ensured that the

¹² See section 1.4 above

¹³ <https://ewn.co.za/2018/04/24/new-funding-policy-victory-for-fees-must-fall-activists> last accessed on 2 Sept 2018

¹⁴ See <https://www.brandsouthafrica.com/governance/services/education-services/south-african-student-loans-and-bursaries> last accessed on 8 October 2018

¹⁵ South African term for students in their final year of high school

¹⁶ Former President Jacob Zuma's government announced fee-free higher education for poor and working class students on 16.12.2017 see. <https://www.news24.com/SouthAfrica/News/zuma-announces-free-higher-education-for-poor-and-working-class-students-20171216> last accessed 1 June 2018

human rights of the students, as enshrined in Section 29 of the Bill of Rights, are respected (Department of Justice, 1997). According to the annual report presented by NSFAS (2017), 255 557 students were assisted by the scheme in the period 2016/2017 to the tune of R12.4 billion (close to one billion US dollars).

In as much as the scheme has assisted many students in realising their goals of obtaining a higher education qualification, reviews of the programme highlight extreme challenges in its conceptualisation of the 'poor and working class' students who are supposed to be the beneficiaries of the scheme (DHET, 2010). DHET South Africa cited among many others, the following challenge in the scheme, and offered the subsequent recommendation:

The challenge is thus to obtain a more accurate volume of financially disadvantaged students ... academically eligible yet financially disadvantaged students are doubly prejudiced: firstly, when trying to access well-resourced institutions, if the NSFAS allocation model awards funding based upon the institution rather than upon the student's financial disadvantage; secondly, when the funding obtained is only partial and does not cover the full costs of studying. In the current system, both of these factors are present. (DHET, 2010, p. 36)

The allocation formula to universities, which is based on each institution's self-determined Full Cost of Study (FCS) and the demographic profile of the student population, the so-called Disadvantaged Student Index (DSI) at an institution, should be replaced. (DHET, 2010, p. 128)

As reflected above, the current methods being used by NSFAS and other government organs to identify poor and deprived students are inadequate. There is also a conceptual fissure in the definition of poverty among students, which makes it very difficult to come up with accurate means tests. The NSFAS Ministerial Review of 2013 appraised that the means test they used was outdated and that there was a need for research into better ways of determining student means (DHET, 2013). I argue that giving student funding without addressing other dimensions of deprivation does not help much, as students will still fail to navigate the higher education terrain if other dimensions are not considered and catered for. This was true for previous NSFAS beneficiaries who failed to convert financial access into success, as the report records that historically, an average of only 19% of

students on NSFAS graduate in the shortest possible time, 33% take longer, while 48% drop out or do not complete their studies (DHET, 2013, p. 69).

Consequentially, my study potentially makes an additional contribution by challenging the conventional perception of student poverty in the South African higher education field and in providing new lenses, which may help to solve the problems faced by NSFAS and other policy makers in identifying poor students. Moreover, the methodological blueprint I propose to evaluate student poverty and deprivations in different contexts has the potential to assist policy makers at institutional and national levels in implementing more socially just solutions.

1.8 Overview of research design and methodology

While Chapter Four will elaborate more on the audit trail of where, from whom and what data was produced, and how it was analysed, a brief discussion is provided here in preparation for what will follow later in this thesis. In order to answer my research questions, I employed an exploratory sequential mixed methods research design. The qualitative phase consisted of interviews with key stakeholders, as well as guided focus groups with students. The qualitative phase generated indicators and dimensions of student poverty, which were then used to develop a survey questionnaire, administered at the university in the quantitative phase of the project. The results were then analysed and an index of student poverty was constructed thereafter.

The study was guided by the capabilities approach (see Chapter Two). In addition, I adopted a hybrid methodology for this study where one method was chosen for its focus on individual deprivations and for its ability to foreground participant voices, while the other was chosen for its proven record in satisfying most of the properties of a multidimensional measure as well as for its flexibility in subgroup decompositions. In-depth explanations are given in Chapter 4.

1.9 Structure of the thesis

This thesis is divided into two major parts. The first part focuses on the context, background, significance, rationale and theoretical basis of the study. It also attends to the literature review, conceptual framework, research questions, and methodology (Chapters 1 to 4). The second part delivers the empirical results of the study, reflects on the conclusions drawn from them, and

discusses the implications of the findings (Chapters 5 to 8). The contents of the respective chapters from here on is summarised below, in chronological order:

Chapter Two: Theorising and conceptualising student poverty

Chapter Two presents the different ways in which poverty is understood in literature. I provide a critique of conventional conceptualisation and argue for a human development approach to student poverty. I provide a rationale for selecting the human development conceptualisation operationalised in this study through the capabilities approach¹⁷. I conclude the chapter by reviewing how my chosen theoretical framework could be operationalised.

Chapter Three: Poverty measurement: The case of and for multidimensional poverty

In this chapter, classes of poverty measures are presented, and a case is made for multidimensional poverty measures, arguing that unidimensional poverty measures are not able to capture the nuances of student poverty. I also discuss the merits and technicalities of different multidimensional poverty measures and present a detailed exposition of common approaches used to measure multidimensional poverty. Moreover, the properties of multidimensional poverty measures were reviewed to inform the selection of a methodology. I conclude the chapter by arguing for a novel method of measuring student poverty.

Chapter 4: Research ‘Methods’ and research ‘methods’

This chapter outlines the rationale behind the research process and addresses how I have gone about gathering the data that was used to answer the research question. I begin the chapter by giving rationale for my research paradigm and by arguing for a differentiation between research Methods and research methods. In addition, I motivate for an exploratory sequential mixed methods design as opposed to pure qualitative or quantitative approaches. Thereafter, I present rationale for the case study selection and participant recruitment at all the different stages of the study. Finally, I provide a detailing of the data collection methods and analysis procedures. A discussion of ethical clearance precedes the summative discussion that draws the chapter (and Part 1 of this thesis) to an end.

¹⁷ I argue that the capabilities approach, as a normative evaluative framework with applications in many fields including welfare economics, is a rich theoretical lens with the potential of unveiling the nuances of student poverty. I adopt Amartya Sen’s definition of poverty and define poverty within the capabilities approach. That is, poverty is understood in this study as a deprivation in rudimentary capabilities. Further, I reviewed literature on how the capabilities approach could be operationalised.

Chapter 5: Student deprivations

This chapter answers the second research question, which is, “Which contextual (economic, social, educational, etc.) factors shape and reflect multidimensional student poverty?” Accordingly, findings from the qualitative phases of the research process are presented. Numerous emerging dimensions and indicators of student poverty are also given, and the processes used to validate and consolidate them are elucidated. In addition, the reports of all the participatory processes which were undertaken to rank and assign weights to indicators of student poverty are presented.

Chapter 6: Towards the multidimensional student poverty index - Quantitative results

In this chapter I present the findings from the quantitative research process. Specifically, I outline the statistical information of the participants and I proceed to present results from the Multidimensional Student Poverty Index I designed. A description of how the different indicators and dimensions contribute to the overall poverty scores is given. I also decompose the index according to various subgroups and observe how different demographic groups experience poverty.

Chapter 7: Beyond an index, a triangulation of findings

The objective of this chapter is to triangulate the findings from the different phases of the sequential exploratory mixed methods design and incorporate them into one student poverty narrative. I argue that by interrogating the quantitative findings against the qualitative findings, we are able to get a true sense of both the incidence and intensity of poverty among students. I also argue that the triangulation of my findings is further testament that there are many non-commensurable dimensions of student poverty which would be neglected if it is observed purely from a monetary perspective. The nuances unearthed, and themes discussed, based on direct student voices which were also corroborated with the quantitative findings, give credence to the research design.

Chapter 8: Reflections, recommendations and conclusion

Chapter 8, the final chapter, draws conclusions from, and reflects on the process that informed and shaped this thesis. It strings together the essence of the conclusions drawn from the various chapters comprising the study, paying special attention to how the research questions were answered. The theoretical and methodological contributions of the thesis are also summed up, and the main implications and limitations of the study are discussed. In addition, recommendations and possible directions for future research are proposed.

1.10 Researcher's positionality

The normative stance I take as a researcher emanates from my interest in the different experiences of deprivation among students and how these can be understood and reduced. My interest in student poverty stems from my days as a student leader serving on the Student Representative Council (SRC). As an SRC member, I was exposed to many challenges which students face and I always wondered why stakeholders were doing so little to address them. Most of the interventions I witnessed were smokescreen programs, which only made good reports for the intervenors, but did little to turn the prospects of the poor students. The support which poor students received was always either too little or misplaced, that is, the people helping these students were failing to address the core of the deprivations. Hence, working in student affairs roused my curiosity and led me to ask the questions which guided this research.

Further, as a science lecturer¹⁸, I have always wanted to explore the synergetic outcomes of interdisciplinary scholarship. I believe sustainable solutions to real world problems require an array of perspectives; hence I undertook this project to deepen my understanding of other fields and sharpen my multidisciplinary research skills.

1.11 Conclusion

The opening chapter of this thesis provided the background of the study through its articulation of the research problem, research aims, research questions, rationale and significance of the study. As a means of setting the scene, I provided rationale for all the questions being asked in this project. Moreover, I locate poverty on three levels within the chapter. The first is as a global problem articulated through Sustainable Development Goals. The second is at national level where I presented that more than half of all South Africans live in absolute poverty. Finally, I reviewed literature, which showed that there is a dearth of research on multidimensional student poverty in South Africa. I argue that my study fills in that gap by contributing to the pool of South African literature. The debates and discourses reviewed in this chapter show that there is a very high positive correlation between broader South African poverty and education status. Therefore, reducing student poverty will improve retention rates and concomitantly reduce national poverty. To that end,

¹⁸ Previously Statistics and currently Engineering Mathematics; and holding Actuarial and Mathematical Statistics degrees

I argue that my study makes both conceptual and empirical contributions to theory and practice alike. This motivation is significantly expanded in the next few chapters. The next chapter, Chapter Two, is a presentation of literature and the theoretical conceptualisation of student poverty.

Chapter 2: Theorising and conceptualising student poverty

2.1 Introduction

Poverty in general, and multidimensional poverty in particular, is defined and understood in various ways (Woolard & Leibbrandt, 1999). This chapter takes a closer look at some of the perspectives held in literature and provides a rationale for the argument that poverty is a complex phenomenon which by nature is multidimensional, multifaceted and corrosive (Wolff, et al., 2015). The study aims to design a multi-dimensional student poverty index based on student experiences and understanding at a South African university, asking various questions: how best can poverty be conceptualised and measured in South African higher education? Which contextual (economic, social, educational, etc.) factors shape and reflect multidimensional student poverty? How can the above-mentioned contextual factors be incorporated in creating a South African-based Multi-Dimensional Student Poverty index? How can this index help to understand and make recommendations to reduce poverty in higher education?

To answer the above questions, different possible ways through which poverty is understood are reviewed and discussed below, with the eventual task of determining a suitable theoretical framework for the study. Apart from context, the theoretical lens through which poverty is explored has a major effect on the type of conclusions one can reach. The theoretical perspectives discussed below relate mainly to general poverty as opposed to student poverty, but they are still applicable to student poverty (see Chapter Three). In other terms, student poverty is an offshoot of general poverty and can be understood, identified and evaluated using the same metrics and lenses used in exploring general poverty.

2.2 Theoretical approaches to poverty

Townsend (1979), who is one of the early theorists of poverty, advances the notion that poverty in any context exists when people are denied access to what is generally regarded as a reasonable standard and quality of life in that society. Therefore, the society under investigation is but an object and poverty remains a subject, regardless of the society. As such, the following discussions about general poverty hold true for student poverty.

2.2.1 Exploring poverty and wellbeing

The term poverty is a noun that describes a state of lack or deprivation or deficiency (Campbell, 2007, p. 73). It is a concept whose boundaries and entailments are disputed but there is no objection to the fact that the term describes an undesirable state (May, 1998). Fleurbaey (2007) argues that poverty is not only about having less in quantitative terms, but also involves a qualitative difference. The exact form of this qualitative difference has been a subject of debate by many researchers who have used different definitions and set various cut-offs in determining who is poor. Richard Hull (2007) argues that the poverty debate should be framed within deprivation discussions, as poverty is by most accounts a state of deprivation. This view of poverty as a deprivation is echoed by Amartya Sen (1999) who argues that poverty is a deprivation in freedoms that are fundamental in the realisation of wellbeing. More particularly, Sen argues that an individual is considered to be in poverty when he or she lacks a valued freedom (basic capability¹⁹) which he or she has reason to value (Sen, 1987). This understanding of poverty as the absence of wellbeing was further echoed by the World Bank:

To be poor is to be hungry, to lack shelter and clothing, to be sick and not cared for, to be illiterate and not schooled. But for poor people, living in poverty is more than this. Poor people are particularly vulnerable to adverse events outside their control. They are often treated badly by the institutions of state and society and excluded from voice and power in those institutions (World Bank, 2000, p. 6).

By deduction, poverty is ill-being or the absence of wellbeing. This understanding broadens the scope of poverty beyond mere monetary terms and allows a range of forms of deprivations to be analysed. Wolff *et al.* (2015) however, caution against the assumption that the absence of wellbeing is always evidence of poverty, and rather submit that in as much as one is not only poor in financial terms, finances play a pivotal role in the determination of poverty status. Wolff *et al.* (2015) pronounce the centrality of finances in poverty determination and acknowledge that the existence of numerous non-monetary deprivations which hinder wellbeing may be a result of financial poverty or may lead to financial poverty. This intricate nature of the relationship between wellbeing and financial poverty suggests that studies that look only at financial poverty provide an incomplete picture as poverty is a complex concept. Therefore, it is important when analysing poverty to look

¹⁹ See section 2.1.3

at all the dimensions of human life that suffer as a result of their inability to engage in typically human activities necessary for normal, decent human life as specified by their society (Lotter, 2011, p. 35). Martha Nussbaum echoes these words by arguing that wellbeing and poverty should have values of social justice at the core of their analyses and that political (or constitutional) action should be taken to improve societal social minimums (Nussbaum, 2000). Nussbaum further states that ‘falling under the threshold with respect to any capability is both tragic and unjust’ (Nussbaum, 2000, p. 74). Therefore, for Nussbaum (and Sen), the presence of poverty is evidence of injustice. This is a particularly important contrast, as will be expounded in section 4.2 of Chapter Four.

The articulation of minimum or threshold levels of resources beneath which one is considered poor is critical, regardless of the lens through which poverty is explored. This is an important debate and one that I will return to throughout the chapter. The following section summarises some of the other common lenses through which poverty is understood.

2.2.2 Understandings of poverty in welfare economics

The creation of a multidimensional student poverty index by definition compares welfare among students using economics principles and techniques. The study is therefore located in welfare economics theory. This section provides the contextual and historic background of the theory that informs how student poverty is conceptualised in this study.

Aristotle is regarded as the father of Welfare Economics. He viewed wellbeing as a by-product of one’s actions and not necessarily one’s belongings (Aristotle, 1994 [350 B.C.E.])²⁰. The Aristotelian view allows individuals to define for themselves what happiness and wellbeing means for them. Of happiness, Aristotle says:

Another belief which harmonizes with our account is that the happy man lives well and does well; for we have practically defined happiness as a sort of good life and good action. The characteristics that are looked for in happiness seem also, all of them, to belong to what we have defined happiness as being. For some identify happiness with virtue, some with practical wisdom, others with a kind of philosophic wisdom, others with these, or one of these, accompanied by pleasure or not without pleasure; while others include also external prosperity. (Aristotle, 1994 [350 B.C.E.], p. 34)

²⁰ This is a translation of his 350 BCE piece

Exploring poverty in terms of student well-being is potentially emancipatory since it promotes individual agency and allows individuals to define what a good life means to them without depending on the society to define it for them. This expansive way of looking at poverty was further echoed by Adam Smith (1759) who argued that poverty is about much more than physical deprivation:

Nature, when she formed man for society, endowed him with an original desire to please, and an original aversion to offend his brethren. She taught him to feel pleasure in their favourable, and pain in their unfavourable regard. The reason poverty causes pain is not just because it can leave people feeling hungry, cold and sick, but because it is associated with unfavourable regard. (Smith, 1759, p. 132)

Interestingly, human development researchers in recent years have gone back to this language in explaining what wellbeing means subjectively, whereby wellbeing is understood as human potentials or capabilities²¹ and achieved functionings (Wilson-Strydom & Walker, 2015). However, looking at student poverty through the classic Aristotelian lens is problematic because Aristotle, as a philosopher, focused on developing theories as opposed to enunciating practical methodologies for the operationalisation of those theories. Thus, there is no actionable articulation in his writings of how to perform interpersonal wellbeing comparisons.

Over time, the conceptualisation of wellbeing drifted slowly from the Aristotelian view and took many forms, with the most prominent being the emergence of Utilitarian philosophy. Jeremy Bentham is one of the most prominent pioneer proponents of Utilitarian theory. The theory defines utility as the net satisfaction one derives from any or all of the social determinants of interest (Bentham, 1787; 1970)²². The theory views wellbeing as the sum of utilities. Further, Bentham (1787) argues that utility is both egalitarian and individualistic, which means that all individual estimations of utility deserve equal treatment and respect in comparison with all others. This argument is however critiqued by Amartya Sen (2000) who argues that the utilitarian view of wellbeing is flawed and is simplistic in its conceptualisation, as individual wellbeing is also related to collective wellbeing. That is, individual wellbeing ought not to be pursued at the expense of collective wellbeing. Sen argues for a pluralistic approach to wellbeing, where wellbeing is viewed from both individual and

²¹ See forthcoming theoretical section

²² Republished in 1970

collective perspectives, and is achieved through democratic processes. Wellbeing, in essence, is composed of various non-commensurable elements as opposed to the Utilitarian understanding of a single measure (see above).

As such, Utilitarian theory has received criticism in the literature from many prominent scholars. John Rawls posited that an analysis of wellbeing should be on an individual level and that wellbeing is achieved when one possesses a set of ‘social primary goods’ (Rawls, 1971, p. 215). Rawls promotes the view that “each person has an equal right to a fully adequate scheme of equal basic liberties which is compatible with a similar scheme of liberties for all” (Sen, 1992, p. 75). Rawls proposes a basic goods approach that could be used to conceptualise student poverty since he argues that societal wellbeing is dependent on the wellbeing of the least advantaged member of the community (in this case, the student). The main limitation, however, is that Rawls only considers material conditions and does not explicitly address issues of freedom and how this freedom is related to wellbeing. Further, Rawls does not take account of the fact that different people are differently able to convert resources into capabilities, and capabilities into functionings (Sen, 1992).

Another approach that can be used to evaluate poverty is the human rights approach (Sen, 2005). This approach views poverty as a denial of a basic right (Wamala, 2010). Alkire (2010, p. 21) defines human rights as, “...the rights possessed by all persons, by virtue of their common humanity, to live a life of freedom and dignity. They give all people moral claims on the behaviour of individuals and on the design of social arrangements and are universal, inalienable and indivisible”. Wamala (2010, p. 312) argues that poverty and human rights have an intricate relationship since abuses of basic rights usually lead to poverty, and conversely, poverty usually leads to human rights infringements.

A common conceptualisation of poverty at present is done through the classical human capital theory as propagated by Theodore Schultz (1963). The theory has at its core the notion that poverty can be reduced, and development enhanced, by optimising human productivity through the systematic development and advancement of applicable knowledge, skills, education, and abilities (Becker, 1993). Human capital theory suggests that higher education should have a high rate of return on investment if it would be worth investing in (Blaug, 1976). Poverty is therefore viewed through this theory in terms of its economic aspects. This unidimensional perspective of the human capital theory makes it less ideal to use it in evaluating student poverty²³ (Sen, 1992).

²³ See chapter 3 for a full discussion on this

2.2.3 Human development approach

Human Development aims to expand people's freedoms – the worthwhile capabilities people value – and to empower people to engage actively in development processes, on a shared planet. And it seeks to do so in ways that appropriately advance equity, efficiency, sustainability and other key principles. (Alkire, 2010, p. 24)

An alternative theory to the above theories (see Section 2.2.) is the human development approach that views human beings as ends and means of development (Gasper, 2002; Yang, 2018; Murray, et al., 2007). The 1990 Human Development Report defined human development as “a process of enlarging people's choices. The most critical ones are to lead a long and healthy life, to be educated and to enjoy a decent standard of living. Additional choices include political freedom, guaranteed human rights and self-respect – what Adam Smith called the ability to mix with others without being ‘ashamed to appear in public’ (Alkire, 2010, p. 4). This definition has since been refined, particularly in the 2009 Human Development Report, which defined human development as the expansion of people's freedoms to live their lives as they choose (Alkire, 2010).

The above definitions directly link the theory to the work of renowned economist Amartya Sen (1979) who is recognised as the architect of the capabilities approach. The capabilities approach was designed as an alternative economic welfare theory with the primary focus on poverty measurement and achieving social justice. The approach has at its core ideals of expanding people's freedoms to live lives that they have reason to value. Researchers like Martha Nussbaum, in her philosophical work and in collaborations with Amartya Sen, have given impetus to the approach and established it as a viable normative evaluative framework (Nussbaum, 1988; Sen & Nussbaum, 1993). Nussbaum lauds the approach as critical in the creation of a theory of social justice and in the measurement of social welfare (Nussbaum, 2011).

The approach has been successfully operationalised in different fields, with the most significant being its pivotal role in international wellbeing analysis. One of the foremost advocates of the human development approach, Mahbub ul Haq, worked to realise a people-centred approach to poverty alleviation being used in global policy (UNDP, 1990). This was through the incorporation of the

capabilities approach in the creation of the Human Development Index (HDI)²⁴ and the annual Human Development Reports (HDRs) of the United Nations Development Programme (UNDP). The index considers multidimensional poverty aspects in inter-national development comparisons. This and other applications of the capabilities approach (which is discussed in detail in Chapter 3) have led to the capabilities approach being hailed as impressive in its use in poverty analysis (Fukuda-Parr, 2003). The approach's main attraction is its shift from monetary approaches in order to create a multidimensional and realistically nuanced picture of poverty (Surgden, 1993). Streeten (2000) echoes Alkire's views that the capabilities approach paints a rich picture of poverty analysis because it incorporates the positive aspects of the utilitarian and basic needs approach to give considerable reach and depth to how poverty is understood (Alkire, 2005, p. 123). This is also highlighted by Sen (1999) who argues that the capabilities approach, which underpins the human development approach, offers solutions to some of the shortcomings of other poverty policy frameworks. The capabilities approach is potent in poverty studies as it infuses principles of social justice in poverty analysis and measurement (Sen, 1985). Further, it has proven itself invaluable in people-centred poverty assessments, as evidenced by the Human Development Index (Haq, 1999; Wisser, et al., 2016).

The approach draws, in a way, on the strengths of the other two main approaches (human rights and human capital approaches) in that human rights can be framed as freedoms and human capital could be viewed as a capability or functioning (see Section 2.5). That is, human rights could be viewed as fundamental freedoms (Alkire, 2010). This argument is supported by Streeten (2000) and further echoed by Robeyns (2006), who argues that in as much as these approaches may seem to be disjointed, the capabilities, human rights and human capital theories have smoother seams than other scholars suggest. Robeyns (2006) posits that the three approaches can complement each other instead of antagonising one another. Given the above arguments, I adopt the capabilities approach as the theoretical framework guiding this research. The approach has been commended in literature, as showed above, for placing individuals at the centre and for promoting wellbeing, therefore it is a fitting lens to use to answer my research questions. The following section provides a detailed description of the framework.

²⁴ The main challenge with the human development approach especially on a global level is that the HDI seems to have missing dimensions. This limitation is caused by the practicality and difficulty of selecting dimensions that are measurable and for which there is data available internationally. For instance, sometimes a rise in the Gross Domestic Product does not translate to an improvement in lived experiences in that particular country (Haq, 1999).

2.3 Operationalizing the capabilities approach

2.3.1 Theoretical Framework

As mentioned earlier, the capabilities approach (CA) is a normative evaluative framework advanced by Sen (1976). Central to the capabilities approach are concepts of capabilities and functionings. Sen (1979) conceptualises capabilities as the achievable freedoms one has at one’s disposal and goes on to define functionings as the ‘doings’ and ‘beings’ that one has reason to value. Functionings are the realisations of valued capabilities. Using the capabilities approach, student poverty is viewed as the deprivation of one or more rudimentary capabilities (Sen, 1999, p. 87). These capabilities are the essential things students need to achieve minimum function in the university context (Banerjee, et al., 2006) and live lives they have reason to value (Laderchi, et al., 2003).

The CA is viewed in neo-economics or mainstream economics as an alternative economic welfare theory (Krishnakumar, 2007). In the diagram below, Wells (2012) illustrates how the capabilities concepts relate to traditional Welfare Economics principles.

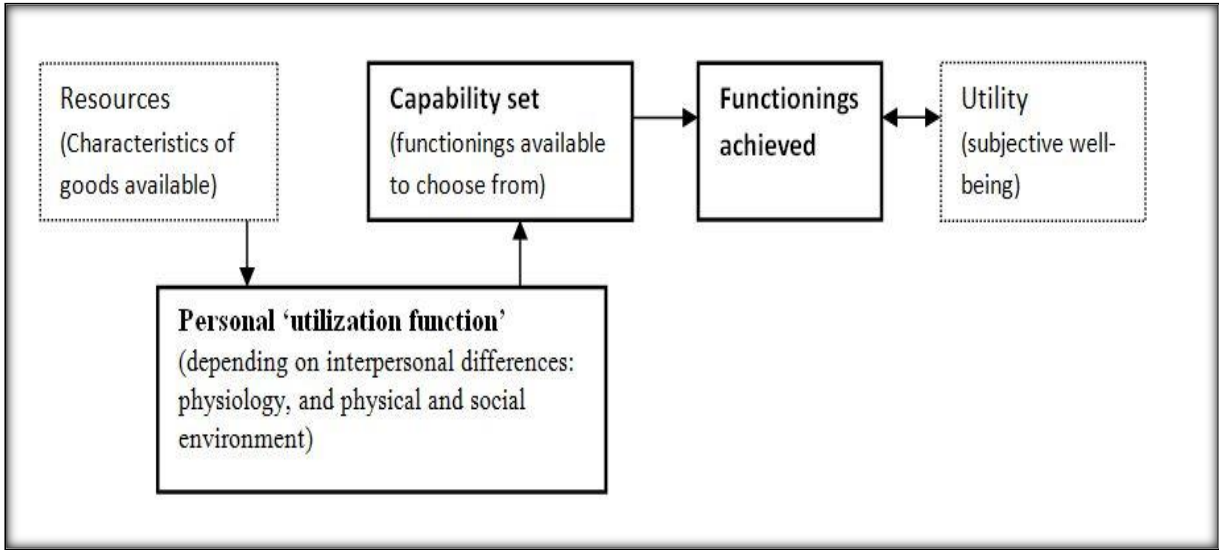


Figure 2.1 : Utilitarian concepts vs. capabilities approach core concepts, adapted from Wells (2012)

Figure 2.1 shows that the operationalisation of the capabilities approach starts with the creation of a capability set, which is influenced by the available resources and various conversion factors. These factors are referred to in economics as the personal ‘utilisation function’. In capability approach language, they are referred to as conversion factors. Conversion factors are the social, environmental, economic and individual conditions that facilitate the conversion of an individual’s capabilities into

functionings, or the factors that allow one to create a set of capabilities. Conversion factors are rather useful in higher education as they provide an account of individual differences and how these differences might contribute to poverty or deprivation (Robeyns, 2003a; Robeyns, 2005). Another concept which is very important in the CA is the notion of agency and how it, together with the various conversion factors, work together in enabling students to convert capabilities into desired functionings. The role of agency and choice in higher education is fundamental in understanding the structures which create and sustain student poverty (Robb, 2000; Wagle, 2002) as will be discussed in Chapter 7.

Moreover, the distinctions in the core ideas of the capabilities approach are important, especially in the measurement of student poverty where it is imperative that they are known, as highlighted below:

- i) The resources that students have or lack and the threshold levels of these resources;
- ii) The freedoms or real potentials students have to achieve their various valued outcomes (capabilities);
- iii) The actual valued outcomes that students get to realise (functionings)
- iv) The factors which hinder or facilitate the conversion of capabilities into functions or resources into capability sets (conversion factors).

To illustrate the above concepts, I shall make use of an example of a student from a rural background who has been offered a scholarship to study the program of his choice at a prestigious university. The opportunity to study can be seen as the resource at hand. The desired functioning could be obtaining a qualification at the end of his academic journey, which will bring him satisfaction or utility when he achieves it. In order for him to pass, he needs to have freedoms, which facilitate the realisation of his goal as well as the aptitude for the program he is doing; these sum up his capability set. The various environmental, social, personal and economic factors, which allow him to convert his capabilities into functionings are the conversion factors. These could be conducive study halls, a conducive teaching and learning environment, accessible libraries, reliable internet, a stable political environment, bearable climate, and so forth. The driving force for the student to study hard or work on his schoolwork is an expression of his individual agency, that is, the ability of one to act to achieve one's valued ends (including choices, decision making, determination, aspiration, etc.). In essence, the capabilities approach advocates for the expansion of an individual's agency and freedom in choosing what they value while acting within enabling conditions to achieve their valued functionings. Achieved functionings are not only a valued end in and of themselves, but they also

create a fertile environment for the creation of other capabilities which can be converted to specific functionings through specific interactions of agency and conversion factors.

Since student poverty is viewed as deprivation in one or more capabilities, failure to achieve a particular desired functioning could be seen as an incidence of student poverty. The intensity of student poverty is reflected in the amount and extent of un-achieved desired functionings. The operationalisation of the capabilities approach as summarised in the theoretical framework diagram above and described in the following sections shows how all the core ideas of the capabilities approach interact and help in the understanding and measurement of student poverty.

2.3.2 Operationalising the capability approach in student poverty measurement

Robeyns (2018) posits that the capabilities approach is an interdisciplinary approach with potential applications in diverse areas and explicit relevance in numerous fields of study. Nevertheless, the approach has not been used as broadly as it should due to a number of factors. Chief among these factors is the fact that the approach poses a number of practical challenges in its operationalisation (Krishnakumar, 2007, p. 43). Chiappero-Martinetti (2000, pp. 207-239) highlights some of the challenges and recommended guidelines which are to be observed in the empirical applications of the approach. She identifies key areas of application when operationalising the capabilities approach for an empirical study. These will be described briefly below.

2.3.2.1 Adequate evaluative space: Capability Sets

As mentioned earlier, the capabilities approach is a normative evaluative framework with a range of empirical applications (Comim, et al., 2008; Anand, et al., 2008). Most of the quantitative empirical applications of the approach have been in the fields of economics, health and econometrics, championed by researchers like Sabina Alkire, Flavio Comim, Mozaffar Qizilbash, Paul Anand and Enrica Chiappero-Martinetti, Krishnakumar, Maria Laura di Tommaso among others (Alkire, 2005; Comim, 2001; Qizilbash, 1996; Anand, et al., 2005; Chiappero-Martinetti, 2000; Krishnakumar, 2007; Andreassen & Di Tommaso, 2018). One common feature in all these studies is the measurement of sets of capabilities as opposed to individual capabilities, which in essence takes account of multidimensionality.

Sen advanced the capabilities approach in the welfare economics space in his 1985 monograph where he suggests an empirical approach to welfare economics, different from conventional methods at the time (Sen, 1985). His approach was a deviation from the widely used utilitarian and human capital theory perspectives (Schokkaert & Van Ootegem, 1990; Roemer, 1998). One of Sen's main contributions at this point was identifying well-being as a collection of states which one has a reason to value. Another significant feature of the capabilities approach, which Sen also emphasised in the 1985 monograph, is that it focuses on the individual as an entity of interest, which allows for a deeper understanding of what individual students have reason to value, and thus takes account of the heterogeneity of people. The individual focus of the capabilities set thus adds a new dimension of vantage over other welfare theories (Anand, et al., 2005).

2.3.2.2 Lists of (essential, relevant) capabilities or functionings

Robeyns (2003a) argues that after defining the capability space in which measurement will take place, it is imperative in empirical studies to articulate how the capabilities set will be created or understood. The articulation of how capability sets are created is particularly important in this study as dimensions of student poverty are identified using a similar rationale.

The two main ways to generate a list of valuable capabilities are through deliberative democratic processes and the use of pre-determined lists of valuable or relevant capabilities. Sen argues against having predetermined lists of valued capabilities (Sen, 1999). He posits that valued capabilities should be decided upon through democratic processes. Sen argues that the biggest advantage of democratic deliberation is that individuals and/or societies are afforded an opportunity to exercise their own agency in deciding what they have reason to value. In a sense, deliberative democracy empowers and gives a sense of autonomy to those involved (Sen, 1999). What is not clear to me in Sen's notion of democratic deliberation is an articulation of how this can be achieved²⁵. Sen argues that the task of weighing various capabilities should be left to the ethical and political considerations of each society based on public reasoning. This perspective has been viewed as idealistic and incomplete, in that the process of deliberative democracy is a political one, which needs layouts of definite political methodologies in order to achieve it (Niemeyer, 2004). The scarcity of such methodologies within the capabilities approach and precisely in Sen's writing leaves the concept of democratic deliberation intrinsically invaluable but instrumentally complicated to operationalise.

²⁵ I address this challenge in the methodology section and propose a solution

Other factors that plague democratic deliberation processes include the role of power and voice (Goodin & Niemeyer, 2003). Different people treasure different things and thus their valuable states of 'being' are different. The different values are not always reflected through a process of deliberative democracy, since groups have different power epicentres and individual voices do not have equal weights (Niemeyer, 2004). Another concept which makes democratic deliberation difficult is the issue of adaptive preference, that is, filtering genuine capabilities from those adaptively preferred. Human beings by nature make choices based on what they know and what they are exposed to. Pierre Bourdieu calls this aspect of humanity 'Habitus' which is defined as, "the way society becomes deposited in persons in the form of lasting dispositions, or trained capacities and structured propensities to think, feel and act in determinant ways, which then guide them" (Wacquant, 2005, p. 316). Literature is somewhat silent on how the effect of habitus, or 'adaptive preferences' as Martha Nussbaum puts it, can be empirically captured (Nussbaum, 2011). The process of democratic deliberation, especially in ascertaining student views of poverty, should thus be done in a rigorous and reflexive manner, taking into account the challenges presented above.

The respect for individual voice in the capabilities approach is one of the strengths of the CA (Robeyns, 2005). Therefore, any methodology which is founded within the approach should foreground that. Nussbaum (2000), who advocates for the use of a predetermined list, posits that her list of central or core capabilities, which she created through an academically/philosophically rigorous exercise, captures universally valued capabilities in constitutional processes. Researchers like Wolff and de-Shalit (2007) have empirically validated Nussbaum's list, showing that the list is not just a normative construct but a viable tool with invaluable applications in policy formation and other critical sectors of community (Wolff & de-Shalit, 2007). However, Sen neither endorses nor disregards this list, which has since been endorsed by various researchers who found that there is a high degree of convergence between their lists and Nussbaum's list (Sen, 2005). Alkire (2002) and other researchers have compared and contrasted Nussbaum's list with over 39 other lists of capabilities and have found a strong convergence in the valued capabilities identified. Thus, as Qizilbash (1996) claims, Nussbaum's account is in general, a high-level account of capabilities that public policy must address. Nussbaum's list, though impressive in its expansiveness and widely accepted as a comprehensive guide for selecting relevant capabilities, has however been met with a number of criticisms (including those mentioned above) from Sen, who refuses to endorse Nussbaum's fixed and universal list, arguing that capabilities are forever changing and cannot be encapsulated in a generic list (Robeyns, 2003a).

The apparent advantages of using predetermined lists of capabilities are that it becomes easier to perform interpersonal capability comparisons and one does not have to worry about issues of weights and aggregation since these are usually incorporated in the creation of the capability lists (Robeyns, 2003a). A weakness of using pre-set lists, however, is that capabilities are by definition not static, but dynamic. Thus, one capability list which applies to group A and time X may not be applicable to the same group at time Y. Moreover, since capabilities are influenced by various conversion factors and agency capacitors, a list designed for group A may not necessarily be applicable to group B. Martha Nussbaum responds to this challenge by arguing that her list is by no means exhaustive but provides constitutional guidelines (Nussbaum, 2000). Robeyns (2003, p. 64) advocates against sticking to a predetermined list of capabilities and contends that any list of capabilities should be tested to see if all the items on it are useful in the specific context in relation to the overall judgement and/or goal. She explicitly suggests that different lists should be adopted for different contexts. The study is situated in the higher education context where researchers like Walker (2006), Wilson-Strydom (2012), Ruswa (2014), Calitz (2016), Wilson-Strydom (2016), and Ongera (2016) have developed specialised lists of valued student capabilities to answer specific research objectives. Melanie Walker concurs with Robeyns by saying:

There is a valid case for a list, but this should be for specific purposes, or evaluation or critique. It should not be fixed or canonical, it should not be hierarchically ordered, and it should in some way include participation and dialogue. (Walker, 2006, p. 49)

The qualification which Walker (2006) gives allows the augmentation of existing lists with new capabilities which may come from various processes like democratic deliberation or primary research and other literatures, something which is critical in informing the methodology of this study. The creation of a multi-dimensional student poverty index has the identification of various dimensions of poverty and capabilities at its core, therefore an exhaustive methodology will be used to determine valued dimensions. The various concepts of the capabilities approach described in this section are going to be applied, critiqued and referred to in the rest of the thesis.

2.4 Implications for higher education in South Africa

Although the capabilities approach in particular, and human development in general, have not been explicitly advocated for by policy makers in South African higher education, their sentiments have been expressed numerous times. The former South African minister of Higher Education and

Training, Blade Nzimande, in a stakeholder summit on higher education, emphasised the ministry's commitment to capacitate institutions of higher learning to produce highly-skilled graduates who are also aware of their social responsibilities as citizens (Nzimande, 2010). The call for graduates with more than just technical attributes locates the vision of the department of higher education within the field of human development (Walker & Unterhalter, 2007). Human development theory (see Section 0) generally, and the capability approach in particular, represent a departure from human capital theory which commodifies students or graduates and places value on them based on how much of their skills, knowledge and abilities can be traded or are translatable into explicit economic value; with little regard for their overall wellbeing. The traditional propagation of human capital theory in higher education limited the agency of individuals as they are forced to do that which is deemed economically valuable and not necessarily that which they themselves value (Lanzi, 2007). Lanzi (2007) captures this dilemma aptly by describing the treatment of people as mere economic units as social injustice. In as much as human capital theory has proved itself as effective in creating economic growth, it is found wanting in addressing issues of happiness, freedom, agency and general wellbeing which are key pillars of human functioning and flourishing. Deneulin et al. (2006) advance the argument for a more human development centred approach by lauding the capabilities approach as the most apt approach or normative framework that can transform unjust capitalistic structures into more humane ones.

2.5 Conclusion

There are a number of ways through which poverty can be conceptualised and understood. The discussions above gave the rationale for selecting the human development conceptualisation, operationalised in this study through the capabilities approach. That is, poverty is understood in this study as a deprivation in rudimentary capabilities; while acknowledging that not all deprivations would constitute poverty. In other words, in as much as poverty is not just in financial terms, but it is deprivation in key capabilities, finances do play a vital role in determining student poverty and should be considered in multidimensional poverty measurement (Wolff, et al., 2015). Finally, the capabilities approach was discussed and key debates relating to it were explored. However, student poverty has been reported in literature to be complex and multi-layered. The next chapter (Chapter Three) outlines a discussion on the different ways through which student poverty can be measured.

Chapter 3: Poverty measurement: The case of and for multidimensional poverty

3.1 Introduction

It was established in the previous chapters that poverty is something we ought to be concerned about and that the lens through which poverty is explored determines the conclusions that can be reached. As such, a human-centred capabilities approach was chosen as a theoretical lens through which poverty can be investigated. The choice of the lens affects the type of poverty measures that can be used and sets boundaries on how poverty is and can be measured. This is echoed by Sakiko Fukuda-Parr (2003) who argues that the conceptualisation of poverty influences the measure that is used to assess it. To that end, this chapter outlines a review of literature from scholars who have used different methods to measure poverty, taking into account the compatibility of the reviewed methods with the CA and the particularity of student poverty.

3.2 Towards multidimensional poverty measures

3.2.1 Classes of poverty measures

There are a number of approaches that can be employed to measure poverty. A number of factors that will be explored in the chapter guided the choice of a method. Poverty measurement has two basic steps, the identification step and the aggregation step (Alkire & Foster, 2009). Aggregation will be described within specific methodologies (see section 3.3). Identification of the poor is done in three broad classes or clusters. Sabina Alkire (2009, p. 6) summarised the three main categories as:

1. *Unidimensional approaches*: This is when the multiple indicators of well-being are combined into a single aggregate variable and a poverty cut-off is set on this aggregate variable. A person is identified as poor when his or her achievements fall below this cut-off level. The unidimensional method of identification takes into account dimensional deprivations, but only insofar as they affect the aggregate indicator. There is minimal scope for valuing deprivations in many dimensions independently of one another, something that is viewed as an essential characteristic of a multidimensional approach.

2. *Union approaches*: These regard someone who is deprived in *any* single dimension as multidimensionally poor. It is commonly used, but as the number of dimensions increases, it may be overly inclusive and may lead to exaggerated estimates of poverty.
3. *Intersection method*: This requires someone to be deprived in *all* dimensions in order to be identified as poor. Often considered too restrictive, this method generally produces untenably low estimates of poverty. (Alkire, 2009)

Unidimensional measures are most commonly used to measure and evaluate poverty (Curtis, 2017). They usually have one monetary threshold against which poverty is assessed (Suppa, 2016). The intersection and union methods are used in a number of multidimensional poverty measurement approaches. Some of these approaches as found in literature are the fuzzy set approach (Chiappero-Martinetti, 2000), Alkire-Foster methodology (Alkire, et al., 2015), information theory approach (Dagsvik, 2012), Individual Deprivation Measure (Wiser, et al., 2016), distance function approach, as well as many other axiomatic approaches (Deutsch & Silber, 2005). All the above approaches have their own applications, strengths, and purposes. A description of some of the methods, which have been used in related multidimensional poverty studies, is given in the sections below, together with rationale for the normative decisions I took in choosing the measurement approaches I employed in this study.

3.2.2 A case for multidimensionality

The most common and conventional understanding of poverty views poverty through an income lens where a person is poor if he or she falls below a particular financial threshold or lacks the financial capacity to enjoy a particular consumption level (Wagle, 2002). This understanding of poverty has been criticised for its simplicity and overt inability to recognise that there are various non-income based dimensions of poverty that directly affect people's well-being and quality of life (Akindola, 2009). Robb (2000) writing in an International Monetary Fund publication argued that if well-being and quality of life are to be considered, then vulnerability, physical and social isolation, insecurity, lack of self-respect, lack of access to information, distrust of state institutions and powerlessness can be as important to the poor as low income. Furthermore, Brock (1999) argues that the poor in most countries identify poverty as multidimensional or at least as more than just monetary deprivation. The World Bank in a study titled, "Voices of the Poor: Crying out for Change" confirms that poor people refer to ill-being and wellbeing as multidimensional concepts (Narayan,

et al., 2000). This further supports that poverty is not unidimensional, that is, economic deprivation is not the only form of deprivation that can impoverish human lives (Sen, 1999).

Part of my argument throughout the thesis is that student poverty is multidimensional, composed of numerous non-commensurable indicators which can be encapsulated into a headline index. Scholars who argue for multidimensionality of poverty measures posit that poverty is both nuanced and complex, therefore robust methods need to be weighed when choosing the best measurement approach (Alkire & Santos, 2010). Akindola (2009) affirms that student poverty is multifaceted and cannot be reduced purely to a lack of purchasing power. Table 3.1 below shows how money or income-only based approaches to poverty may make two fundamental errors in the measurement of poverty in general and student poverty in particular (Alkire, 2009).

Table 3.1: Money based vs. Multidimensional approaches to poverty analysis

| | | Non-monetary | |
|-----------------|-----------------|---------------------------|--------------------------|
| | | <u>Not Poor</u> | <u>Poor</u> |
| Monetary | <u>Not Poor</u> | Not poor at all | <i>Error of Omission</i> |
| | <u>Poor</u> | <i>Error of inclusion</i> | Absolutely poor |

Adapted from (Alkire, et al., 2015)

When applying the above money/income-based poverty analysis to university students, the first error is the error of inclusion. This is where students who fall below a certain financial threshold are regarded as poor, whereas they are actually not poor when other aspects or dimensions of their well-being are also considered. For instance, rural students attending a rural university near their home may value and possess family, health, and food security and they may regard themselves as not poor if they have these aspects of wellbeing even if their income or monetary resources are lower than those of other students. If an income-only based approach is used, such students may be erroneously written off as poor. The second is the error of omission. In this scenario, a student may be financially better off but lack other aspects or dimensions which they need to lead a life they have reason to value. For instance, a student may come from a family with an income above the defined level of poverty, but have to pay for expensive travel for long distances to and from university, which then affects his quality of life and well-being. Alternatively, the student may be one of five children who need educational funding in a family who are only just above the household threshold for being considered poor. This student would be erroneously regarded not poor if poverty is viewed purely through an income-based approach. Table 3.1 shows the flaws in unidimensional poverty measures and supports the case for a multidimensional approach to measuring student poverty. As argued

here, income-based approaches do not reflect the full picture of poverty in general, and student poverty in particular, therefore a multidimensional approach is expedient in studying student poverty (Alkire & Santos, 2010; Hamilton & Daughtry, 2017).

Student poverty can take different forms ranging from undesirable economic fortunes to the inability to pass modules well due to a range of contextual factors. This complexity of student poverty is further confounded and compounded if poverty is measured using conventional metrics of absolute poverty that gauge poverty against rigid scales (Mabughi & Selim, 2006). This is because most of the existing absolute poverty scales are unidimensional. Townsend's (1979) view of relative poverty where one is poor if one falls below a socially (or culturally) agreed and accepted threshold also falls short of explaining multidimensional poverty. The weakness of relative poverty is that individual expression may be hindered, and individual voice and uniqueness stifled, since the societally accepted threshold may not reflect individual aspiration. In a similar vein, Brian Barry (2005) writes:

I do not deny that poverty, defined as lack of basic necessities, is a great evil ... I want to insist, however, that the whole idea of a standard of poverty unrelated to the incomes of others is nonsense... Becoming relatively worse off can make you absolutely worse off in terms of opportunity and social standing (Barry, 2005, pp. 172-173)

Barry (2005) draws attention to the shortcomings or challenges experienced when poverty is determined in relative terms and makes a case against a unidimensional poverty measure, arguing that "Becoming relatively worse off can make you absolutely worse off in terms of opportunity and social standing" (*ibid*, p.173). The position advanced by Barry is critical in understanding how students experience and perceive poverty. Some may feel impoverished simply because they are relatively poorer than others are, a kind of poverty which Barry argues is also legitimate. Conceptions of poverty by students vary, they can be relative or subjective, real or imagined (Lotter, 2011), and it is important for a multidimensional measure to acknowledge and unearth this. A student may feel poor because he or she fails to keep up with the fashion trends that his or her friends may be following whereas another may feel as if they are not deprived because of adaptive preferences^{26, 27} when they are genuinely deprived (Khader, 2011). Careful consideration should be taken to ensure

²⁶ Adaptive preferences refer to situations where the preferences of individuals in deprived circumstances are formed in response to their restricted options

²⁷ Nussbaum (2001) argues that preference welfarism, the doctrine that a person's good consists of the satisfaction of her informed desires, fails to explain our intuitions in cases of "adaptive preference," where the preferences of individuals in deprived circumstances are formed in response to their restricted options

that student voices and opinions on their state of being level up to acceptable societal standards. To do this, scholars advise that poverty measures should be constructed in rigorous, consultative, and reflexive ways (Webster & Engberg-Pedersen, 2002). The following section delineates examples of studies that have focused on multidimensional poverty in South Africa.

3.2.3 Multidimensional poverty measurement in South Africa

In as much as there are hardly any published studies²⁸ that have looked particularly into multidimensional student poverty in South Africa, there has been a lot of work done to measure multidimensional poverty in other contexts, as shown below. Table 3.2 below presents some of the multidimensional poverty measurement studies that have been carried out in South Africa together with the approaches employed and the context in which the studies were conducted.

Table 3.2: Studies on multidimensional poverty in South Africa

| Author / Reference | Approach | Context/theme |
|---------------------------------|--|--|
| Fransman & Yu (2018) | Alkire Foster Methodology | Multidimensional poverty in South Africa in 2001-2016. |
| Mushongera <i>et al.</i> (2017) | Alkire Foster methodology | A Multidimensional Poverty Index for Gauteng Province, South Africa: Evidence from Quality of Life Survey Data |
| Frame <i>et al.</i> (2016) | Alkire Foster Methodology | National Youth SA Multidimensional Poverty Index (MPI) based on ward data |
| Statistics South Africa (2014) | Alkire Foster Methodology | The South African MPI: Creating a multidimensional poverty index using census data |
| Noble <i>et al.</i> (2006) | Provincial indices of multiple deprivation | SA Provincial data |
| Woolard and Klasen (2005) | Shorrocks rigidity index, Gini index | Income Mobility and Household Poverty Dynamics in South Africa |
| Naidoo <i>et al.</i> (2005) | Totally Fuzzy and Relative Approach | Comparison of Totally Fuzzy and Relative Approach in SA |
| Bhorat <i>et al.</i> (2004) | Asset and service deprivation | Dimensions of Poverty in Post-Apartheid South Africa |

²⁸ To my knowledge or in the public domain at the time of writing this thesis (see Chapter 1 section 1.7).

| Author / Reference | Approach | Context/theme |
|----------------------------------|---|---|
| Van der Walt (2004) | Totally Fuzzy and Relative Approach | A Multidimensional Analysis of Poverty in the Eastern Cape Province, SA |
| Qizilbash (2004) | Borda score, Human poverty index | On the Arbitrariness and Robustness of Multi-Dimensional Poverty Rankings |
| Keller (2004) | Heckprobit analysis | Household formation, Poverty and Unemployment: The case of rural households in South Africa |
| May <i>et al.</i> (2004) | Micawber threshold, Asset index | Kwa-Zulu Natal Province Income Dynamics study (KIDS) 1993 – 1998 |
| Ngwane <i>et al.</i> (2003) | CHAID Analysis | Poverty in South Africa – A Statistical Analysis |
| UNDP (2003) | Service deprivation index | UN regular report |
| Oosthuizen and Nieuwoud (2002) | Foster-Greer-Thorbecke (FGT) poverty measures | A Poverty Profile of the Western Cape Province of South Africa |
| Ngwane <i>et al.</i> (2001) | Head count index, Watts measure | Poverty in South Africa in 1995 – A Totally Fuzzy and Relative Approach |
| McIntyre <i>et al.</i> (2000) | General index of deprivation using principal component analysis | Geographic patterns of deprivation and health inequities in South Africa: Informing public resource allocation strategies |
| Hirschowitz <i>et al.</i> (2000) | Household infrastructure index using factor analysis | Key Baseline Statistics for Poverty: Measurement, Measuring Poverty in South Africa |
| Klasen (2000) | Composite deprivation index | Measuring Poverty and deprivation in South Africa |
| Leibbrandt and Woolard (1999) | Foster-Greer-Thorbecke (FGT) poverty measures | Comparison of Poverty in South Africa's Nine Provinces |
| Klasen (1997) | Income based analysis | Poverty, Inequality and Deprivation in South Africa: An Analysis of the 1993 SALDRU Survey |

Table 3.2 above shows that numerous multidimensional approaches have been employed in poverty measurement in South Africa. There has, however, been a steady rise of studies that are adopting the Alkire-Foster methodology. The studies above show that general poverty in South Africa is multidimensional, implying that even student poverty, which is a microcosm of the broader society, should also be multidimensional. The national Multidimensional Poverty Index (MPI) was

constructed by the national statistical agency, Statistics South Africa, which shows that even the government is committed to addressing poverty from a multidimensional perspective. This further validates my decision to explore student poverty from a multidimensional perspective. Another favourite or common approach as seen above is the Fuzzy approach. A detailed discussion of these methods will be discussed in the subsequent section.

3.3 Multidimensional poverty measures

As shown above, numerous multidimensional poverty measures can be considered for this study. The strength of a poverty measure is gauged by how well it satisfies the properties listed and explained in section 3.3 below. This section examines in detail three approaches which seem most relevant to this study, given their proven potency in literature, my research aim and their adaptability to the higher education environment.

3.3.1 The Individual Deprivation measure²⁹

The Individual Deprivation Measure (IDM) was developed by researchers from different contexts and was first published by Wiser *et al.* (2014). The measure was designed as a response to the shortfalls of existing Multidimensional poverty measures. For instance, the global Multi-dimensional poverty index uses the Alkire-Foster Methodology that has the household as a unit of analysis and assumes everyone in the household is equally deprived (Alkire, et al., 2015). This is not always the case; usually individuals within households are heterogeneous and not uniformly deprived (Chant, 2005). The individual deprivation measure responds to this challenge by providing a methodology that disaggregates households and locates the deprived individual within a household (Bessell, 2015). The IDM has a strong focus on gender sensitivity; so the ability of the measure to locate deprivation within households enables more nuanced explorations of gender-related deprivations than other multidimensional poverty measures (Wiser, et al., 2016). The IDM also deliberately took note of power relations in collecting the data and the researchers ensured that female voices came through, as opposed to other surveys, which tend to be completed just by the most powerful individuals in the households, who happen to be men most of the time (Wiser, et al., 2016). This purposeful focus of a poverty measure on one biographical aspect like gender is another potent aspect of the IDM.

²⁹ I operationalised partially as the full methodology is due for release in 2020. See <https://iwda.org.au/the-individual-deprivation-measure/>

Further to this, the IDM places a large emphasis on the importance of individual voice and it allows those affected to define what constitutes poverty for them and give input into how it should be measured. For the IDM, the dimensions of poverty were developed, prioritised and defined in a multi-phase process done by eighteen communities in six countries and across continents (Angola, Fiji, Indonesia, Malawi, Mozambique and the Philippines) (Wiser, et al., 2014). Data was collected in extensive ways and the result is primary data, which gives the developed poverty dimensions relevance, applicability and presents a rich picture of the poverty status of the target society. Data collection was in two main phases. The first phase comprised in-depth interviews and participatory projects in all the countries involved. In the second phase, the same research teams returned to the same sites across all six countries involved in the first phase and conducted individual surveys with participants. There were roughly 100 participants per site, 300 per country, and 1800 across the six countries (Wiser, et al., 2016).

Noteworthy is that the IDM includes 15 dimensions of poverty: food, water, shelter, health care, education, energy/cooking fuel, sanitation, family relationships, clothing/personal care, violence, family planning, the environment, voice in the community, time-use, respect and freedom at work (Wiser, et al., 2014). Weights are assigned to each dimension based on the views expressed by the participants through participatory processes, that is, the participants agree upon the weights. This is a departure from other multidimensional measures which most often have the researcher assign the weights, or which make use of arbitrary weights (Wagle, 2002; Lemmi & Betti, 2006). The degree of deprivation is then calculated for each person in each dimension on a uniform Likert scale ranging from scale 1 to 5 (1 represents very great deprivation, 5 no deprivation) (Koch, 2016). The weights are not just assigned to the dimensions; in order to model reality as far as possible, they are also assigned according to the severity of deprivations. Severe deprivations consequently carry a higher weight than minimal deprivation (thus illustrating depth of poverty) (Wiser, et al., 2014; Wiser, et al., 2016).

The poverty measure is given on a scale that is standardised from 1 to 100, where 100 represents a person not experiencing any deprivations. The consensus from the developers of the approach is that all persons who achieve a result below 60 are considered poor (Wiser, et al., 2014; Wiser, et al., 2016). The IDM ensures that finances remain central by having a simple asset index, which is used to approximate the financial status of a household (Bessell, 2015). The results from the asset index

or financial status of each household are juxtaposed on an adjacent axis representing the social dimensions, thereby providing a clearer understanding of the household's poverty status.

In as much as the IDM is ground-breaking in its consideration for the voices of the poor and in creating an accurate picture of local needs, it has been argued to fall short on a number of fronts. One is that it is extremely expensive to implement since it makes use of extensive surveys and there is little evidence that inter-community or international comparisons can be made (Koch, 2016). Further, the approach is still under development, so very few definitive conclusions can be reached about how it satisfies the general properties of multidimensional poverty measures³⁰. The appeal of the measure for this study is that student voices can be captured and reflected in the index and in the assigning of weights. The challenges posed by the measure can be offset to a degree by using the measure in conjunction with another measure. The next measure, which is used extensively in multidimensional poverty measurement, is the fuzzy set approach.

3.3.2 Fuzzy approach to multidimensional poverty

The Fuzzy set theory has been used extensively in multidimensional poverty measurement as evidenced in literature (Lemmi & Betti, 2006; Chiappero Martinetti, 2006). This is because fuzzy sets replace harsh binaries (poor or not poor) with a soft threshold that depicts an intermediate, gradual representation between acceptable and unacceptable living conditions, or adequate and inadequate levels of well-being, without establishing a single abrupt cutoff line (Chiappero Martinetti, 2006). Fuzzy sets were first introduced by Zadeh (1965) with many applications in the fields of Economics, Mathematics, and Statistics. They were introduced to poverty measurement by Cerioli and Zani (1990) and later expanded by many researchers like Cheli (1995), Chiappero Martinetti (2000) and Cheli and Lemmi (1995). Fuzzy sets were traditionally viewed as a class with a continuum of grades of membership (Zadeh, 1965, p. 339). Whereas traditional poverty measures have absolute poles, (poor and non-poor), fuzzy sets allow individuals to partially belong to any one of the poles, as long as they fall between the minimum and maximum values. Cheli and Lemmi (1995) provide reference for the membership function using two broad definitions, one for a 'Totally Fuzzy Approach' and the second for 'Relative Fuzzy Approaches'. The Totally Fuzzy Approach takes an entire series of variables that are supposed to measure a particular aspect of poverty into account, whereas the Relatively Fuzzy Approach only takes specific variables into account.

³⁰ These properties are outlined in the last section of this chapter

In general, the degree of membership to a particular fuzzy subset is given by the membership function. Given that X is allowed to be a set, and that x is an element of X . A , a fuzzy subset of X , is defined as: $A = \{x, \mu_A(x)\}$ for all $x \in X$. The mapping of X is $\mu_A(x)$ bound between $[0, 1]$. This indicates the extent of membership of x to A . Thus $\mu_A(x)$ is the membership function to the extent that should $\mu_A(x) = 0$, x does not belong to the fuzzy subset of A . If $\mu_A(x) = 1$ then x in its entirety is a member of A . Should $0 < \mu_A(x) < 1$, then x only partly belongs to A . As $\mu_A(x)$ nears 1, the degree of membership with respect to A increases (Cheli & Lemmi, 1995).

Using the above notations, let X represent a set of k poverty dimensions. And Let $X = \{X_1, X_2, X_3, \dots, X_k\}$ in a population of n individuals or households. The membership function of the i^{th} individual in dimension X_j can be represented by $\delta(x_{ij})$. If there are m categories of deprivation within a particular dimension X_j , these categories can be arranged in order of the risk of poverty, meaning $x_j^{(1)}$ would reflect the lowest risk of poverty and the maximum risk would be reflected by $x_j^{(m)}$. Thus $X_j = \{x_j^{(1)}, x_j^{(2)}, \dots, x_j^{(m)}\}$ and $x_j^{(1)} < x_j^{(2)} < \dots < x_j^{(m)}$ with respect to risk of poverty, given that $F(x_j^{(\lambda)})$ is the cumulative distributive function of $x_j^{(\lambda)}$. In light of the above; the definition offered by Cheli and Lemmi (1995, p. 122) is summarised as:

$$\delta_{x_{ij}} = \{\delta^0(x_j^{\lambda-1}) + \frac{F(x_j^{(\lambda)}) - F(x_j^{(\lambda-1)})}{1 - F(x_j^{(1)})}\} \text{ if } x_{ij} = x_j^{(\lambda)} \quad \dots \quad (3.1)$$

Where: $x_{ij} = x_j^{(\lambda)}$, $\lambda = 2, \dots, m$

This definition was an improvement on the one suggested by Cerioli and Zani (1990). The modification addresses the challenges of horizontal and vertical vagueness of poverty. The functional form is non-linear as opposed to Cerioli and Zani's linear membership functional form. The composite poverty index value can be calculated as follows:

$$\delta_p(x_i) = \sum_{j=1}^k w_j \delta(x_{ij}) \quad \forall i = 1, 2, \dots, n \quad \dots \quad (3.2)$$

Where w_j represents the weight of X_j and $\sum_{j=1}^k 1$

The index is a weighted sum of an individual's estimated degree of membership with respect to deprivation dimensions. Using the weighting system of Cerioli and Zani (1990), the weight of each

dimension is the inverse function of the number of individuals deprived in a dimension with respect to the reference population. The function is summarised as follows:

$w_j = \log\left(\frac{1}{\bar{\delta}(x_j)}\right)$, where $\bar{\delta}(x_j) = \frac{1}{n} \sum_{i=1}^n \delta(x_{ij})$, with $\bar{\delta}(x_j)$ which represents the mean deprivation occurring in a particular dimension, X_j . The index as mentioned is bound between 0 and 1, where 1 is absolute deprivation.

Fuzzy set theory often satisfies the following properties³¹: poverty focus, normalisation, monotonicity, transfer principle, symmetry, continuity, ‘increasingness’ in membership function, scale invariance, decomposability, replication invariance (Lemmi & Betti, 2006, p. 63). In as much as the Fuzzy set theory has all the above strengths, it also has a few weaknesses, for instance, depending on the type of membership function used, fuzzy set measures may not satisfy other properties usually considered key, like the focus, weak transfer, and, in some cases, subgroup decomposability (Costa & De Angelis, 2008). Alkire *et al.* (2015) posit that the other challenge with the fuzzy set approach relates to the grounds on which membership functions are selected and justified, and how robust results are to the selection of a particular membership function. That is, there is often little justification given for the normative decisions made as well as far as choosing cut-off points and the type of robustness tests carried out (Chowdhury & Dutta, 2016). The other challenge is that fuzzy set approaches assumes equidistance between points and therefore use ordinal data as cardinal data (Dewilde, 2004). The above challenges are considered in the selection of a measuring tool for this study.

3.3.3 Alkire Foster methodology

The Alkire Foster (AF) measure has a mathematical structure of a family of multidimensional poverty measures proposed by Alkire and Foster (2007; 2009). Alkire and Foster (2009) created the mathematical family of measures that yields a multidimensional poverty index for a particular selection of poverty dimensions, indicators and weights (Alkire & Santos, 2010). The following discussions will outline how this is done using the AF methodology. The index obtained using this methodology is termed the adjusted headcount ratio³² M_0 . The M_0 is most appropriate to use when the data (one or more of the dimensions) is not continuous, that is in the event of categorical/ordinal data. The discussion below illustrates the mathematical composition of M_0 .

³¹ A detailed description of these properties is given in the last section of this chapter

³² The proportion of deprivations that poor people in a society experience, as a share of the deprivations that would be experienced if all persons were poor and deprived in all dimensions of poverty. It is the product of two intuitive partial indices, the Incidence and Intensity of Poverty ($H \times A$).

M_0 measures poverty in d dimensions across a population of n individuals (Alkire & Santos, 2010). If $y = [y_{ij}]$ denote the $n \times d$ matrix of achievements for i persons across j dimensions. An achievement entry of $y_{ij} \geq 0$ represents person i 's achievement in dimensions j . A person's achievement in various dimensions can be represented by the row vector $y_i = (y_{i1}, y_{i2}, \dots, y_{id})$. The column vector $y_{.j} = (y_{1j}, y_{2j}, \dots, y_{nj})$ represents the the distribution of a particular dimension j across all individuals under consideration. In other words, this is just a matrix representation of individuals' scores in all the chosen dimensions. Dimensions are weighted differently and individually when calculating the M_0 . The MPI uses nested weights where w_j denotes the weight assigned to dimension j and w denotes the overall weights vector. The sum of the weights should be equal to the number of dimensions $\sum_{j=1}^d w_j = d$.

The AF method uses a two-tier approach in identifying who is poor in the population (Alkire & Foster, 2007). The first step is to identify all the individuals who are deprived in any dimension. Let $z_j > 0$ be the deprivation cut-off (poverty line) in a multidimensional poverty dimension j and let vector z represent all the deprivation cut-off for each dimension. For instance, a dimension could be transportation and the cut-off could be that a person is deprived in the dimension if they walk more than a certain number of kilometres a day to get to work. A deprivation matrix can then be constructed, where $g^0 = [g_{ij}^0]$ given that each entry g_{ij}^0 is defined by $g_{ij}^0 = w_j$ when $y_{ij} < z_j$, and $g_{ij}^0 = 0$ when $y_{ij} \geq z_j$. This means that the matrix entry for an individual i who is deprived in dimension j will be equal to zero if the person is not multidimensionally poor at the chosen cut-off and equal to the weight w_j if the person is deprived in that dimension j .

The next step is to construct a column vector c of deprivations in the matrix g^0 . An i^{th} entry in vector c represents the sum of the weighted deprivations suffered by person i , that is $c_i = \sum_{j=1}^d g_{ij}^0$. In order to accurately identify who is multidimensionally poor, a second cut-off point $k > 0$ is selected and applied across the column vector c . Alkire and Santos (2010, p. 11) present this more formally as : Let $\rho: \mathbb{R}_+^d \times \mathbb{R}_+^d \rightarrow \{0,1\}$ let ρ_k be the identification function that maps from person i 's achievement vector $y_i \in \mathbb{R}_+^d$ and cut-off vector z in \mathbb{R}_+^d to an indicator variable (Alkire & Santos, 2010). ρ_k takes the value of 1 when $c_i \geq k$ and $\rho_k(y_i, z) = 0$ when $c_i < k$. One is then regarded as poor if one's weighted deprivation count is not less than the value k . This dual cut-off aspect is one of the strongest arguments for the AF Methodology. The method uses within

dimension cut-off z_j to check if an individual is deprived in dimension j and it also uses a cross-dimensional cut-off k to determine who is considered multidimensionally poor. That is, individuals who are deprived in some dimensions but are not on the whole multidimensionally poor are not considered when determining the incidence and intensity of multidimensional poverty. This is a unique and striking advantage of the AF methodology, particularly for my study where it is often necessary and important to separate poor students from those who just experience deprivation in a particular dimension, but are not otherwise poor.

The next step in the AF method is to aggregate the information about the poor individuals into an MPI. To do this, the deprivations of people who are deprived but non-poor at cut-off k are censored. A censor matrix $g^o(k)$ is obtained from g^o by replacing its i^{th} row g_i^o with a vector of zeroes whenever the $\rho_k = 0$. The new matrix excludes all those who are considered non-poor as explained above. From the censored matrix, a censored vector of deprivation counts $c(k)$ is created which differs from vector c in that it reflects zero deprivations only for everyone regarded as non-poor at cut-off k . That is, $c_i(k) = c_i \rho(y_i, z)$ and $g_{ij}^o(k) = g_{ij}^o(\rho(y_i, z))$.

The Adjusted head count M_o is then the mean of the matrix $g^o(k)$. That is, $M_o = \mu(g^o(k))$ where μ denotes the arithmetic mean operator or more generally $M_o = \sum_{i=1}^n \sum_{j=1}^d \frac{g_{ij}^o}{nd}$. M_o is therefore the weighted sum of the deprivations the poor experience, divided by the total number of people, multiplied by the total number of dimensions considered (Alkire & Santos, 2010). M_o is basically a product of the headcount ratio (H), the proportion of people who are poor, and the average deprivation share among the poor (A), $M_o = H * A$. H represents the incidence of poverty, $H = \frac{q}{n}$ where q is the number of poor people. If $\frac{c_i(k)}{d}$ represents the fraction of weighted indicators in which the poor person i is deprived, the average of that function gives the intensity of poverty A, where $A = \sum_{i=1}^n \frac{c_i(k)}{dq}$. The M_o measure therefore summarises information on the incidence of poverty and its intensity of multidimensional poverty, hence its name of Adjusted Headcount Ratio. Alkire and Santos (2010) posit that a result of combining both H and A, M_o satisfies dimensional monotonicity (Alkire & Foster, 2007) meaning if a poor individual becomes deprived in another additional dimension d_j , the M_o will increase. This aspect of the Adjusted Head Count is a very important advantage over the multidimensional headcount, which does not vary when a poor person falls into poverty in an additional dimension.

The M_o can also be decomposed according to population subgroups. If the population (n) comprises of *two* groups, x and y with sized $n(x)$ and $n(y)$ respectively then $n = n(x, y)$, the adjusted head count ratio can be given as:

$$M_o(x, y, z) = \frac{n(x)}{n(x,y)} M_o(x, y) + \frac{n(y)}{n(x,y)} M_o(y, z) \quad \dots \quad (3.3)$$

An example of this could be gender with the groups being male and female. By simple induction, the formula above can be adjusted for any number of subgroups.

Further, the M_o can further be broken down by dimension where the contribution of each dimension to the overall poverty score can be assessed. The contribution of dimension j to M_o can be

expressed as $Contr_j = \frac{\mu(g_{*j}^o(k))}{M_o}$ since $M_o = \frac{\mu(g_{*j}^o(k))}{d}$, where $g_{*j}^o(k)$ is the j^{th} column of the censored matrix $g^o(k)$.

The fact that the M_o can be decomposed by subgroup as well as by dimensions is an additional advantage over the H which cannot be broken down in that way. The Alkire-Foster method allows the researcher to make normative decisions regarding the weights, dimensions, and indicators. This flexibility is critical as it allows population nuances to be captured.

Having looked at the main methods, the following section gives a number of normative decisions and properties that have to be satisfied by multidimensional poverty measures. The discussions above and the properties given below inform the selection of the method used in the study.

3.4 Properties of instruments used in multidimensional poverty measurement

As mentioned above, the selection of measures is guided by the purpose as well as the individual merits of the measure. Every measure reflects normative decisions taken in its implementation. These include the choice of dataset, weights, etc. Alkire *et al.* (2015, p. 197) give the following expansive guideline in the selection of poverty measures:

1. Purpose(s) of the measure: The purpose(s) of a measure may include its policy applications, the reference population, dimensions, and time horizon.
2. The choice of space: The choice of space determines whether poverty is measured in the space of resources, inputs and access to services, outputs, or functionings and capabilities.
3. The unit(s) of identification and analysis: These are unit(s) for which the AF method reflects the joint distribution of disadvantages, identifies who is poor, and analyses poverty.
4. Dimensions: Dimensions are conceptual categories into which indicators may be arranged (and possibly weighted) for intuition and ease of communication.
5. Indicators: Indicators are the building blocks of a measure; they bring into view relevant facets of poverty and constitute the columns of the achievement and deprivation matrices.
6. Deprivation cut-offs: The deprivation cut-off for an indicator shows the minimum achievement level or category required to be considered non-deprived in that indicator.
7. Weights: The weight or deprivation value affixed to each indicator reflects the value that a deprivation in that indicator has for poverty, relative to deprivations in the other indicators.
8. Poverty cut-off: The poverty cut-off shows what combined share of weighted deprivations is sufficient to identify a person as poor. (Alkire, et al., 2015, p. 197)

The decisions listed above will be made in the implementation of a multidimensional poverty measure and will be reflected and discussed in the empirical chapter (Chapter 6). Further, the normative decisions are closely linked to the various properties of the measures.

Apart from making normative decisions throughout the process of constructing a measure, there are also many other rules to which the measure must adhere to ensure measurement validity (Bhorat, et al., 2004). Sen (1976) posits that poverty measures are governed by rules that are summed up in a number of instrument properties and axioms (axioms are universally accepted principles that a poverty measure has to honour). Alkire *et al.* (2015) summarise these properties into four broad groups. The first group consists of invariance properties, namely symmetry, replication invariance, scale invariance as well as two alternative focus properties, poverty focus and deprivation focus (Alkire & Foster, 2011). Invariance properties suggest that a poverty measure should not change

under certain transformations of the achievement matrix³³. The second set are dominance properties, which are monotonicity, transfer, rearrangement, and dimensional transfer properties (Alkire & Foster, 2011). Dominance properties require poverty to either increase or decrease with certain changes in the achievement matrix. The third set of principles pertain to subgroups within a population and are called sub-group properties. Other properties, that guarantee that the measure behaves within certain usual, convenient parameters, are referred to as technical properties (Alkire, et al., 2015). I shall explain these factors in more detail. The discussions below are guided and influenced by Alkire, Foster and colleagues as well as and Alkire and Santos (Alkire & Santos, 2010; Alkire, et al., 2015)³⁴.

3.4.1 Invariance properties

The first set of properties are referred to as invariance properties. Invariance properties refer to all the cases where the poverty scores are not or should not be affected by changes in the achievement matrix.

3.4.1.1 Symmetry

Symmetry (Foster, 2006) –the property requires that each person in a population or sample is treated anonymously so that only deprivations matter and not the identity of the person who is deprived. That is, the same poverty score is reached regardless of who exactly is poor among the student group in the case of this study. Demographic characteristics of the deprived should not matter, deprivation should solely be measured based on the deprivation cut-offs. Formally, if an achievement matrix X' is obtained from achievement matrix X as $X' = \Pi X$ where Π is a permutation matrix of appropriate order, then $P(X'; z) = P(X; z)$.

3.4.1.2 Replication invariance

Replication invariance (Dalton, 1920) –the property requires that if the population of a society is replicated or cloned with the same achievement vectors a finite number of times, then poverty

³³ To understand the invariance properties and terms used please refer to the full list of definitions in Appendix A: Important definitions

³⁴ The equations below are adapted from (Alkire & Santos, 2010; Alkire, et al., 2015)

should not change. That is, the same measure should yield the same scores if re-administered on the same group of students in particular, or on the same population in general. Mathematically, if an achievement matrix X' is obtained from other achievement matrix X by replicating X a finite number of times, then $P(X'; z) = P(X; z)$.

3.4.1.3 Scale invariance

Scale invariance (Chakravarty & D'Ambrosio, 2013) requires that the evaluation of poverty should not be affected by merely changing the scale of the indicators. That is, changing units for any variable should not affect results. For example, if a financial deprivation cut-off is in Rands, the instrument should yield the same results if the unit of the cut-off point is changed from Rands to Cents. Formally, if an achievement matrix X' is obtained by post-multiplying the achievement matrix X by a diagonal matrix Λ such that $X' = \Lambda X$, and the deprivation cutoff vector z' is obtained from z such that $z' = z\Lambda$, then $P(X'; z') = P(X; z)$.

3.4.1.4 Poverty focus principle

This principle (Bourguignon & Chakravarty, 2003) requires that poverty should not change if there is an improvement in any achievement of a non-poor person. That is, the deprivation score should not be affected by any improvements in the dimensions for those who are non-poor. For instance, if a student is multidimensionally poor, he or she must not be affected by the changes in the achievement matrix of another non-poor student. That is, for example, if poor students cannot afford study materials then having students who are otherwise not multidimensionally poor fail to purchase books as well should not affect the poor students' poverty scores. In other terms, if an achievement matrix X' is obtained from another achievement matrix X such that $x'_{ij} > x_{ij}$ for some pair $(i, j) = (i', j')$ where $i' \notin Z$ for every other pair $(i, j) \neq (i', j')$ then $P(X; z)$

3.4.1.5 Ordinality

Ordinality (Deutsch & Silber, 2005)- relates to the type of scale of the particular indicator used for measuring each dimension. Transforming data from one scale to another should yield the same results. Mathematically, suppose that $(X'; z')$ is obtained from $(X; z)$ as an equivalent representation, then $P(X'; z') = P(X; z)$.

3.4.2 Dominance properties

3.4.2.1 Monotonicity

Monotonicity in multidimensional poverty requires that if the achievement of a poor person in a deprived dimension increases while other achievements remain unchanged, then overall poverty should decrease (Alkire & Foster, 2011). That is, if a poor student ceases to be deprived in a particular dimension then the measure should reflect that. Weak monotonicity ensures that poverty should not increase if there is an increase in any person's achievement in the society, rather it should remain the same or decrease when there is a slight improvement in a person's achievement. Mathematically, if an achievement matrix X' is obtained from another achievement matrix X such that $x_{ij} < \min\{x_{ij}^i, z_j\}$ for some pair $(i, j) = (i', j')$ where $i' \in Z$, and $x'_{ij} = x_{ij}$ for every other pair $(i, j) \neq (i', j')$, then $P(X'; z) < P(X; z)$. Defining weak monotonicity formally, if an achievement matrix X' is obtained from another achievement matrix X such that $x_{ij} > x_{ij}$ for some pair $(i, j) = (i', j')$ and $x'_{ij} = x_{ij}$ for every other pair $(i, j) \neq (i', j')$, then $P(X'; z) \leq P(X; z)$.

3.4.2.2 Dimensional monotonicity

Dimensional monotonicity requires that if a poor person who is not deprived in all dimensions, becomes deprived in an additional dimension, then poverty should increase (Chakravarty & D'Ambrosio, 2013). This is mathematically explained as: If an achievement matrix X' is obtained from another achievement matrix X such that $x_{ij} < z_j \leq x_{ij}$ for some pair where $i \in Z$ and $x'_{ij} = x_{ij}$ for every other pair, then $P(X'; z) > P(X; z)$.

3.4.2.3 Transfer

Transfer has to do with how poverty is distributed among the poor given that the overall achievements remain the same (Fleurbaey, 2006). It looks into the incidence of inequality among the poor. The weak transfer principle ensures that poverty does not increase when achievements among the poor become equal. That is, the distribution of poverty among the students should not affect the poverty score. That is, if an achievement matrix X' is obtained from another achievement matrix X such that $X' = BX$ where B is a bistochastic matrix which is not a permutation or an identity matrix and $B_{ii} = 1$ for all $i \notin Z$, then $P(X'; z) < P(X; z)$. Weak transfer occurs if an achievement matrix X' is obtained from another achievement matrix X such that $X' = BX$ where B is a bistochastic

matrix which is not a permutation or an identity matrix and $B_{ii} = 1$ for all $i \notin Z$, then $P(X'; z) \leq P(X; z)$.

3.4.2.4 Deprivation rearrangements

Poverty dimensions can either be complimentary or substitutes. For instance, to illustrate complimentary deprivations, a student who is deprived when it comes to a study-conducive place to stay may as a result be deprived in the security dimensions (Tsui, 2002). As example of substitute dimensions could be a student who complains about the lack of privacy in residences on-campus and decides to move out to stay off-campus where he/she will now have to worry about safety and transport. Alkire *et al.* (2015) posits that if dimensions are substitutes, an association-decreasing rearrangement helps both people compensate for their meagre achievements in some dimensions with higher achievements in others, a capacity that was limited for one of them before the rearrangement. When indicators are thought to be complements, poverty should not decrease under the described transfer (Alkire, et al., 2015). There are two cases, namely weak and strong cases. Weak deprivation rearrangement (substitutes) occurs if an achievement matrix X' is obtained from another achievement matrix X by an association-decreasing deprivation rearrangement among the poor, then $P(X'; z) \leq P(X; z)$. Weak deprivation rearrangement (complements) occurs if an achievement matrix X' is obtained from another achievement matrix X , by an association-decreasing deprivation rearrangement among the poor, then $P(X'; z) \geq P(X; z)$. On the converse, strong deprivation rearrangement (substitutes) exists if an achievement matrix X' is obtained from another achievement matrix X by an association-decreasing deprivation rearrangement among the poor, then $P(X'; z) < P(X; z)$. And strong deprivation rearrangement (complements) exists if an achievement matrix X' is obtained from another achievement matrix X by an association-decreasing deprivation rearrangement among the poor, then $P(X'; z) > P(X; z)$.

3.4.2.5 Dimensional rearrangement

Alkire *et al.* (2015, p. 66) posit that, dimensional rearrangement is an association-decreasing rearrangement in deprivation switches of achievements and deprivations in deprived dimensions among the poor who not only are poor but who also remain poor after the rearrangement. That is, if an achievement matrix X' is obtained from another achievement matrix X by a dimensional rearrangement among the poor, then $P(X'; z) < P(X; z)$.

3.4.3 Sub-group properties

Populations are heterogeneous in nature and can be decomposed into several subgroups. In the event that poverty or achievement increases/decreases in one subgroup, the overall poverty should reflect that. Subgroup consistency therefore makes sure that the change in overall poverty is consistent with the change in subgroup poverty (Alkire, et al., 2015). Formally, suppose an achievement matrix X is divided into $m \geq 2$ subgroups, such that X^l and n^l denote, correspondingly, the achievement matrix and the population size of subgroup l , for all $l = 1, \dots, m$, and the subgroups are mutually exclusive and collectively exhaustive: $\sum_{l=1}^m n^l = n$. Therefore, if an achievement matrix X' is obtained from the achievement matrix X such that $P(X'^l; z) < P(X^l; z)$ but $P(X'^l; z) = P(X^l; z)$ for all $l = l'$, and total population, as well as subgroup population, remains unchanged, then $P(X'; z) = P(X; z)$.

3.4.4 Technical properties

The last set of properties are more technical. They are key technical considerations that every good multidimensional measure should take into account. The first is non-triviality, which means a poverty measure should take at least two distinct values. The second one is normalisation, meaning a poverty measure should take a minimum value of 0 and a maximum value of 1. The final one is continuity, that is, a poverty measure should be continuous across the achievements (Alkire, et al., 2015).

3.5 Conclusion

In this Chapter, a case was made for multidimensional poverty measures, emphasising that unidimensional poverty measures fail to capture the nuances of student poverty. A discussion on the merits and technicalities of different multidimensional poverty measures was given. Further, a detailed discussion of the Alkire-Foster methodology, Individual Deprivation Measure and Fuzzy set approach was done. The weaknesses of each method were presented. The Alkire-Foster, together with the Individual Deprivation Measure, presented strengths which are useful for this study given the theoretical framework I am using and my research questions. Moreover, properties of multidimensional poverty measures were reviewed to inform the selection of a method.

To fully maximise the advantages of the various potential methods, I adopted a hybrid approach in this study. The method I use is an amalgamation of the Alkire-Foster methodology and the Individual Deprivation Measure. The Individual Deprivation Measure is chosen for its focus on individual deprivations and for its ability to foreground participant voices. To offset the shortfalls of the IDM, which are outlined in Section 3.3.1, the Alkire-Foster methodology is also adopted for its proven record in satisfying most of the properties of a multidimensional measure as well as its flexibility in subgroup decompositions. Whereas the Alkire-Foster often uses secondary data, the method I use improves on that by using primary data obtained through participatory methods advocated by the Individual Deprivation Measure. The following chapter elucidates the methods and methodology I used in the study.

Chapter 4: Methodology

4.1 Introduction

The aim of this study as articulated in Chapter 1 is, “To design a Multi-dimensional Student Poverty Index (MSPI) based on student experiences and understanding at a South African (SA) university.” This chapter aims to give a description of how I achieved the aim of the study by presenting a detailed account of the methods and methodologies I employed to answer the research questions³⁵. I shall provide the rationale for the chosen research philosophy and paradigm informing the research. In particular, I advocate for a pragmatic paradigm clasped with social justice as a guiding principle and as an outcome. I framed the design of the study into a hybrid methodology rooted in the adoption and adaption of the Alkire-Foster methodology and the Individual Deprivation Measure. The hybrid methodology employs an exploratory sequential mixed method design using iterative in-depth interviews and guided focus groups for the qualitative phase and a survey questionnaire for the quantitative phase. Furthermore, through the research design, I will articulate, describe and give a rationale for each of the instruments I used. The research methodology and methods used are guided by the tenets of the capabilities approach, which is the overarching theoretical framework adopted for this study.

The chapter is divided into five sections. The first section outlines research philosophy, the second delineates a rationale for a mixed methods approach, and the third shows how I created the hybrid design. The fourth section explores in detail the specificities of the research design; these are divided into the different phases of the research process. The last section presents a summary of the deliverables from the chapter.

4.2 Research Philosophy

One of the most important deliverables of the study is an account of student poverty, which is informed by the experiences and perceptions of the students themselves. Most welfare economics studies use secondary data, but the contribution of my work is a poverty measure, which uses primary data which is not just collected from the students but data which I gathered with the students. I foregrounded participatory methods of data gathering with the understanding that the nature of student poverty is dynamic and highly contextual, therefore the student voice needed to be echoed

³⁵ To achieve the aim of the study I asked four specific questions as outlined in section 1.5 of Chapter 1.

and conscripted at every step of the research. The last research question pronounces my intention to communicate the results of the study to policy makers and stakeholders who work with students with the goal of igniting action and positive change.

As mentioned above, given the potential direct impact of this research on student wellbeing, the methods employed in this study foreground student voices and allow them not just to be research participants but to be co-creators of the knowledge that will affect them eventually. This involvement of students in the creation of the knowledge ‘about them’ has been cited as empowering in literature (Morgan, 2007). Moja *et al.* (2015) argues that students should be empowered, as is done in this study, to be agents of social change:

The knee-jerk reaction of university leadership should be of concern to student affairs professionals more than ever, due to the need to focus on their role in advancing not only awareness of issues of social justice but also of enabling students to become constructive agents of change and to challenge visible and invisible structures that maintain inequities, to imagine a different future and use knowledge for social transformation (Moja, et al., 2015, p. 7)

Moja *et al.* (2015) bring to the fore a perspective which is not explicitly emphasised in many higher education studies, which is a call for the empowerment of students to be agents of social transformation. I use this thinking as a backdrop for my methodology.

4.2.1 Socially Just Research

In line with the sentiments above, I am committed to the belief that social justice in higher education can be advanced through not only the empowerment of students and the reduction of inequality, but through the practice of the principles of social justice at every level of student-related research processes. Walker (2003) argues that one of the ways social justice can be achieved in the educational environment is through doing justice.

Yet, on the whole I think that we often prefer to describe or critique the world as it is and are less successful in thinking about how our actions today build an educational world of tomorrow – the struggle for social justice is hard work, but only through doing justice can we make justice. (Walker, 2003, p. 181)

Walker (2003) presents an interesting idea of doing justice as a means to achieve justice. This is particularly powerful in this research context in that it takes the focus away from the usual rhetoric of socially just research and calls for reflection to see if every step of the research process is in and of itself an act of justice. In line with the above argument, the research design and the methods I employed are chosen in a way which not only promotes social justice but also which practices social justice. Every process outlined in the research design is reflexive and carefully weighed against the ethos of social justice. The following principles summarise my application of social justice principles in informing the research design. I believe that:

- i. Socially just research in higher education should empower students to become constructive agents of change (Moja, et al., 2015). That is, the student voice should be central to the arguments and the students should be co-creators of knowledge. The knowledge generated should benefit those who created the knowledge. The research process should have a clear intention not just to use students as mere participants for my own personal ends; rather I am called to reflect constantly on whether my processes and actions are empowering and emancipating those I am researching.
- ii. Socially just higher education research should facilitate the use of knowledge for social transformation through challenging visible and invisible structures that reproduce inequalities (Moja, et al., 2015). This is achieved by using a pragmatic paradigm to explore student poverty as is argued for below.
- iii. Socially just mixed methods research (particularly in higher education) should be carried out in a rigorous, reflexive and reliable manner (Fries, 2009). Using the best methods and instruments to answer one's research questions is in a sense an act of justice. Therefore, I chose the best methods I could access to answer my research questions. Fries (2009) argues that the assurance of the rigour and reliability of a study is critical in achieving just research.

Apart from a commitment to principles of social justice, I frame my study within the pragmatism paradigm for the reasons given in the following subsection.

4.2.2 Pragmatism Paradigm

The articulation of research paradigms is a critical component of any research design process with ethical and empirical implications, since paradigms shape how one designs and carries out a research project (Morgan, 2014). At a fundamental level, paradigms have the potential to create new

worldviews and social contexts that have widespread impacts on the conduct of inquiry (Morgan, 2014, p. 1047).

The study adopts pragmatism as a guiding paradigm. Pragmatism offers the flexibility to think reflexively about all the instruments used in the study and it gives the freedom to use appropriate methods to answer the study's unique research questions. In essence, pragmatism allows the researcher to combine and modify methodologies as is most appropriate (Johnson, et al., 2007). This aspect makes the paradigm ideal in the creation of a multidimensional student index. Further, the paradigm is chosen for the following reasons:

- i. The pragmatism paradigm is not rigid, it allows the researcher to use methods which best answer the research questions (Johnson, et al., 2007, p. 125). This is a particularly appealing attribute of the paradigm, as my study is novel in the space of South African higher education. Therefore, the paradigm allows me to adapt and adopt aspects of a number of methodologies as I will explain in the Methods section below.
- ii. Pragmatism allows the researcher to be critical of himself or herself as he or she is conducting the research (Cameron, 2011, p. 102). I used student voices to answer my research questions as well as to direct the research process. Therefore, I was constantly reviewing my influence as I collected, analysed and interpreted the data.
- iii. The paradigm offers a link from philosophy to practice, which makes it powerful for the research design in this particular study since the research is guided by a strong theoretical framework (Morgan, 2007, p. 63). The greatest strength of the pragmatic paradigm is that it presents a clear connection between theory and practice. That is, the paradigm does not only question how things are, it also presents a normative challenge by calling the researcher to question how things ought to be and to ask normative questions. This ties in well with the capabilities approach, which is a normative evaluative framework.

The above reasons led to the adoption of the pragmatic paradigm in this study.

4.3 Research design

4.3.1 Exploratory Sequential mixed methods design

Part of the questions this study seeks to answer involves unearthing students' conceptions of student poverty as well as the incorporation of these conceptions into creating a multidimensional student poverty index. From a pragmatic perspective, neither quantitative nor qualitative methods of inquiry alone can completely answer these questions. They each lack either depth or breadth. In as much as quantitative methods are useful in the technical creation and testing of the multidimensional poverty index, they come short in revealing the nuances of poverty and in capturing student voices. This challenge found in quantitative research is however addressed by qualitative research methods, which allow for deeper exploration of student experiences. Qualitative approaches on their own do not allow for the creation of a poverty index as they lack the breadth needed for a multidimensional poverty index to be created and tested. In response to these challenges, the study adopts a mixed methods approach, which draws from the strengths of both the qualitative and quantitative approaches (Tashakkori & Teddlie, 2010). More precisely, mixed methods research is defined as a study that:

... Involves the collection or analysis of both quantitative and qualitative data in a single study in which the data are collected concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process of research. (Creswell, et al., 2003, p. 219)

Mixed methods therefore combine qualitative and quantitative techniques and offset the weaknesses of one with the other. As seen in the citation above, there are numerous topologies one can adopt in conducting mixed methods research. The topologies fall into three main categories: embedded, sequential and concurrent mixed methods designs (Creswell, et al., 2003). Embedded and concurrent methods have both qualitative and quantitative explorations done jointly and simultaneously, respectively (*Ibid*), whereas sequential studies have the processes done one after the other (*Ibid*). The nature of my research questions (see Section 1.5) called for a research design which could collect both qualitative and quantitative data. To that end, I employed a sequential mixed methods approach. The first part of my research questions involved obtaining the students' nuanced understanding of poverty and I did this through qualitative inquiry. The latter part, which is the development of the poverty index, required a quantitative inquiry. Therefore, I adopted a mixed methods design in order

to be able to answer all my research questions. According to Creswell (2003), sequential methods can either be exploratory or explanatory. The exploratory sequential mixed methods research design was the most suitable for my study as the initial qualitative section identified, located and mapped dimensions of poverty while the subsequent quantitative process allowed these dimensions to be incorporated in the creation of an index.

The research design which will be elaborated on in the coming sections will articulate how the above points are addressed, as well as give further rationale for the instruments used in each phase of the research process. Below is a schematic representation of the research process.

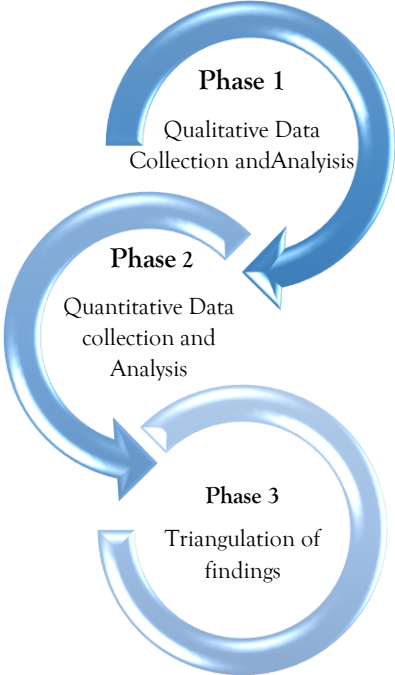


Figure 4.1. : Exploratory Sequential Mixed Methods design

4.3.2 Strengths of the design: participatory poverty assessment

The proposed exploratory sequential mixed methods design offers a number of advantages, with the first being that it is rigorous and thus has the potential to achieve richer results than either a purely qualitative or purely quantitative approach. The adopted design involves the participation of the students in making the necessary normative decisions like selecting dimensions of poverty, setting weights, determining cut-off points, and so forth. It is therefore, primarily a participatory poverty assessment methodology. Alkire (2007) argues that:

Another fundamental approach to the selection of dimensions is a process of ongoing deliberative participation. The processes of interest aim to draw out people's actual values and priorities using group discussions and participatory analyses – whether for the purposes of planning, assessment, policy, or interim monitoring and continuous improvement. (Alkire, 2007, p. 8)

The design allows for the implementation of participatory methods, which are emancipatory and empowering to the students. It promotes most of the factors that Brock (2002) argues need to be addressed in the majority of poverty-related studies and assessments, to wit:

First, policy-makers' disposition for personal involvement with poor people in learning about poverty affects the soundness of the knowledge claims they can make. Second, the choice of knowledge-gathering approach can have profound implications for the personal attitudes and outlooks of influential actors in the poverty reduction project. Third, personal attitudes and epistemological soundness both have a bearing on how far participatory poverty research achieves higher audibility, credibility and leverage for poor people in policy development and delivery. (Brock, 2002, p. 36)

The combination of the theoretical framework, research philosophy, research paradigm and research design make the methods elaborated on below both novel and potent. The other strength of the design chosen is that qualitative and quantitative reliability and validity tests are administered separately which adds to improving the rigour of the design. To operationalise this design in my study I make use of a hybrid methodology, which is explained in the following section.

4.4 The Methods: Alkire-Foster and the Individual Deprivation Measure

Having reviewed the different multidimensional poverty measures and methodology (see Chapter 3), I was particularly drawn to the Alkire-Foster (AF) methodology as well as the Individual Deprivation Measure (IDM) as existing guiding methodologies that I would adapt or employ. I used the two jointly, to create a hybrid methodology. The IDM mainly informed the qualitative phase of the research, while the AF methodology informed the quantitative phase. The IDM framework also follows an exploratory sequential mixed methods design and is grounded in the capabilities approach, which makes it an ideal rubric for the methodology and methods adopted in this study (Wiser, et al.,

2016). The strengths of the IDM as indicated in previous chapter (see Section 3.3.1) include the fact that it measures individual realities as opposed to households' realities. In addition, the individuals involved have an input in determining which indicators are valuable, as well as in the determination of weights for various dimensions of poverty (see Section 4.5). The weights are configured in relation to how poverty is conceived by the individuals through participatory methods (Wiser, et al., 2016). Further, the participatory aspect of the IDM makes it ideal for higher education as it empowers the people being investigated. This study therefore used the Individual Deprivation Measure as methodological guideline or model for the qualitative section since it encapsulates the attributes of a socially just approach to poverty analysis. Section 4.5 will outline how I implemented the IDM.

The quantitative phase was influenced by the AF methodology, which has been lauded in literature for its ability to aptly measure multidimensional poverty, track changes in poverty over time and allow for intergroup and intragroup poverty comparisons (Alkire, et al., 2015). The AF method has a set methodology which has been implemented and tested in numerous fields before, which made it easier to implement and test in this research. Moreover, the AF methodology was further efficacious for my study since most of the technical aspects of the methodology are publicly available³⁶. The way the methodology is set out allows for normative decisions to be made using participatory methods as I did in this study. I will give a detailed account of how I used the hybrid method in the following section. The figure 4.2 below is a schematic summary of the hybrid method I employed.

³⁶ I was also trained in the AF at the OPHI Multidimensional Poverty Beijing Summer School in 2016 and I had direct support from the OPHI team

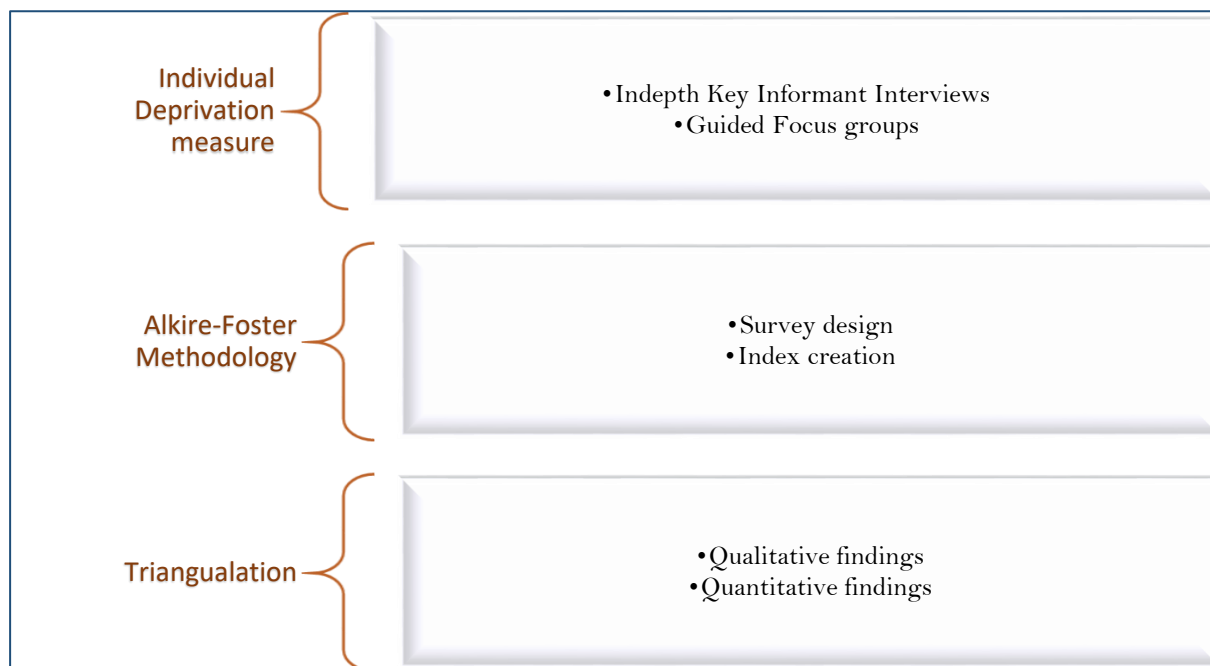


Figure 4.2: The Methods

4.5 Topology of the research design

4.5.1 Qualitative Process-Phase 1

In response to the above-mentioned aim of this study, which was to create a multidimensional student poverty index based on the experiences and understandings of the students, a qualitative inquiry was conducted as the initial phase of the adopted exploratory sequential mixed methods research design. The process was such that the qualitative results were used to create an instrument to gather quantitative data. The data collection process was all conducted within the auspices of the capabilities approach. As argued in earlier chapters (see Chapter 2) the CA has core values which encourage the expansion of individual freedoms and agency (Wilson-Strydom, 2016). It encourages individual voices to be heard in choosing what the individual has reason to value (Klein, 2016). In consequence, the qualitative phase was conducted in a way which ensured that students' voices were captured adequately, and that their capabilities are aptly documented. In-depth interviews and focus groups were used to capture the experiences, voices and perceptions of the students as well as those of student affairs practitioners.

4.5.1.1 Study context

The research was conducted at the Bloemfontein main campus of the University of the Free State in South Africa. The University of the Free State (UFS) was selected because there is ethnic, racial and general demographic diversity in the student population, which presents a vast array of student poverty dimensions (unlike some other universities in South Africa which have biographically homogenous student bodies). The UFS has three campuses and they are each unique and diverse. The Bloemfontein campus is a historically white campus that has since transformed to accommodate students from all backgrounds, the QwaQwa campus is a historically black campus that has remained racially untransformed over the years (although the university is in the process of making the campus less racially distinct), and the South Campus is a satellite campus that focuses on access and foundation programmes for students who do not qualify academically to enrol into mainstream programmes. Further, the UFS Bloemfontein campus has seven academic faculties, thirty-seven on-campus residences, over seventy student-led and run societies and in excess of twenty-seven thousand full-time students affiliated to its Bloemfontein campus (27 530 registered students in 2018). Of which, about 15 000 rely on state funding through NSFAS³⁷. Van der Berg & Raubenheimer (2015) posit that up to 84.6% of all students at UFS are food insecure. These dynamics made the UFS Bloemfontein campus a viable university to study multidimensional student poverty. The effect of the context on the findings is explored in Chapter 6. Moreover, the university provided the most diverse sample of students and was also accessible to me since I was based in Bloemfontein at the time of the study, which made it convenient to conduct iterative rounds of focus groups and interviews.

4.5.1.2 Key informant In-depth Interviews

The first part of the data collection phases involved getting an understanding of student poverty from those who work with the students the most, namely, student affairs practitioners. This was done through identifying three key informants and conducting in-depth interviews with them. In-depth interviews have the potential to reveal valuable information from the participants (Legard, et al., 2003; Mears, 2012; Cridland, et al., 2016; Guest, et al., 2017). This is because participants are afforded the liberty to explain their thoughts thoroughly and to get immediate clarity on ambiguous questions. Further, the interview environment allowed the participants to bring to the fore issues and matters which would not be revealed through any other method of inquiry. Cridland *et al.* (2016)

³⁷ See https://www.ufs.ac.za/docs/librariesprovider42/sasse-documents/publications-documents/sasse-annual-report-2015-118-eng.pdf?sfvrsn=e860c921_0 last accessed 28 October 2018

provide guidelines for conducting effective in-depth interviews which were followed in this study. The guidelines expound on the interview guide preparation, recruitment of participants, obtaining consent/assent, conducting effective interviews, analysis and interpretation of data, effective communication of research findings, and reflections and recommendations for maintaining researcher and participant confidentiality.

I used semi-structured interviews (Fylan, 2005; Wildavsky & Hammer, 2018), organised to allow the key informants to express themselves freely with minimal interference or direction from the interviewer. Non-probability purposive sampling (Tansey, 2007; Etikan, et al., 2016) was used to identify these key informants because I needed to identify specific experienced individuals who were both knowledgeable and willing to participate. The three chosen informants were selected on the basis of their experience with students and on the grounds of their exposure to student life, issues and challenges at the University of the Free State. The chosen informants are a senior Student Affairs official, a representative of Housing and Residence Affairs at the university, and an outgoing Student Representative Council (SRC) executive member. The student affairs individual was chosen because he interacts with students on a daily basis and also helps organise student life programmes on campus so he had a particular perspective of student poverty. The housing and residence official manages placements of students in residences and also attends to complaints and problems within the residences so his understanding of student poverty was also critical. The last key informant was an outgoing student representative, who was chosen because of her experience and insight based on her time serving on the SRC.

I ran two rounds of interviews with these key informants. The first round was to get their conceptualisation of student poverty which I used as a basis for the focus group discussions which I carried out with the students. The second was a follow-up interview to verify if my analysis was a true reflection of their views. The key informants work with students on a daily basis and were well placed to provide foundational information on student poverty (See Appendix D for the interview guide³⁸). I will explain the details of the second round in a later section (see Section 5.3).

³⁸ The interview Guide had the following headings 1.Introduction to get background of the participants 2.Understanding of student poverty 3.Poverty measurement 4.Poverty mapping

4.5.1.3 Guided Focus Groups

The other part of the qualitative phase involved conducting a set of guided focus group interviews with various students. This exercise was a critical part of the adapted Individual Deprivation Measure which foregrounds participatory ways of data collection and knowledge creation. Focus group discussions are celebrated for their ability to foster participation and widen the range of issues that may arise from qualitative inquiry (Pugsley, 1996; Schaal, et al., 2016; Lucero, et al., 2018). The study followed the structure used by Schaal *et al.* (2016) with an eventual goal of allowing students to define multidimensional poverty according to their own understanding and experiences. The discussions were structured to deliver the common dimensions of poverty among students from the students themselves (see Appendix E for the interview guide). The guided focus groups were also aimed at delineating the intensity of poverty among those who are poor. This was achieved through classifying poverty from how the poorest of students would look on a scale which stretches from absolutely poor to non-poor. The last objective of the guided focus group discussions was a poverty location exercise which aimed to locate instances and circumstances which make students multidimensionally poor or multidimensionally poorer within the student community. The exercise of locating poverty was crucial in order to know the factors which lead to or aggravate multidimensional poverty.

As with the in-depth interviews, non-probabilistic purposive sampling was used to identify the participants. The participants were selected from the UFS Bloemfontein campus and included both residential (on campus) and non-residential (off-campus) students. I ran three initial focus group discussions, each with eight members and another follow-up session (see Section 5.3). Some of the participants were recruited from the residences on a voluntary basis. I sought the assistance of residence committee members to invite volunteers. This was done because the members of residence committees are familiar with the students and could reach students I would not otherwise reach. I also used posters on campus to invite random students and I used snowballing³⁹ to recruit participants. As a result, I got unique and diverse focus groups.

Three focus groups had eight members each with a fair distribution around gender, race and study areas as depicted in the table below. 24 students were involved in the three FGDs which were conducted at UFS between October 2016 and May 2017. The specific demographics shown in the table below are also used as identifiers in the findings in Chapter Five. I chose eight participants

³⁹ Snowball sampling is where research participants recruit other participants for a test or study. See <https://www.statisticshowto.datasciencecentral.com/snowball-sampling/> last viewed 20 October 2018

because this number is small enough to ensure maximum participation of all participants and also large enough to capture a range of diverse views (Carlsen & Glenton, 2011).

Table 4.1: Summary of the focus group discussion participants

| Focus Group one | Focus Group two | Focus Group three |
|---|---|---|
| 1. Off-Campus Female 2 nd year Accounting Off-campus | On-campus Male 2 nd year Psychology and Linguistics | On-campus Male 3 rd year Marketing |
| 2. Off-Campus Female 2 nd year Education | On-Campus Female 2 nd year Administration | On-Campus Female 2 nd year Medicine |
| 3. Off-Campus Female 1 st year Consumer Science | Off-Campus Female 1 st year Accounting | On-Campus Female 4 th year Medicine |
| 4. Off-Campus Female 1 st Year Law | On-Campus Female 2 nd year Law | On-Campus Female 3 rd year Medicine |
| 5. On-Campus Female 2 nd year Law | Off-Campus Female 2 nd Accounting | On-campus Male 3 rd year Marketing |
| 6. Off-Campus Female 1 st year Consumer Science | On-campus Male 3 rd year Geography | On-Campus Male 3 rd year Medicine |
| 7. Off-campus Female 3 rd year Political Science and Governance | Off –campus Female 1 st year Actuarial Science | Off-campus Female 1 st year Agriculture |
| 8. Off-Campus Female 2 nd year Education | Off-campus Female 3 rd year Quantity Surveying | On-Campus Female 2 nd year Education |

The participants included students from both low and high-income households as well as black and white students which gave the sample a healthy mix. The focus group discussions (as well as interviews) were all tape recorded and I solicited the services of an experienced note-taker in all the discussions.

4.5.2 Qualitative data processing and analysis

The qualitative data was transcribed by both a professional transcription company and by me. Both the interview and focus group data was transcribed and stored on a password-protected computer. Ethical considerations, as described in later sections, were made to protect the confidentiality of the participants in the handling of the data. I then applied open and descriptive coding to capture the dimensions of poverty guided by the coding manual written by Saldana (2009). From there I performed thematic coding to trace the indicators and dimensions of student poverty. The storage, arrangement and analysis of data was done using the NVivo software. The analysis process was

iterative, whereby I first coded the data descriptively and revised the codes several times. From there I then ran several rounds of thematic coding where I rearranged the emerging codes into themes. The last round of coding was to map the themes to indicators of student poverty. The analysis process took a period of 14 months due to its iterative nature, involving numerous consultations with my supervisors to ensure that the dimensions I obtained were true reflections of the views expressed in the data. The recursive nature of the analysis alludes to the rigour of the process I followed and contributes to the validity and reliability of my qualitative process (Golafshani, 2003). The main deliverable from the analysis was the indicators of student poverty, which are used in the next phase to construct the quantitative data collection instrument.

The poverty dimensions into which these indicators fall were determined during the analytical phase of the qualitative data through the lens of the capabilities approach. I further evaluated the reliability and validity of my process through the guidelines offered by an empirical capabilities approach scholar, Robeyns (2003b, p. 70) who suggests the following criteria in creating a capability set⁴⁰:

1. The criterion of explicit formulation: A number of indicators emerged from the data and I grouped them accordingly guided by the data and literature as well. To ensure that my classifications were right, I held follow-up interviews and focus groups to allow participants to comment. I shall explain this process below.
2. The criterion of methodological justification: The method used for generating a list must be clearly explained, scrutinised and defended as the most appropriate method for the specific issue at hand. This was done through reflexively approaching all the phases of the research as explained above.
3. The criterion of sensitivity to context: Robeyns (2003b) advocates for a pragmatic approach when creating a capability set or cluster of indicators, taking into account that it is important to speak the language of the debate into which one wishes to engage. I used participatory methods before and after the initial analysis to allow the students to have direct input into matters affecting their wellbeing.
4. The criterion of different levels of generality: Under this principle, Robeyns (2003b) posits that if the list being developed aims at an empirical application or wishes to lead to specific policy and intervention proposals, then at least two stages should be followed in its design.

⁴⁰ Her principles are given first (before the colon) and my application is explained for each principle thereafter. Though her principles apply to the creation of capability sets, the questions she poses are applicable to the identification of poverty dimensions as well.

The first stage involves drawing up an ‘ideal’ list that is unconstrained by the limits of data or measurement, or of socioeconomic or political feasibility. The second stage is focused on drawing up a more pragmatic list that takes such constraints into account. The list of indicators I was creating was to be administered to the student population and therefore I chose indicators which could be measurable and whose cut-off points could be determined.

5. The criterion of exhaustiveness and non-reduction: Robeyns (2003b) writes that the capabilities (indicators in my case) included in the list should include all important elements, each of which should not be reducible to the other. While there may be, and often is, some overlap, this should not be substantial. This does not exclude the possibility of a subset having such an important status that it requires consideration on its own, independent of the overall set. This point was particularly important when I was selecting emerging indicators from the data. The indicators chosen had to reflect non-commensurability as argued in the earlier chapters (see Appendix F for the list of indicators and dimensions).

Having created and tested the indicators and dimensions against the empirical rubric above (Robeyns, 2003b), I then took the list of indicators and dimensions back to the students in another focus group to ratify the dimensions, set up weights and determine cut-off points. This was done close to 10 months after the first round of interviews. The following section summarises that process.

4.5.2.1 Follow-up interviews and focus group

The last part of the qualitative analysis was to run a follow-up focus group discussion with the same set of students. The purpose was to finalise the indicators and dimensions of student poverty, to assign weights to the dimensions and to set up cut-off points for each indicator. The participants ended up being a mixture of those who were in the initial group with some new members. The full description of this process and the outcomes are given in the next chapter (Section 5.3).

Finally, I ratified the results of the analysis together with the decisions and choices made by the students in follow-up interviews with the same key stake holders interviewed earlier. The results of this process are also in the next chapter. Below is a schematic summary of the qualitative phase.

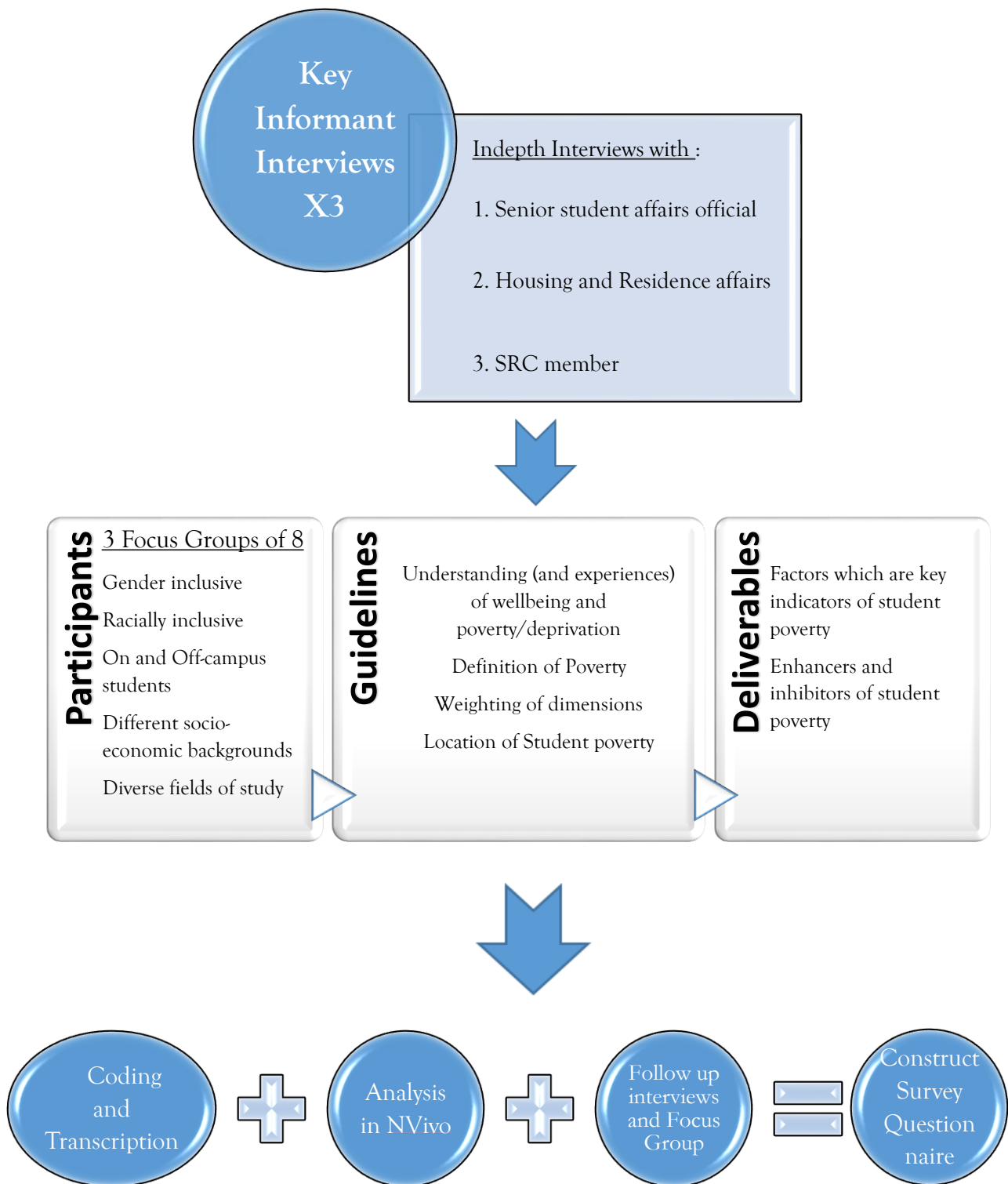


Figure 4.3: Summary of the qualitative process

4.5.3 Quantitative Measuring Instrument

The final stage of the data collection process involved the creation and administration of a quantitative instrument (Creswell, et al., 2003), an instrument that was informed by the results of the qualitative process as mentioned above. In particular, the multidimensional indicators of student poverty, which were identified in the qualitative process were used as a foundation to create and administer a quantitative instrument. The objective of the instrument was to capture data, which I then used in the implementation of the Alkire-Foster methodology in the designing of the multidimensional student poverty index. This next section gives an elucidation of how the quantitative phase was carried out. Precisely, the section provides a rationale for the measuring instrument of choice and as well as a thorough exposition of how the instrument was created. A description of the target population from which the sample is drawn, the distribution of the measuring instrument and the data handling methods employed are also discussed below.

4.5.3.1 The survey questionnaire

I designed a survey questionnaire to capture the quantitative data (see Appendix I). Survey questionnaires are popular in quantitative studies and have been proven to be effective tools for gathering quantitative data (Ganassali, 2008; Christley, 2016; Healy, et al., 2018). The survey was constructed based on the indicators and dimensions of poverty, which students identified. The questionnaire was developed not only to capture the intensity and incidence of student poverty, but also to reflect individual indicators of student poverty. It comprised a number of key biographical questions, which capture the vital demographic information of the participants, especially information that might be categorised as conversion factors according to the theoretical framework, CA. The greater part of the questionnaire, however, comprised indicators of student poverty as identified by the students through the guided focus groups.

4.5.3.2 Quantitative sampling and distribution

The survey questionnaire was administered at the University of the Free in South Africa. Firstly, three rounds of pilot surveys were conducted, and the questionnaire was refined after each round. These surveys were done with 17 randomly selected students who were willing to give feedback on the usability of the questionnaire. The analysis of the pilot data also allowed me to refine the survey accordingly before sending it out. The final questionnaire was then administered in two forms (see Appendix I for the final questionnaire). The first was an online survey, created on the University of

the Free State's online survey platform and administered anonymously. The link to the survey was then circulated to students⁴¹. Apart from an online format of the survey questionnaire, hard copies were also administered. Taking into account the length of the questionnaire, the target populations, the adopted sampling technique and the required sample size, it was not practically feasible to distribute the survey just in hard copy in a way that all the members of the population would have an equal chance of responding, as argued by Yates (1949), and more recently by Rahi (2017). Therefore, an electronic survey method was used to host and distribute the questionnaire as well as to store the data. The software which was used is the Evasys Electronic Survey Platform.

I used snowballing to recruit participants and I received assistance from the focus group discussion participants who shared the link extensively on social media. I also received assistance from Student Affairs, Housing and Residence Affairs and the UFS Communications department who agreed to send the link to the survey via emails to all registered students. The various efforts yielded a good response, with one thousand seven hundred and ninety-one students (1791) responding. To augment the online surveys, I also ran hard copy surveys which were the second form.

The hard copy surveys were to be distributed to general students using simple random sampling in the first round and then quota sampling was applied to ensure that the sample is adequately representative. Aono & Nguyen (2017) posit that random sampling yields representative samples. This view is supported by Yates (1949) as well as McLeod and Bellhouse (1983). To ensure that the survey reached as many diverse students as possible, I recruited twenty-three (23) research assistants to distribute the surveys (Appendix H shows the information sheet I gave the research assistants). They were financially compensated using my annual university research grant. I strategically allocated the 23 research assistants to different sections of the university, and outside the university. Some distributed the survey on campus and others off-campus, while some distributed in residences and within student associations. I checked the results of the hard copy surveys constantly to see which demographics were under-represented and then I re-sent the research assistants to collect data from the under-represented quarters. The use of students in sharing the link to the survey and having them as formal research assistants was empowering to them and gave them insight into how research is run. This aspect is in line with the research philosophy and paradigm I adopted. Moreover, having students lead the distribution of the quantitative data collection encouraged other students to participate, resulting in rich data.

⁴¹ This is the link to the survey <http://surveys.ufs.ac.za/evasys/online.php?p=THK7Y>

The data from the hard copies was then captured on Evasys and a total of five hundred and fifteen (515) forms were returned completed. This brought the total number of student respondents to two thousand three hundred and six (2306), which was over 1800 respondents more than I had initially hoped to get at the time of writing my proposal for the study. My commitments regarding sampling were that all the students should be given a fair chance to respond, meaning the selection probability distribution for each participant had to be uniform. I recruited assistants who could reach all the demographic. Therefore, to estimate my required sample size in a way that allowed an equal chance of selection, I made use of a statistical method which was advanced by Tanaka (1987). Tanaka (1987) argues that to get the minimum sample size n for a population of N with a confidence level of $x\%$ and a margin of error of $\pm e$ the following relationship holds:

$$n = \frac{Z^2 \cdot p \cdot (1-p)}{e^2} \quad \text{or} \quad n = \left(\frac{Z_{1-\frac{\alpha}{2}} \cdot \sigma}{e} \right)^2 \quad \dots \quad (4.1)$$

Where:

Z = Z value from the normal table (e.g. 1.96 for 95% confidence level)

p = percentage picking a choice, expressed as decimal

e = confidence interval or margin of error, expressed as decimal (e.g., .04 = ± 4)

Since the number of full-time students is twenty-seven thousand (27000), using the formula above, the minimum sample size needed was 345 with a confidence interval of 95% and a margin of error of 4. Therefore, my sample of 2306 is more than the statistical minimum required and has a lower margin of error, implying that more conclusive inferences can be made from the sample.

4.5.3.3 Quantitative data storage and handling

The data collected was stored electronically on a password-protected machine. It was also backed up on secure cloud storages, Google Drive and Dropbox. The data was cleaned in SPSS and Excel and then it was analysed using the following statistical software: Stata, R, SPSS and Microsoft Excel. Stata was used primarily for the implementation of the Alkire-Foster Methodology. SPSS was used for cleaning the data, while Microsoft Excel was useful in creating visuals and R was instrumental in running statistical tests.

4.5.4 Ethical considerations

I proactively upheld ethical values at all times and throughout all the phases of the research. To this end, ethical approval for the study was granted before the data collection process began. A copy of my ethical clearance is attached in the appendix (Appendix G). The ethical considerations I made during this research were informed by Subedi (2016), who provides a guideline of all the factors which should be considered in ensuring that studies are conducted in an ethical manner. She posits:

Since mixed methods research combines quantitative and qualitative research, ethical considerations need to attend to typical ethical issues that surface in both forms of inquiry. Quantitative issues relate to obtaining permissions, protecting anonymity of respondents, not disrupting sites and communicating the purposes for the study, avoiding deceptive practices, respecting vulnerable populations, being aware of potential power issues in data collection, respecting indigenous cultures, not disclosing sensitive information, and masking the identities of participants (Subedi, 2016, p. 573)

I also obtained ethical clearances from the Faculty's ethical committee, student affairs and all other relevant departments of the university. Moreover, I provided all participants with a copy of my consent form, which stipulated among many other things that the identities of the participants were to be protected at all times, as I was committed to upholding the highest levels of privacy and confidentiality (see Appendix C for the consent form). Appendix B shows the information sheet provided to participants, which also outlines the ethical considerations I made in this study.

4.6 Conclusion

The chapter provided a rationale for the different methodological choices I made in this study. I argued that a hybrid approach was necessary in order to answer my specific research questions. To that end, I adopted the IDM as well as the AF methodology and used them within a sequential exploratory mixed methods design. My research design, the exploratory sequential mixed methods design, had three main phases. These were the qualitative phase informed by the IDM, the qualitative phase informed by the IDM, and the final phase which is a triangulation of findings from the two processes. The initial phase, the qualitative phase, yielded the indicators and dimensions of student

poverty which were then used to design a questionnaire. The survey was distributed at the UFS Bloemfontein campus electronically and via hard copies and 2306 students completed the survey.

The results of the different phases are given in the forthcoming chapters. The results of the qualitative process are presented in the Chapter Five and the results from the quantitative process are presented in Chapter Six.

Chapter 5: Student Deprivations

5.1 Introduction

This chapter aims to answer the second research question, that is, “Which contextual (economic, social, educational, etc.) factors shape and reflect multidimensional student poverty?” The processes followed to collect, analyse and consolidate the findings are guided by the values of the Individual Deprivation Measure as explained in previous chapters (see Chapter 1 and Chapter 4). As argued in the introductory chapters (See Chapter 1 and 3), student poverty is multidimensional as it comprises numerous incommensurable aspects. The following section gives an account of how students at the UFS experience and understand various contributors to student poverty, including economic, social, and educational factors. Further, a summary of identified dimensions and indicators of student deprivations is also provided. As explained in the methodology chapter, Chapter 4, data was collected by interviewing three staff members who work closely with students, as well as from three focus group discussions with a total of twenty-four undergraduate students.

The three staff members interviewed were from Housing and Residence Affairs (HRA), Student Affairs (SA) and the Student Representative Council (SRC) (see Appendix D for interview schedule). They each have different experiences and view student poverty and student issues through unique yet non-antagonistic lenses. Their concerns range from student funding to identity and living arrangements. The staff informant views aided in constructing the focus group interview schedule (see Appendix E).

The three focus groups were made up of students from different faculties, backgrounds and of different racial, gender, and academic level profiles. Though the students shared some positions regarding what constitutes student poverty, most of their understandings emphasised different aspects, being shaped strongly by their unique biographies and demographic characteristics. The rich mix of students who participated in the discussions provided an in-depth insight into student understandings and elucidates the intensity of poverty across the student body. To highlight the wealth of diversity of the participants, I shall caption all quotations with relevant descriptive biographical information. To verify the data and analysis, follow-up interviews were conducted with the three staff members and a follow-up focus group was conducted with students to elicit their opinions on the themes emerging from the data analysis. The follow-up focus group also served as

a platform for students to discuss and debate deprivation cut-offs and weights for the various indicators and dimensions of student deprivations as explained in the methodology chapter.

Five main themes or areas of student deprivation emerged from the qualitative analysis. These include *basic needs*, which are most vital for student functioning or survival, *essential resources for learning and living* as a student, the *living conditions and living arrangements* of students, *freedom of participation* and aspects of *psychological wellbeing*. Each of these themes is described and supporting evidence from the data is provided in the sections below. In the final section of the chapter, these findings are brought together to propose a set of dimensions constituting student poverty. The dimensions, in turn, formed the basis for the conceptualisation of the survey instrument that was used in this study (see Chapter 4).

5.2 Dimensions of student deprivations

The student body is a heterogeneous group consisting of people with different backgrounds, lived experiences and opportunities. By virtue of this, though students experience common deprivations, they also face differing deprivations at different levels of intensity. The staff member quoted below argues that poverty is an issue of access, meaning that one can determine how poor students are by looking at that to which they do not have access. He explained:

When you talk about poverty, I mean, it's about access. It's about being able to have access let's say from an academic perspective, being able to pay your fees in time and in advance, and knowing that that's the one thing that you do not have to worry about versus somebody who does not have to worry about that because you know already your fees are paid, you know you have enough books, you have enough of this, you have enough food, you have accommodation that is decent. You live a fairly decent lifestyle. – (Male Staff Member – Student Affairs)

The extent to which students experience poverty depends on their own personal and unique achievement matrices, which are informed by the intersection of various factors. The deprivations that are discussed in this section are of a nature which directly affect student wellbeing and thereby negatively affect learning. The complexity of understanding student poverty is highlighted by the two quotations below, the first is the perspective of a staff member and the other is the view of a student.

The above analysis shows that most students raised issues around money, food, wellbeing, social support, mentorship, lack of resources, race, and time management. Using NVivo to organise the data into nodes, I conducted an in-depth, rigorous and iterative analysis of the data, which resulted in the organisation of the data into the following themes or nodes:

5.2.1 Basic needs

The first set of deprivations which the students identified have a bearing on survival and basic needs. In defining student poverty, one student said, “I think [poverty is], going to class hungry and going to bed hungry, same day” (Off-campus Female Student, 3rd year Social Work). The student’s view was echoed by a number of students who concurred that there is a dire challenge of hunger or food insecurity on campus. Food is viewed as a primary need, which ought to be met first before a student can discharge his or her duties and responsibilities.

[The] first thing that you have to do [after receiving money is] to buy something that you really need, especially food because you can't study without food. You buy food then you are sorted. (On-campus Male Student, 3rd year Marketing)

Most of the participants noted that there are a number of students who are food insecure⁴². A further challenge highlighted by the participants is that students who are food insecure are seldom easy to identify since food security is a very personal matter known only by those closest to the student. The following examples buttress and illustrate how different students deal with the challenge of food insecurity.

There are poor students on campus, you won't see them because they're within us. Some people will visit you because they don't have food and they'll wait until you dish up, that's your poor student. You know, they will always be there, always by your side or when you're printing, they'll ask, please print for me, I'm quickly running to the toilet, you won't see it because they're trying to hide themselves. So, identifying a poor student, you need, like a mentor which has a personal relationship with that person, to actually identify that, so and so only gets R200 or even nothing at the end of the month. So, poor students, you can't just say, okay, he's poor because he's wearing a torn shirt because that's fashion nowadays so, you can't actually see it. (Off-Campus Female Student, 2nd year Accounting)

⁴² <http://www.universityworldnews.com/article.php?story=20180113101854330> <https://www.iol.co.za/news/south-africa/sa-university-students-often-go-hungry-15475342> last accessed 12 June 2018

It is up to us as students to help other hungry students...because I know in our residence there's this corridor, like this guys' corridor. Because I've seen them, they just have that thing where they get to the corridor... Everybody just puts it at the table and then they just mix everything together, everybody just brings a plate, and they all eat. (On-Campus Female Student, 2nd year Administration)

I think that residences lack a common eating area or common place, yes. I noticed with us because we were six, seven friends living in the same corridor and sharing food. My friends would all give their food normally to me and then I would go make food. Then someone else would make rice and we'd all just put our stuff together, all watch a movie or whatever and eat. So I think as soon as it becomes more of a communal [setup], it's much easier for people to step up and say "but okay I don't have something to bring to the table today". Or like "can we please do this now because I don't have anything"? So like the more individual it is, I think it's a bit more difficult for people. Because it is difficult, just going and asking [for food]. (On-Campus Male Student, 2nd year Psychology and Linguistics)

The examples above suggest that the number of students who are struggling with food security is much higher than widely known since there are so many students who struggle with hunger in silence. There are also quite a few who depend on their friends for food as shown in the examples above. Although the university has a number of programmes to alleviate hunger on campus, like the No Student Hungry campaign, and the students interviewed were aware of the programmes, these programmes do not have the capacity to accommodate all of them. In addition, entrance into the programmes is restricted by stringent requirements such as a 65% academic average and evidence of volunteer work, which excludes some needy students.

Most of the factors flagged by the students and staff members pertaining to the basic functioning or survival of students, particularly the availability of accommodation, food and health had a strong association to the students' financial status. Students who struggle financially were most susceptible to these basic deprivations. The illustrations below further elucidate the views of the students.

A lot of the time there is a big link between being able to access good healthcare and financial status. There are also people who suffer because of their actual physical state and that can be from women's issues to disabilities and stuff— Access to healthcare is expensive especially for us as students. An appointment is R350 on campus; just an appointment, no medication and that is a lot for us as students ... It is cheaper to go to a private doctor (GP). But students hardly even know where to find them. (On-Campus Female Student, 2nd year Medicine)

[Responding to a conversation on non-monetary aspects of wellbeing] *It was very in line with all being said that I think we do not push the financial thing away completely. In that lower microanalysis that she said, financial wellbeing is very connected to how you feel physically then and your access to physical things. It's also linked obviously to your mental and emotional state because obviously with a lack of things comes the stress that it has on you, and that mental stress has an effect on your physical. So once that basic level is done then you can move onto the next level of poverty in the more abstract forms.* (On-Campus Female Student, 2nd year Medicine)

In as much as finances seem to have a direct link to the wellbeing of students in that they are central in either alleviating or multiplying the deprivations faced by students, the data shows that there are many other factors which affect student wellbeing beyond finances. As mentioned earlier, wellbeing comprises many incommensurable aspects, which cannot always be quantified or measured in financial terms. Two students noted:

Also we have things like health, those issues aren't really accounted for so we can't really say, this percentage of students are depressed, or this percentage of students is malnourished. We know that they're there but they're not in your face – it's like the varsity hides it in a sense. (On-Campus Female Student, 4th year Medicine)

So, ill-being is the absence of all of those things [physical and emotional health, health care and social support], or at least you having to struggle much more to get all those things that I spoke about, than let's say the majority or the rest of the students or other students. So it's these kinds of sort of struggles that should not necessarily be there, but that you as a student have to bear. So ill-being, basically I think it's on all those levels. For example, something like medical aid, being able to know that you are covered, you know, you have medical aid gives you a sense of peace because you know the cost of being sick is high. (Female Staff Member - Student Representative Council)

So your total package of wellbeing can suffer serious effects if you cannot contribute to that student's upliftment. Introducing him to this new environment but making him feel at home by helping him, by assisting him to get onto perhaps the No Student Hungry Programme, onto financial aid, and onto proper accommodation. (Male Staff Member-- Housing and Residence Affairs)

Without health and health-care a student would not be able to study comfortably, therefore health is a basic need as evidenced above. On top of health and food, a student needs a place to stay where

they can study freely and comfortably. Deprivations associated with living arrangements are discussed in the following sections.

5.2.2 Learning resources

As expected in the South African context where there is a large public debate on student funding, one of the most mentioned deprivations is a lack of resources necessary for learning. The most cited resource in the data was tuition fees. Most students indicated that they struggle either to settle their tuition fees or know a lot of people who are struggling to settle tuition fees. Since the University of the Free State required tuition fees at the time when the data was collected⁴³, the lack of tuition fees for previous, current and future years is a critical deprivation, which contributes significantly to student poverty and wellbeing. Beyond tuition fees hindering access to the university and to university resources, a lack of tuition fees also affects the students psychologically and mentally. The following excerpts shed more light:

We see people who are lacking financially that they don't know what tomorrow holds, so they lose the motivation to even try and work hard if at the end of the day I'm not coming back to school next year. We don't have the money, so why should I even pass? (Female Staff Member - Student Representative Council)

For me, it's like when you're still a young person, you still want to find your feet, and first of all, you do not know who's going to pay your tuition - stress level high. You do not know what you're going to eat, you do not know who's going to pay your accommodation, and you do not know who's going to buy you something to wear. (Off-Campus Female Student, 2nd year Education)

As seen in the examples above, students who pay their tuition fees on time, and who know where their future tuition fees will come from, are purported to be more motivated than those who struggle with fees. They are well positioned to perform better academically than their struggling counterparts do. Describing a poor student, a staff member posits:

...It's a struggle for them to have enough money for books. And it's a struggle in that they may not even get those things so they have to constantly and continuously try to just get, but get by. (Male Staff Member -- Student Affairs)

⁴³ A fee-free regime for poor South African undergraduate students was introduced by the ruling government, the African National Congress (ANC,) after the data was collected

The above staff member affirms that resource-based deprivations are not just limited to tuition fees. There are many other learning resources deprivations emerging from the data. The following examples show some of the common ones:

So, you have to put aside money for projects as well, which you have to do off-campus [if campus computer labs are full]. You have to get there, so, transport. You have to pay for using that computer because we don't really pay to search things on the internet [on-campus] but now there, you have to pay and you have to print as well. So, resources. (Off-Campus Female Student, 2nd year Accounting)

The way they [NSFAS⁴⁴] fund students, students are paid tuition fees first, then books, then accommodation, and what's left goes for meals - That's not enough for a year. (Male Staff Member, - Housing and Residence Affairs)

Wi-Fi, you can use Wi-Fi in the comfort of your own room, while we [off-campus students] don't have access to internet. What about us who have online tests that have to be submitted at a certain time and that time, you can't come to campus because it's at night and it's not safe ... people who live on campus are so privileged, they are so, so privileged. - (Off-Campus Female Student, 2nd year Education)

The students point out that there are some critical resources necessary for learning without which a student would be deprived. Examples of these include prescribed textbooks, internet access, necessary technology, printing, transport, and so forth.

In as much as a lack of certain resources can imply deprivation and subsequently poverty in that dimension, this is however not always the case. Issues such as a lack of financial management and proper budgeting can lead to lack of resources. The following examples show that a lack of resources is not always a viable proxy for resource deprivation.

Some people cannot budget at all so, they will end up looking poor because they used all of their money ... so we'll see you as poor but you're actually not poor. (Off-Campus Female Student, 1st year Consumer Science)

If you know like how to eat cheap, if you know how to have all the nutrients that you need, all the healthy things, then you can start drafting a budget and then you can seem okay. (On-Campus Male Student, 2nd year Psychology and Linguistics)

⁴⁴ National Student Financial Aid Scheme. Also see Section 1.7

Some people just don't go to the Bridge⁴⁵, they just save their money, and they do have the money but save it. Some people cannot budget at all so they will end up looking poor because they used all of their money and they know, if you're given R2000, obviously you can't ask for more because that's a lot already. So, you won't have more money at the end so, whatever you've used up, you've used it up so, we'll see you as poor but you're actually not poor. (Off-Campus Female Student, 1st year Consumer Science)

It's really difficult because food is a choice for some people, they prioritise other things instead of food so and it's really difficult to identify a student who does not have food. Because you will notice that they get a certain amount of money at the end of the month and they spend on other things but they come to these organisations [which offer food aid] crying, saying, "I don't have food, my parents don't afford this" (Off-Campus Female Student, 2nd year Accounting)

From the above extracts, it is evident that students can appear deprived of certain resources when they are actually not deprived, due to a lack of proper budgeting skills or due to their individual preferences. This is a very important aspect to consider when evaluating resource-based deprivations to avoid categorising those who are not deprived as deprived (as explained in Chapter 2).

5.2.3 Living conditions

Living arrangements which do not provide the best conditions for studying were identified as another source of deprivation; a severe deprivation in some instances. The following quotations from students give examples of some of these living conditions.

You can never be kicked out of on campus residence, [but] off-campus, they can lock your room and you have nowhere to stay. It's really painful to stay off-campus, even for parents who have a child that stays off-campus because you know on campus there's a residence head, if someone next door is making noise, you can get authorities to control. Off-campus, they will tell you, "this is a commune . . . we're going to make noise, we're going to party if we want to party. So, staying off-campus is really bad. It needs someone that can stand for himself or herself and be positive and know that okay, I'm here to study. Because some people leave and go home and they are like, I cannot do this, I rather just go and stay at home and not study at all. Because of the pressure you get, one day of not paying your rent, your room is locked. (Off-Campus Female Student, 2nd year Accounting)

⁴⁵ 'The Bridge' is the university's student centre on campus where students and staff shop, eat and drink.

Like electricity, he [an Off-campus Landlord] told us he's not going to buy the electricity because we use way too much electricity now and stuff like that. You feel like, so alone especially like, I'm 18 and like, this is my first time out of, like, my home and I feel like, it's just drowning me, it's too much. (Off-Campus Female Student, 1st year Accounting)

Some students who live off-campus frequently struggle to study because the living spaces are not controlled to ensure that they are conducive for studying. The students often struggle with issues of noise and resources necessary for studying, like electricity. Moreover, the accommodation contracts for off-campus accommodation are usually stricter than the on-campus contract, and students face the risk of being evicted from their rooms if they fail to pay rent on time. Some students are therefore subjected to immense stress each month when rent is due and this has an adverse effect on their studies. However, it is not only off-campus students who worry because of their living arrangements, students living on-campus also have their own unique challenges as evidenced below.

I think that to a certain extent a lot of the problems that students face are brushed under the rug or not really seen. . . . There were so many students that had suicide attempts or were depressed and you don't see that unless you're in that leadership position, because the residence hides that because it makes the residence look bad. (On-Campus Female Student, 4th year Medicine)

It's just as disgusting to be someone who is part of a residence or organisation to realise, okay, I'm black and people don't speak my language and I'm forced to speak their language. And that's okay, we can compromise but then it's just unfair that the white students do not make effort to accommodate us . . . We are made to feel like the residences don't understand our cultures and that's why we are made to sing their stupid songs in first year, and they're not willing to compromise either. It's just as disgusting being someone who notices this and wants to go in on the leadership side and change things, and then to be met by people who just don't want to listen – they [management] don't want to open their minds, they don't want to change and that ideology is perpetuated by management. (On-Campus Female Student, 3rd year Medicine)

We are told in residences that we speak this language while we're here and pray before we do this, even though I'm not of the same religion or cultural beliefs as you and it's like I am being forced . . . There are subtle things that not only residences but in a lot of organisations do to force their beliefs on us. (On-Campus Female Student, 2nd year Law)

Some students who reside in campus residences struggle with issues of identity, culture, religion, sexuality and race. These factors can affect their learning experiences and overall wellbeing, especially for first years who are instructed to behave in particular ways in order to be part of a residence. For example, while describing the ordeal a biologically male transgender first-year student who identifies himself as a female went through in a male residence, a friend explained:

First of all the uniform, they had to wear a [man's or boy's] uniform. Yes and in meetings they don't say anything, first years don't say anything. They don't talk, nothing. She was forced to keep her hair short because it's a male residence because usually she does braids ... but she was forced to cut her hair. (On-Campus Male Student, 3rd year Medicine)

Another source of deprivation related to living arrangements is the accessibility of the university from where the students live. Students indicated that they sometimes struggle to get transportation to the university or to valued social activities. As seen below, transport can affect how students experience university life and can become an indicator of a deprivation.

I think a totally poor student is one that literally struggles. Everything for them is a struggle. For them to even come to campus is a struggle. For them to even have something to eat, it's a struggle for them to have transport money enough. (Male Staff Member - Student Affairs)

I know with one incident most of the girls in my residence have cars, so when they were doing events, it's like out of Bloemfontein, and I was like okay guys, I don't have a problem with having events and what not, but also doing that - for us a cab is R300 to go outside Bloemfontein in and out, and you guys have cars and they're like, if we do it in Bloemfontein then there's more people that have to come but I'm like, do you see what you guys are doing? (On-Campus Female Student, 2nd year Medicine)

It gets really full [in the computer labs on campus] so, you need to go outside the campus and try and do your work because time is also going out and you cannot stand there for two hours waiting for a computer. So, you have to put aside money for projects as well, which you have to do off-campus. You have to get there so, [you need] transport. You have to pay for using that computer [off-campus]... (Off-Campus Female Student, 2nd year Accounting)

From the above examples, it is clear how transport has a significant effect on how students experience the university environment. A staff member goes on to draw the following association between living arrangements and poverty.

I think poor students are not on campus, because being on campus is actually a privilege. You have to be able to afford to be here. So there will not be many poor students that are staying on campus. They will be staying in houses outside that are committed students that are having to take two or three taxis to come here. (Male Staff Member -Student Affairs)

The above assertion is seconded by other research participants, who confirm that the place one lives in has a bearing on the nature of deprivations they experience. Another example of this which comes from the data is the issue of security challenges associated with one's living arrangements; these threats to security are experienced both on and off-campus, although these challenges seem more intense off-campus.

First and most foremost, my priority in life is security, I cannot come here and want to better my life and my family's life and then, my wellbeing and my security's being compromised because I'm living off-campus. Because while you're on campus, security is here 24/7, you hardly hear problems of people getting mugged, people getting raped. (Off-Campus Female Student, 2nd year Education)

Like I can't live my life like that. I can't wear these pants because they're so tight, I can't wear that because it's so tight, I can't wear that skirt because it's so short, what if somebody will get an idea and then they may decide to rape me, It's a matter of us trying not to live in fear and actually live our lives, because literally I can't be walking around with pepper spray even on campus. (On-Campus Female Student, 3rd year Medicine)

There's a thing circulating that, there are people who are kidnapping students, who are raping them, all of those things so, I don't know whether it's true (Off-Campus Female Student, 2nd year Education)

From the above examples, it is apparent that students value matters of safety and security. Safety and security are therefore an important component of indicators which are associated with a deprivation in living standards.

5.2.4 Participation

Another dimension of deprivation which comes from the data is that of participation within learning and in university life more broadly. Students fail to participate in the university environment due to various reasons, including, but not limited to, their backgrounds, their social class, race, finances and language. The participants believe that the university needs to make efforts to ensure that no student should be discriminated against due to reasons like finances when it comes to participation, especially in learning-related activities. For example:

...Can't the university make sure that all of the things that we are supposed to do [student empowerment/enrichment programs], are accessible on campus and do not need the use of money. Unless it's entertainment which has nothing to do with my academics; that I can pay for myself. (Off-Campus Female Student, 2nd year Education)

Other people, their tuition and all of their needs are paid, are being paid by their parents so it puts a strain on a budget because I'm not saying that we're not supposed to buy posters or do what we're supposed to do but then, can't the university make sure that all of the things that we're supposed to do, are accessible on campus and do not need the use of money. Unless it's my own free will, for example, an event, what do you call these things, formal, like formal things, for my entertainment, it had nothing to do with my academics, it has nothing to do with my wellbeing, I just want to do that for myself so, that can be paid for. But things like motivational speakers, [you] pay R20, I do not understand. (Off-Campus Female Student, 2nd year Education)

Students are expected to be equal in class, but the reality is that they are different and their abilities to function or participate within the university environment are different. Some students have more university navigation potential than others do. A Student Affairs staff member captured the separation that happens on campus due to the differences in status among students, with the following case:

So, within the environment, and obviously how the environment responds to you, can also make you poorer ... I will give you an example, when you go to the shops here where students buy, there are different kinds of shops that sell different kinds of things at different kinds of prices, right? But certain students can only buy at a certain shop, and others can buy at all the shops, you know. So that already, that distinction, because I mean, you are all together in a class, but when you go to buy, you know where you're going to go. So that already, that separation that happens there, already it makes your experience of this place much poorer because now

you know that okay, in class we are the same, but when we go to buy stuff at the Bridge⁴⁶ there, I cannot buy there because I can't afford it. There are different things that happen also on campus, different things that may come through which may require resources and you may want to be part of that, but because you can't afford it, or because your values, or not your values, your priorities are different. So, one thing leads to another thing and leads to another thing, so your social status or your economic status will lead you to have less [sic] experiences and less of this and less of that. So it's a vicious cycle, and when you are not in that vicious cycle, then you are able to also navigate. You know, you can choose to go and buy something that is cheaper, but you choose. Another person does not choose because that's the only thing they can afford. (Male Staff Member -Student Affairs)

The above example demonstrates the ongoing dilemma some students face. They are constantly reminded of their differences because of the things they cannot afford or have no freedom to participate in. Things like choice and preference also came out strongly during the focus group discussions. Particularly, some students preferred not to participate in sporting and other co-curricular activities because of interest, and not necessarily because their freedoms are constrained. Echoing the words of the student affairs representative, it is one thing to choose when one actually has a choice, but if one chooses from limited or constrained choices, then that individual is deprived. Participatory deprivations go beyond finances; there are also other factors within the institution that hinder student participation within both the learning environment and social spaces. The following examples highlight some of these factors:

...I feel a lot of the time I go to one module specifically where the only black person who is actually involved in the module is still seen as a teacher's assistant even though she probably has more credentials within that module – because she's not a doctor, she's seen as slightly less ... She's teaching anatomy and in that module at the end of the year everyone gets together and then the module leader [Doctor X, who is white] walks around and takes a picture with each group⁴⁷. And then whenever it came to the English class groups, especially with non-white groups, she takes a picture of your group, not with the group, so there's a distance. I would never approach her if I had a problem with studying (On-Campus Male Student, 3rd year Medicine)

Another thing is let's say you're part of a certain group and you're working with a different kind of people, you know South Africa is more diverse. And then in that group there are a certain number of people who are

⁴⁶ 'The Bridge' is the university's student center on campus where students and staff shop, eat and drink.

⁴⁷ There are two groups. The first group is taught in English and the other is taught in Afrikaans, the latter of which comprises mainly white and mixed-race students.

dominating. Let's say okay, I'm Zulu, he's Xhosa then out of ten people there's eight Xhosas. And then now they want to force me to speak their language. (On-campus Male Student, 3rd year Marketing)

As soon as you have one experience like that where you are cut off from something because of funny accents [for example] you will pull out completely from ever participating. Like, I don't even want to do sport because you know when you get there you are going to be asked to buy a shirt or a boodie. (On-Campus Female Student, 2nd year Law)

The examples above show that students can be deterred or constrained from participating because of their identities. The medical student above felt excluded and distanced because of his race and that affected his learning since he could no longer approach the lecturer. Such exclusions were shared by various students like the two above who were excluded from participation because of their ethnicity, language, social class and accents. Evidence shows that there is a lot of pressure for students to fit in and they end up adopting some behaviours out of peer pressure.

Let's say you have three friends who are financially stable, their parents are financially stable. But your parents can only afford to give you money so that you can afford your basic needs, things like that. And then now you have those friends, each and every weekend, you know Friday it's going down and you don't want to be left out, you check. And now you use the money that you were supposed to buy food so that you can fit in in that particular group. Each and every Friday you have to go out. Then they're always buying clothes and everything, then you end up opening a credit card which you can't even afford to pay. So I think it can also depend on the friends that you choose, they can influence on how you behave, on how you react from a certain situation. (On-campus Male Student, 3rd year Marketing)

I think it's like being scared. You're scared and not used to the environment. So you like tend to not participate, like making friends also is a problem because if my friend is doing it, chances are I'm also going to do it. But if I go there and I want personal space alone then I won't [go]. (On-campus Male Student, 3rd year Marketing)

Some students are first year students and when they get here, they expect environment where, you will not find people smoking whatever, drinking whatever; they're not used to that. And then now, you get to a place where they smoke, they do whatever they want to do, at whatever time they want to do. There are no rules, there's no discipline and you cannot bounce back [if you join them]. So, emotionally and psychologically, you're going to start having problems and it's going to need you to have the strength. It goes on to such an extent, that students end up committing suicide. (Off-Campus Female Student, 2nd year Education)

The examples above show that participation is linked to how welcome students feel in the environment and the degree of participation in either leisure or study-related activities is to some extent proportional to their sense of belonging.

5.2.5 Psychological wellbeing

Evidence from the data shows that many students worry about finances, relationships, workload, safety and family among many other things. The worrying ranges from simple concerns to depression, and often constrains them academically. The following extracts show some of the issues.

I think [worrying about] food, nutrition like she mentioned, finances and lack of a rigid support structure lead you into a depressive state to a point where you feel overwhelmed, and everything is just overwhelming. The place, the environment which you live in, whether here on campus or off-campus can also depress you. Until you feel, I can't concentrate anymore...you become antisocial until you even become suicidal. (Off-Campus Female Student, 1st Year Law)

...I think we are going to start having high rates of suicide here on campus if these [Psychological and emotional needs of students] are neglected, if they are just shoved at the back. (On-Campus Male Student, 3rd year Medicine)

We see people who are lacking financially that they don't know what tomorrow holds, so they lose the motivation to even try and work hard if at the end of the day I'm not coming back to school next year. We don't have the money so why should I even pass? (Female Staff Member, Student Representative Council)

As seen above, students find many things stressful. The examples below show that one way which helps them face the challenges they encounter is having a solid social support base. There is evidence to suggest that students who have good support are more balanced than those who do not, and are more able to navigate the university environment successfully.

I think South Africa's school system does have a role to play in this regard as well, and in many instances that is what is lacking. Back home or at school level to prepare you for coming to university you will come to

this whole different environment. It's a big environment, it's a big change from school level to university level, and suddenly you find you're out of your turf. (Male Staff Member, Housing and Residence Affairs)

I think maybe I will come back again to access, because when you come here, you are already coming from a particular environment; from a particular kind of poverty. So when you get into this environment, if you are coming from a home where your parents are there and you have a support structure, but still maybe you don't have that much money, but still that makes you at least, you are not alone. But if you're an orphan and you are coming into this environment and then you don't have that net to fall back on when things get difficult, that can also constitute a form of poverty in a sense, because for the other person you have people. (Male Staff Member, Student Affairs)

I think like affiliation plays a big part for young students especially when you are first year and second year ... but I think it gravitates more towards academic ability and financial stability when you come later on. But in the first year and second year I think affiliation, being a part of something, like having an identity within the place apart from a student number is very important for a lot of young students. Well, for me that's when they seem the most active and like happy. (Off-Campus Female Student, 2nd year Education)

The desired support may be from friends and family or it may come from organised residence mentorship programs, which students who reside on campus enjoy.

Because I feel like a mentor is a person who is going to guide you... For me I take it as it's an extended family who knows your things, your challenges that you have experienced, the problems that you came up with and on how you're going to deal with them. (On-Campus Female Student, 2nd year Administration)

Like, you cannot differentiate from a person that lives on campus who is poor, it's very difficult but the minute you look at off-campus students, you see poverty. Why, why is there such discrimination and segregation against us? Because even though you find poor students who are living in the residence, you wouldn't say they are poor because of their privileges and their marks as well, they work for them because they get to class on time, they get their assignments on time. They don't miss anything, their mentors are there every day at their residences to help them. If you have a problem, there are even tutors that are senior, above you, who can even help you. For example, if she's doing consumer science and I have a food practical, she's my senior, I can go to her but at off-campus, who you going to go to? People are busy. (Off-Campus Female Student, 1st year Consumer Science)

Mentorship has a pivotal role to play in advancing student wellbeing, as seen in the examples above. Students who do not have mentors have different and often less pleasant lived realities than their peers who do have such support. Social support for students is not only limited to mentors, it should actually come from everyone including families and the community at large.

I think it also goes back to it takes a village to raise a child, so as much as your brother is not working and what not, for us it's like we have to build each other, so it's not really you have to do it, but if you were raised in that sphere that Ubuntu and what not, then obviously you will practise what you've been preached to. (On-Campus Male Student, 3rd year Medicine)

And also the involvement of parents, if your parents are involved [in your life], then you will get residence placement on campus. Some of us, our parents, they trust us that, you can do it on your own. They say look for what you can get. You found the school now, look for residence or if I don't find it, my parents won't come and sit here and be angry and go to the offices and make a scene. They'll be like, okay, you didn't receive it, let's look for another option. So, things like that, if your parents are involved, you will receive a place on campus. (Off-Campus Female Student, 1st year Consumer Science)

The above examples show that the presence and support of family and friends goes a long way in advancing the wellbeing of students. One of the greatest effects of poverty beyond the physical effects is its effect on human dignity. The students believe that poor students struggle with identity and confidence, and that they therefore need support to open up about their struggles:

I think it's on various levels, but I think for me, wellbeing for me equals dignity, just dignity that comes from a human being, and being able to live and to have experiences that each and every other student should have (Male Staff Member, Student Affairs)

It is also difficult because I can be sitting here and I tell you that I just walked five kilometres here and you won't know, do you see. So, it's very difficult to identify that no, she's poor, no, she's not, no, she's on this level, you know. Like she said, mentors do actually play that huge role, the moment there's a mentor in someone's life, they do connect on every level so, mentors are able to identify that something is not right... And they [mentees] spend a lot of time with their mentors and they are able to share whatever it is, "okay listen, I haven't been eating for two days now and I don't know where I'm going to get bread for the next coming days so, can you maybe help me, can you maybe give me advice." So, the moment the person has a mentor, it's much more easier (Off-Campus Female Student, 2nd year Accounting)

And then lacking in other things, not just in tuition but food, clothing, the way we look or we present ourselves, it can even hinder us from associating with certain circles, or forcing us to associate with those that are not extremely helpful to us. But because we are trying so hard to fit in you will see people who are not passionate about politics, but they join these thing [political organisations on campus] to try and identify even though it's not their passion. ... So they associate with who they aren't basically, they change their identity, yes ... You see people who are not rich but having a R4000 phone because they feel the need to blend in, so they look normal. They're wearing your Levi's jeans, all those things, the branded items ... [due to] that pressure to conform and look normal. (Female Staff Member, Student Representative Council)

The previous examples show that poor students go to great lengths to fit in and they also show that poverty has an effect on emotional wellbeing. Deprivations in material resources, as reported, affect not just the emotional state of students but also the social circles they will belong to. The quotation above highlights that some students are forced to pretend to be of means in order to fit into some social groups. This is a great cause for concern as Breda (2018) argues that healthy relational resources are important in creating resilient students. This type of behaviour could be evidence of emotional or psychological deprivation (Usborne & Taylor, 2010). In a sense, the evidence above suggests that poverty of the mind is as constraining as material poverty.

5.3 Consolidation of dimensions

As mentioned above, the student poverty dimensions include indicators or themes which were both raised frequently and those which were flagged as critical by students in the different focus groups as well as staff member interviews. A second round of recoding and analysis, looking particularly at interrelated themes, guided by the Individual Deprivation Measure which foregrounds the exact voices of the students resulted in the summarisation of the dimensions and indicators of student deprivations given in the table below. The table also shows, in parenthesis, the number of direct references each indicator had from the data from the NVivo analysis file.

Table 5.1: Summary of dimensions

| Dimension Name | Indicator (frequency⁴⁸) |
|--------------------------------|--|
| Basic Needs | Food security (62) |
| | Amenities (40) |
| | Shelter (67) |
| | Access to basic healthcare (22) |
| | Physical health (31) |
| Learning Resources | Tuition Fees – For previous, current and future years (120) |
| | Resources for learning (57) (Learning materials, technology, stationery, ability to print, internet access, etc.) |
| | Management of resources- budgeting (17) |
| Living conditions | Conducive study environment (106) |
| | Access to transport (21) |
| | Safety and security (22) |
| Participation | Participation in learning (110) |
| | Participation in leisure activities (i.e. co-curricular/social activities) (34) |
| Psychological wellbeing | Social support (67) |
| | Dignity (12) |
| | Emotional Wellbeing (130) |

The figure below gives a visual representation of each of the dimensions.

⁴⁸ The number of direct references each indicator had

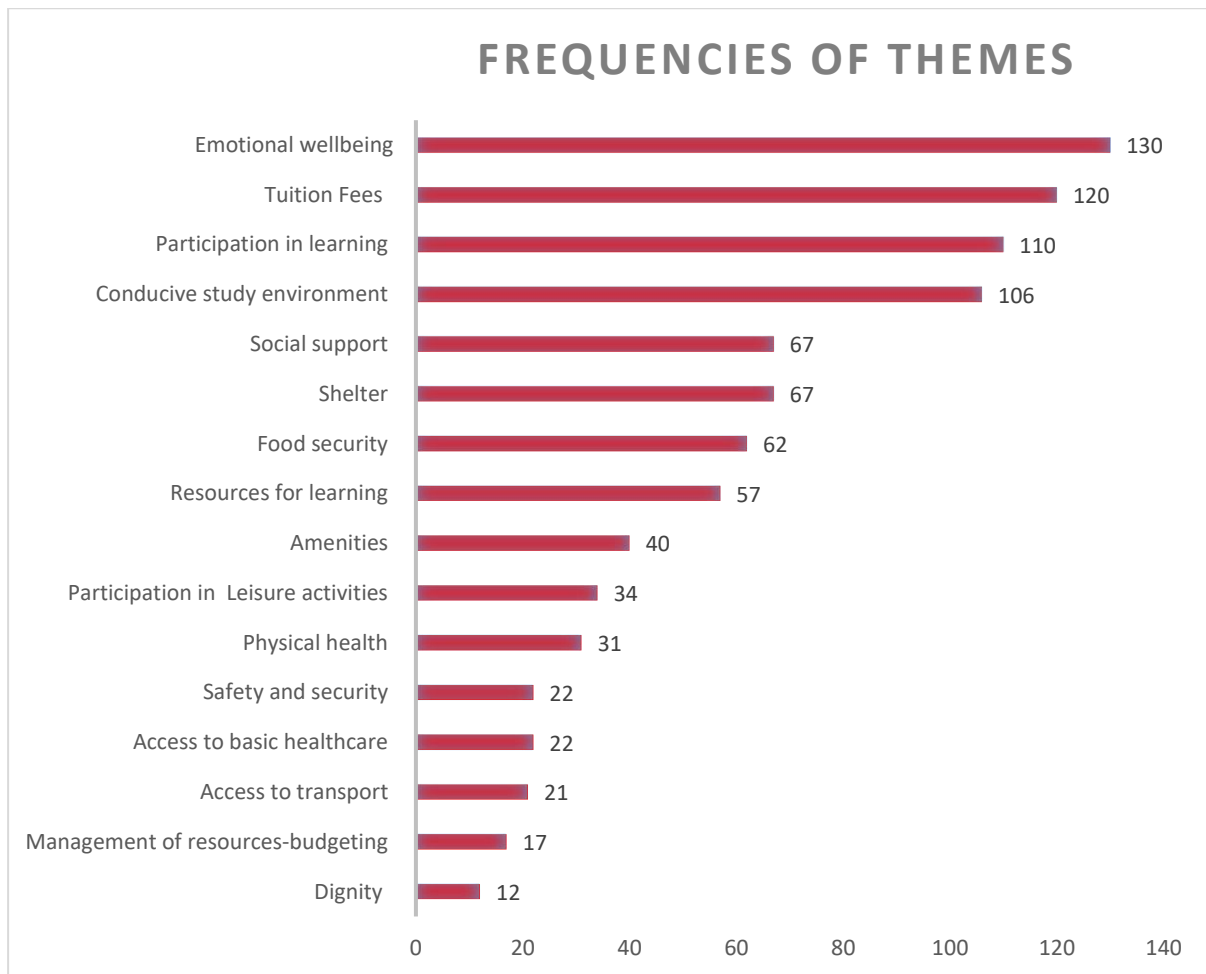


Figure 5.2: Summary of nodes⁴⁹

To ensure that the views of the students were captured and summarised correctly, I set up a follow-up focus group. This was important since the dimensions identified should be directly from the students and they should emerge from participatory methods as recommended by the Individual Deprivation Measure. The ratification process allowed the students not only to name the dimensions but to assign new weights to the indicators and dimensions as explained below.

5.4 Ratified dimensions indicators and weights

The objective of this section is to give a summary of the process followed in order to identify deprivation cut-offs and weights for indicators and dimensions. As mentioned in the methodology chapter 4 (see Section 4.5.3) the deprivation cut-offs, dimension names and weights were set up by

⁴⁹ Percentage coverage means the number of times a node is mentioned out of the sum of all the instances all nodes were mentioned

the students in a focus group discussion. The table below gives the demographic composition of the students who participated in this second round focus group:

Table 5.2: Naming and weighting FGD Participants

| Participant | Gender- Field of study-Year- Residence |
|-------------|---|
| 1 | Female, Agriculture, 4th year, Off-campus |
| 2 | Female, Education, 3rd year, Off-campus |
| 3 | Female, Law 2nd year, On-campus |
| 4 | Female, Law, 3rd year, On-campus |
| 5 | Male, Agriculture, 3rd year, Off-campus |
| 6 | Male, Education, 3rd year, Off-campus |
| 7 | Male, Information Technology (IT), 2nd year, Off-campus |
| 8 | Male, Medicine (MBChB), 4th year, On-campus, |

The table above affirms that the group was balanced and diverse. It also included five students who had participated in the first focus groups and three new students, so the engagement was robust and insightful.

5.5 Ranking and initial naming of dimensions

The initial exercises were to give the students a summary of the indicators I had identified from my data analysis, and then to ask them to propose names for clusters of indicators. The table below give a summary of the names suggested by students for different clusters.

The participants were asked to rank the dimensions according to the extent to which they contribute to student poverty, with those contributing most to be coded red, followed by purple, blue, green and yellow in descending order of importance. The table below shows the dimension names identified by the students.

Table 5.3: Naming of dimensions

| Cluster | Indicator | Suggested name |
|----------------|--|--------------------------------|
| <i>A</i> | Food security | Basic needs |
| | Shelter | |
| | Health | |
| <i>B</i> | Tuition Fees – For previous, current and future years | Access to learning |
| | Resources for learning (Learning materials, technology, stationery, ability to print, internet access, etc.) | |
| | Management of resources- budgeting | |
| <i>C</i> | Conducive study environment | Living conditions |
| | Access to transport | |
| | Safety and security | |
| <i>D</i> | Participation in learning | Participation |
| | Participation in leisure activities (i.e. co-curricular/social activities) | |
| | Belonging | |
| <i>E</i> | Social support | Psychological wellbeing |
| | Dignity | |
| | Emotional Wellbeing | |

The initial understanding was that the order of importance is as follows: basic needs, access to learning, living conditions, psychological wellbeing and participation.

5.6 Revised dimension names

The table below shows how the names suggested by the students compare with the names I had recommended for the clusters from the analysis. The column on the far right gives the revised dimension names taking the student voices into account.

Table5.4: Devised dimension names

| Dimension | Student’s Proposed name | My initial recommendation | Revised names |
|------------------|--------------------------------|----------------------------------|-------------------------|
| A | Basic needs | Basic survival | Basic needs |
| B | Access to learning | Learning resources | Learning resources |
| C | Living conditions | Living arrangements | Living conditions |
| D | Participation | Participation | Participation |
| E | Psychological wellbeing | Personal wellbeing | Psychological wellbeing |

I chose to retain the students' proposed name of psychological wellbeing for dimension E to capture the essence of the particular deprivation falling under this category, as will be seen with the deprivation cut-offs in the following subsections. Dimension B involves resources necessary for learning or survival as a student, so I opted to name it "Learning resources" as opposed to the students' proposed name which may limit the scope of indicators within this dimension to just access to learning. I also adopted "living arrangements" to "living conditions" because living conditions form a subset of living arrangements. The same applies to the rest of the dimensions, which stand as they were named by the students.

5.7 Towards dimension and indicator weights

Beyond naming and verifying dimensions of student deprivations, students also assigned weights to the dimensions. The whole group agreed that basic needs and resources should have higher weights than the rest of the dimensions. They also agreed that living conditions should have a higher weight than psychological. The shift from the initial position they adopted in the initial ranking exercise (that is, giving the living conditions higher weight than given in the ranking exercise), came about after an intensive group debate and discussion. Closer interaction with the indicators and discussions with one another led to that shift in perception. The argument was that deprivation in living conditions has a direct catalytic effect on material conditions, which precipitate multidimensional poverty. Most of the students (6 out of 8) agreed that psychological wellbeing was to be ranked higher than participation, although the other two believed participation should be higher than psychological wellbeing. The participants suggested that basic needs contribute 30% to student poverty, learning resources also 30%, living conditions 20%, psychological wellbeing 15% and participation 5%. The point of contention was on the weighting of the last two. Most students in the FGD believed that, in comparison to the other dimensions, participation in the environment of learning or leisure activities deserved a low weight of 5%. The argument was that the primary and most important goal of university is to provide a student with a qualification; the rest is secondary. They placed psychological wellbeing higher than participation as they believed that indicators like stress and dignity are essential components of a worthwhile existence. The students also suggested indicators' weights and there were no objections or disagreements regarding the weights of the indicators.

To better understand the issue of dimension weights, I set up follow-up interviews with the three key stakeholders as explained in the methodology chapter, and they agreed with the students' assigned weightings for the initial three dimensions but suggested different weights for the last two. The extracts below show the key stakeholders' views.

As someone who was working in student affairs before becoming a lecturer, I have observed that students do not fully appreciate the importance of participation... It is through participation that you establish networks which will help you in the future and where you develop skills like leadership and self-discipline ... some [of the students I lecture] feel ashamed because of how they speak. At first they would not even come to me to ask questions because they were not fluent in English but after I started using a bit of Sesotho in my classes more and more students came to consult. So, yes, participation is important – Female Staff Member (Lecturer, former Student Representative Member, Interview 2)

I have reassigned the dimension weights based on what I think is more important first and then going downwards (Basic Needs contribute (40%), Learning resources 25%, Living arrangements 15%, Psychological wellbeing 10% and Participation 10%) ... Basic needs are so key and especially to human dignity so without these cannot even begin to see themselves as a person who can or will succeed ... black students lack the very basics and this includes accommodation meaning some have to sleep in bathrooms, libraries, etc. The issue of access is hopefully being attended to with [Fee] Free Education ... If implemented properly and if the so-called 'missing middle'⁵⁰ are catered for then it can have a significant impact on student deprivations. Student poverty is just the tip of a huge problem the problem of poverty in general in black communities is only then manifested when those students go to university and lack all of the provisions mentioned. Student poverty needs to be addressed holistically because some students even end up in more debts from credit cards, clothing cards, etc. because they lack basic financial management skills. Male Staff Member (Student Affairs, Interview 2)

The above examples show that participation is very important and suggest that it should have a higher weight than the 5% given by the student group. Issues of the benefits of participation raised make a case for adjusting the weights, as does the literature on higher education (Housee, 2001; Harrison, Davies, Harris, & Waller, 2018). Commenting on the possible hindrances to participation, a staff member said:

⁵⁰ Students who cannot qualify for bursaries because they are deemed not poor yet they cannot afford study fees or qualify for student loans

We have managed to accredit 3000 beds off-campus and we have about 5700 beds on campus but that is not enough, all those beds are full. We have a big accommodation crisis on campus ... Just the other night I was called to [a certain residence] to evict some students who were sleeping in the basement ... How can a student like that be expected to perform like another from a warm bed? How about his emotional wellbeing, how is he expected to feel? ... I would say a totally deprived student is one who has no electricity, water, warm bed and sheets to sleep in. Male Staff Member (Housing and Residence Affairs, Interview 2)

The housing and residence affairs representative raised a point that non-participation can be due to other serious deprivations, and therefore we should not give participation such a low estimate. Emotional health is also very important as it is related in various ways to many other dimensions. Given the challenges posed in the examples above on mental and emotional health, psychological wellbeing was not given the same weight as participation as suggested by one staff member. Instead, I assigned a slightly higher weight to still reflect the strong views of the students on this issue.

5.8 Dimension and indicator weights and cut-off points

There were a number of condensed indicators which I expanded in order to get a finer picture. These were indicators which included nebulous aspects that had to be unpacked before I could incorporate them into a questionnaire. For example, I originally had the tuition variable which I then expanded into tuition for previous years, current year and future years, as is seen in the table below. That differentiation is critical in understanding student poverty. I also expanded the stress/worry variable to distinguish between worry as a phenomenon and the availability of support when worried. The dignity variable was further decomposed to have shame and confidence stand alone. Table 5.5 shows all the expansions I made.

Taking into account all the discussions from Section 5.7, the final dimensional weights I used are given in Table 5.5. Further, I assigned equal weights to all the indicators within dimensions to ensure that the indicators I expanded remain informed by the dimension weights discussed above, which reflect the views of both the students and the key stakeholders⁵¹.

⁵¹ The students in the focus group agreed to assign equal weights to all indicators with each dimension. This is also in line with how the Global MPI is calculated.

Table 5.5: Dimension Weights

| Recommended Dimension Name | Expanded Indicators | Indicator Weight | Dimension Weight |
|-----------------------------------|--|-------------------------|-------------------------|
| Basic Needs | Food security | 1/5 | 30% |
| | Amenities | 1/5 | |
| | Shelter | 1/5 | |
| | Basic Health | 1/5 | |
| | Physical health | 1/5 | |
| Learning resources | Outstanding debt | 1/7 | 25% |
| | Tuition (current year) | 1/7 | |
| | Study-related expenses (current year) | 1/7 | |
| | Tuition (future years) | 1/7 | |
| | Study-related expenses (future years) | 1/7 | |
| | Management of resources- budgeting | 1/7 | |
| | Resources for learning | 1/7 | |
| Living Conditions | Conducive study environment | 1/5 | 20% |
| | Access to transport | 1/5 | |
| | Safety where I live | 1/5 | |
| | Victim of assault on campus | 1/5 | |
| | Victim of assault off-campus | 1/5 | |
| Participation | Participation in Learning | 1/3 | 10% |
| | Participation in Leisure activities (i.e. co-curricular/social activities) | 1/3 | |
| | Belonging | 1/3 | |
| Psychological wellbeing | Social support | 1/5 | 15% |
| | Feeling of Shame | 1/5 | |
| | Self-confidence | 1/5 | |
| | Someone to talk to when stressed/worried | 1/5 | |
| | Often worried | 1/5 | |

The students in the focus group also did an exercise to define appropriate deprivation cut-off points.

The following table gives their views.

Table 5.6: Deprivation cut-offs

| Recommended Dimension Name | Condensed Indicator | Recommended deprivation cut-off |
|-----------------------------------|--|---|
| Basic Needs | Food security | Deprived if student has limited access to adequate healthy food. Less than two meals a day |
| | Amenities | Deprived if you have no access to water, electricity and decent sanitation |
| | Shelter | Deprived if student has no accommodation of his/her own. e.g. squatting |
| | Access to basic healthcare | Deprived if student has no access to basic healthcare |
| | Physical health | Deprived if struggling with physical health |
| Learning resources | Tuition Fees (For previous, current and future years) | Deprived if a student's tuition fee account is in arrears or current fees are not paid, without a definite payment plan and/or sponsorship for future years of study is neither confirmed nor guaranteed |
| | Resources for learning (Learning materials, technology, stationery, ability to print, internet access, etc.) | Deprived if student lacks any of the following resources necessary for learning; critical technology e.g. computer or internet, prescribed books and other learning material, vital stationery and access to printing facilities |
| | Management of resources- budgeting | Deprived if unable to manage financial resources or to budget |
| Living conditions | Conducive study environment | Deprived if the living conditions make it difficult or impossible to study |
| | Access to transport | Deprived if transport challenges negatively affect learning and other study-related activities |
| | Safety and security | Deprived if the living conditions are not safe and secure |
| | Participation in learning | Deprived if there is any hindrance to participating in study-related activities (core and co-curricular activities) |

| Recommended Dimension Name | Condensed Indicator | Recommended deprivation cut-off |
|-----------------------------------|--|--|
| Participation | | (e.g. financial-affordability, cultural, racial, environmental, social, health, personal and political limitations) |
| | Participation in Leisure activities (i.e. co-curricular/social activities) | Deprived if there is any hindrance to participating in valued leisure activities (extra-curricular/social activities) (e.g. financial-affordability, cultural, racial, environmental, social, health, personal and political limitations) |
| | Belonging | Deprived if a student does not feel that the university environment is socially inclusive |
| Psychological wellbeing | Social support | Deprived if the social support needed to succeed in studies (from friends, family, mentors, housemates, roommates, etc.) is not adequate |
| | Dignity-Shame | Deprived if current state of being brings a sense of shame (for example, not being able to afford suitable clothing or toiletries) |
| | Confidence | Deprived if student lacks confidence |
| | Someone to talk to when stressed/worried | Deprived if student has no one to talk to when worried |
| | Worry | Deprived if constantly worried or anxious about personal challenges (e.g. funding, learning resources, workload, family, relationship, etc.) |

The table above shows the cut-off points which will be used in the quantitative analysis phase to determine whether or not a student is poor. The cut-off point definitions informed the response categories used in the survey (see Appendix I and Appendix O).

5.9 Conclusion

This chapter aimed to answer the second research question, that is, “Which contextual (economic, social, educational, etc.) factors shape and reflect multidimensional student poverty?” The voices of the students who participated in this study were the means to answer the question. The findings reveal that students face a plethora of deprivations which can be broadly categorised as follows: basic

needs which are most vital for student functioning or survival, essential resources for learning and living as a student, the living conditions and living arrangements of students, freedom of participation and aspects of psychological and psychological wellbeing. The evidence above highlights the most pressing deprivations faced by students, which together constitute multidimensional student poverty. Five broad dimensions of deprivation emerged from the data together with twenty-five informing and corresponding indicators (for expanded indicators see Section 5.8).

The exercises done in all the phases of the data collection and analysis of the data were informed by participatory methodologies, particularly the Individual Deprivation Measure which promotes the foregrounding of participant voices and views. Students also worked in a focus group to ratify the dimensions and to assign weights to the different dimensions, which they did as follows: basic needs (30%), learning resources (25%), living conditions (20%), psychological wellbeing (15%) and participation (10%). The effect of all these weights on the multidimensional student poverty index is explained and shown in the next chapter.

Finally, the dimensions, indicators and weights identified in this chapter were used to design the survey questionnaire (see Appendix I and Appendix O) which was administered to the entire student body. The results of the survey will be presented in the next chapter (Chapter 6).

Chapter 6: Towards an index of multidimensional student poverty - Quantitative findings

6.1 Introduction

The analysis reported in this chapter aims to answer the third research question of the project, which is “How best can these (dimensions of student deprivations) be incorporated in designing a Multidimensional Student poverty index?” Following the results of the qualitative analysis discussed in the preceding chapter (Chapter 5), the identified dimensions and indicators of multidimensional student poverty informed the development of a survey questionnaire, which was administered to students as explained in the methodology chapter (Chapter 4). The survey aimed to gather the data, which is used in the designing of the Multidimensional Student Poverty Index (MSPI) using the Alkire-Foster (AF) methodology, guided by central ideas of the Individual Deprivation Measure (IDM). To that end, this chapter gives the results and analysis of the quantitative analysis phase of this research.

The first section presents the demographic statistics of the participants. Personal and family biographical information is given in this section, focusing mainly on variables which relate to wellbeing and poverty. The second section gives the results of the analysis using the Alkire-Foster methodology. In particular, a detailed account of how the overall MSPI was constructed is given. Further, the contribution of each of the indicators to the global poverty score is set out. The third section shows how the MSPI can be decomposed according to various sub-groups, that is, the MSPI is calculated for different categories within demographic variables. The last section is a comprehensive summary of the significant findings from the quantitative analysis. Though the identification of indicators and dimensions as well as their weights was conducted using the Individual Deprivation Measure, none of the quantitative analysis was done using the IDM, as the quantitative part of the IDM is still under development and will only be released for global use in 2020⁵². A detailed discussion of the results and synthesis of the quantitative and qualitative results will be given in the next chapter (Chapter 7).

⁵² <https://iwda.org.au/the-individual-deprivation-measure/> last accessed 15 August 2018

6.2 Participant biographies

As noted earlier, the study was conducted on the Bloemfontein campus of the University of the Free State. The campus enrolled 27 530 students in the 2018 academic year, 60% of whom were females and 40% were males. These included 25 628 full-time students. The survey was distributed to all the students and a total of two thousand three hundred and two students (2302) completed the survey. Nevertheless, the final respondents used for this analysis after cleaning the data⁵³ were two thousand one hundred and eighty-one (2181). The structure of the questionnaire (see Appendix I) was as follows: Personal demographic information, family demographic information, and the five dimensions of deprivation containing the various indicators. To test for reliability of the questionnaire, (the internal consistency in the responses), the global Cronbach Alpha was calculated (Hoeboer, et al., 2018; Cronbach & Meehl, 1955). The Cronbach Alpha was 0.730, which is an acceptable level in determining internal consistency (Young, Ng, Pan, Fung, & Cheng, 2017).

This subsection summarises the biographical data of the participants and shows how some of the demographic variables compare with the actual university population. The biographical information of the respondents summarised below suggests that the sample of students who completed the survey was well-balanced and representative.

⁵³ The cleaning methods are explained in section 4.5.3 and 5.3

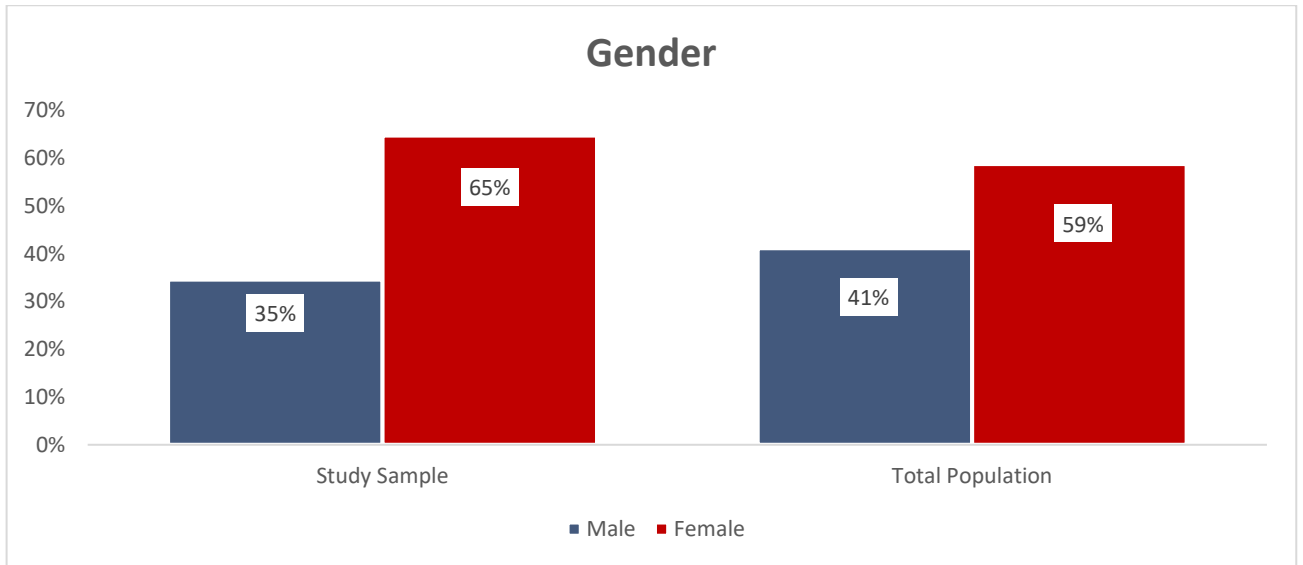


Figure 6.1: Genders of participants

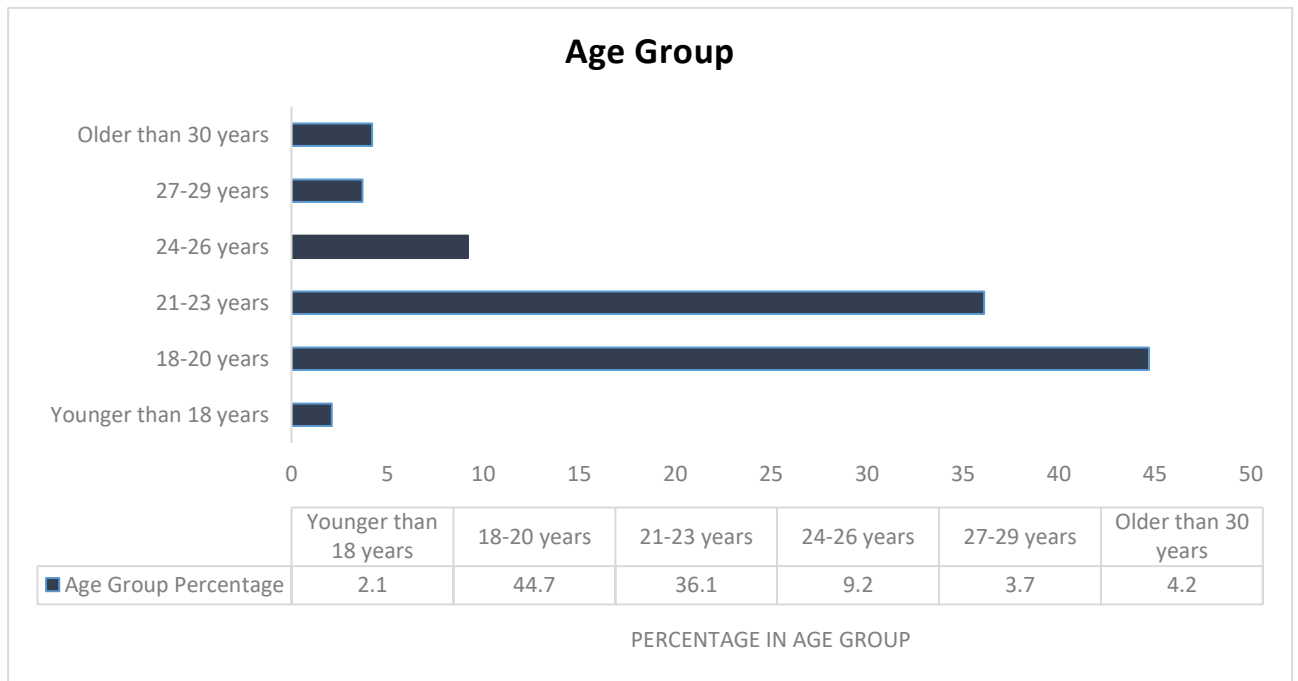


Figure 6.2: Age group of sample

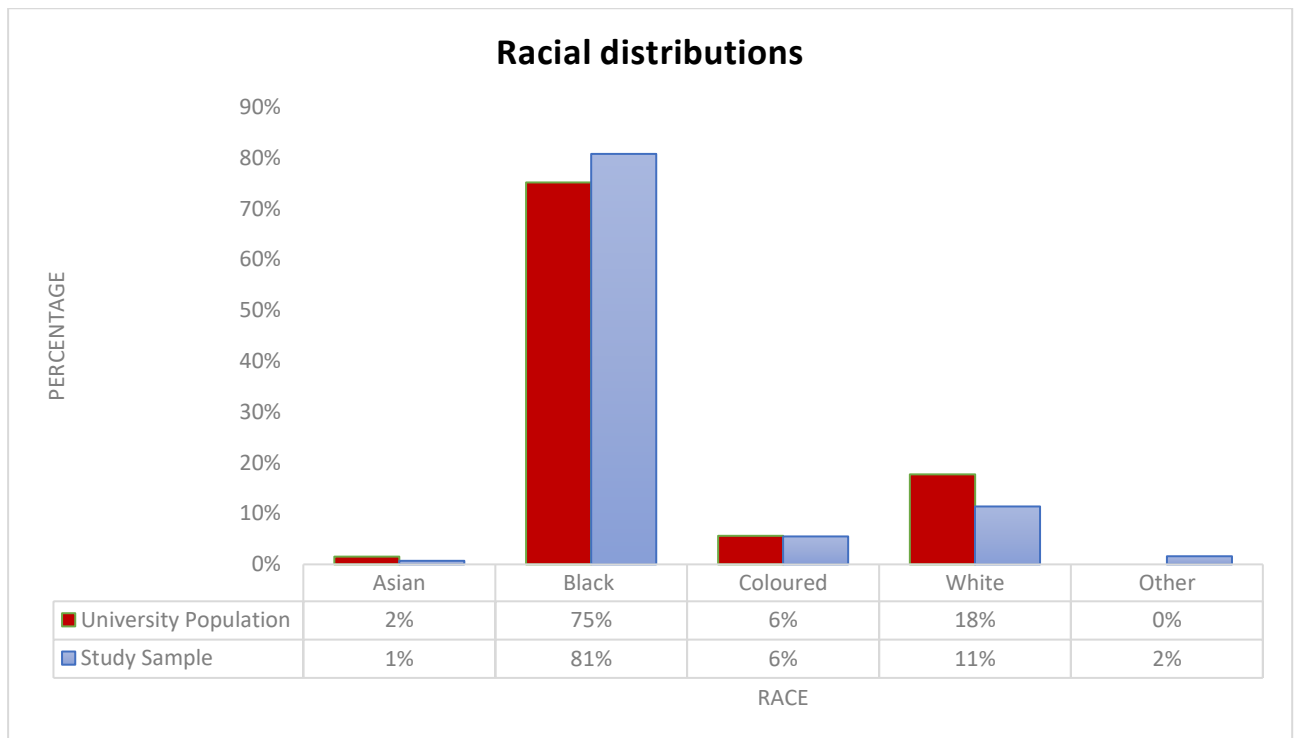


Figure 6.3: Racial distributions

From the above figures, most of the participants (64.8 %) were female, and the majority of the students (>80%) were black students (Figure 6.3) aged between 18 and 23 years of age (Figure 6.2). As shown above, these figures (see Figure 6.1 and Figure 6.3) reflect the demographic composition of the institution where the data was collected, the Bloemfontein campus of the UFS.

This study started at a time when South Africa was experiencing waves of student protests over student funding, particularly over the fact that a number of students had been financially excluded from accessing higher education (see Chapter 1 Section 1.6). Though government introduced a tuition fee-free education regime during the course of this project, as explained in Chapter 2, most of the students who participated in the study were not yet benefiting from this change. The biographies of the participants show that about 38% of the respondents were funded by government via the National Student Financial Aid Scheme (NSFAS) and close to 27% of them were supported by their families as shown in the figure 6.4 below.

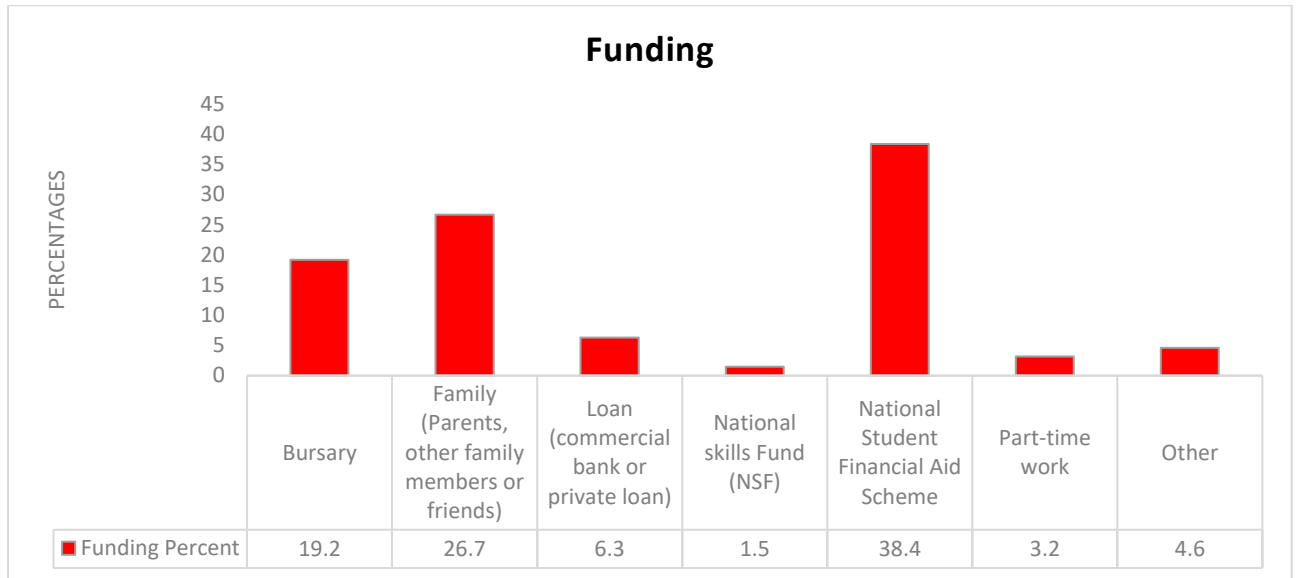


Figure 6.4: Source of university funding⁵⁴

Disaggregating the above by race shows that different racial groups access funding differently (p value of 0.00 for the χ^2 Goodness of fit test). As shown in Figure 6.5 below, about 44% of all black students use NSFAS, whereas only 6% of white students do, as most of them rely on parents and family to fund their studies.

⁵⁴ Tuition fees is about USD3 000 per year in South African universities. Living expenses are also close to USD 4000 per year. Total university expenses average USD7000 while average household income is USD 10 872 a year. See <http://www.oecdbetterlifeindex.org/countries/south-africa/> last accessed 23 February 2019

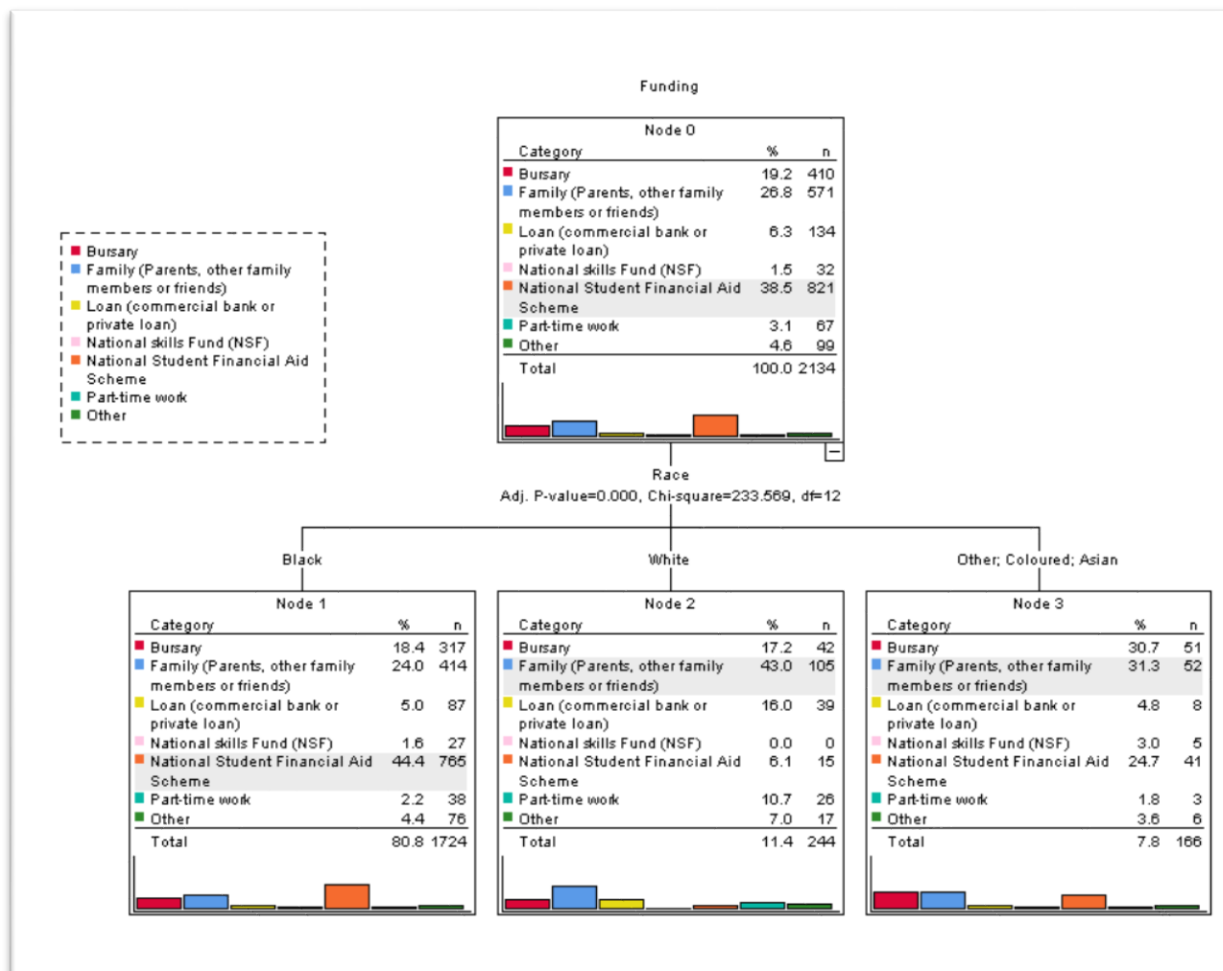


Figure 6.5: Race and Funding

One of the most significant shortcomings of NSFAS, which is used by the majority of black students as indicated in the previous chapter (Chapter 5), is that the money that students get is reportedly not enough to cover living expenses. There is also evidence of this in literature (McKay, Naidoo, & Simpson, 2018). This means that although the students may have funding for their studies, they struggle to cover other essential study-related costs like accommodation and food (de Jager, Nassimbeni, Daniels, & D'Angelo, 2018).

It was reported in the preceding chapter that the place of residence has an effect on the overall well-being of students, and consequently determines the incidence and intensity of deprivations they face. From the data collected, the majority of the students who participated in the study stayed off-campus in student accommodation⁵⁵ and only 16% stayed with family; as shown in Figure 6.6 below.

⁵⁵ 79.3% of the overall Bloemfontein UFS students stay off campus and only 5700 stay on campus

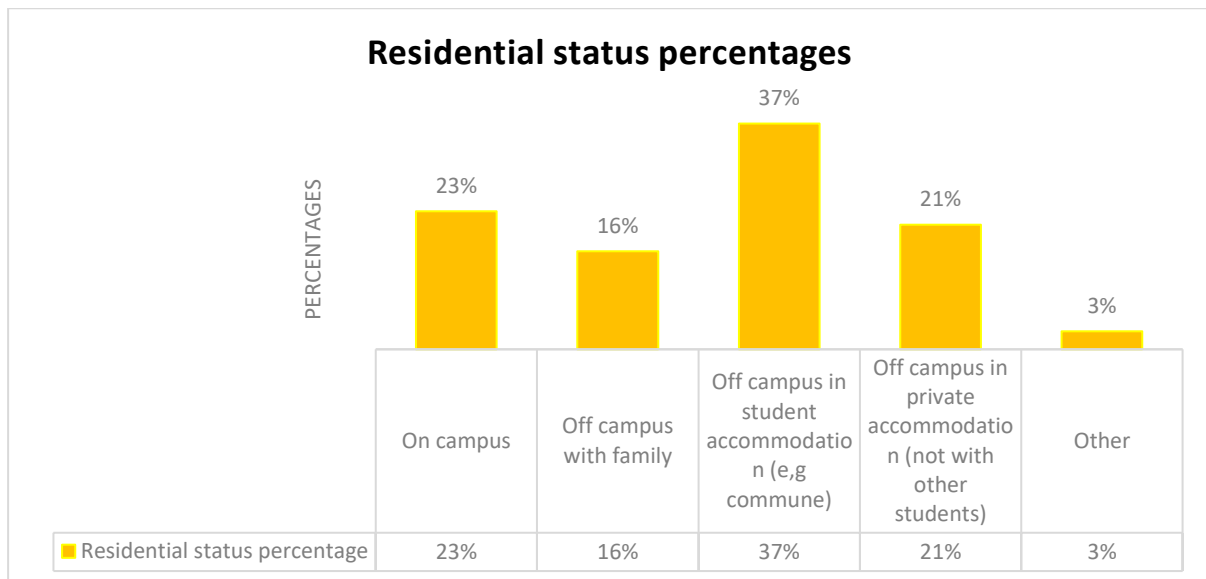


Figure 6.6: Residential Status of participants

Another important biographical marker is the type of high schools that the students attended before getting into tertiary education. Some scholars (Sachs, 2008; Rogerson, 2018) suggest that the type of school attended also determines the deprivations faced by the student. In this sample, only 15% of the students attended urban private schools, which are usually the best resourced and academically the best performing schools, enrolling the most financially capable students. The majority (56.4%) of the respondents attended rural and township schools and 25.1% attended Ex-model C schools, which are also well-resourced schools. Figure 6.7 below shows the distribution of the students by school attended.

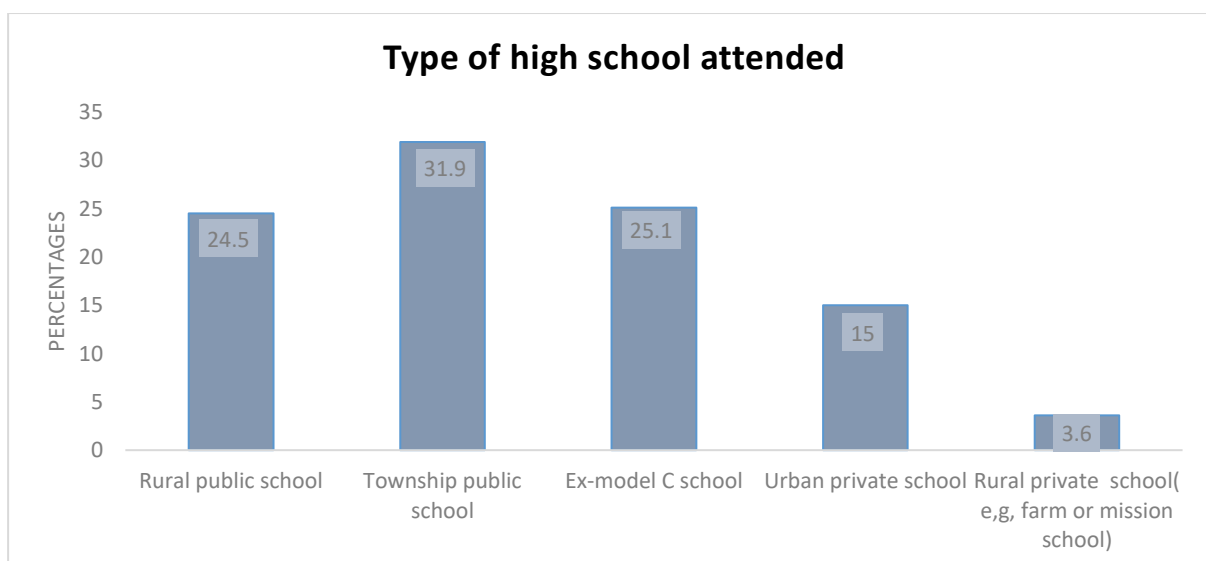


Figure 6.7: Type of high school attended

The choice of schools attended is usually related to the economic class of the families where the students belong. Most of the respondents reported that they come from middle class families as seen in Figure 6.8 below. The limitation of these numbers is that this is self-reported data, so some students may label their family's economic class inaccurately. Over 32% report coming from working class families and only 2% identify with the upper class.

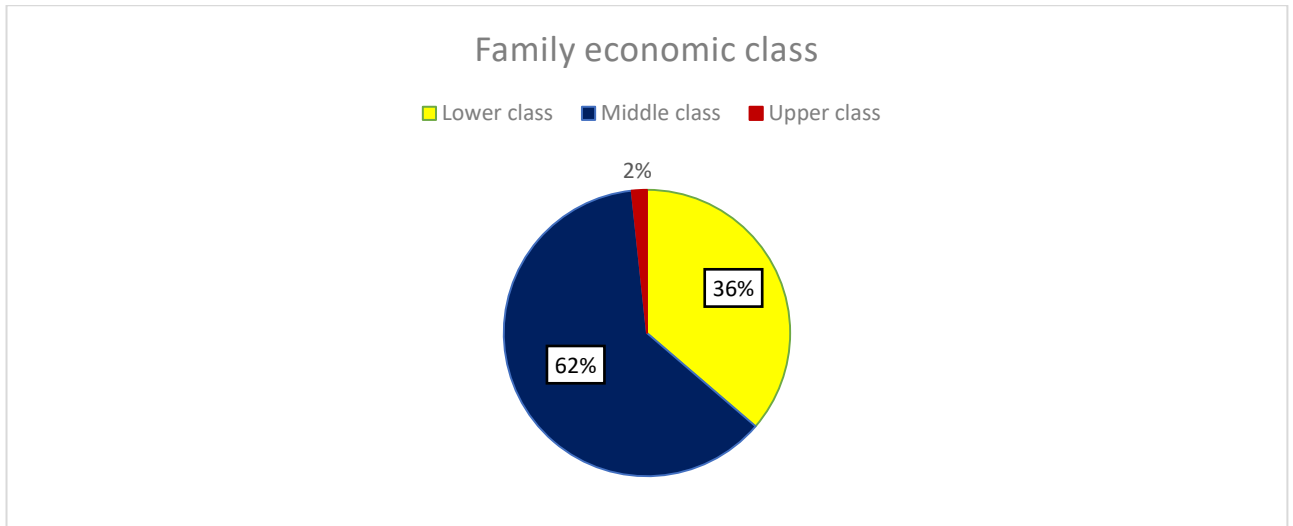


Figure 6.8: Family economic class

The historical narrative of segregation in South Africa has resulted in economic class being closely related to race (Fourie, Stein, Solms, Gobodo-Madikizela, & Decety, 2017; Hansen, 2018). Figure 6.9 below shows how the economic classes are distributed across various racial categories.

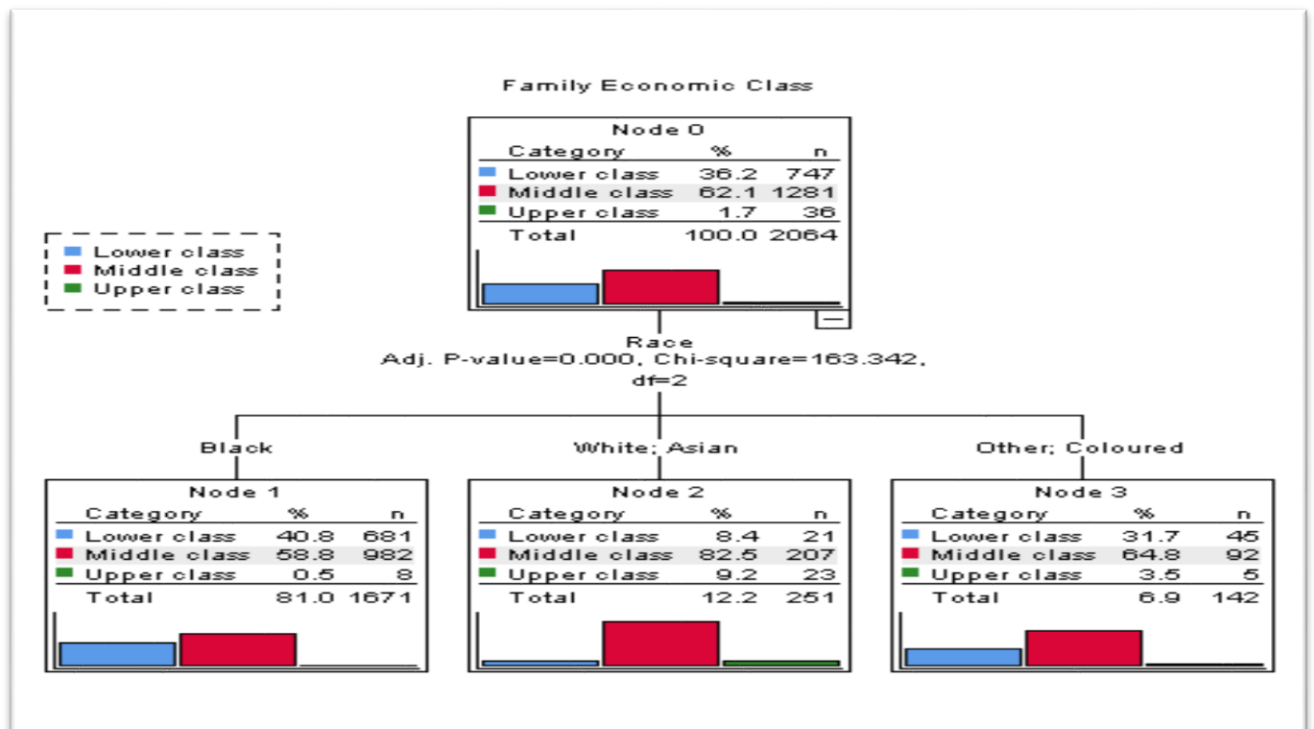


Figure 6.9: Family economic class and race

All the racial categories have most of their students coming from middle class families, although there is a statistically significant difference between the various classes within racial groups. From

the figure above, close to 40% of all black students report coming from working class families. Close to 32% of coloured students are also from working class families, while just 8% of white students report coming from working class families. The inverse trend holds for the upper class distribution, where only eight black students out of the 1671 black students indicated coming from upper class families and 23 out of 251 white and Asian students come from upper class families. Coloured students are, however, in neither extreme with 5 out of 142 students reportedly coming from upper class families.

Literature also suggests that the education status of a student’s family can have an effect on the number of deprivations a student experiences, as well as on a student’s probability of academic success (Kelly-Laubscher, Paxton, Majombodzi, & Mashele, 2017; Hébert, 2017; Strong, 2017). Students who come from homes with educated parents are reported to adjust better to the university environment than those who are first-generation students. The sample of students who participated in this study comprised up to 42% first-generation students. Figure 6.10 shows the percentage of the family members of research participants with tertiary education. The effect of this on their deprivations is presented in later sections of this chapter.

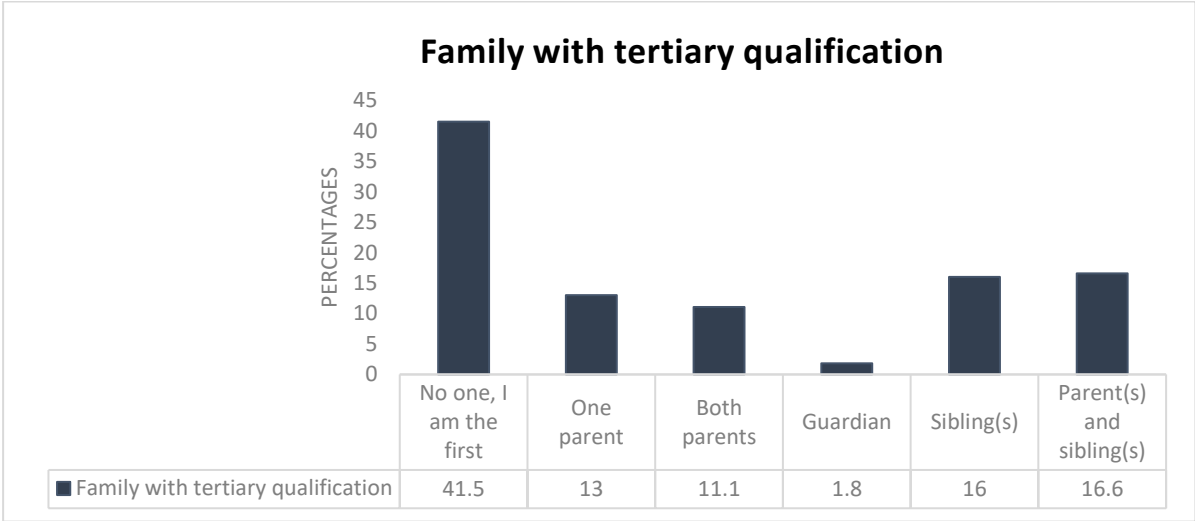


Figure 6.10: Generation status- family members' tertiary education

Figure 6.11 below shows that about 19% of the students come from homes where no-one is employed, and the majority come from homes with more than four people in total. A mentioned above, 20% come from homes where no-one is employed and close to 36% have only one employed person in the household. Figure 6.12 shows the number of people in households.

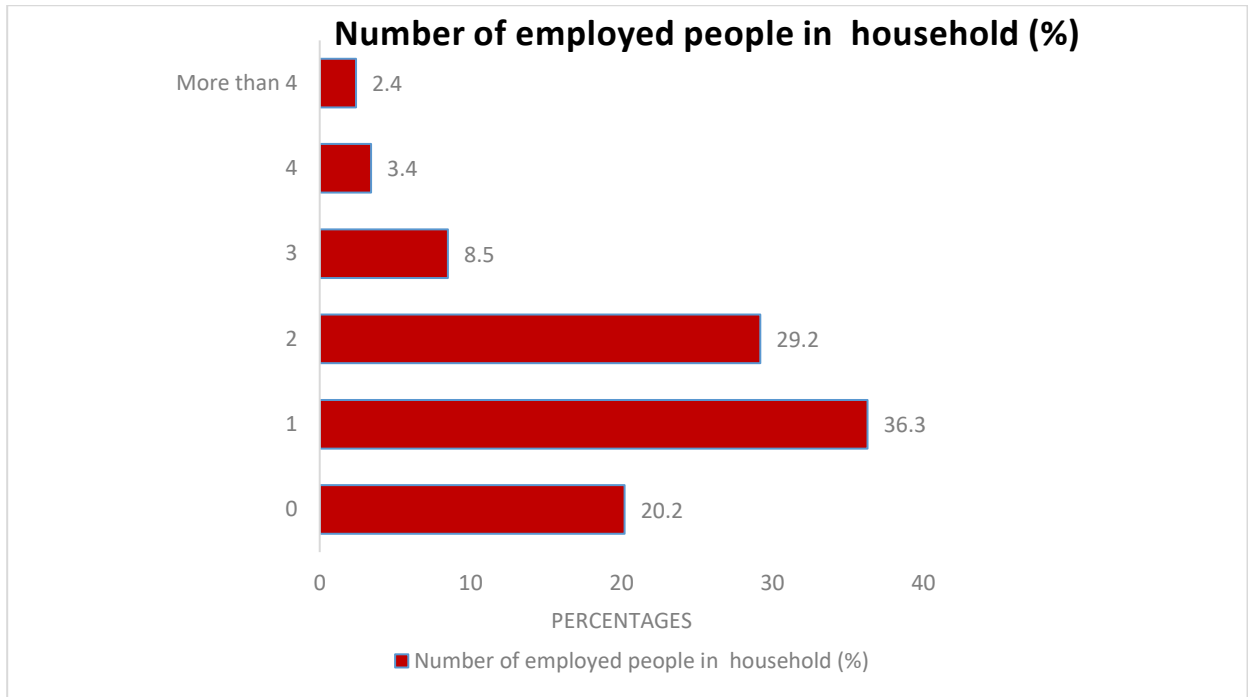


Figure 6.11: Number of employed people in household

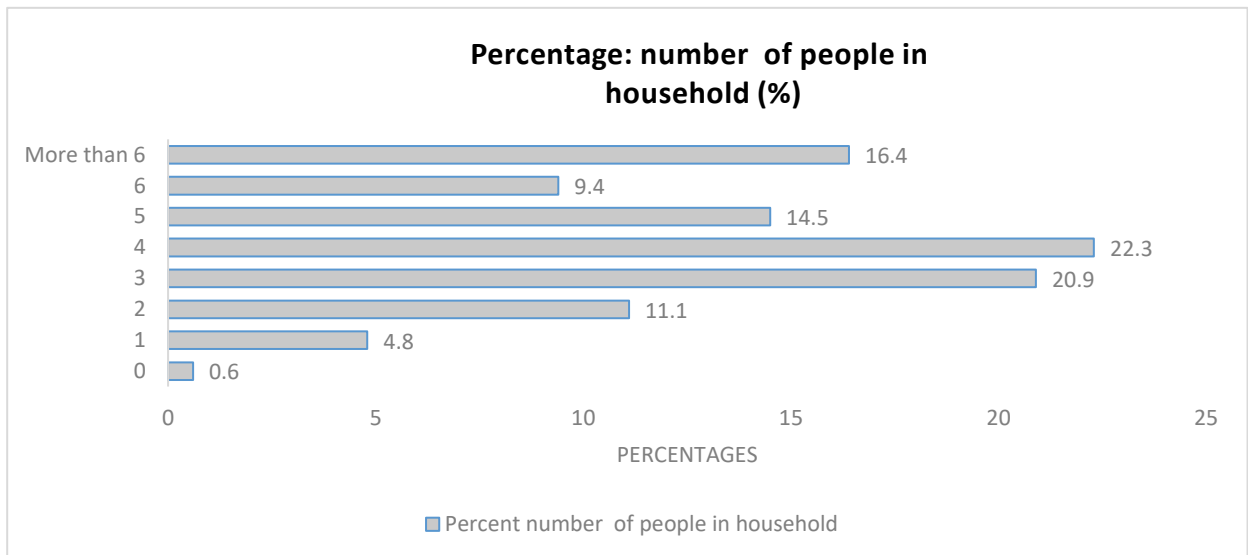


Figure 6.12: Number of people in household

As argued in Chapter 1, another shortcoming of NSFAS is that the instrument they use to determine students' need for funding examines gross household income and neglects to take into account the number of people the gross income provides for (Matsolo, Ningpuanyeh, & Susuman, 2018). As a result, students who come from large families with a gross household income barely above the threshold are neglected and are deemed non-deprived, whereas in reality they are indeed deprived. This was one of the issues raised by students during the 2015/2016 nationwide student protests. They argued that the number of employed people in a student's family, the number of dependants per household, and the number of dependants a particular student has may all impact on a student's

deprivation status. Figure 6.13 shows the number of dependants in the families of research participants.

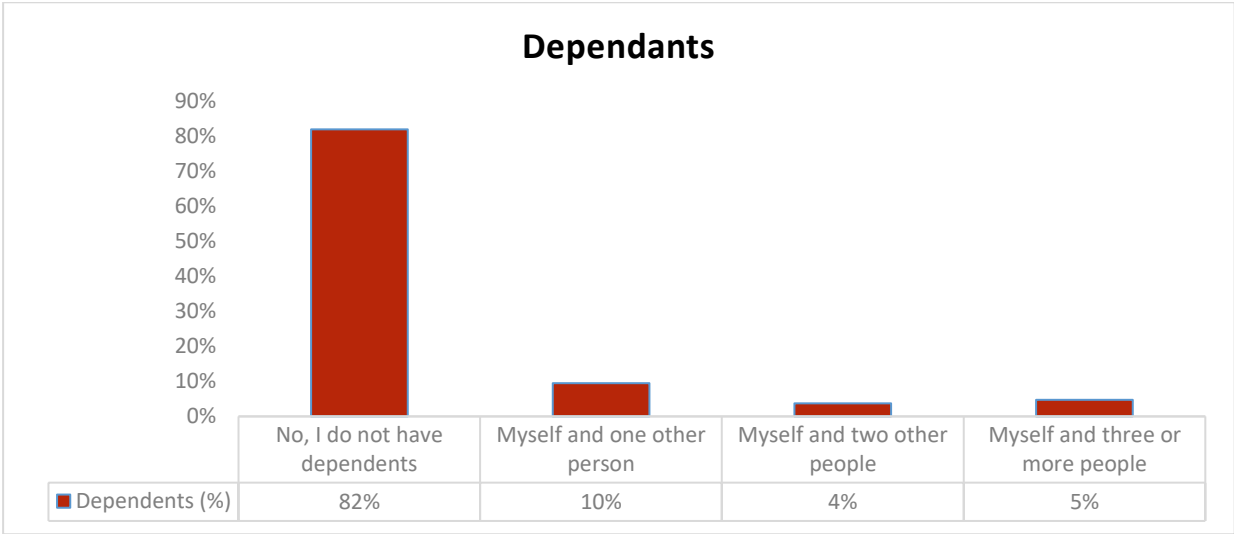


Figure 6.13: Dependants

Looking at the students' academic biographical information, Figure 6.14 below shows that all the faculties were represented. Figure 6.15 shows that 90% of the students were undergraduate students. Those with self-reported average marks of 50-70% form 60% of the respondents (Figure 6.16).

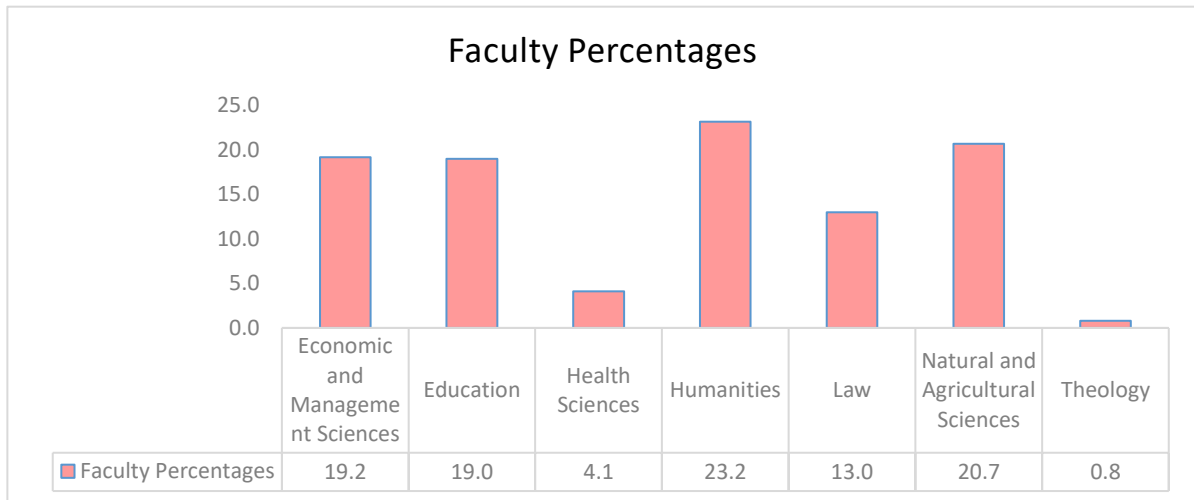


Figure 6.14: Faculty of registration

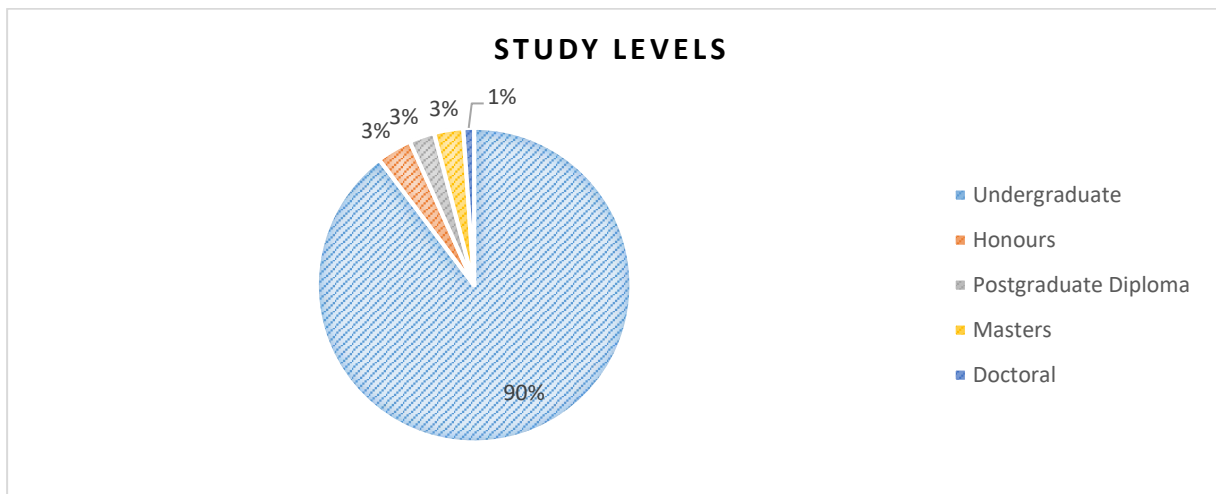


Figure 6.15: Study levels of participants

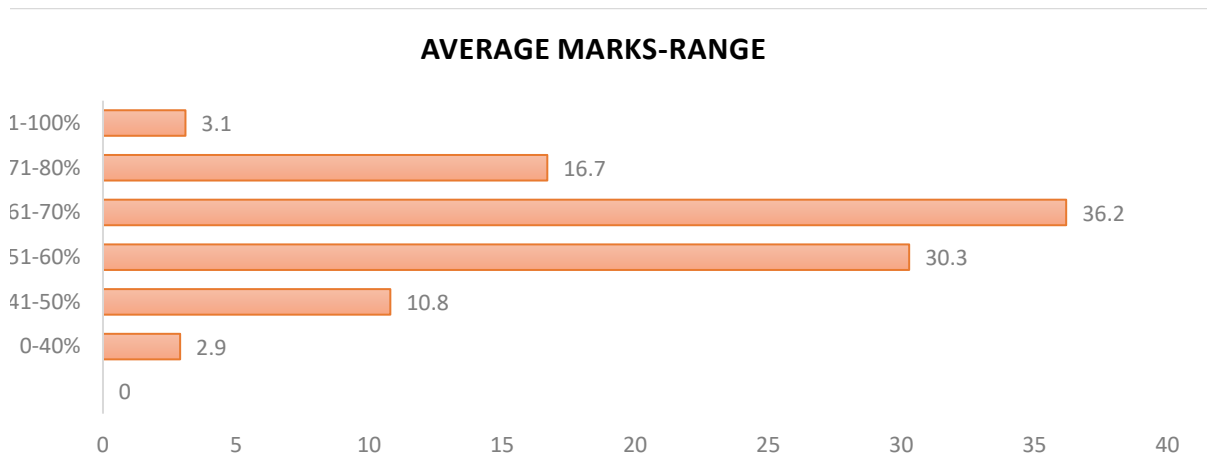


Figure 6.16: Reported average marks

Multidimensional poverty in general, and student poverty in particular, is shaped by a number of intersecting factors, which differ from individual to individual. Figures 6.1-6.15 presented above show how these different biographical profiles were distributed in the data. Moving beyond merely painting a picture of the participants, the biographic information shown above is used in the following sections as the basis for subgroup decompositions of the the calculated Multidimensional Student Poverty Index (MSPI) in Section 6.4.

6.3 Alkire-Foster Multidimensional Student Poverty Index (MPSI) design

6.3.1 Identification - Uncensored/Raw head counts

The first part of the Alkire-Foster methodology is termed the identification phase, where deprivation cut-offs are set by dimension to determine who is poor (Alkire, et al., 2015). All the indicators of student poverty were answered in a four-point Likert scale (strongly disagree=1, disagree=2, agree=3 and strongly agree=4). The survey was structured such that the first two poles of every indicator question depict a state of deprivation, whereas the last two point to a state of non-deprivation.

For the student sample of $n = 2181$ with $y = [y_{ij}]$ denoting the $n \times d$ matrix of achievements for i students across j indicators, an achievement entry of $y_{ij} \geq 0$ represents student i 's achievement in indicator j . A student's achievement in various indicators can be represented by the row vector $y_i = (y_{i1}, y_{i2}, \dots, y_{id})$. The column vector $y_{.j} = (y_{1j}, y_{2j}, \dots, y_{nj})$ represents the the distribution of a particular indicator j across all individuals under consideration. Since all the indicators had uniform codes and cut-offs, vector z was set to represent all the deprivation cut-offs

for all the indicators with $z_j > 0$ being the deprivation cut off (poverty line) in a multidimensional poverty indicator j . The poverty line was set at $z_j = 3$ meaning any value of 1 and 2 shows deprivation and 3 and 4 show non-deprivation. A deprivation matrix was then constructed from the above where $g^0 = [g_{ij}^0]$ given that each entry g_{ij}^0 is defined by

$$g_{ij}^0 = \begin{cases} 1 & \text{deprived} \\ 0 & \text{non - deprived} \end{cases} \quad \dots \quad (6.1)$$

That is, a student is deprived $g_{ij}^0 = 1$ when $y_{ij} < z_j$ and $g_{ij}^0 = 0$ when $y_{ij} \geq z_j$. The next step is to construct a column vector c of deprivations in the matrix g^0 . An i^{th} entry in vector c represents the sum of the weighted deprivations suffered by person i , that is $c_i = \sum_{j=1}^d w_j g_{ij}^0$; $0 \leq c_i \leq 1$ where w_j is the weight of indicator j . Each dimension has a unique weight as mentioned in Chapter 5. The indicators within each dimension were assigned equal weights, and their individual contribution to the overall score depends on the weight of the dimension the indicator falls in. The forthcoming Table 6.2 shows the uncensored head-count ratios for each of the indicators; some of the indicators⁵⁶ were reverse coded to ensure that a code of 1 and 2 represent a state of deprivation. Figure 6.17 also shows a summary of the uncensored or raw head-count ratios for each of the indicators as well as for the dimensions (including weights) of student deprivations.

⁵⁶ Physical health, Outstanding fees, Worry and Shame

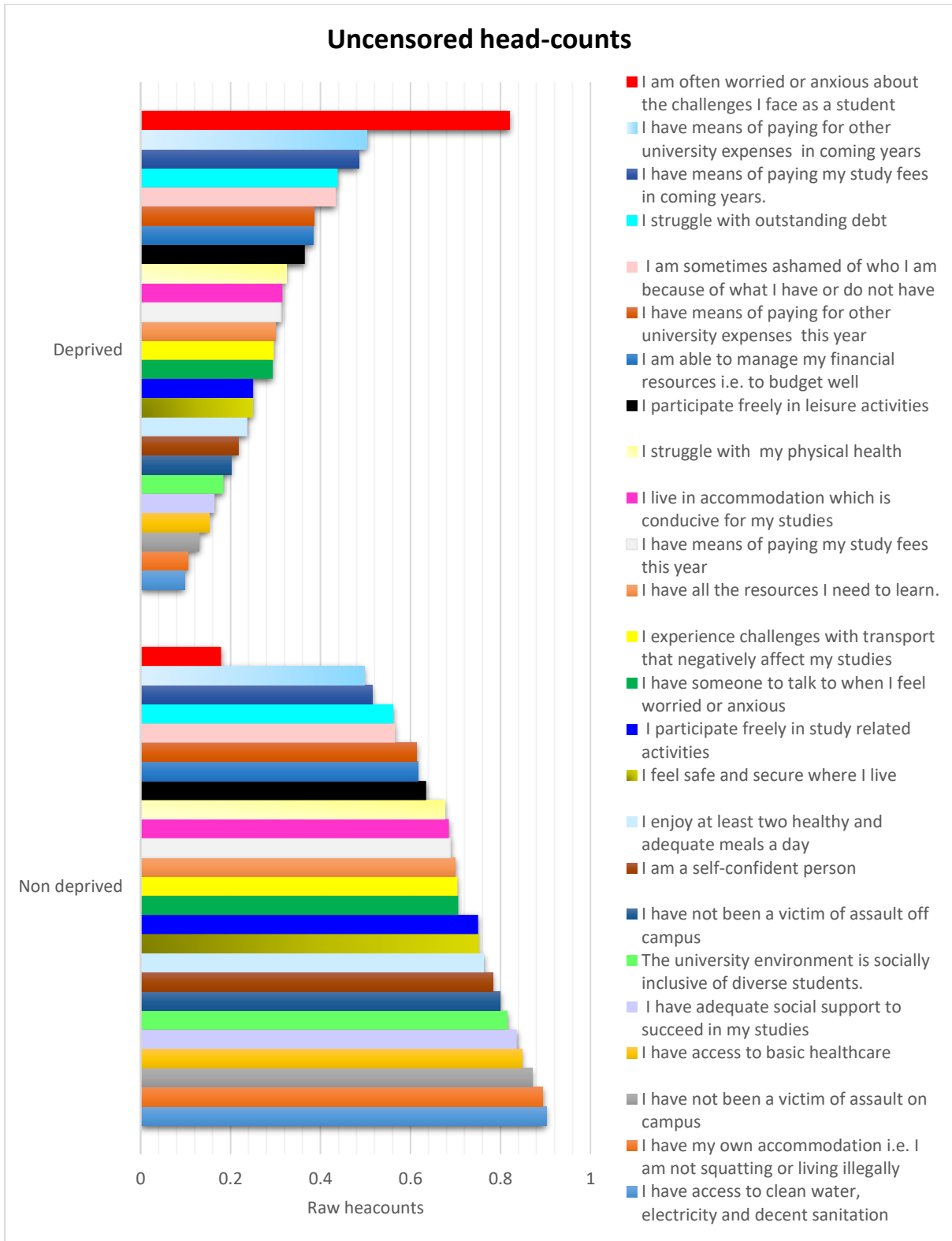


Figure 6.17: Uncensored head-count ratios

Grouping the above deprivations indicators according to the respective dimensions into which they fall, from Figure 6.18 below, we observe that learning resources and psychological wellbeing are the

areas with the most student deprivations, followed by participation, living conditions, and basic needs respectively⁵⁷.

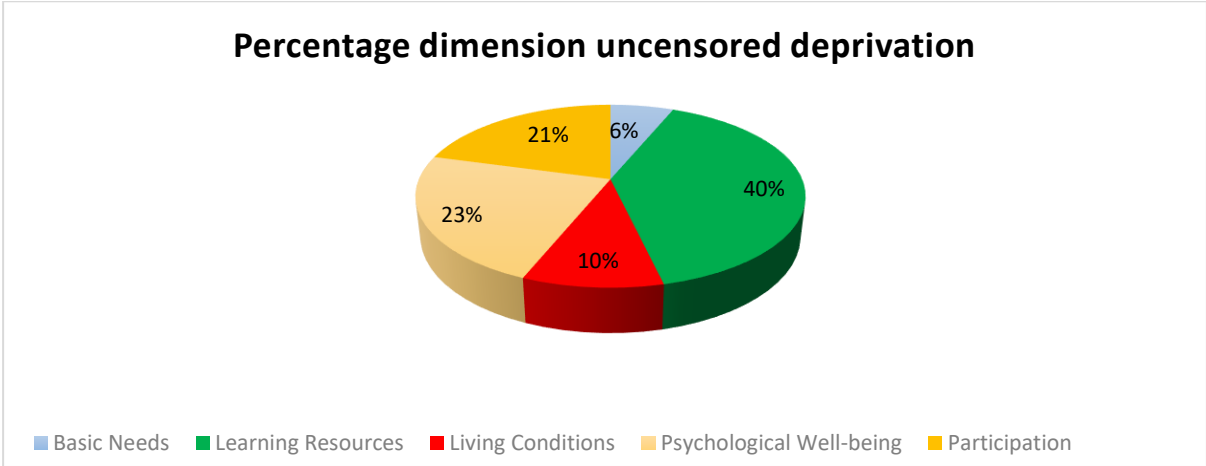


Figure 6.18: Percentage dimension uncensored deprivation

The table below gives a detailed summary of the above graphs. Specifically, the graphs show the actual uncensored indicator headcounts, the actual raw headcounts for each dimension and each dimension’s assigned weight. The table also shows the indicator variable names as they shall be referred to for the rest of the chapter.

Table 6.1: Raw head-count ratios

| Dimension | Indicator description | Indicator name | Raw head-counts | Students deprived in dimension |
|------------------------------------|---|------------------|-----------------|--------------------------------|
| Basic Needs [weight 30%] | I enjoy at least two healthy and adequate meals a day | Food | 23.7% | 3.5% |
| | I have my own accommodation, i.e., I am not squatting or living illegally | Accommodation | 10.6% | |
| | I have access to clean water, electricity and decent sanitation | Amenities | 9.8% | |
| | I have access to basic healthcare | Basic healthcare | 15.2% | |
| | I struggle with my physical health | Physical health | 32.4% | |
| | I struggle with outstanding debt | Outstanding debt | 43.8% | |
| | I have means of paying my study fees Current year (CY) | Tuition CY | 31.2% | |
| | I have means of paying for other university expenses Current year (CY) | Stud exp CY | 38.6% | |

⁵⁷ The percentages shown are the percentage contribution of each dimension in relation to itself. The values for the raw head counts of each dimension are given below.

| Dimension | Indicator description | Indicator name | Raw head-counts | Students deprived in dimension |
|--|--|-----------------------|-----------------|--------------------------------|
| Learning resources [weight 25%] | I have means of paying my study fees in Future Years (FY) | Tuition FY | 48.5% | 22.4% |
| | I have means of paying for other university expenses in Future Years (FY) | Stud exp FY | 50.3% | |
| | I am able to manage my financial resources, i.e., to budget well | Budgeting | 38.4% | |
| | I have all the resources I need to learn. | Resources | 30.0% | |
| Living conditions [weight 20%] | I live in accommodation which is conducive to my studies | Living environment | 31.5% | 5.5% |
| | I experience challenges with transport that negatively affect my studies | Transport | 29.6% | |
| | I feel safe and secure where I live | Security | 24.9% | |
| | I have not been a victim of an assault on campus | Assault campus | 13.0% | |
| | I have not been a victim of assault off-campus | Assault Off-campus | 20.1% | |
| Psychological wellbeing [weight 15%] | I have adequate social support to succeed in my studies | Social support | 16.4% | 12.9% |
| | I am sometimes ashamed of who I am because of what I have or do not have | Shame | 43.4% | |
| | I am a self-confident person | Confidence | 21.7% | |
| | I have someone to talk to when I feel worried or anxious –Support when worried | Support worried | 29.4% | |
| | I am often worried or anxious about the challenges I face as a student | Worry | 82.1% | |
| Participation [weight 10%] | The university environment is socially inclusive of diverse students. | Environment | 18.4% | 11.6% |
| | I participate freely in study-related activities | Participation study | 25.0% | |
| | I participate freely in leisure activities | Participation leisure | 36.5% | |

The above Table 6.1 shows that though an overall figure of 12.9% of the student sample are deprived in the psychological wellbeing dimension, up to 82% of the total sample are deprived in the worry indicator of the same dimension and 43% are deprived in the shame indicator. In addition, many students reported a great deal of insecurity when it comes to resources for future study in terms of

tuition fees (50%) and resources to cater for living expenses (43%). The learning resources dimension had at least 30% deprived across all the indicators, making it the highest contributor to the overall unweighted deprivation score. Another area with a high deprivation score is in living conditions, where close to 32% live in conditions which are not conducive for studying (see Figure 6.6 for the residential status of students). Under the basic needs dimension, 24% of the sample is food insecure, 32 % struggle with their physical health while only 9% and 10% struggle to get decent amenities and secure their own accommodation respectively. Close to 19% of the students reported not feeling welcome at the university. Close to 37% are not free to participate in valued leisure activities. A detailed discussion of these statistics and what they mean for student lives and wellbeing will be given in the next chapter, Chapter 7.

6.3.2 Censored deprivation matrix

In as much as raw head count ratios show deprivation scores for each indicator, they do not distinguish between those who are deprived in a particular indicator and also multidimensionally poor and those who may be deprived but not poor. The censored head-count ratio addresses this challenge by censoring out those who are not multidimensionally poor from the calculation of the head-count ratio; the result is a censored head-count ratio. To achieve this, a censor matrix is created, taking into account a second cut-off point k , which considers the number of dimensions one has to be deprived in for such a person to be considered multidimensionally poor; the cut-off is given as a percentage. A censor matrix $g^o(k)$ is obtained from g^o by replacing its i^{th} row g_i^o with a vector of zeroes whenever the $\rho_k = 0$, meaning if a student is not multidimensionally poor, his or her deprivations are censored out. The new matrix excludes all those who are considered non-poor as explained above. From the censored matrix, a censored vector of deprivation counts $c(k)$ is created which differs from vector c in that it reflects zero deprivations only for everyone regarded as non-poor at cut-off k . That is,

$$c_i(k) = c_i \rho(y_i, z) \text{ and } g_{ij}^o(k) = g_{ij}^o(\rho(y_i, z)) \quad \dots \quad (6.2)$$

More formally, as mentioned in Chapter 3, if $\rho: \mathbb{R}_+^d \times \mathbb{R}_{++}^d \rightarrow \{0,1\}$ let ρ_k be the identification function that maps from person i 's achievement vector $y_i \in \mathbb{R}_+^d$ and cut-off vector z in \mathbb{R}_{++}^d to an indicator variable (Alkire & Santos, 2010, p. 11). ρ_k takes the value of 1 when $c_i \geq k$ and $\rho_k(y_i, z) = 0$ when $c_i < k$. One is then regarded as poor if their weighted deprivation count is not less than the

value k . This dual cut-off aspect is one of the strongest arguments for the Alkire –Foster Method (see Chapter 3, Section 3.3.3).

I decided to use a cut-off of $k = 30\%$ to ensure that someone is classified as multidimensionally poor if he or she is deprived in more than one dimension. This is because the highest weight assigned to the single dimension is 30% as shown in the table above. The global MPI has three dimensions with equal weights and it has a cut-off of 33% which ensures that one is deprived if one is deprived in more than one dimension (Mushongera, et al., 2016). The table and figure below show the censored deprivation head-counts and how they compare to the raw head-count ratios.

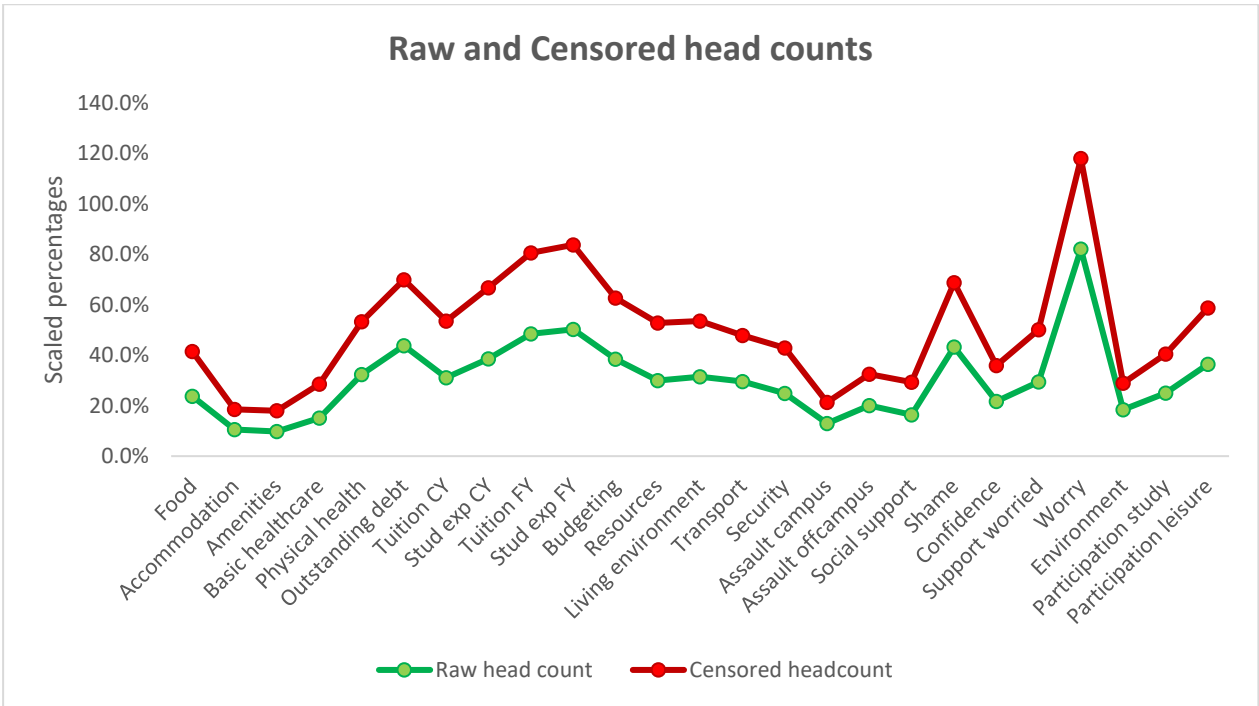


Figure 6.19: Censored vs. raw head-counts

Figure 6.19 is summarised in Table 6.2 together with the percentages of those who are deprived and multidimensionally not poor. In other words, the table shows the percentage of the students who are censored out per dimension.

Table 6.2: Actual Censored Vs. Raw head-counts

| | Raw head count (uncensored deprivation score) | Deprived in a particular indicator but not Multidimensionally Poor | Censored head-count |
|-----------------------|--|---|----------------------------|
| Worry | 82.1% | 46.2% | 35.9% |
| Stud expenses FY | 50.3% | 16.7% | 33.6% |
| Tuition FY | 48.5% | 16.4% | 32.1% |
| Stud expenses CY | 38.6% | 10.3% | 28.2% |
| Outstanding debt | 43.8% | 17.5% | 26.2% |
| Shame | 43.4% | 17.9% | 25.4% |
| Budgeting | 38.4% | 14.1% | 24.3% |
| Learning resources | 30.0% | 7.1% | 22.9% |
| Tuition CY | 31.2% | 8.8% | 22.4% |
| Participation leisure | 36.5% | 14.1% | 22.3% |
| Living environment | 31.5% | 9.5% | 22.0% |
| Physical health | 32.4% | 11.5% | 20.9% |
| Support worried | 29.4% | 8.7% | 20.7% |
| Transport | 29.6% | 11.3% | 18.3% |
| Security | 24.9% | 6.9% | 18.0% |
| Food | 23.7% | 6.0% | 17.7% |
| Participation study | 25.0% | 9.5% | 15.5% |
| Confidence | 21.7% | 7.5% | 14.2% |
| Basic healthcare | 15.2% | 1.8% | 13.4% |
| Social support | 16.4% | 3.5% | 12.9% |
| Assault Off-campus | 20.1% | 7.7% | 12.4% |
| Environment | 18.4% | 7.9% | 10.5% |
| Assault campus | 13.0% | 4.6% | 8.4% |
| Amenities | 9.8% | 1.6% | 8.2% |
| Accommodation | 10.6% | 2.6% | 8.0% |

The censored head-count ratios presented above show that not everyone who is deprived in any particular dimension is multidimensionally poor. Up to 46% of those deprived in the worry variable are actually not multidimensionally poor, although there is a relationship between those who lack basic learning resources and multidimensional poverty. To test if there is a difference between the

Raw and Censored head-counts, a t-test is conducted assuming unequal variances⁵⁸. The hypotheses are:

$$H_0: \text{Mean of Raw head-counts} = \text{Mean of Censored head-counts}$$

$$H_1: \text{Mean of Raw head-counts} \neq \text{Mean of Censored head-counts}$$

The results of the test are shown in Table 6.3.

Table 6.3: t-Test: Two-Sample Assuming Unequal Variances

| | <i>Raw head count</i> | <i>Censored head-count</i> |
|------------------------------|-----------------------|----------------------------|
| Mean | 0.305808648 | 0.197915885 |
| Variance | 0.024570564 | 0.006208637 |
| Observations | 25 | 25 |
| Hypothesised Mean Difference | 0 | |
| Df | 35 | |
| t Stat | 3.0749188 | |
| P(T<=t) one-tail | 0.002033892 | |
| t Critical one-tail | 1.689572458 | |
| P(T<=t) two-tail | 0.004067783 | |
| t Critical two-tail | 2.030107928 | |

The t-tests done above have two-tailed p-values<0.05 meaning we reject the null hypothesis and conclude that there is indeed a statistically significant difference between the raw and censored head-count ratios. Though the censored head-count ratios follow a comparable trend with the raw head-count ratios, the difference between the two is critical as censoring removes those who may be deprived in an indicator but are not multidimensionally poor, and leaves only those who are deprived and multidimensionally poor. That is, censoring does not only re-scale the achievement matrix, but it effectually creates new classes of deprivation.

6.3.3 The Adjusted head count ratio— M_o

Using the censored head-counts to determine poverty still gives an incomplete picture of poverty as it does not take into account the intensity of poverty, the extent to which poor students are poor.

⁵⁸ Assuming equal variance places a judgement on the hypothesis before running the test so I avoided that by assuming unequal variance

Therefore the next step in constructing the MSPI is using the above matrices to calculate the Multidimensional Head-count Ratio (H), the Intensity of Poverty among the Poor (A), and the Adjusted Head-count Ratio (M_o) through summarising (obtaining the mean) of the identification vector, the individual deprivation share, and the individual censored c vector at any level of k respectively. More formally, the adjusted head count M_o is then the mean of the matrix $g^o(k)$, that is

$$M_o = \sum_{j=1}^d w_j \mu(g_{\cdot j}^o(k)) \quad \dots \quad (6.3)$$

Where μ denotes the arithmetic mean operator i.e.

$$M_o = \sum_{i=1}^n \sum_{j=1}^d \frac{g_{ij}^o}{nd} \quad \dots \quad (6.4)$$

M_o can be seen as a weighted sum of the deprivations the poor experience, divided by the total number of students, multiplied by the total number of indicators considered (Alkire & Santos, 2011). M_o is therefore just a product of the head-count ratio (H), the proportion of people who are poor, and the average deprivation share among the poor (A), $M_o = H * A$. H represents the incidence of poverty, $H = \frac{q}{n}$ or $H = h_j(k) = \mu(g_{\cdot j}^o(k))$ where q is the number of multidimensionally poor students at cut-off k . If $\frac{c_i(k)}{d}$ represents the fraction of weighted indicators in which the poor person i is deprived, the average of that function gives the intensity of poverty A where $A = \sum_{i=1}^n \frac{c_i(k)}{dq}$. The M_o measure (Adjusted Head-count Ratio) therefore summarises information on the incidence of poverty and the intensity of multidimensional poverty, and is generally referred to as the multidimensional poverty index. I chose a cut-off of $k = 30\%$ for normative reasons mentioned above. However, to get a sense of how the values would differ if I choose different cut-off points, Figure 6.20 shows values of H and M_o at various cut-offs starting at $k = 10\%$ and incrementing by 5% up to 100%. At a cut-off of 10% about 30% of the students would be multidimensionally poor though at the same cut-off, close to 80% would be erroneously labelled as poor according to the censored headcount ratio. Therefore, the censoring done with the M_o above ensured that close to 50% of those who would have been labelled as poor while they are actually not multidimensionally poor are exempted. Increasing the cut-offs leads to a decrease in that number of multidimensionally poor students. That is, the stricter or higher the cut-off, the fewer students who would be considered multidimensionally poor.

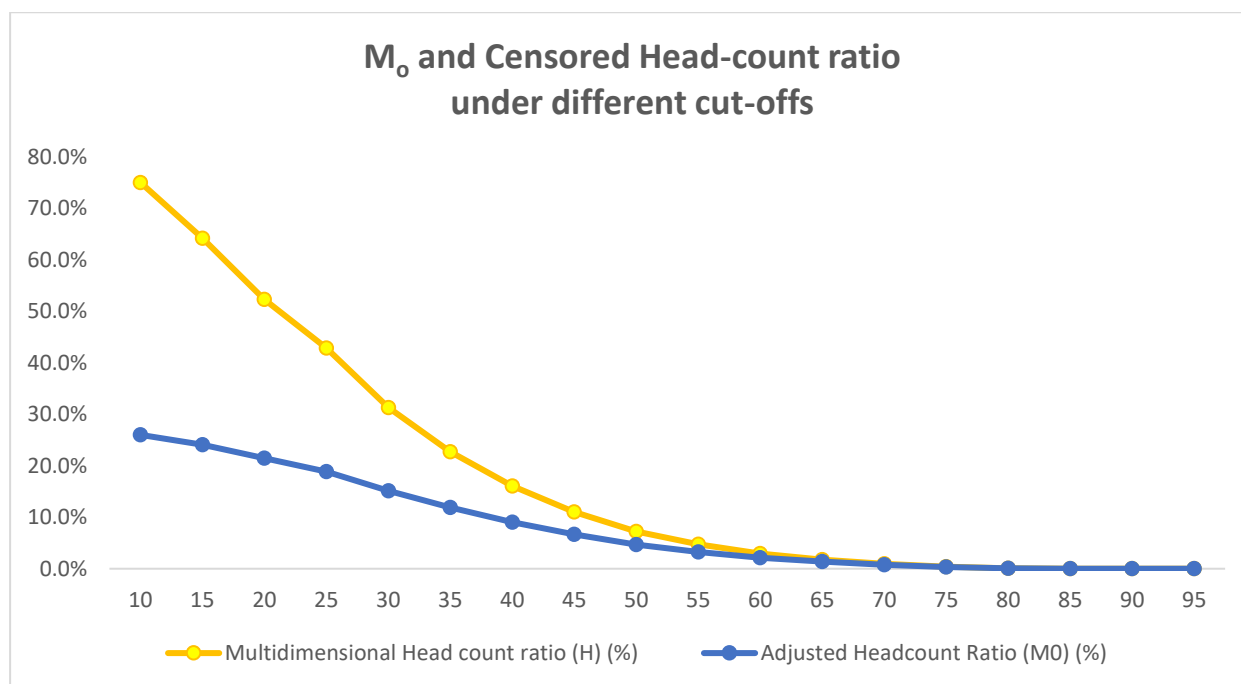


Figure 6.20: M_0 and Censored Head-count ratio for different k values

Table 6.4 below gives the values of the censored head-counts, adjusted head-count ratios as well as the intensity of poverty at the different cut-off points (Sensitivity analysis).

Table 6.4: Sensitivity analysis - M_0 and Censored Head-count ratio for different k values

| Poverty | | | |
|--------------------|--|---|--|
| Cut-off (k) | Multidimensional Head count ratio (H) (%) | Intensity of poverty among the poor (A)% | Adjusted Head-count Ratio (M_0) (%) |
| 10 | 86.1% | 31.8% | 27.4% |
| 15 | 75.0% | 34.7% | 26.0% |
| 20 | 64.1% | 37.6% | 24.1% |
| 25 | 52.3% | 41.0% | 21.5% |
| 30 | 42.8% | 44.0% | 18.8% |
| 35 | 31.3% | 48.3% | 15.1% |
| 40 | 22.7% | 52.3% | 11.9% |
| 45 | 16.0% | 56.5% | 9.1% |
| 50 | 11.0% | 60.5% | 6.7% |
| 55 | 7.2% | 64.8% | 4.7% |
| 60 | 4.7% | 68.7% | 3.2% |
| 65 | 2.9% | 72.5% | 2.1% |
| 70 | 1.8% | 75.9% | 1.4% |

| Poverty | | | | |
|-------------------------------|--|---|---|--|
| Cut-off (<i>k</i>) | Multidimensional Head count ratio (H) (%) | Intensity of poverty among the poor (A)% | Adjusted Head-count Ratio (M_0) (%) | |
| 75 | 1.0% | 79.3% | 0.8% | |
| 80 | 0.4% | 82.9% | 0.3% | |
| 85 | 0.1% | 88.0% | 0.1% | |
| 90 | 0.0% | 0.0% | 0.0% | |
| 95 | 0.0% | 0.0% | 0.0% | |
| 100 | 0.0% | 0.0% | 0.0% | |

The above table and figure show that about 19% of the students are multidimensionally poor at the chosen poverty cut-off of $k = 30$. Looking at absolute differences between the incidence and intensity of poverty shows that the higher the incidence, the lower the intensity for cut-offs less than 30% and that the reverse is true for cut-offs over 35%. The change happens at the cut-off of 30% where there is the least absolute difference between the incidence of poverty and the intensity of poverty among those who experience poverty. This further validates the selection of a cut-off of 30% as it has comparably moderate intensity and incidence. As mentioned above, there is an inverse relationship between intensity and head-count as k increases, that is, the higher the cut-off, the lower the number of multidimensionally poor students and also the higher the intensity of poverty among the poor. For instance, pushing the cut-off to $k = 50$ reduces the percentage of multidimensionally poor students to 6.7% although the 11% who experience poverty at this cut-off are deprived in over 60% of the indicators. The fact that the Alkire-Foster multidimensional poverty index can be evaluated at different cut-offs allows the user to test different normative positions with ease by simply changing the cut-offs and observing the effect on the incidence and intensity of poverty, which is another strength of the approach.

6.3.4 Percentage indicator contribution to M_0

Another significant advantage of the Alkire-Foster's adjusted head-count ratio M_0 is that the M_0 can be broken down into its building blocks, that is, the contribution of each indicator to the overall score can be calculated. The contribution of indicator j to M_0 can be expressed as

$$Contr_j = w_j \times \frac{\mu(g_j^0(k))}{M_0} \dots \quad (6.5)$$

Where $g_j^o(k)$ is the j^{th} column of the censored matrix $g^o(k)$ and w_j is the adjusted weight of the indicator j .

The fact that the M_o can be decomposed by subgroup as well as by indicator is an additional advantage over working with the raw head-count H which cannot be broken down in that way. Figure 6.21 shows how each of the chosen indicators contribute to the overall poverty score. Of note, physical health, that is, struggling with physical health, was cited as the highest contributor to the M_o followed by worry primarily about funding for future studies and future study-related expenses.

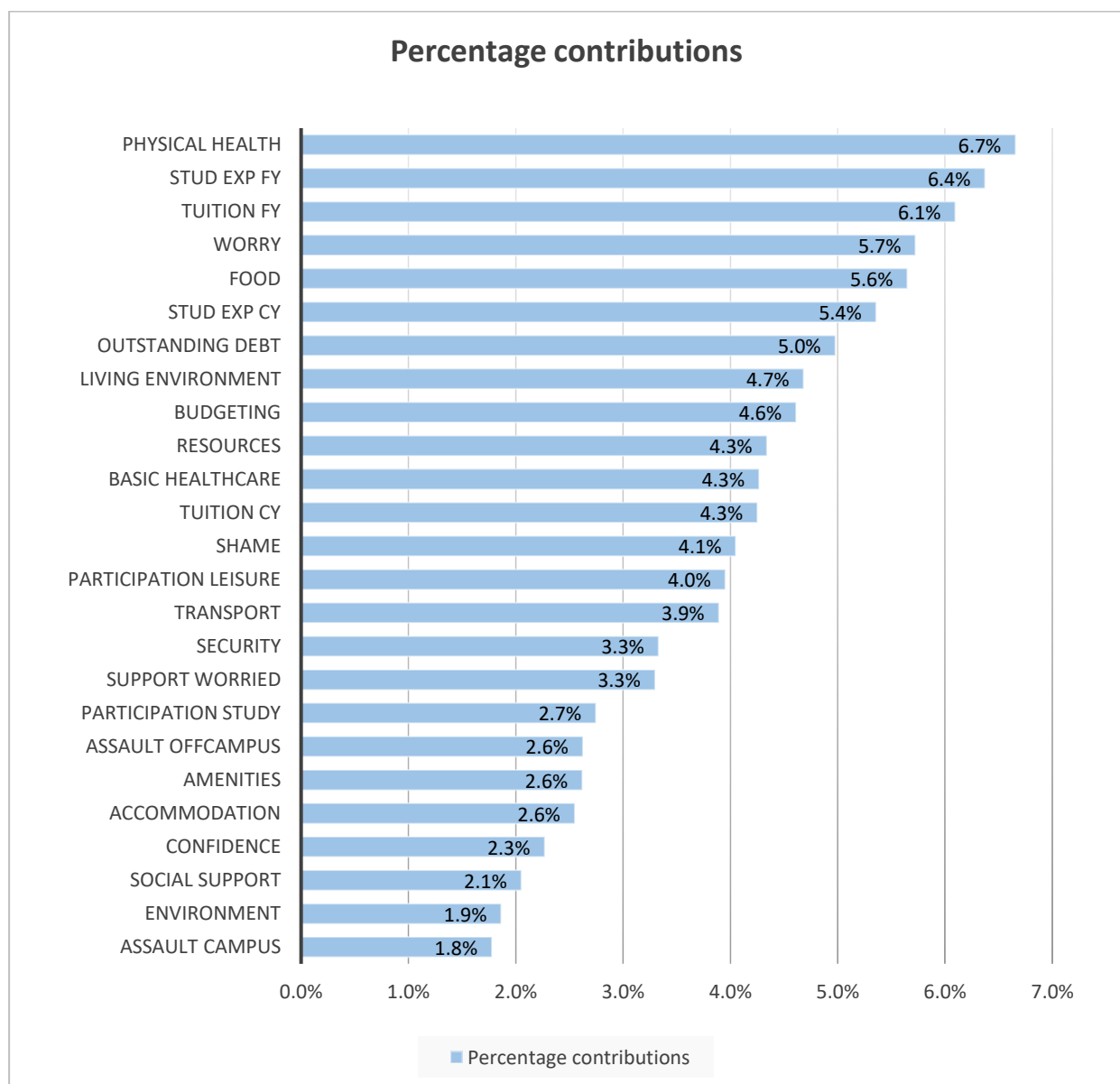


Figure 6.21: Percentage indicator contribution to M_o

Figure 6.21 shows the percentage contribution of each of the indicators to the overall poverty score, and it shows that deprivations in physical health and funding for future studies contributed most to the Multidimensional Student Poverty Scores. Most students (82%) reported worry as a significant source of deprivation. Figure 6.22 shows that most students worry about workload and other unspecified things. The next cause of worry is relationships, funding and learning resources.

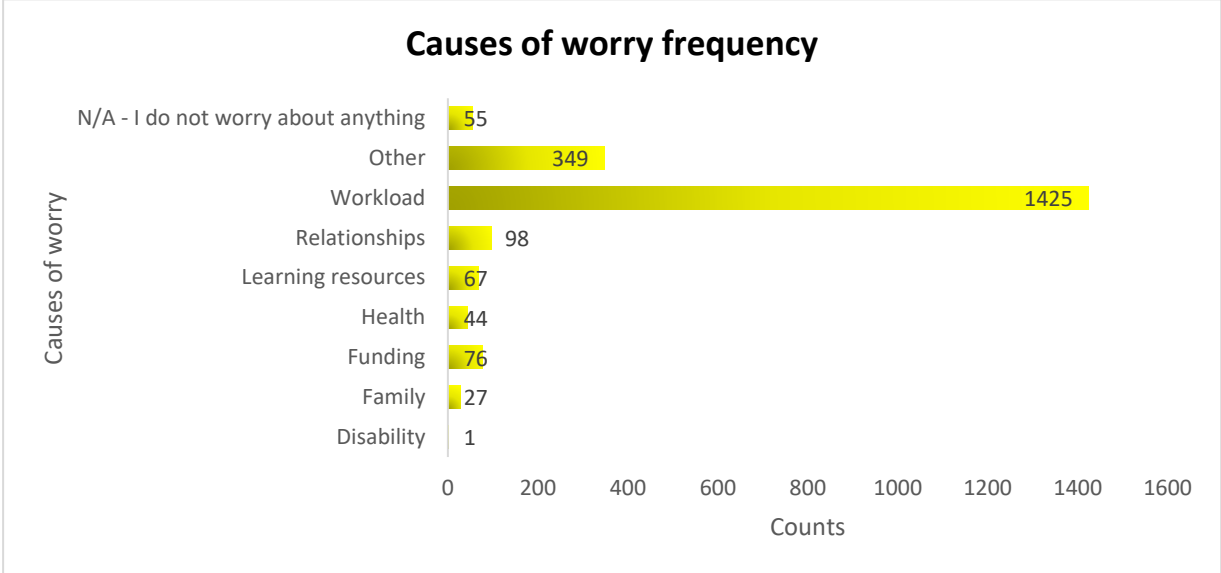


Figure 6.22: Causes of worry

Aggregating the indicator contributions according to the dimensions into which they are grouped shows that learning resources has the highest contribution to M_o and participation in learning has the least.

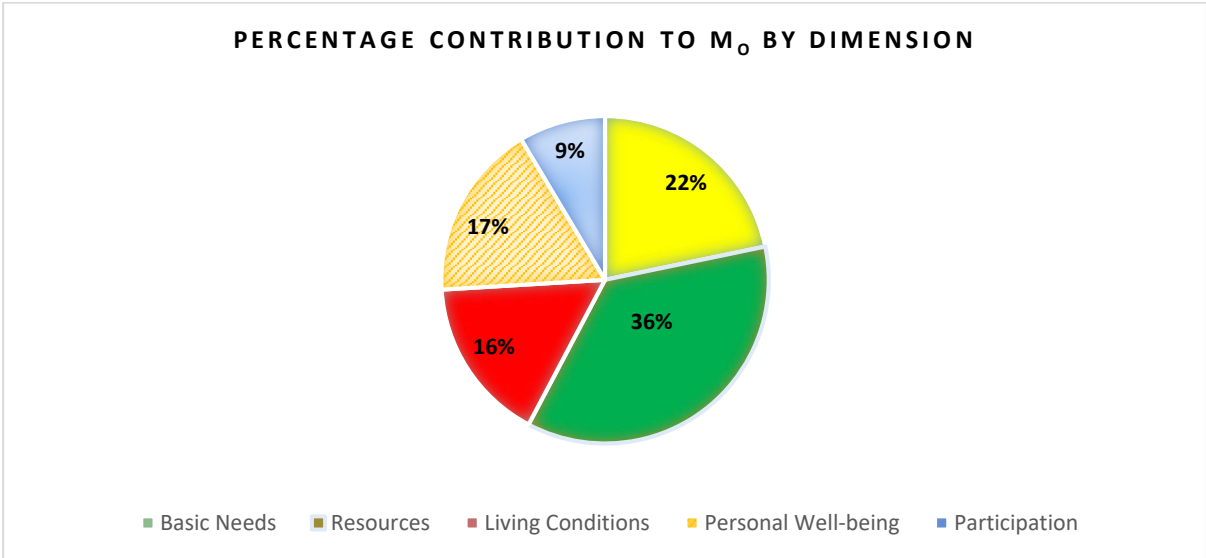


Figure 6.23: Percentage dimension contribution to M_o

As seen above, all the dimensions into which the indicators are grouped have a significant contribution to the overall MPI. Calculating a non-parametric correlation between the dimensions shows that the M_o score contributions have positive and statistically significant ($p < 0.01$) correlations with each other for all the dimensions of deprivation.

Table 6.5: Kendall's tau_b

| | Basic Needs | Learning resources | Living Conditions | Personal Well-being | Participation |
|---|-------------|--------------------|-------------------|---------------------|---------------|
| Basic Needs | 1 | .357** | .308** | .300** | .138** |
| Learning resources | .357** | 1 | .253** | .267** | .122** |
| Living Conditions | .308** | .253** | 1 | .225** | .182** |
| Personal Well-being | .300** | .267** | .225** | 1 | .214** |
| Participation | .138** | .122** | .182** | .214** | 1 |
| ** Correlation is significant at the 0.01 level (2-tailed). | | | | | |

Looking at the MSPI at the dimensional level, it is observed that the learning resources dimension has the most significant contribution to the multidimensional poverty score. It is therefore necessary to explore further which resources students struggle to obtain. The students reported that they lack the following resources necessary for their learning:

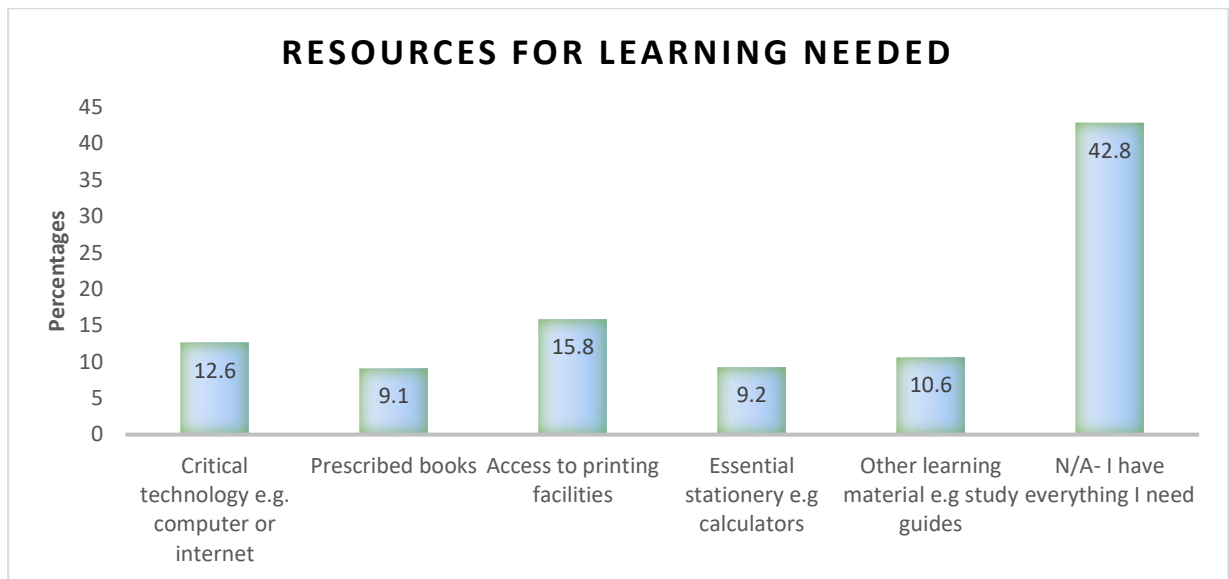


Figure 6.24: Resources needed

Most students report having all the resources they need for learning. About 16% report not having adequate access to printing and 13% have limited access to critical technology. About 81% of the students, however, have all the books and stationery they need.

The dimension of participation had the lowest contribution to multidimensional poverty (Figure 6.23) since most students reported that they have little hindering their participation, as shown in Figure 6.25 below. Those who experience deprivation in participating in study-related activities highlight that their participation is hindered mainly by language (accent), university environment, safety and security, residential status (residence and knowledge). Those who are hindered from participating in leisure activities are hindered mostly by safety and security, interest, finances, residence and the university environment.

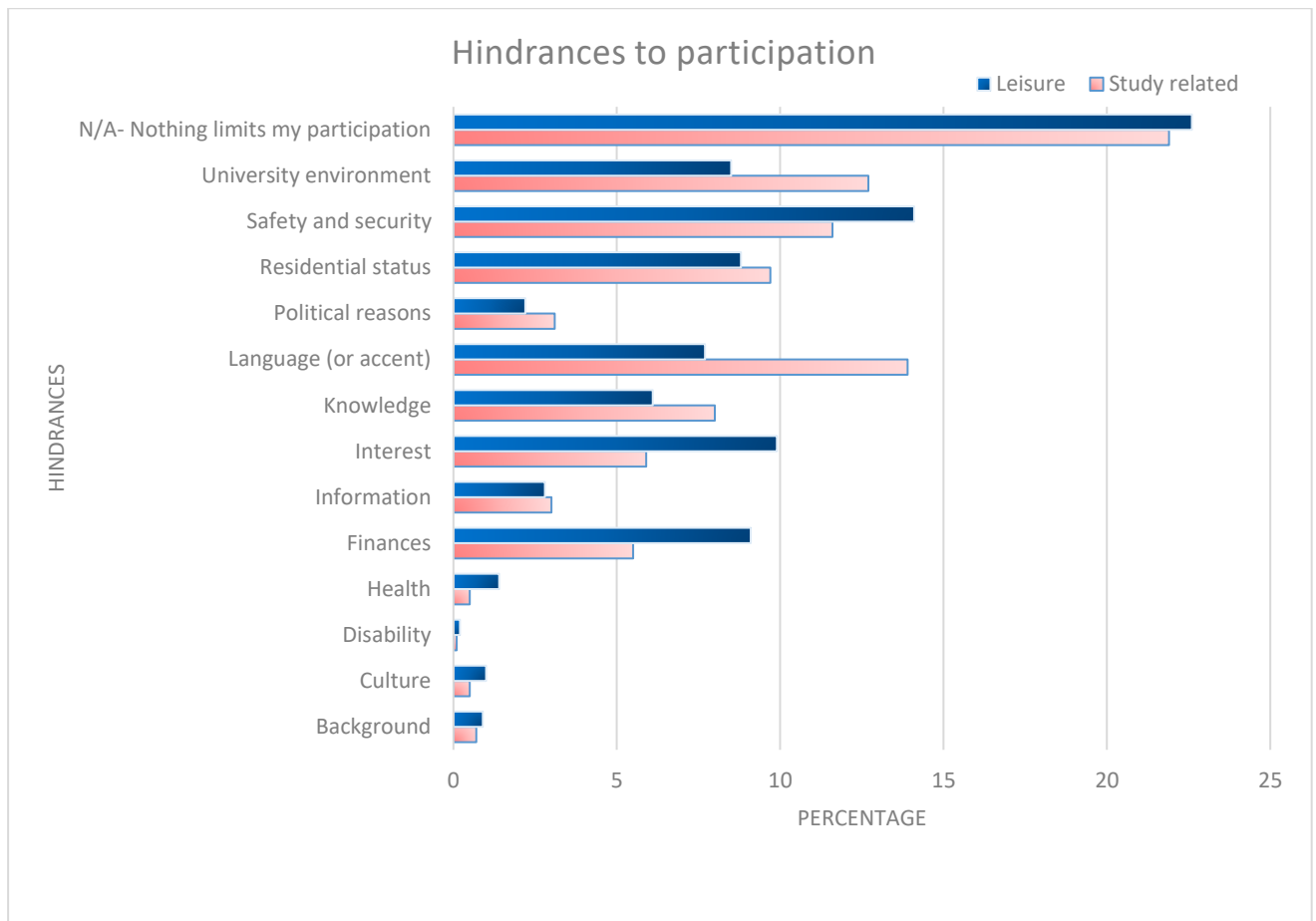


Figure 6.25: Hindrances to participation

More students have nothing hindering their participation in leisure activities than those who have hindrances to participation in study-related activities. Language hinders participation in study activities more than it hinders participation in leisure activities. Finances and interests also hinder participation in leisure activities more than they hinder participation in study-related activities.

6.4 Subgroup decompositions

Beyond finding how different indicators and dimensions contribute to the adjusted head count ratio, the Alkire-Foster methodology also allows the index to be decomposed according to various subgroups. For instance, if the student sample (n) comprises two groups in a particular demographic (e.g. gender has Male and Female), we can call the subgroups x and y with sizes $n(x)$ and $n(y)$ respectively then $n = n(x, y)$, the adjusted head count ratio can be given as

$$M_o(x, y, z) = \frac{n(x)}{n(x,y)} M_o(x, z) + \frac{n(y)}{n(x,y)} M_o(y, z) \quad \dots \quad (6.6)$$

Assuming we have m subgroups as in the case in this study, $n = n(x_1, x_2, x_3, \dots, x_m)$ and the M_o is thus given by

$$M_o(x_1, x_2, x_3, \dots, x_m, z) = \sum_{i=1}^m \frac{n(x_i)}{n} M_o(x_i, z) \quad \dots \quad (6.7)$$

There are a number of variables or subgroups in the data whose distribution of poverty is of interest. Therefore, a number of variables will be decomposed to see the distribution of poverty within the subgroups. The first variable is race; and Figure 6.26 shows how the M_o is distributed among the various racial groups.

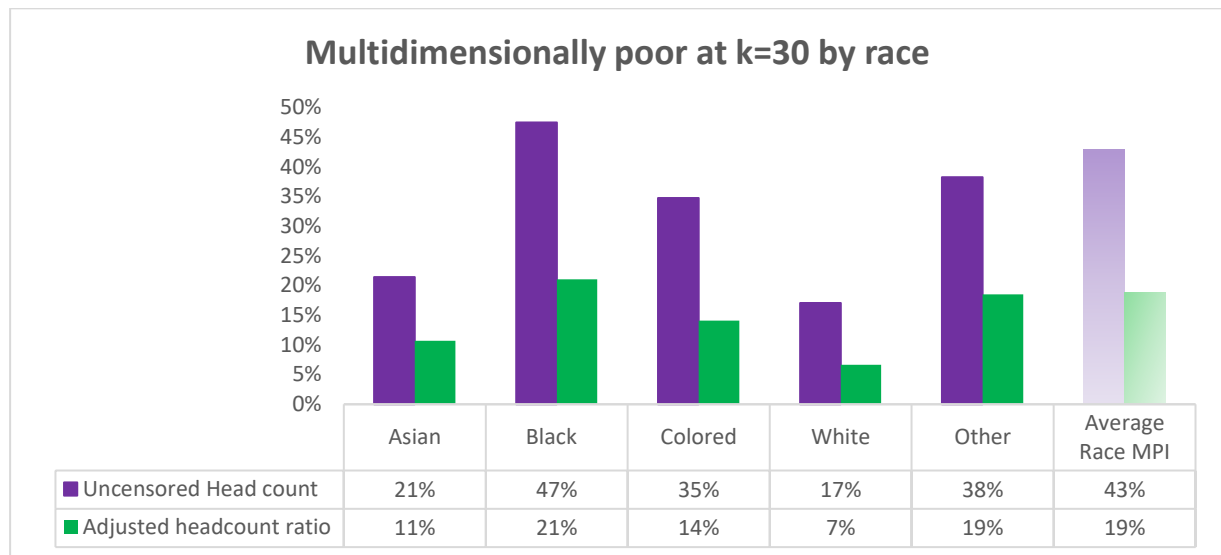


Figure 6.26: Racial decomposition of race M_o

The M_o for black students is higher than the average for all the racial groups. Looking at odds ratios, black students experience poverty three times more than white students and almost 1.5 times more than coloured students. Therefore, as we would expect from the literature, a person's race seems to have a significant bearing on their multidimensional poverty status. Table 6.6 below shows how each individual race grouping experiences poverty in each of the indicators. The scale of poverty for each race grouping is indicated by a moving scale of deprivation represented by a spread from dark colours to light colours. That is, a darker shade represents the indicator with the highest deprivation score per racial category.

Table 6.6: Contributions of each dimension to M_o by race

| | Asian | Black | Coloured | White | Other |
|-----------------------|-------|-------|----------|-------|-------|
| Food | 8.0 | 5.6 | 8.3 | 5.1 | 2.9 |
| Accommodation | 4.0 | 2.6 | 2.2 | 1.8 | 4.8 |
| Amenities | 0.0 | 2.8 | 1.1 | 0.4 | 1.9 |
| Basic healthcare | 0.0 | 4.4 | 3.2 | 2.6 | 4.8 |
| Physical health | 8.0 | 6.4 | 6.5 | 10.6 | 6.7 |
| Outstanding debt | 4.8 | 5.0 | 4.7 | 5.5 | 4.5 |
| Tuition CY | 0.0 | 4.3 | 4.4 | 2.4 | 4.1 |
| Stud expenses CY | 4.8 | 5.4 | 4.9 | 4.2 | 5.3 |
| Tuition FY | 2.4 | 6.1 | 5.8 | 5.7 | 6.4 |
| Stud expenses FY | 4.8 | 6.4 | 5.8 | 6.6 | 7.0 |
| Budgeting | 7.2 | 4.7 | 4.5 | 2.8 | 4.5 |
| Resources | 7.2 | 4.5 | 3.7 | 1.7 | 3.4 |
| Living environment | 8.0 | 4.7 | 4.8 | 4.9 | 3.2 |
| Transport | 5.4 | 3.9 | 3.4 | 5.6 | 0.6 |
| Security | 8.0 | 3.8 | 4.1 | 2.9 | 3.2 |
| Assault campus | 0.0 | 1.8 | 1.4 | 2.4 | 2.5 |
| Assault Off-campus | 0.0 | 2.6 | 1.9 | 3.4 | 5.7 |
| Social support | 0.0 | 2.0 | 3.2 | 1.7 | 2.9 |
| Shame | 6.0 | 3.9 | 4.7 | 5.7 | 5.2 |
| Confidence | 2.0 | 2.3 | 2.2 | 2.8 | 2.9 |
| Support worried | 2.0 | 3.4 | 3.1 | 2.2 | 2.4 |
| Worry | 4.0 | 5.6 | 6.6 | 7.2 | 5.9 |
| Environment | 2.2 | 1.7 | 2.4 | 3.5 | 3.7 |
| Participation study | 6.7 | 2.7 | 2.6 | 4.1 | 2.6 |
| Participation leisure | 4.5 | 3.9 | 4.6 | 4.3 | 3.9 |

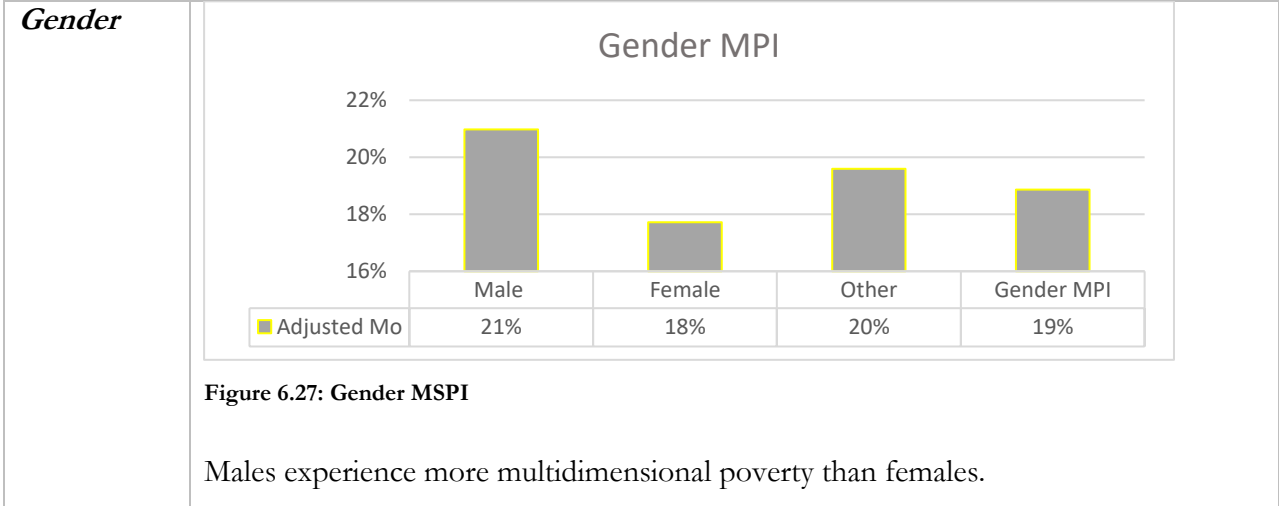
Looking at the MSPI across various other demographic variables and testing to see if there is a difference in the MSPI values across various groups within the variables, we get the following summary, which shows that family economic class is the only variable without a statistically significant difference in the MSPI scores among the various subgroups.

Table 6.7: test for difference in MSPI by demographic profile

| | t | Df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
|---|--------|----|-----------------|-----------------|---|----------|
| | | | | | Lower | Upper |
| MSPI Marks | 5.264 | 5 | .003 | .19949132 | .1020640 | .2969186 |
| MSPI Race | 4.301 | 3 | .023 | .13109005 | .0340920 | .2280881 |
| MSPI Gender | 20.583 | 2 | .002 | .19434330 | .1537179 | .2349687 |
| MSPI Faculty | 9.120 | 6 | .000 | .18177569 | .1330070 | .2305444 |
| MSPI Type of high school | 6.334 | 4 | .003 | .17622340 | .0989805 | .2534663 |
| MSPI Family class | 2.088 | 2 | .172 | .15605930 | -.1655493 | .4776679 |
| MSPI Funding for studies | 12.058 | 6 | .000 | .20016931 | .1595508 | .2407879 |
| MSPI Generation Status | 6.382 | 5 | .001 | .17599242 | .1051098 | .2468750 |
| MSPI Number of employed people in household | 6.355 | 5 | .001 | .16939633 | .1008810 | .2379117 |
| MSPI Dependants | 13.042 | 4 | .000 | .22235752 | .1750212 | .2696938 |

Since Table 6.7 shows that there is a difference in the MSPI across different demographic groups, Table 6.8 below shows the subgroup of the MSPI according to various groups within the specific demographic categories. The last bar in every subgroup graph shows the overall MSPI, which is 19%. A brief description of each of the graphs is also given below the graphs.

Table 6.8: Subgroup decomposition graphs for various demographics



Residence

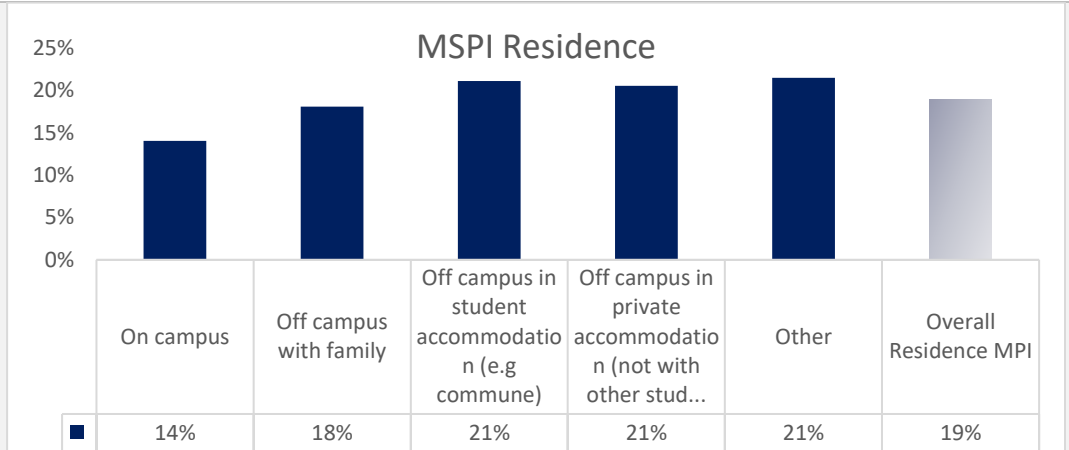


Figure 6.28: Residence MSPI

Students who stay on-campus have the lowest multidimensional poverty scores and students who stay off-campus without family or on their own have the highest (21%).

Type of high school

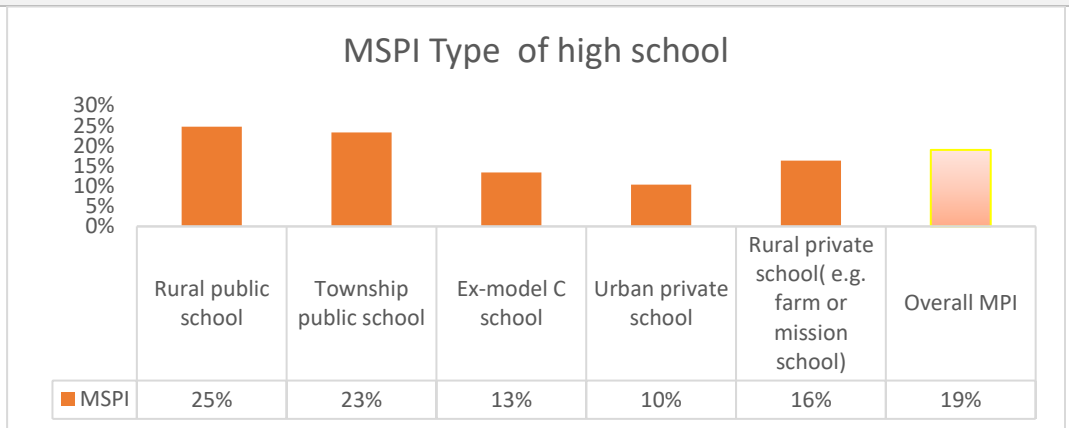


Figure 6.29: High School MSPI

Given that the global MSPI is 19%, rural and township school graduates have high multidimensional poverty scores. Ex-Model C and urban schools have lower score than students from other schools.

**Funding
for studies**

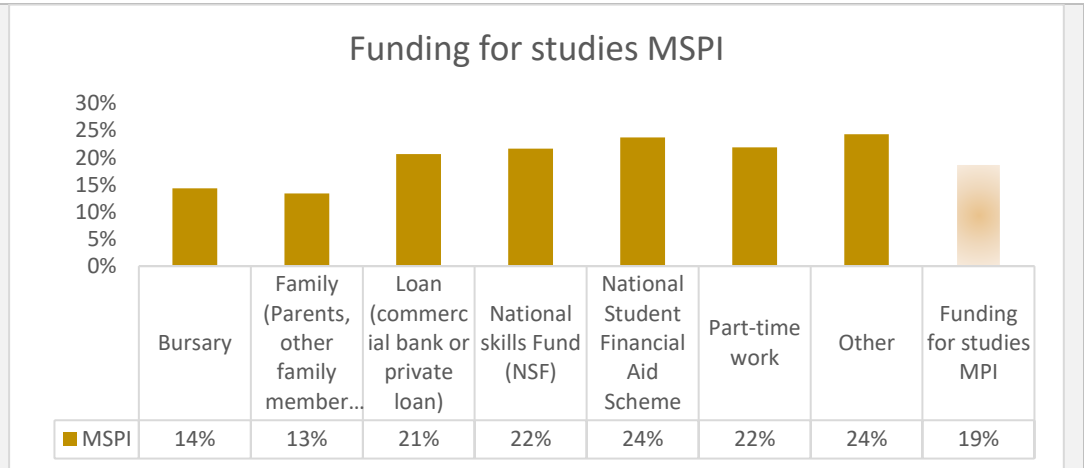


Figure 6.30: Funding MSPI

Students who use non-government bursaries and those who are sponsored have MSPI scores of 13% and 14% respectively, which are very low. Those who use NSFAS have the highest levels of multidimensional poverty.

**Family
class**

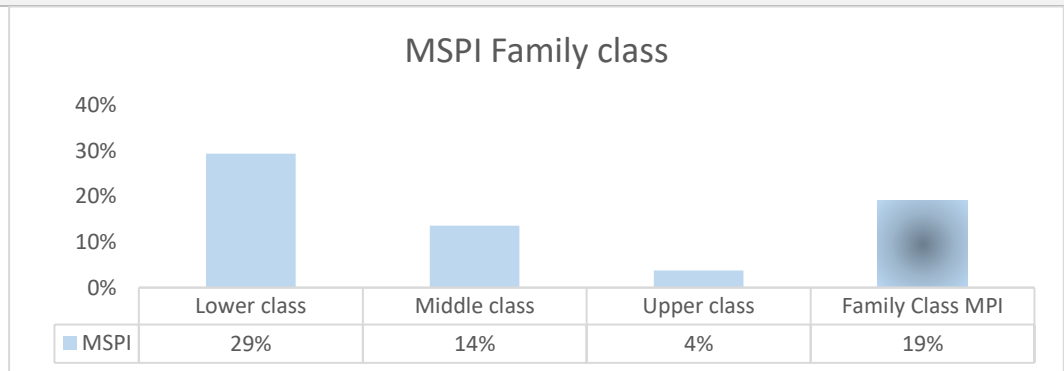


Figure 6.31: Family class MSPI

As expected, students who report coming from a lower-class family have the highest MSPI scores, whereas of the 19% who are multidimensionally poor, 14% report being from middle-class families.

Generation Status

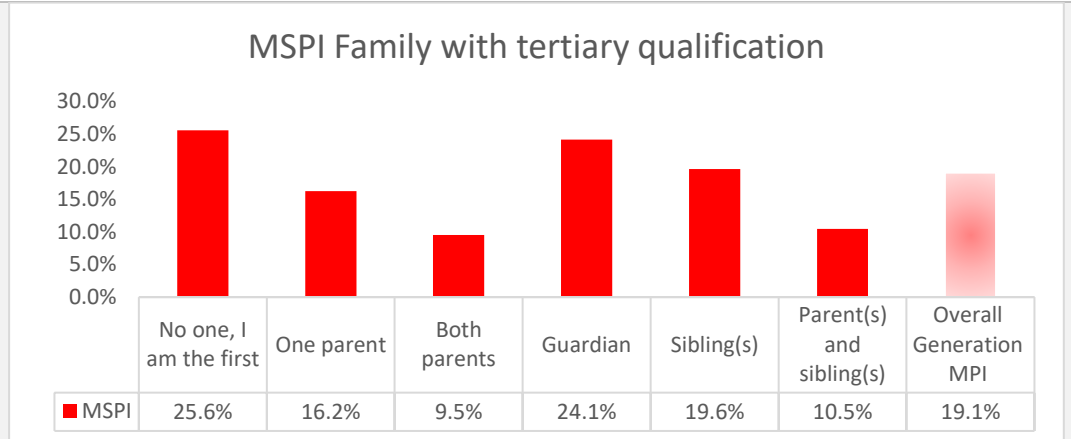


Figure 6.32: Generation status MSPI

Students who come from homes where both parents have tertiary qualifications have the lowest MSPI scores, followed by those with parents and siblings with tertiary qualifications, and then those who have just one parent also have lower than average MSPI scores. First-generation students have the highest multidimensional poverty scores; almost triple those who have two parents with tertiary qualifications.

Number of employed people in a household

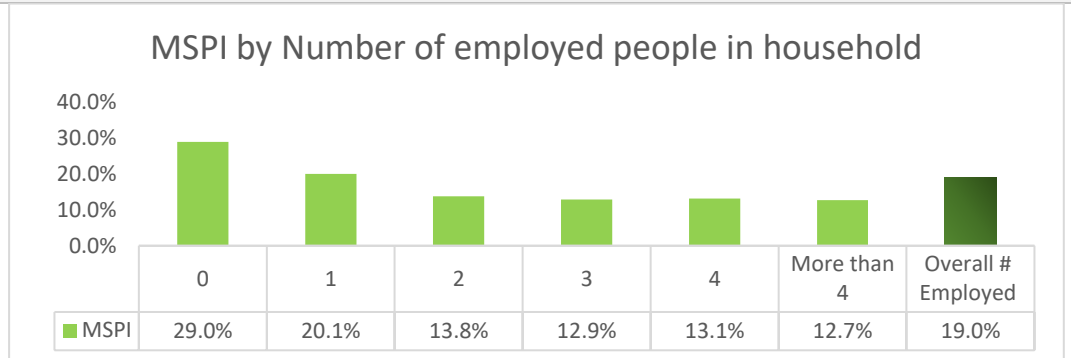


Figure 6.33: Employment MSPI

Families with no employed people have the highest MSPI of all demographic groups, almost 29%. Those from families with one person who is employed have almost the median scores and those having two or more employed people in their households have almost similar scores. Students from families with no employed people experience poverty about two times greater than those from families with two or more employed people.

Number of dependants

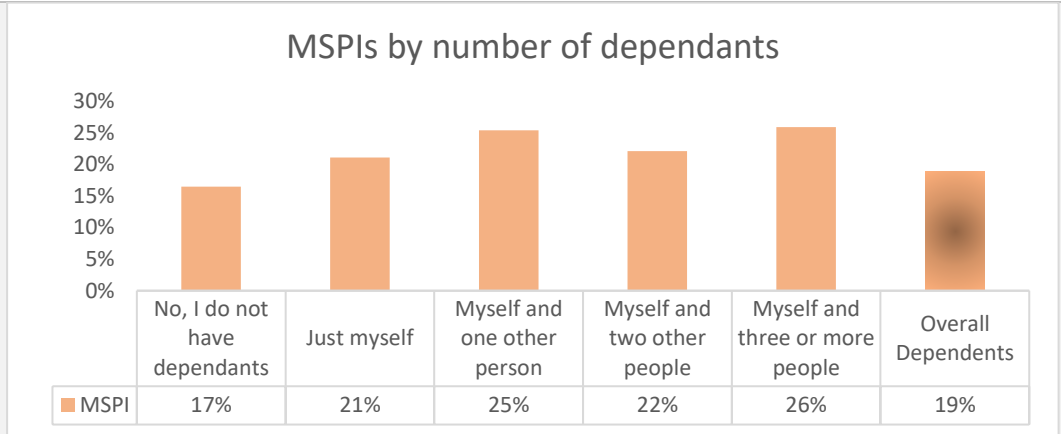


Figure 6.34: Dependants MSPI

Students who have dependants experience more multidimensional poverty than those who are dependants themselves or those who take care of just themselves. Students who have two dependants have lower MSPI scores than those with one dependant. This will be discussed in the following chapter.

Average reported marks

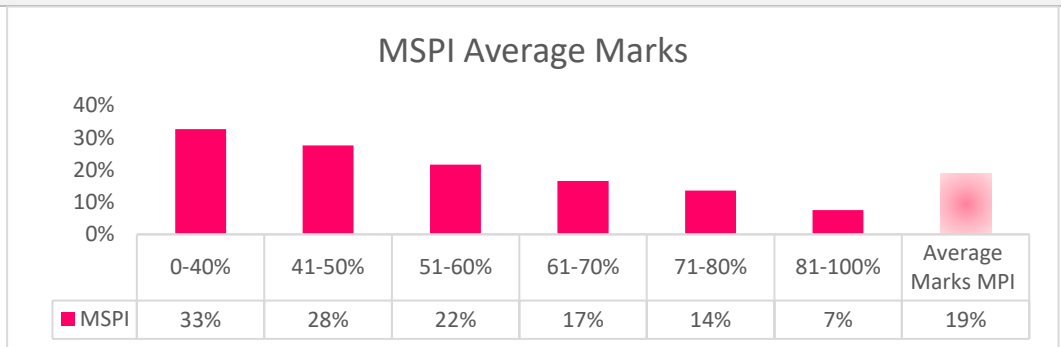
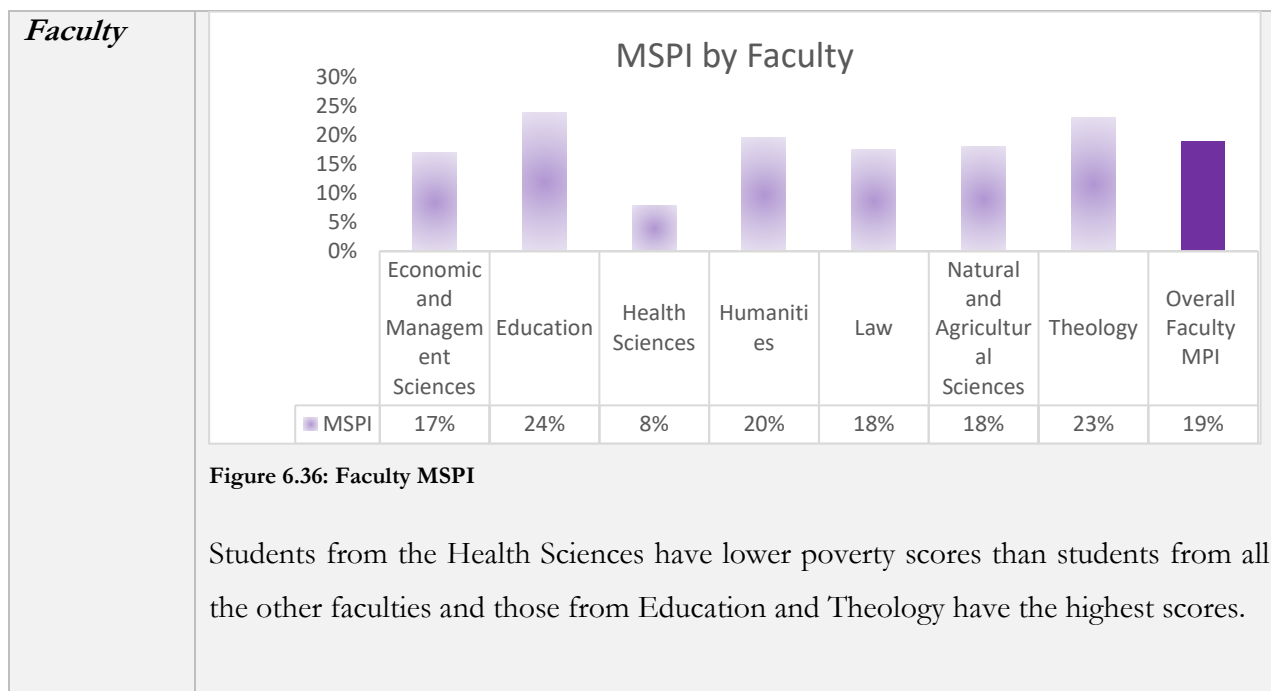


Figure 6.35: Reported average marks MSPI

The figure above suggests that the higher a student’s reported marks, the lower his/her MSPI. Students who reported the highest marks had the lowest MSPI scores as well.



The above figures show the distribution of the MSPI across various groups with important demographic variables, particularly, the figures show that multidimensional poverty is experienced quite differently across groups.

6.5 Conclusion

The above results show that over 18% of the students who participated in the study are multidimensionally poor. Further, it was shown that those who are poor are deprived in at least 44% of the dimensions at a considered cut-off point of $k = 30\%$. Disaggregating the MSPI score according to demographic categories shows that there are vast differences in the MSPI scores for different groups within a demographic variable. For instance, males are more multidimensionally poor than females (Figure 6.27). Concerning residences, on-campus students are almost two times less likely to be multidimensionally poor than off-campus students (Figure 6.28). As expected, students from rural and township schools experience multidimensional poverty at least twice as much as students from urban schools (Figure 6.29). Students who use NSFAS and other government funding or part-time work to fund their studies experience multidimensional poverty more than others (Figure 6.30). Students from lower-income families also experience more poverty than other families (Figure 6.31). As anticipated, first-generation students are more deprived than those who have guardians or siblings with tertiary education (Figure 6.32). Interestingly, having two parents with tertiary education lowers the poverty score by a factor of 3. In addition, students who come

from homes with no employed person have the highest levels of multidimensional poverty, and those with more than one employed person in the household experienced comparable multidimensional poverty levels, regardless of the number of employed people (Figure 6.33). It is noted that having dependants also increased the poverty score (Figure 6.34). There was also a correlation between self-reported marks and poverty, that is, the higher the self-reported marks, the lower the poverty scores, implying that academically struggling students experience more multidimensional poverty than their academically well-performing counterparts (Figure 6.35). Health Sciences students obtained lower multidimensional poverty scores than students from other faculties; whereas those from Education have the highest MSPI scores (Figure 6.36).

The findings presented above show that the cross-sectional multidimensional student poverty index for the university is 19% and can be decomposed according to various subgroups. The findings therefore answer the third research question of the project, namely, “How best can these (dimensions of student deprivations) be incorporated in designing a Multidimensional Student poverty index?” Further discussions of these results and their implications are presented in the next chapter.

Chapter 7: Beyond an index, a triangulation of findings

7.1 Introduction

The objective of this chapter is to elucidate the main findings of this research project as presented in the previous two chapters. The findings, which are discussed below are consolidated from every stage of the data collection process (see Chapter 5). That is, the findings are obtained through a process of triangulation of the results from the qualitative analysis (interview and focus group discussion data), with the quantitative analysis of the survey data in conjunction with the results from the qualitative analysis of the qualitative data from the survey. The discussions below are guided by the capabilities approach, (see Chapter 2 Section 2.3), which is the guiding theoretical framework for this study.

In addition, as mentioned in the preceding chapters, the study is a sequential exploratory mixed methods study (see Chapter 4, Section 4.3.1), with the qualitative process informing the quantitative process. That is, the results of the qualitative phase informed the data collection and analysis done in the quantitative phase of the project. This study had four research questions. The qualitative analysis, through methods adapted from the Individual Deprivation Measure methodology, answered the first and second research questions. This was done by giving an account of how students view student poverty, as well as presenting the factors or dimensions indicators, which shape multidimensional student poverty (see Chapter 5). As part of the data collection process, a largely quantitative survey was conducted guided by the results of the qualitative analysis to capture the incidence and intensity of student poverty. The data collected was then used to create an index of multidimensional student poverty informed by the Alkire-Foster methodology (see Chapter 6).

Further, the survey circulated also had an open-ended qualitative question where respondents could give their comments, accounts and experiences of poverty. Like the other qualitative data, these comments were coded in NVivo software according to the dimensions they alluded to. The comments and stories reported in this part of the data collection process also serve to give a direct voice to the participants as will be seen in the following sections. The survey was conducted online and anonymously, meaning the views expressed were not censored in any way and the students were able to express themselves freely without any direction or interference.

The chapter is divided into four main sections comprising firstly students' stories regarding their lived experiences, the second focuses on their understanding of student poverty, followed by exploring dimensional poverty contributions, and finally, examining deprivations of key sub-groups. The first section aims to contextualise the themes, which will be discussed in the subsequent sections. The second section reviews empirically how the students understand poverty and highlights a challenge faced in identifying poor students. The third section looks at how the various indicators contribute to a student's multidimensional poverty score. The last section then discusses the distribution of poverty among various demographic and biographic groups.

7.2 Student stories from survey questionnaire: Lived experiences

In light of the capabilities approach, which advocates for individual voices to be heard and emphasises the importance of individual lives, more direct student voices and stories are foregrounded as an introduction to the concomitant discussions. Four hundred and seventy students gave personal accounts of multidimensional poverty in the comments section of the survey, despite the fact that the comments section was not compulsory. I selected five of these stories, which capture most of the resonating themes. The stories below present an unfiltered perspective of how the critical dimensions of student poverty interact. The themes or dimensions are in line with those identified in the previous chapter, including basic needs, resources, psychological wellbeing, living conditions and participation. Appendix J shows the number of students who mention each of the above indicators in their accounts. The first story was written by a student who struggled with resources necessary for learning, but was able to move out of poverty. It captures how the student navigated her way through various complexities in her academic pursuits.

Student poverty is a reality that I expected but not to the extent that I experienced last year. Now I'm okay, but my first year I found myself thinking and wondering where I'm going to get my next meal, spent days without food and when I did get some, it was very little. I remember my friend bought wors⁵⁹ for us once because it was cheap but when we prepared it, we found that the wors we were eating was meant for animals but we had to eat it because it meant that it was now a waste of money to just throw it away. We both lost weight to a point that all our clothes did not fit us anymore and she started having problems with her abdomen because of that. On top of that we were thrown out twice by landlords because we could not afford the rent until we found a stable place to stay but then she couldn't come back in 2017 because she didn't get a bursary. I got NSFAS [National Student Financial Aid Scheme] but that money never

⁵⁹ Local name for sausages

lasted since I had to pay the amazing woman we were living with and the remaining had to provide for family back at home, but what I never anticipated was second semester where I found myself homeless, 'sleeping' at school, having to go to downtown where a friend of mine lived to quickly bath and come back for my classes, finding myself sleeping in lecture halls and even in church. I remember this other day that I attempted to sleep at EBW⁶⁰, I thought the people who lock there wouldn't notice me but they did, I felt like giving up that day but I was hopeful that everything would work out. I knew that God would answer my prayers and He did in the end and it's because of Him that I was able to go through that and not falter. But anyway I'm okay now and my friend was also able to come back this year by God's grace. ~Anonymous Student Online

The story shows the interrelated nature of deprivations whereby the student's health, dignity, and studies were affected by her state of multidimensional poverty. The shortage of funds for future and current years of study was a major concern for the student. The students were constantly worried, which affected their health and dignity as they ate pet food. This story, which resonates with many other student stories in the survey, shows how student poverty drives students to a point of desperation and into a state of great distress. Though relatively few students experience situations as extreme as these, the quantitative analysis shows that 18.9% of all students who participated in this study are multidimensionally poor. This may seem low, but the intensity at which those few experience poverty is high. The multidimensionally poor are deprived in at least 44% of the indicators of poverty as reported in Chapter 6.

Although the poverty usually leads to situations of worry, the uncensored headcounts show that 82% of all students worry a lot about workload, funding for future studies and living expenses, regardless of their poverty status. However, the dimensional contribution of the worry variable to multidimensional poverty is close to 6%, which suggests that multidimensional poverty and worry have a compounding effect on each other. In a similar vein, the second student story presented below presents a vivid description of how she struggles not to worry about her situation and how her efforts to live positively with her reality of deprivation often failed, resulting in situations of great humiliation and degradation. I inserted translations in parenthesis for the parts she wrote in SeTswana, her native language. I kept the vernacular expressions in order to capture the student's emotions and confusions.

⁶⁰ A lecture hall on campus

I feel like poverty is the harshest form of violence. Black people face this violence every day of their lives. Poverty is degrading and humiliating. I, myself come from a disadvantaged background, and I came to the university with the sole purpose of studying. I told myself that I am not going to worry myself about what I wear, the people I hang around with; so far I'm failing. I have cancelled hanging out with certain people only because I didn't have anything to wear. There have been days where I phone my sister crying because ga ke na diaparo (I do not have clothes). Poverty e tla go tsenya matlho tlhe (poverty will draw people's eyes and attention to you). I asked my mom to send me blankets, and she knew someone who was coming to Bloemfontein, so she gave her those blankets. I went to town to meet the person, when I got there those blankets were in an old lekgasa la bag (old and tattered bag), it had no zip. I was so embarrassed because I had to carry that bag mo toropong yotlhe (throughout town) and when I got to the place that I stay at, I had to pass all the rooms until I got to mine. Everybody was looking at me ka lekgasa la bag (old and tattered bag). I was so hurt, I phoned my mom crying asking her why couldn't she at least try to buy a new bag, and she said she didn't have money. The humiliation that I endured, I just for once wanted to be like bana ba bangwe (other students). I know my mom is trying her best, but situations like these di go diga moa (dampen the spirit). There were days where I had to carry pap (maize meal) with inkomasi (sour milk) as my lunch box only because meal allowance ya NSFAS⁶¹ e fedile (food allowance from the grant was exhausted). I ate the skehftin (lunch) in the toilet because I was too embarrassed for anyone to see me eating it. It hurts me to think that every black student has a story to tell where he or she had to struggle just to get basic things like food. It's like a rite of passage for every black student, ga gona le ga a le mongwe o nang le perfect 'varsity experience' (there is not even a single black person who has a perfect 'varsity experience'). I thought things were going to go smoothly for me, but no, I'm still struggling to this day. As we speak, I'm typing this response on an empty stomach, I only ate motogo (maize porridge) in the morning and don't have money on my student card to go and buy diChips ko the deli (potato chips at the Deli). I can't phone back home to ask for money because mama ga a kgone (because my mother cannot assist). ~Anonymous Student Online

The student experienced great shame based on her state of deprivation, which was in part a result of her background and the insufficiency of her bursary. At some point, the student would eat in the toilet, too ashamed for other students to see the food she ate. The experience of shame reported by the student resonates with 1212 other students (68.8% of the participants) who report feeling ashamed at one point or another in their lives as students. Looking at the fact that she came from a

⁶¹ National Student Financial Aid Scheme

home which could not support her financially, that placed her in the bracket of students whose multidimensional poverty score is 29% from the quantitative analysis reported in the preceding chapter. The data shows that background is a major determinant of multidimensional student poverty status. The next story is similar to the previous one but presents a terrible deprivation experienced by both off-campus (MSPI of 20.1%) and on-campus students (MSPI of 13%).

I'm one of those students that have had to sleep at the study logs⁶² and in the public bathrooms. I remember this day I was so filthy because I hadn't taken a shower for days or had eaten anything in those days and I was on campus the whole time walking around slay queens⁶³ and 'classic men'. I was so homeless that this one time I went to go sleep at my previous commune,⁶⁴ this was second year and the commune was full of guys, a few were returning from the previous year as well, and others were new. There were still empty rooms, so I decided to sleep in there. But one guy whom I had met briefly came to have sex with me, I tried to fight him off, but he was drunk, and the rest of the guys were out still, he just came back early, I finally gave in, and I let him do what he wanted to. Tears were just falling down my face, and I kept on asking myself why I was there in the first place? Why don't I have my own place because this wouldn't be happening right now! I hope my experience, well a glimpse of it helps you with your work, and also to highlight the consequences of being a poor student. It doesn't end at just not being able to buy new shoes because the only pair you have now has a huge hole, there are a lot of other matters. I'm sure there are people who experience even worse than that. ~Anonymous Student Online

The story above highlights the vulnerability of poor students and the emotional trauma they go through. The student was sexually assaulted because poverty stripped her of the security other students enjoy. Assault is one of the challenges faced mainly by off-campus students. The study showed that off-campus students are 2% more deprived than an average student and over 7% more deprived than on-campus students in this dimension.

Another concern which emerged from analysing the comments and stories of multidimensionally poor students is that multidimensionally poor students do not only worry about their current situations, they also worry about their future security and future responsibilities. The student below captures these challenges in her story.

⁶² 24 hour study section of the library

⁶³ A term used to refer to well-dressed ladies

⁶⁴ Student house Off-campus

I have had times where I went to bed hungry because I did not have food to eat that day. Or I did not have money to buy electricity to cook the last bit of mealie meal to make pap⁶⁵. In such situations, one knows that calling back home would yield no benefit as you will be worrying them for no reason: Plus what are they able to do? Other than sympathise with you and notify you that, 'Lai le ha, ha gonang ha gonang, ngwana wame' ('Even here, there is also no food my child!'). Such situations have at times reminded me of the reason I wanted to better myself by educating myself, but also, sometimes have quite discouraged me. I mean how can one concentrate with an empty stomach?' Sometimes going to bed with tears in my eyes, hoping the hunger will subside would be the only option. As this is my final year, issues like will it benefit the whole family for me to study further, become a rising concern. This is because it means they will have to wait a year longer in order to 'enjoy' the benefits of having someone who earns a fixed salary (That is if I will be able to find employment in my field of study, immediately after graduating)...There are just too many mouths to feed and too little hands feeding them. I for one, have no children myself but I already know that by the time I receive my first pay-cheque as a working lady, I already have 2-3 dependants that need to be taken care of. If not me, then who? I am slightly honoured to be the trailblazer, but I am at the same time very anxious if I will be able to by myself be financially free while also ensuring that my loved ones are cared for without them 'sponging off me' for (for lack of a better term.) ... I read somewhere; I think it was from a post from Billy-Guy Bhembe (The founder of Black Child It Is Possible Foundation) that 'The greatest gift you can give to poor people, is not to be one of them.' My prayer is that I myself be that special type of individual who gifts the world of the poor by being the changing agent. ~Anonymous Student Online

The student cites that she has to think about her family when deciding what to do in the future, which is an incidence of constrained choice. Such students cannot exercise their agency, freedom and opportunity fully as they constantly have to think about the interests of their families. This phenomenon literarily termed 'black tax' is a cause of worry for many graduates. The student reported below is a senior student who returned to study after having gone to work for 10 years to take care of his family.

Students, particularly those coming from impoverished backgrounds face a myriad of challenges, which can contribute to their access in university, and if they do obtain access, some of the things may contribute to them performing averagely or below average. I am a student coming from a

⁶⁵ A staple starch in SA made from mealie meal

background where both parents were never educated due to the previous regime that made it hard for them to have education as a priority; as there were other pressing needs. I nonetheless managed to get an Education degree, worked and enrolled for postgraduate studies. In my first degree, I was assisted by two of my sisters who were both cashiers in one of the chain stores in the neighbourhood. Both of my sisters never had an opportunity to study further after passing matric due to poverty at home. When I graduated with my degree, I then worked to help two of my younger siblings with their education, which they finished and are now working. Such responsibilities never end for a black child from these backgrounds as we are constantly subjected to this phenomenon termed the 'black tax.' As such, I have been working for more than ten years and have been largely using my money to help my fellow siblings and parents out. Another challenge is that in workplaces we are subjected to the challenge of being underpaid. Other questions that I normally ask myself are - when will I begin to work for myself? When will I start a family of my own? I have spent so many years taking care of the family that I inherited from my father. Understandably so, I do not regret this happening as I understand all the condition our parents were subjected to by the system of colonialism, apartheid and its separate development policies that pushed the generations of my people to the margins of society in the poverty-stricken homelands. The story of the people from homelands is that of 'poverty breeds poverty' as even the descendants of the poor man and woman seem to never come out of this scourge so easily. Universities are not accommodative of people like me in terms of our understanding about life, how we shape our ideas etc. ~Anonymous Student Online

The story sums up the fears of many of the black students who participated in the different phases of the research. Their degrees are pursued essentially for their instrumental value, and failure to succeed academically has dire implications for these students and their families. Therefore, most of them worry a lot about workload and future responsibilities.

The above stories give an insight into the lived realities of the students and are presented in order to give a background to the way the results are interpreted below. I shall explore the issues highlighted in more depth in the forthcoming sections.

7.3 Understanding student poverty

In as much as it has been established in previous chapters that student poverty is multidimensional (Arciprete & Biggeri, 2017) and the dimensions of student poverty have been identified (Chapter 5),

identifying multidimensionally poor students remains a challenge as some deprivations are hidden (See Chapter 5, section 5.2). There are surface deprivations which everyone sees, for instance, the struggle to register or remain registered, transport challenges which hinder one from attending classes, an inability to access resources, failure to dress appropriately and an inability to access resources necessary for learning (books, electrical gadgets and other study course-specific materials). These deprivations are often evident from simple data gathering tools like observation, interviews, and surveys. However, there are other deprivations, which are not conspicuous. For example, looking at the raw head count ratios for the indicators with the highest uncensored poverty rates (Figure 6.17), it is noted that most students are deprived in the following variables: worry (82%), living expenses (50.3%), outstanding debt (43.8%), and shame (43.4%). Two of these top variables are not apparent deprivations, that is, shame and worry cannot be assessed and verified simply or quickly. This following subsection draws together the challenges in defining student poverty and the intricacies which make the identification of poor students difficult.

7.3.1 Definition of student poverty, beyond finances

From the analysis done in Chapter 7, students who come from low income homes experience more multidimensional poverty (MSPI of 29%) than their counterparts. The results presented previously show that students whose families could afford to pay their fees had an MSPI of 13%, which is almost half of the score for those who used government loans and grants, who have an MSPI of 24%. The data, therefore, suggests that finances are a central contributing factor to the intensity and incidence of multidimensional poverty. Exploring poverty from a multidimensional perspective is consequently not a tangential departure from a monetary approach, but instead, it enriches the picture through the production of a more nuanced reality. Finances directly limit capabilities (valued freedoms) as they typically limit access to valued opportunities, resources, conditions and spaces leading to capability deprivations that Amartya Sen defines as a state of poverty (Biggeri & Mehrotra, 2011). One student buttresses:

Being poor is an inevitable problem that cannot be resolved in a short period of time. It discourages us, and we end up having low self-esteem because of all the judgements. I would be happy if students who are poor like me are assisted financially in order to pursue our careers.

~Anonymous Student Online

The above student, like many others in the focus groups and survey, identifies him/herself as poor in financial terms but also brings to the fore other deprivations which students face. Observing student poverty from a purely monetary angle gives a partial picture as there are many non-commensurable dimensions of student poverty which adversely affect student wellbeing (Burchi, Muro, & Kollar, 2017). The intricate relationship between income-related poverty and other deprivations is further elucidated in the account of the following student:

*Thank you so much for this study, I am literally in tears. It just reminded me how fortunate I am now, just how far I've come. I remember back in first and second year I had no accommodation or funding. I used to find my room where I stay locked when I get back from studying at night. I slept on the floor in my friend's room when I was squatting (I insisted on sleeping on the floor). I remember one time I was crying walking back from A*⁶⁶ to my friend's place at B* when I found my room locked again [by landlord, due to outstanding rentals]. I cried so much I even sat on the street. I can only see now that maybe I was depressed because I actually lost weight. Till this day if someone knocks on my door loud when I am sleeping it scares me, and my heart beats fast thinking it is someone coming to lock me out. Student poverty is real. NSFAS makes these challenges a lot easier; I now have safe accommodation, food and, in fact, I have my basic needs covered, even though I have some financial needs but it's better. I am currently looking for a job to cover my outstanding accommodation, but the landlord I have now is very understanding. The survey just brought back a lot of memories in a good way though. Sometimes it is easy to forget. I always tell other students that are going through what I have gone through that it'll eventually get better. Let me get back to my assignments I am feeling motivated. ~Anonymous Student Online*

The above student cites a very grave challenge that, without finances, one is cast in a vortex of deprivations, which spirals downwards driving the students to other deprivations. For instance, students who are struggling financially due to the inadequacy of their grants find it difficult to cope with their academics, and they end up failing which leads them deeper into poverty and stress. The student above managed to succeed despite the odds stacked against her and she is now in a comfortable space and sounds happy and motivated. The change in her financial outlook seems to have had a lowering effect on the psychological deprivations she faced. Deprivations, like disadvantage, can be corrosive, meaning one deprivation may lead to many others (Wolff & Avner de-Shalit, 2007). This reality is particularly important for higher education stakeholders to understand

⁶⁶A* and B* are pseudo codes for location identifiers

since student deprivations demand swift responses before they potentially trigger additional deprivations, as summed up by the student quoted below.

Poverty is a serious problem, it is a lot like a disease, more especially to the youth of this country, and if it is not dealt with, it may completely ruin the future of this country. ~Anonymous Student Online

The results presented in Chapters 5 and 6 show that student poverty comes in many different forms and has numerous faces other than the financial face (Jensen, 2009). As mentioned earlier, the point of departure in defining student poverty is to acknowledge the intricate role finances play in driving, creating, deepening and revealing deprivations. In as much as finances are essential and central to a student's wellbeing and influence profoundly how well the student enjoys or accesses other dimensions of wellbeing, they are not the sole determinant of student poverty. That is, even if students get free education, they will still face poverty as long as other non-monetary dimensions of student poverty are not addressed. Finances on their own do not constitute student poverty, they are but a critical dimension of multidimensional student poverty.

7.3.2 The interplay of dignity, shame, and stigma

Shame and stigma are the the main reasons why it is difficult to identify poor students. 44% of the students who participated in the survey agreed with the statement, "I am sometimes ashamed of who I am because of what I have or do not have." The raw head-count ratio shows that 16% of all students are deprived in the indicator representing shame. After decomposing the MSPI by indicators, the "shame" variable was ranked higher than the variables representing assault, transport, social support, security and many more. Shame is an important concept to acknowledge and investigate because, among many other reasons, shame has a way of worsening one's poverty situation. It makes it difficult for the poor to be identified since it forces them to conceal their poverty in order to avoid stigma. "Social stigma occurs in situations where there is unequal social, economic, and political power and there is an opportunity to label, stereotype, separate (us versus them), lose status, and discriminate" (Belcher & DeForge, 2012, p. 929). Students who participated in the survey echoed these sentiments, for example:

There are a lot of suffering students out there who are scared of showing themselves, because of the judgement they experience. Surveys like this should be done during registration. Thus it will be easier for them to be located and helped. I'm also one of those students suffering in all sort of ways. ~ Anonymous Student Online

It is hard to study when you do not have anything to eat. Yes, the university has student hunger programmes [feeding programmes], and they help out a lot, but the shame one has when coming out of the office after collecting food parcels! It is not a shame that comes from thy self, but when other students look at you it's like WHAT! I wish all students who are financially needy can get assistance. I for one I struggle every month to pay rent, buy food and toiletries. I have two pairs of pants and a couple of t-shirts ... To think about it, the struggle is real when one pursues education. ~ Anonymous Student Online

The above quotations capture the views of a lot of poor students (65 references in the NVivo file). The leading causes of shame were reported as the element of being exposed, fear of judgement, ridicule, and pity, which will come from other students. Landmanane and Renge (2010) posit that poverty can lead to a state where the poor look down on themselves and suffer from attribution issues where they blame themselves for the state they find themselves in. Students need to be assisted in developing confidence with which to combat feelings of shame before shame limits their lived opportunities, their capabilities, and their freedom to be and do that which they have reason to value. There is evidence in literature that poverty leads to a sense of shame and self-doubt and the findings from this study support that (Reyles, 2007; Walker, Kyomuhendo, & Chase, 2013). The student cited below aptly writes that poverty leaves students feeling insecure and worried about how other students view them.

Being a poor student is a very sad situation to be in because you feel insecure about almost everything. The worst thing is always being worried about what others think about you and the situation you are living in. ~ Anonymous Student Online

The shame associated with poverty often compels those experiencing it to hide their need or find other excuses to explain or justify their limited participation and access. R Walker (2014, p. 40) puts it succinctly, stating that, "...the shame and stigma experienced by people in poverty leads to social exclusion, limited social capital, low self-worth, and a lack of agency that could all serve to prolong poverty." Looking at this from a capabilities point of view, where poverty is understood as capability

deprivation, poverty leads to a sense of shame and stigma, which further worsens the poor students' [capability] deprivations. Therefore, "poverty breeds poverty" as reported by the students in the stories given above. Apart from the workload, students cited that they are most worried about unspecified 'Other' things in the survey and the evidence emerging from the qualitative analysis suggests that shame and stigma could be part of the 'Other' things they worry about.

7.4 Exploring dimensional poverty contributions

The study identified twenty-five indicators of student poverty, grouped into five main dimensions (see Section 5.8). These indicators and dimensions had different contributions to overall student poverty. Figure 6.21: Percentage indicator contribution to shows how each of the indicators contribute to the multidimensional poverty score in percentage terms. The indicators discussed in the following subsections are not only the ones with the highest contribution to multidimensional poverty but also those that have the highest numbers of deprived students measured by the raw and censored headcount ratios. Both raw and uncensored headcounts are considered because in as much as the multidimensional poverty score is used to identify the proportion of students living in poverty and who need immediate support, it is nonetheless also important to tackle all the deprivations students experience, even for those who are below the threshold of being categorised as multidimensionally poor.

7.4.1 Basic needs Dimension

The basic needs identified from the data were food, accommodation, basic amenities, access to health care and physical health status (Chapter 5). Looking at the censored headcounts only (Chapter 6), 8.2 % of poor students do not have electricity and water, and 8% of them have no place to live. Up to 13.5% of the poor students do not have access to basic health care, 17.7% of them are food insecure, and 20.9% are deprived in terms of physical health. I shall discuss each of the indicators in this dimension.

7.4.1.1 Physical health indicator

The first indicator under this dimension is physical health. As seen in Figure 6.23, physical health made the highest contribution to multidimensional student poverty (6.7%). About 32.8% of the students were shown to be deprived in the health indicator (Figure 6.21) after applying the Alkire-

Foster methodology. The point that students placed physical health above all resource-related indicators suggests that physical health is a significant capability, which students need in order to achieve their valued educational functionings. Literature also supports the centrality of the health capability (WHO, 1997; UNDG, 2013). Martha Nussbaum (2000, pp. 78-80) identifies bodily health as one of ten core human capabilities and defines physical health as, “being able to have good health, including reproductive health; to be adequately nourished; to have adequate shelter”. The results of the study are subsequently consistent with literature. The extract below gives an example of how some students interact with the physical health capability.

Although I come from a middle-class family and attended a former model C school, I still experienced a lot of impoverishment during my undergraduate years. My single mom could not afford my fees, and NSFAS and other financial aids could not accept me because on paper it looked as though my mom could afford my fees. The reality was that she could not, and that affected a lot of areas. I survived on student loans, hardly got new clothes (I survived on high school rags), could not pay for most textbooks, and could not afford food. This resulted in poor health conditions and ultimately affected my school performance. ~Anonymous Student Online

The student echoes the voices of many other students in that physical health is vital to a student’s life in order to realise his or her main desired functionings; that is, obtaining qualifications and acquiring knowledge. The data shows that students who lack physical health have fewer opportunities to live lives they have reason to value than those who are not deprived health wise. The relationship between multidimensional poverty and physical health is reciprocal, that is, the absence of physical health increases the multidimensional student poverty score of a student, and on the converse side, the presence of multidimensional student poverty leads to a deprivation in physical health capability. This two-way loop makes physical health an atypical indicator since it is not only a valued capability but can also be viewed as a conversion factor. The quotation below illustrates how student poverty can be viewed as a conversion factor:

The university should be aware that the other students are struggling to perform well because of some constraints, like their physical health. They have to have ways to support such students because it’s not that they just fail but it’s because their health prohibits them to function well in their academics. ~Anonymous Student Online

Physical health is thus an essential dimension in establishing student wellbeing. Apart from physical health contributing to MSPI, the data also shows that students who are deprived in the health dimension also suffer from many other deprivations. This further emphasises the fact that student poverty is multidimensional at its core.

The private accommodation I live in is not conducive for learning. It is usually cold and when it rains the water gets inside. It causes health problems because I often have constant colds and flu. I also experience back pain because the beds provided to us by the landlords are uncomfortable, they have no mattresses. Another thing is that on top of the rent I pay I also have to buy electricity. This becomes a problem because we are restricted from buying electricity with the bursary money. ~Anonymous Student Online

The above quote highlights the multifaceted nature of student deprivations. 98% of the students who participated in the study faced more than one deprivation, and of those, 18% were multidimensionally poor at the chosen cut-off. In this study, a student needs to be deprived in more than 30% of the dimensions as explained in the previous chapter (Chapter 6) to be regarded as poor. Beyond physical health, students also flagged food insecurity as another cause of deprivation.

7.4.1.2 Food insecurity indicator

Poverty has a very negative impact on students; it may even cause depression. I believe many students go to bed hungry and cannot call home because the situation is also bad back there. ~ Anonymous Student Online

The stories in the first section of the chapter and the one above show how students go to bed hungry and the effect that this has on their academic performance and life in general. 23.7% of students indicated that they are food insecure, defined as not having access to more than one meal a day. Of that 23.7%, 17.7% were multidimensionally poor, with food contributing 5.6% to overall multidimensional student poverty. Food insecurity is very different from other deprivations as it presents an immediate threat to one's survival and functioning. The following data excerpts shed more light:

I am sometimes worried about where will I get the meal for the day because the bursary students get food allowance once in three months and when they no longer have money they do not know where to get the money. For example, no one works at my family, and my granny supports the family of 6 people including me with her pension grant of R1690 which is not enough to buy the food and toiletry for people back home and for me.~ Anonymous Student Online

I am a hungry student so it is very hard in my life. I have a shortage of money to buy food, clothes and all materials of studying. So it is very hard to study in my modules. ~ Anonymous Student Online

The data shows that most of the food insecure students are those who have no way of paying their own fees and those on the government scholarships, in particular NSFAS (Appendix GB). They are also typically from low to medium-income households. Most of the food insecure students also attended township and rural schools, as shown in the figure below.

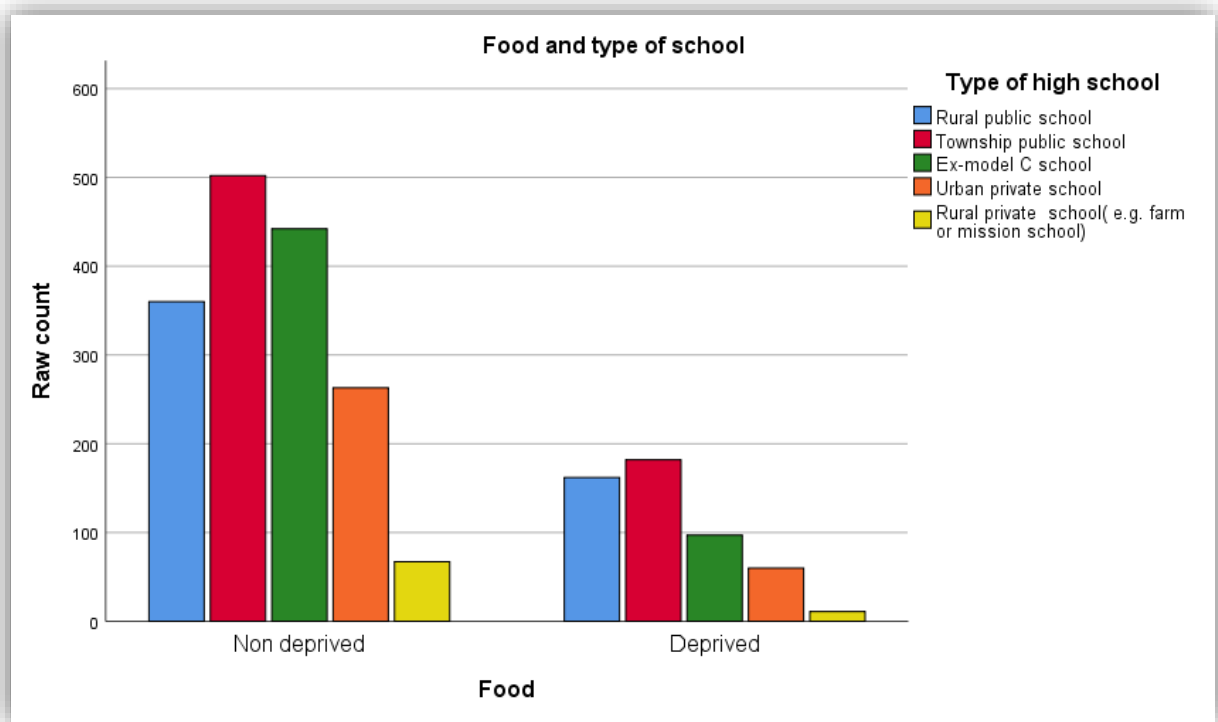


Figure 7.1: Food deprived or non-deprived students and their type of high school⁶⁷

The students' quotes below illustrate the choices and trade-offs the students have to make.

⁶⁷ Raw count refers to the actual number of students

I know that there are different social classes and one could fall under lower income households or high income households. There is an assumption that because one is in a middle class household things are easy which is not true. Being from a middle class home is a blessing in the fact that I do not starve but I may not even complete my studies because I cannot afford higher education, mom is drowning in debt. Yes, you have food but at the expense of mom who is at home and places herself at a disadvantage for me. I may not be poor but so many sacrifices have to be made that are emotionally taxing. I may eat everyday but at home they do not even have electricity.
~Anonymous Student Online

There are students who really need help. Some even use their bursary in order to support their families back home with regards to food and clothing. There are those who walk from the location to campus just to attend classes, some even sleep on campus at the study log to avoid spending money on transport and rather eat on campus. They then use that as an excuse for studying the whole night. Studying requires one to eat because of the energy used. ~Anonymous Student Online

Some students with bursaries have to choose whether to eat or to send money home to their struggling families. Such trade-offs have direct implications, not just on achieved functionings and capabilities but even on valued capabilities and student aspirations (Hart, 2016). Students' aspirations (as well as experiences of poverty functionings and valued capabilities) are therefore not just influenced by the resources which students have at their disposal but also depend on the economic status of their families. A student's background is fundamentally a major determinant of their deprivation status.

7.4.1.3 Accommodation indicator

My struggle is real because even where I am staying, I am being chased out because I lived there illegally without the consent of the landlord. ~Anonymous Student Online

About 10.7% of the students in the quantitative sample indicated that they do not have a place to live, meaning 184 students were accommodation insecure⁶⁸. This is cause for concern as having one's own accommodation was cited as a basic need by the students in the focus groups discussions (5.2.1).

⁶⁸ This is not referring to ownership of property but to the ability to afford to pay rent for a room or flat.

There are students who get to the point of dropping out because they do not have a place to live as evidenced by the student quoted below:

If it weren't for my girlfriend and her parents letting me stay with them until I finish my studies, I wouldn't have been able to study. I would have had to go back to my hometown and work in the mines. ~Anonymous Student Online

The case of the above student is one which resonates with many other students who indicated that they would sleep in lecture halls, bathrooms or on desks in the library because they had nowhere to live. However, not all students struggle with accommodation; the vulnerable groups from the data were females and black students. The tables below show that there is a disproportionate variation in the accommodation distributions by gender and race.

Table 7.1: Gender and accommodation

| | | <i>Gender</i> | | | Total |
|----------------------|---------------------|---------------|---------------|---------------|--------------|
| | | Male | Female | Others | |
| <i>Accommodation</i> | Non-deprived | 30.5% | 58.3% | 0.4% | 89.3% |
| | Deprived | 4.1% | 6.6% | 0.1% | 10.7% |
| Total | | 34.5% | 64.9% | 0.5% | 100.0% |

From the table one can see that female students struggle the most with accommodation. Up to 65% of the 184 students who do not have accommodation are females, and only 35% are males. However, from the MSPI, male students have a higher MSPI score (21%) than females (18%). This means that although female students are highly deprived in this dimension, male students are still deprived in more dimensions than their female counterparts. There is also a statistically significant difference in the deprivations experienced by different races as shown below, where most students who do not have accommodation of their own are black. According to the quantitative analysis (Chapter 6), 47% of black students are deprived in more than 30% of the dimensions considered, and 21% of them are multidimensionally poor, which is three times higher than for white students.

Table 7.2: Race and Accommodation

| | | Race | | | | | Total |
|---------------|--------------|-------|-------|----------|-------|--------|--------|
| | | Asian | Black | Coloured | White | Others | |
| Accommodation | Non-deprived | 0.6% | 71.1% | 5.1% | 11.1% | 1.4% | 89.3% |
| | Deprived | 0.0% | 9.6% | 0.5% | 0.3% | 0.2% | 10.7% |
| Total | | 0.7% | 80.7% | 5.5% | 11.5% | 1.6% | 100.0% |

The table above highlights that Asian students are not deprived at all in the accommodation dimension, and that the highest number of deprived students are black. Having accommodation of one's own is also important in preserving dignity and confidence. Students who do not have accommodation of their own have limited agency, as they live at the mercies of whoever is helping them and they also are prone to experience worry, shame and alienation, as discussed above.

7.4.2 Learning Resources Dimension

Most students suffer from accommodation problems and daily living. They may have sponsors that cover tuition and registration and have to hustle for books and daily living including study material. Under such conditions, it is not easy to compete with your peers because you are under resourced. The background we come from limits us sometimes even in obtaining a degree not because you are not academically well but because of financial background. ~Anonymous Student Online

Students often struggle to secure the resources necessary for study, as they indicated in the focus groups as well as in the survey. The learning resources dimension comprises indicators relating to tuition and living expenses as well as an indicator for budgeting, as summarised below.

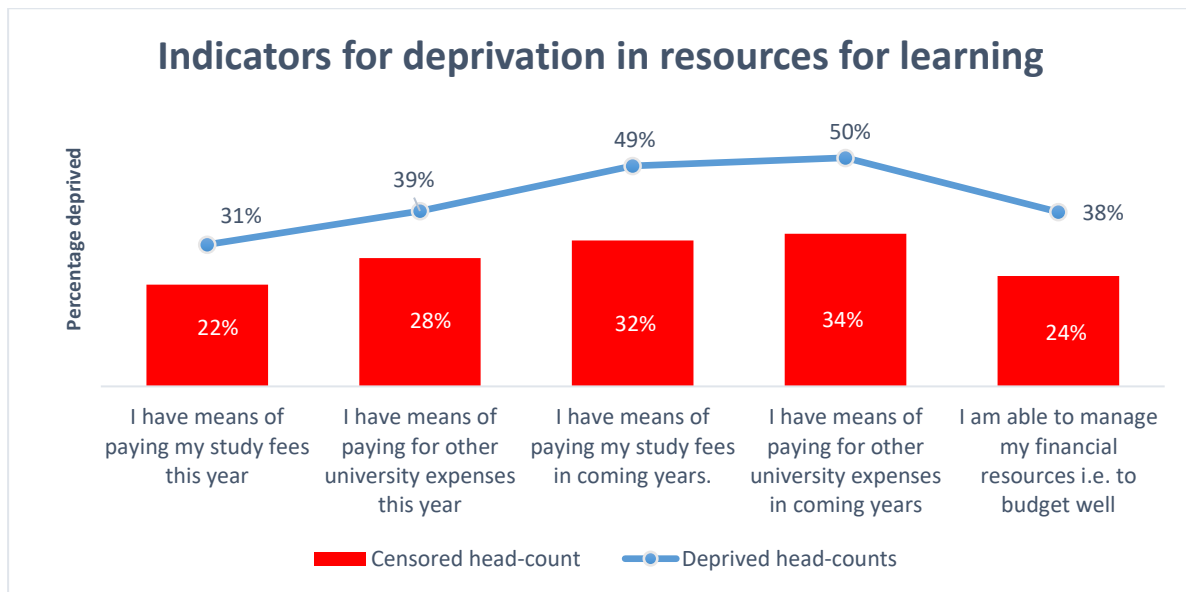


Figure 7.2: Percentages deprived in indicators for learning resources

The censored head-counts show that over 22% of all multidimensionally poor students are deprived in all the indicators, which together build up the learning resources dimension. The government introduced a fee-free study regime during the course of the project, but most of the students who participated in the study had not seen the benefits of the regime as they still had to fund their own studies through NSFAS (38.4%), family (26.4%), and other bursaries (19.2%). The voices below highlight how different students struggle with a lack of primary resources for learning.

We as students come from different backgrounds and as we are introduced to a new life at varsity, we struggle in some things. Sometimes meals allowance is loaded late, mind you some of us have no one they depend on at home, and some are having unemployed parents. When it comes to clothes since its winter, you may find out that there is a problem. This can result in cold related infections and illness which can lead to poor academic performance or attendance of classes.
 ~Anonymous Student Online

I believe there is more emphasis on tuition fees being paid and the costs of living on campus, books and meals are not considered. The pressure of fees makes students drop out as they lose hope and drive in their studies. I believe that as the government works toward free tuition they can, in the interim, make concessions for free internet, free meals, free housing and subsidised books as they move towards free tertiary education. This would reduce the dropout and help a lot

of people from impoverished backgrounds and some parents who are recently retrenched to at least have the student remain in university. ~Anonymous Student Online

The students above further explain the need for a student to have means to cover both tuition-related expenses and living expenses. Provision of one without the other may lead to a number of challenges. The fee-free regime can make a significant difference if students are also provided with essential resources, apart from just tuition, that they need in order to study. From the data, most of the students on the government bursary scheme experienced more multidimensional poverty than those without bursaries. Those on NSFAS had an MSPI score of 29% which was over 12% higher than the average MSPI for the university. The existence of multidimensional student poverty among government grant bursary holders, despite having funding, can be explained further by the voices of the following students.

It is somewhat worrying to think that there may be many students on campus who, despite having a bursary, may at times not have food. ... It is stressful being unsure what NSFAS's approach to paying these things is. I worry about whether NSFAS will pay or not. As a foster child of a middle-aged couple with grandchildren and obvious financial strain, I know that if NSFAS stops paying my study fees not only I, but also my foster parents, will find it near impossible to pay the university the outstanding amount. In between semester tests, I cannot help but wonder whether I won't be kicked Off-campus for failure to pay, or that I might finish this year only to find that NSFAS will not allow me to study a second year. At this moment, I am more or less secure on campus. I am in a residence, have food and access to technology. I am, however, very aware of the fact that this might change at any moment. While NSFAS provides all these things, I have no trust that they will continue to provide it. I believe that many students like myself suffer under the strain of financial uncertainty. Knowing that everything you are working for may prove to be in vain due to outside forces. ~Anonymous Student Online

So many students do not have basic clothes to wear to campus, winter is approaching and I only have 2 jerseys. Students even with NSFAS funding do not always have groceries after the 15th of the month because R800⁶⁹ really doesn't get you a lot and there's really a limit to what you can buy and eat. More accommodation should be made available to the university because very rarely you can stay at a place without paying rent till NSFAS pays out. I know people who have had to move to 2 different places since the beginning of the academic year because of this.

⁶⁹ The monthly food allowance from NSFAS which is approximately US \$55

There really should be a clothing allocation from NSFAS at least twice a year even if it's R300 to buy a jean and t-shirt. ~Anonymous Student Online

The above examples show that students on NSFAS struggle with other dimensions of deprivation in terms of accommodation, clothing, food and dignity, which could explain their high MSPI score. The way NSFAS disperses funds is a cause for concern for students as they have to make fresh applications annually and some students who were recipients of the grant or loan in the previous year could have their applications declined in the middle of their academic studies. In addition, the first payment of funds from NSFAS typically only comes through several months after the start of the academic year. Therefore, students who depend on NSFAS are often worried about their future, particularly about passing well so that they can secure funding. The scheme looks at two main things in order to offer funding; the first is a student's marks. Failing students are not considered which is problematic since failing could be an indication of underlying deprivations that make it difficult to learn. For instance, students who have no accommodation or no food struggle to cope academically, and that then discredits them from getting NSFAS for future years, thereby further plunging them into multidimensional poverty. The second criterion for the determination of need is related to parents'/guardians' income, where R350 000 combined annual household income is considered the threshold (See Chapter 1 section 1.6). NSFAS considers the income bracket of the parents to determine a student's eligibility for funding, which is also problematic since some families have more responsibilities than others do in the same bracket. That is, some have more responsibilities and dependants than others. This results in students forming what is termed 'the missing middle' who do not qualify for funding and are also not eligible for bank loans.

My twin brother and I were denied NSFAS because our parents earn above the required amount. I think it's unfair considering the fact that there are two of us and not just one. University is expensive and my parents are government employees (nurse and correctional officer) so they don't earn much. NSFAS should really consider the number of children a household has in University before denying them. ~Anonymous Student Online

However, not all students who struggle with resources come from underprivileged backgrounds; some are reported to be inexperienced in budgeting and in handling funds. As discussed during the focus groups and acknowledged in the previous chapter, the following discloses this in a similar vein:

I have just noticed that those who do seem less fortunate, seem to waste their money (oftentimes funding from bursaries) on brand name items, food (very prominent on campus), or perhaps going out (clubbing etc.); rather than learning to be frugal or money-wise. There just seems to be a huge wasteful mind-set that either students are completely unaware and unknowing of how to budget, save, or plan, or it's just complete disregard for the blessing and opportunities afforded by hand-outs and bursaries/scholarships etc. ~ Anonymous Student Online

Information or education is critical in equipping people with the skills to manage their own resources, and even more so in situations where resources are scarce.

7.4.3 Living conditions dimension

The notion that some students are forced to squat with friends or constantly move from place to place, due to finances, is quite sad. The fact that students are forced to drop out of university due to a lack of finances for tuition fees is equally sad. The essence of this problem is of course parents' lack of financial stability as well as a lack of financial planning. In addition, university tuition fees are quite expensive, not to mention living expenses. I am unsure what the solution to student poverty could be. ~ Anonymous Student Online

Living conditions were identified as another factor which contributes to multidimensional poverty. The table below shows that most of the students who are deprived in the indicators of living conditions are also multidimensionally poor. The exceptional case was the assault on campus variables where the raw and censored head-counts had the smallest difference, suggesting that the deprivation in the variable was experienced mainly by the multidimensionally poor students. The relatively large differences between the raw and uncensored deprivation in the other variables suggests that the deprivations were common to all students, regardless of their multidimensional poverty statuses or their living conditions.

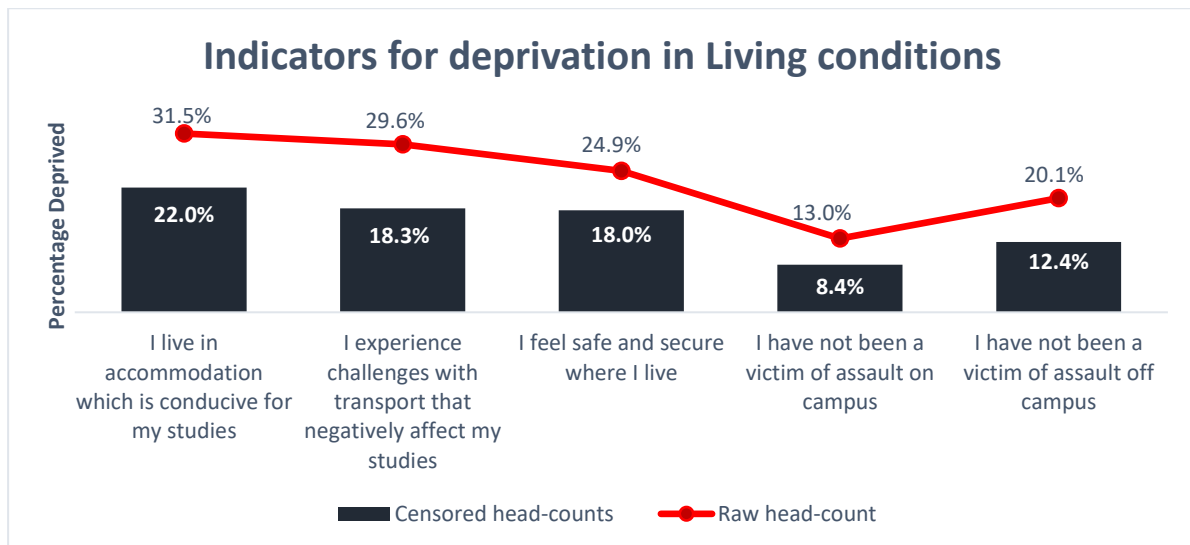


Figure 7.3: Percentage deprived in indicators for living conditions dimension

From the previous chapter, students who lived off-campus without family constituted 58% of the sample (MSPI of 21%). Those who lived with family constituted 16% (MSPI of 14%) and those who stayed in university residences were 23% (MSPI of 14%). I tested to see whether there is a statistically significant difference between the places of residence in terms of the poverty score of the students using a Two Way Anova (campus vs. off-campus). The data showed that there was a statistically significant difference in the MSPI score for the different places of residences ($F(2, 2116); F=6.844; p=0.03 < 5\%$). The same differences hold true when tested using t-tests to see if there is a difference in the off-campus accommodation MSPIs ($p < 0.00$). The analysis shows that students who live off-campus are also the most deprived in this dimension. A student explained, based on experience:

...Both my parents aren't working and I sometimes miss or arrive late in classes because I do not have money for transport. This does not only make me miss classes but I also come to classes tired because of walking for 2 hours to the campus and cannot give my full attention in classes, I have been suffering from anxiety and stress for the past few months and afraid that this might affect my studies badly. I also cannot participate in leisure activities such as doing the campus radio presenting and playing sports because I live far from the varsity. ~Anonymous Student Online

The cry for help by the above student is not an isolated voice. A number of students raised the cry that their living arrangements were not conducive for their studies and the study confirms that their cries are valid given the MSPI scores. Off-campus students complained of things like noise levels,

unreasonable landlords, safety, distance from campus, transportation, lack of study spaces, lack of electricity and no Wi-Fi (which they need to do assignments and to study). The following students explained their ordeal:

The pain some students go through every day just to get by for the day is unbelievable. As an off-campus student, you have got to count yourself lucky to have found accommodation then count yourself blessed if it's near transportation routes and safe. ~Anonymous Student Online

Being off-campus for first year students is not safe because we do not have much information on what is really happening out there. When you have late classes you have to ask other students to accompany you or you just run, after getting off the school transport. It does not even drop you off near where you are renting but drops you halfway there. I have tried seeking for a space in an on-campus residence ever since I got to the school but there is no luck. ~Anonymous Student Online

Student safety off-campus is a serious problem and the university seems to be taking it lightly. Fellow students are robbed, raped, and assaulted on their way to their designated accommodation. We live in fear in our communes because landlords do not ensure our safety at communes. There have been two break ins at my current commune in a matter of one month. Off-campus student safety!⁷⁰ ~Anonymous Student Online

Looking at these deprivations through the capabilities lens, it becomes apparent that students' real opportunities are constrained by their living arrangements. Living conditions are an important conversion factor which play an integral role in students exercising their agency and choices. As mentioned above, students are restricted from doing what they value; for instance, extra-curricular activities, because of safety and transport concerns. Living conditions play a pivotal role in students realising their various desired functionings (beings and doings), as both a conversion factor and as an enabler or constrainer of individual agency.

7.4.4 Psychological wellbeing dimension

⁷⁰ The UFS has however initiated a number of interventions. They have installed panic buttons at strategic places on campus, they partnered with the local police to patrol off-campus, they have held awareness marches, and they are piloting a shuttle service.

Once a month there must be a day where psychologist walk around and just ask how someone is doing, I believe that would have a huge influence, being a student is difficult, and nobody has time to listen to anyone's problem. If not, maybe have a day once a month where people can go to psychologists (e.g. about 15) to just offload and think about the positive things in life than stressing with school work. ~Anonymous Student Online

From the stories in the first section of this chapter and the above quotation, it was evident that poverty has an effect on the psychological wellbeing of students. 82% of all students indicated that they are often worried, though only 35.9% of those are multidimensionally poor, as shown by the Figure below. The large difference between the raw and censored head-counts suggests that worry is a big issue among students from all economic classes.

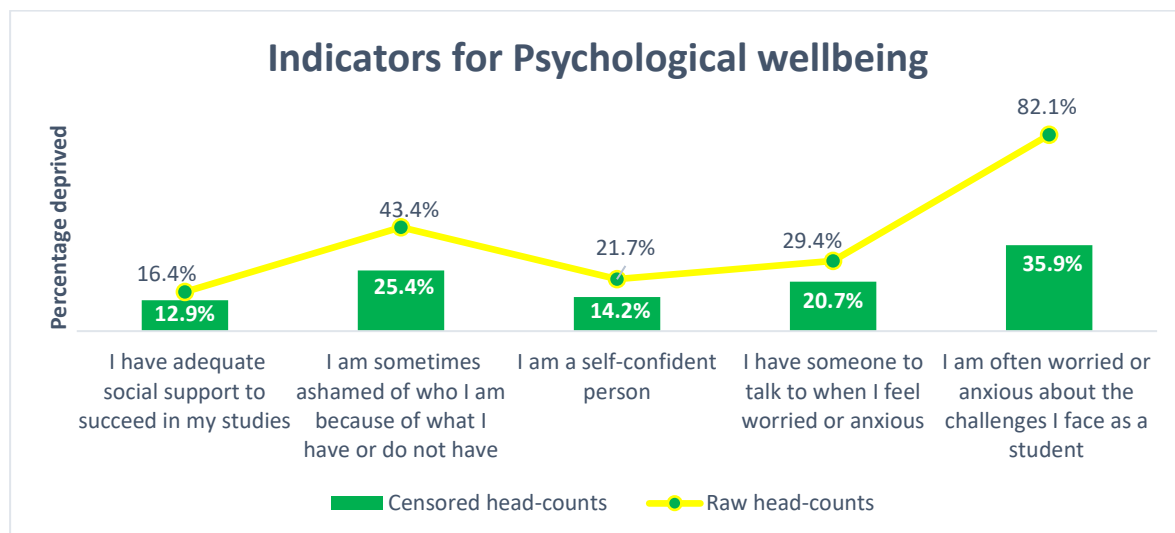


Figure 7.4: Percentage deprived in indicators for Psychological wellbeing

The figure above also shows that after censoring out the non-multidimensionally poor from the deprived students in this dimension, very few deprived and multidimensionally poor students have adequate social support and self-confidence. The students quoted below call attention to the mental wellbeing of students, arguing that in as much as interventions address monetary poverty, they also need to look into the emotional wellbeing of students.

A whole lot of money is spent on tuition and study-related resources rather than on the well-being of students. Students are facing severe depression without practical support. The education system does not accommodate students from different backgrounds and with different challenges. ~Anonymous Student Online

Student poverty to me is a rather critical and sensitive matter, that I feel no one really cares about. There are a lot of students here at the university that do not have money for basic needs ... most of them feel ashamed of asking because then it's like, "why did they decide to come to such an environment whereas they have no funds to sustain themselves?" This poverty then leads to depression, poor academic performance and general spiritual 'unwellness'. ~ Anonymous Student Online

In as much as students suffer in this dimension, the data shows that students who have social support are less likely to be deprived. The respondents in the focus groups particularly mention mentorship as a useful tool in identifying and lessening the burden of poverty. They argue that mentors are able to see beyond the façade and discover hidden deprivations. Mentorship is flagged on numerous occasions by the respondents as critical not just in identifying student poverty but in improving the general wellbeing of students as a whole. The presence of mentors and other healthy relationships in institutions of higher education has been argued in literature as vital in enhancing and promoting student capabilities and flourishing (Heckman, 2015). Terrior and Leonard (2007) further argue that students who have mentors attest to fuller student experiences with fewer deprivations. Therefore, the findings are consistent with literature.

7.4.5 Participation dimension

Self-confidence schemes should be initiated to boost the confidence within students from poor backgrounds. You may find that these poor backgrounds psychologically inhibit students from participating at their full potential. If one is poor, that doesn't mean one is dumb. But somehow it feels that way for most students. The tertiary life exposes poor students to other students from private schools and model C schools, and this thus make assumption that these students are smarter than them. Of course these students were exposed to good quality equipment, but who is to say a brain of a poor person cannot improve and grow. Poor background based students need to realise practice makes perfect. The more you engage yourselves in activities, the more you'll get better and improve. If schemes aimed to awaken this realisation within students from poor backgrounds are to be initiated, there will be a significant increase in the confidence of these students, and confidence leads to success. ~ Anonymous Student Online

From the above discussions and quotation, it is apparent that multidimensional poverty affects student participation in study and leisure-related activities. The figure below shows that there are more students who are deprived in leisure activities than those deprived in study-related activities. This could be a response to government initiatives, which have focused on giving students academic access without a strong emphasis on social access.

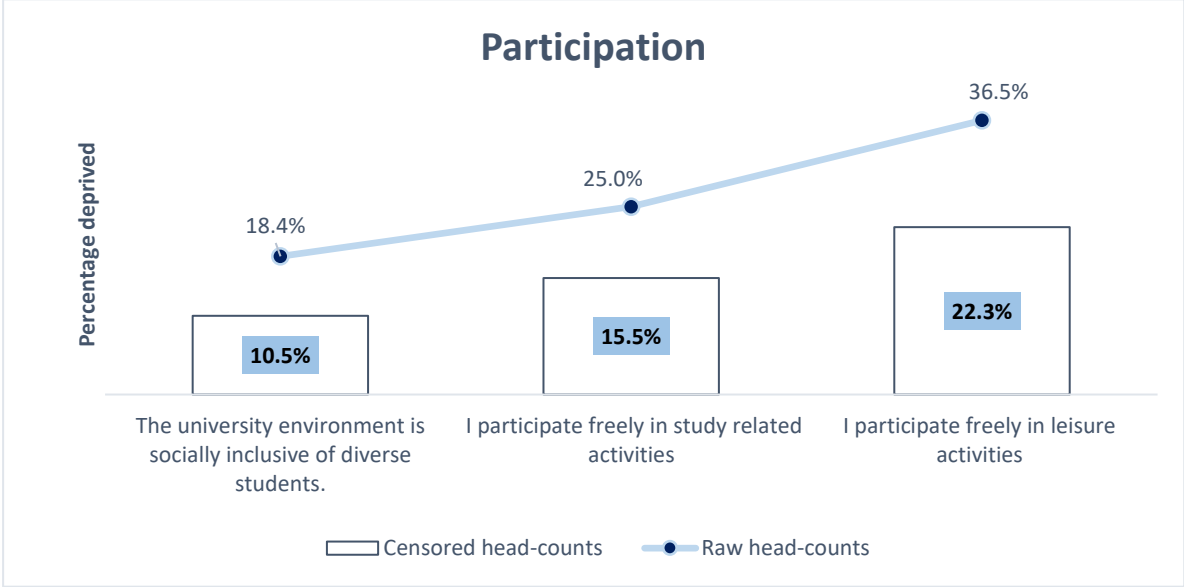


Figure 7.5: Percentage deprived in indicators of Participation

In Chapter 6, Figure 6.25, it was reported that students who experience deprivation in participating in study-related activities highlight that their participation is hindered mainly by language (accent), university environment, safety and security, residential status(where they live) and knowledge of university programmes and activities. Interestingly, students did not cite finances as a major hindrance to participation in academic activities; rather they cited language and belonging. These reasons differ from those which hinder them from participating in leisure activities. Participation in leisure activities is hindered mostly by safety and security, interest, finances, residence status and the general university environment. This means that the university needs to focus on making the university more welcoming in order to improve participation. The following explanations summarise the prevailing challenges regarding the university environment.

Equality and poverty can never coexist. The university itself is not an inclusive space as it is only fully enjoyed by those who hold economic power. ~Anonymous Student Online

It cannot be submitted of the university environment to be that, which is socially inclusive of diverse students. For the following reasons, first, social inclusion in its broader definition comprises of, among a few, the entitlement to dignity, of which social classes within the university have hindered. Second, the feeling of being valued is tainted by racial segregation, socio-economic status, historical injustices ... To enumerate, certain individual differences have no grounds to be recognised nor understood. . ~ Anonymous Student Online

Gays and Lesbians sometimes find themselves isolated or excluded from some activities. ~ Anonymous Student Online

The maintenance of a white conservative and patriarchal culture through its residence, sports and general modus operandi, the university is a violent space for black womxn⁷¹, the LGBTI+ community and non-Christians. The university is not Black user friendly (Black referring mainly to African and coloured blacks - a majority of whom are poor, womxn, people with disabilities and the LGBTI+ community) . ~ Anonymous Student Online

Some demographic groups find it harder to participate than others do as they feel unwelcome in the university environment. These groups included women, black students, financially poor students, the LGBTI+ community, and students with disabilities. Efforts will have to be made to accommodate these groups and improve their participation in order to reduce deprivations in this area.

7.5 Examining deprivations of key sub-groups

It has been established that different students go through different incidences and intensities of poverty. There are some demographic groups which are more prone to experiencing more poverty than others within particular dimensions. Some of the sub-groups were discussed in the previous section. For instance, the analysis showed that males are more multidimensionally poor than other genders (Figure 6.27). Using a One Way Anova to test if there is a statistically significant difference between the different genders in terms of their deprivations in each of the dimensions⁷², the following picture was derived, given the concomitant hypotheses:

⁷¹ A neo-feminist expression of the independence of women

⁷² Continuous score obtained as mean of constructs i.e. as mean of all indicators in dimension

H₀: There is a difference in the deprivation score for dimension *i* between the genders.

H₁: There is no difference in the deprivation score for dimension *i* between the genders.

Table 7.3: Anova Test for gender difference in dimensional deprivations

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---------------------------------|----------------|----------------|------|-------------|--------|------|
| Basic Needs | Between Groups | 4.098 | 2 | 2.049 | 6.844 | .001 |
| | Within Groups | 633.440 | 2116 | .299 | | |
| | Total | 637.537 | 2118 | | | |
| Learning resources | Between Groups | 11.660 | 2 | 5.830 | 11.262 | .000 |
| | Within Groups | 1091.765 | 2109 | .518 | | |
| | Total | 1103.425 | 2111 | | | |
| Living Conditions | Between Groups | 4.449 | 2 | 2.224 | 5.967 | .003 |
| | Within Groups | 783.262 | 2101 | .373 | | |
| | Total | 787.711 | 2103 | | | |
| Psychological Well-being | Between Groups | 1.766 | 2 | .883 | 2.594 | .075 |
| | Within Groups | 713.431 | 2096 | .340 | | |
| | Total | 715.197 | 2098 | | | |
| Participation | Between Groups | .156 | 2 | .078 | .188 | .829 |
| | Within Groups | 864.352 | 2088 | .414 | | |
| | Total | 864.508 | 2090 | | | |

I reject the null hypothesis for every variable except personal well-being and participation which have p values greater than 0.05. This means that there is no statistically significant difference in the deprivation score for the basic needs, learning resources, and living conditions dimensions between the genders. The conclusion is also confirmed by conducting robust tests of equality of means using the Welch t-tests, which work with the assumption of unequal variance (See Appendix M). Male students recorded higher levels of poverty overall than females in the dimensions with statistically significant differences despite the fact that the university has more female students than males (59% to 41%). Possible reasons could be that there are more male students living off-campus than on-campus, which affects their participation and increases their multidimensional poverty score as discussed above. Also, male students had higher readings of deprivation in central psychological wellbeing variables like worry and social support, which have been proven to be critical in reducing multidimensional poverty.

Considering the residence variable, it was reported that on-campus students are almost two times less likely to be multidimensionally poor than off-campus students (Figure 6.28). It was noted earlier that residence is a crucial conversation factor; living off-campus significantly increases the risk of multiple deprivations. Student background was also shown to have a significant impact on students from rural and township schools, who experience multidimensional poverty at least twice as much as students from urban schools (Figure 6.29 and Appendix K). The same was also true for students who use NSFAS and other government funding or part-time work to fund their studies (Figure 6.30), and students from lower-income families.

Another factor which students identified as a cause of deprivation is race. Working with the following hypotheses the subsequent results were obtained:

H₀: There is a no difference in the deprivation score for dimension *i* among the different races

H₁: There is a difference in the deprivation score for dimension *i* among the different races

Table 7.4: Anova difference in deprivation scores by Race

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---------------------------------|----------------|----------------|------|-------------|--------|------|
| Basic Needs | Between Groups | 37.703 | 4 | 9.426 | 33.384 | .000 |
| | Within Groups | 604.220 | 2140 | .282 | | |
| | Total | 641.923 | 2144 | | | |
| Learning resources | Between Groups | 108.388 | 4 | 27.097 | 57.138 | .000 |
| | Within Groups | 1011.552 | 2133 | .474 | | |
| | Total | 1119.940 | 2137 | | | |
| Living Conditions | Between Groups | 28.622 | 4 | 7.156 | 20.144 | .000 |
| | Within Groups | 754.865 | 2125 | .355 | | |
| | Total | 783.488 | 2129 | | | |
| Psychological Well-being | Between Groups | 18.449 | 4 | 4.612 | 13.992 | .000 |
| | Within Groups | 699.187 | 2121 | .330 | | |
| | Total | 717.636 | 2125 | | | |
| Participation | Between Groups | 7.618 | 4 | 1.905 | 4.625 | .001 |
| | Within Groups | 869.237 | 2111 | .412 | | |
| | Total | 876.855 | 2115 | | | |

From the above, the p-values are less than 0.05 for all the tests, therefore I reject the null hypotheses for all the tests and conclude that there is a statistically significant difference in how different races experienced deprivation at dimension level. There was also a difference in sentiments from black

and white students during the focus group discussions and interviews, which was reflected in the surveys as well. Most white students complained about issues of culture, heritage, safety, and health, whereas black students complained about resource-related matters like accommodation, food, fees and transport. The following examples are from two white students commenting on different aspects.

Being an Afrikaans speaking student, I find it sometimes difficult to adapt to study material being in English only, as I wrote matric⁷³ in Afrikaans, where other students may have done matric in English. I find some classes difficult, where there is antagonism towards my home language. I, however, have far more friends from other cultures than friends who are also white. I do not have many friends who are from my own cultural background, and most of my friends are from different cultural backgrounds. We all have the same struggles and worries with regards to safety, finances, etc ... Our main worry is that we do not always feel safe on campus and especially in the student accommodation neighbourhoods, like Brandwag and Universitas. We are also not pleased about driven political unrest on campus, e.g., Fees Must Fall, e.g., as it makes us feel unsafe. We are also worried about depression amongst students, drug and alcohol abuse, especially amongst younger students and ignorance towards HIV/Aids, etc.
~Anonymous Student Online

As a white South African without many financial, political or cultural restrictions, filling out this questionnaire was a very good reminder of how incredibly privileged I have been throughout my life. And the constant, daily struggles of many other people around me deal with - whether it is clearly visible or not - and how it may impact every aspect of their lives. Although my answers were very generic and possibly not what you were hoping for, thank you for choosing to conduct research in such a necessary domain of our society. I hope it yields helpful results that can be put to good use. Good luck! ~Anonymous Student Online

The censored head-counts showed that white students were three times less likely to be poor than black students. The following student expressed some of the challenges that black students, who are in most instances poor, experience. These issues range from the university system of disbursing funds to black students, to the financial freedom students may value, to the lack of pro-activeness on the side of the university in (practically) supporting students living off-campus and to a lack of openness in terms of the sale and billing of internet access to students.

⁷³ School-leaving certificate (Grade 12)

Firstly, what I have observed so far is that the university has designed a system to restrict mostly black students from financial freedom. They try to distribute all the funds students have around white people. e.g. NSFAS students do not get their allowances in cash, both for books and meals allowances, so that they will spend it on campus shops on items that are over-priced. The idea is not to protect students from spending on unnecessary and non-academic related items since students end up spending their allowances on expensive loud speakers and other entertainment equipment. Secondly, most black students do not get enough academic and social life support from the university. Students from black communities generally do not get academic support from their family members so our only hope is to get help from the university. Thirdly, most black students do not drive cars and in the university they do not have financial freedom (they do not have access to hard cash, since the university uses Fundi system⁷⁴) so they cannot even afford to pay for a shuttle, while the majority stay off-campus ... and some have classes after 8 pm. This means that our safety is not the university's priority, what happens after we exit the gate is our business. Lastly, we are just customers to the university, e.g. the the university sells internet but no student ever received an e-mail notifying about internet billing or just to ensure that all students are aware of internet billing⁷⁵. Lots of black students are not aware of internet billing and they won't get registered the following year [because they owe]. It is really painful seeing our brothers and sisters enjoying internet access without being aware of the storm that is yet to come. ~Anonymous Student Online

It is worth noting that the data shows that there are also white and coloured students who struggle at the university. Some black students actually feel that skin colour should not be a determinant of success or preference. The students therefore draw our attention to the dangers of generalising and stereotyping according to race. They also pose a challenge to some black students who often use their race, family background and historical disadvantage as excuses.

I would like people to realise (including lecturers) that it's not only the black students that struggle with poverty. I know I am privileged enough due to my father's income, but I know of a lot of white and coloured students that struggle. These students get ignored because of the colour of their skin. We are supposed to be equals, then why are "some more equal than others"?
~Anonymous Student Online

⁷⁴ System where money is loaded onto student card

⁷⁵ The university allocates 1 Gigabyte per student per month and they start billing the students after the gigabyte expires. The rates charged are comparable to local mobile data rates which then leaves students with huge bills.

As black people, I feel like we use our backgrounds to limit ourselves from participating and doing things that are out of our comfort zone. For many learners, poverty is an excuse we use to defend ourselves which should not be the case. In varsity, we all have equal opportunities to make it in life, no matter the skin colour. ~Anonymous Student Online

The evidence in the data suggests that multidimensional student poverty is different for different races, with black students being the most affected. This is despite the fact that it has been over 24 years since the official end of racial segregation in the country.

7.6 Conclusion

In this chapter, I discussed the results of both the qualitative and quantitative phases of the research project in relation to my research objectives and questions. Each of the five broad dimensions of deprivation which have been coupled with twenty-five informing and corresponding indicators discussed in this chapter are testament to the fact that there are indeed many non-commensurable dimensions of student poverty, which would be neglected if student poverty is observed from a purely monetary perspective. The nuances unearthed and themes discussed based on direct student voices also give credence to the research design – an exploratory sequential mixed method. The initial qualitative phases, interviews and focus groups resulted in the indicators and dimensions of student poverty, which informed the questionnaire that was designed and distributed in the quantitative phase. A purely quantitative approach would not have given a picture as detailed and nuanced as discussed above. Further, analysing the qualitative responses in the survey gave a firsthand reflection of the lives of the students and gave insight into their real, uncensored lived experiences. The understanding of student poverty was thus constructed by triangulating three sources: initial qualitative results from the focus group discussions and interviews, quantitative results and final qualitative results from anonymous students in the survey.

The quantitative part allowed for the voices of many students to be expressed in the study, about 2306 in total. These voices aid in giving a more expansive perspective of the incidence and intensity of student poverty and showed which dimensions contribute most to student poverty, as well as giving a picture of how poverty is distributed in different sub-groups. The way students understand poverty has been used to identify factors influencing student poverty, which has in turn been used to create a multidimensional student poverty index.

Chapter 8: Reflections, recommendations and conclusion

8.1 Introduction

In response to the dearth of research into the incidence and intensity of student poverty in South African higher education (van der Berg, 2018; Spaul, 2013; Walker, et al., 2009); the absence of clear metrics to measure and compare student poverty (van der Berg, 2008; Brock-Utne, 2007); and the scarcity of studies on multidimensional student poverty (Noble, Wright, & Cluver, 2006; Oyedemi, 2009), I embarked on this project in a bid to bridge these gaps in the literature (see Chapter 1 Section 1.4). I framed the study within the field of human development, operationalised through Amartya Sen's capabilities approach (Chapter 2 Section 2.3), which foregrounds student freedoms, voice and agency.

The study set out to design a multidimensional student poverty index at a South African university based on student experiences and understandings of poverty (Section 1.5). To achieve this, the views of students and student affairs practitioners were sought, through rigorous and exhaustive methods of inquiry (see Chapter 4). A novel methodology was created and implemented using different existing research designs, methodologies and philosophies (Chapter 4 Section 4.4). A number of critical student poverty dimensions emerged from the data (Chapter 5 Section 5.2). Their interaction with one another and their contributions to overall student poverty were also explored (Chapter 7 Section 7.4). Furthermore, a multidimensional student poverty index was created which is the first such index in the country (Chapter 6 Section 6.3). The potential of this index is boundless, especially in the South African higher education landscape which is unequal and highly segregated (Walker & McLean, 2013; Wilson-Strydom & Okkolin, 2016). Overall, the findings from the research make an original, contextually sensitive contribution to student poverty studies in an environment where the inequalities of the past still influence the present state of affairs, not just in higher education but in the country at large.

In this final chapter, the different strands that constitute the thesis are woven together to echo the resounding argument I have been making throughout the thesis. The argument is that, in as much as student poverty is an instance of general societal poverty (See Chapter 1 Section 1.1-1.3), it has germane and unique non-commensurable components that can only be understood through rigorous, reflexive, and human development centred approaches (See Chapter 4). I explored the

complexities of student poverty through findings from the research and contrasted these with the positions held in literature.

Specifically, part of my thrust in this concluding chapter is to reflect upon what the research sought to uncover, the theoretical and methodological contributions made to the multidimensional poverty and higher education fields. The chapter also highlights the implications of these contributions to this study and knowledge as whole. Having come to the end of the study, I shall also discuss how each of my research questions was addressed in the study. Furthermore, key findings from my study that might inform policy and practice regarding the creation of a socially just multidimensional student poverty index are discussed. As an acknowledgement that the work done in this thesis is neither exhaustive nor sufficient to identify all the conceptions of student poverty and compile all the dimensions of student poverty, the study limitations and areas for further research are also highlighted.

8.2 Reflection on the problem statement

In the first chapter of this thesis, I highlighted that poverty is a serious human plight from which students are not exempt. I also mapped out that poverty is as much a South African problem as it is a global concern. The South African case shows that in as much as those most affected by poverty do not even access higher education institutions -they are excluded completely due to finances, information and stunted aspirations caused by adaptive preferences among many other factors - those who do attend face a myriad of deprivations. I argued that the current monetary matrices used to measure student poverty fail to capture the extent of poverty among students accurately. The spate of student protests in higher education institutions between 2015 and 2017 revealed the range of deprivations among poor students, showing that student poverty is both multidimensional and nuanced (Chapter 1 Section 1.7). I argued that the discourses among students in the country, manifested in protests like #RhodesMustFall, #OpenStellenbosch, #UnsilenceUFS, #FeesMustfall, and so forth, express that students view themselves as more than economic units in the economy but that they see themselves as full human citizens with rights and responsibilities. To that end, I argued that there is a need to research student poverty using a capacious normative evaluative framework.

I also noted in the first chapter that the student body is heterogeneous, comprising students from different ethnic, religious, economic, financial and social backgrounds. The implication of this is that

approaches which look into multidimensional student poverty should have the individual student as both a unit of analysis and a unit of evaluation. The South African government and other organisations which aim to assist deprived students struggle to identify these students and they end up falling through the cracks (Chapter 1 Section 1.9). I saw a need for a headline figure which policy and decision makers can use to identify deprived students. In as much as there are many criteria used for this purpose, there is no agreed and empirically tested method publicly available to do so. Consequently, I proposed to cover that gap by providing a multidimensional student poverty index informed by students, having individual students at the centre, and an actionable methodology on developing a multidimensional student poverty index.

The problem and complexities highlighted above led me to ask the research questions, which then steered this research. The questions I asked were:

1. How best can poverty be conceptualised and measured in South African higher education?
2. Which contextual (economic, social, educational, etc.) factors shape and reflect multidimensional student poverty?
3. How can the above-mentioned contextual factors be incorporated in creating a South African based Multi-dimensional Student Poverty index?
4. How can this index help to understand and reduce poverty in higher education?

To that end, the following section gives concise accounts of how each of these research questions were answered. Reflections and comments on the various instruments and methods employed are presented accordingly.

8.3 Reflections on the research questions (RQ)

8.3.1 Conceptualisation of poverty (RQ1)

The first question was:

How best can poverty be conceptualised and measured in South African higher education?

In order to understand the best ways to understand and measure poverty in South African higher education I used two primary methods. The first was looking at what has been published, particularly

looking at the ways in which poverty has been understood and measured in previous studies, both locally and internationally. I then marked the grey areas and blind spots in literature and investigated ways to patch those conceptual pitfalls (Hull, 2007; Sen A. , Human Rights and Capabilities, 2005; Wamala, 2010). The next method of securing conceptualisations was through an empirical process where I sought and analysed data to get the perceptions of various stakeholders.

8.3.2 Theoretical viewpoint

A number of lenses through which poverty can be conceptualised and understood were considered and explored. These ranged from human capital theory to utilitarian perspectives and a basic needs approach (Bentham, 1787; 1970; Rawls, 1971; May, 1998; Woolard & Leibbrandt, 1999; Schultz, 1963). The weaknesses of these approaches were noted and discussed. Stemming from the weaknesses of the above methods, I then argued for and gave a rationale for selecting the human development conceptualisation of poverty, operationalised in this study through the capabilities approach.

I argued that the capabilities approach is an apt framework to investigate student poverty because it evaluates the status quo against a normative standard. I also explained that central to the capabilities approach are concepts of capabilities and functionings. Sen (1979) conceptualises capabilities as the achievable freedoms a person has at his/her disposal and goes on to define functionings as the 'doings' and 'beings' that one has reason to value. The functionings are the realisations of valued capabilities. Using the capabilities approach, student poverty is viewed as the deprivation of one or more rudimentary capabilities (Sen, 1999, p. 87). These capabilities are the essential things students need to achieve minimum function in society (Banerjee, Benabou, & Mookherjee, 2006) and live lives they have reason to value (Laderchi, Seth, & Stewart, 2003). That is, poverty is understood in this study as a deprivation in rudimentary capabilities. However, not all deprivations constitute poverty. That is, some deprivations are worse than others and some have a more significant effect on wellbeing than others do. For instance, finance and resource-related deprivations seem to have a huge bearing on one's deprivation status. This means that in as much as multidimensional poverty looks into other deprivations, besides those of a financial nature, there is a need to recognise the integral role of finances (Wolff, et al., 2015).

The capabilities approach has also been lauded for its application in multidimensional poverty studies and is the guiding framework behind the global Multidimensional Poverty Index (2010). The use of

human development approaches in wellbeing studies is illustrated by the Human Development Index, which is used to compare and rank countries (Alkire & Santos, 2009). The Human Development Index is a function of a country's Gross Domestic Product (GDP), life expectancy and literacy rates (Haq, 1999). This index is arguably very effective in comparing development between countries but cannot be modified to work for individuals and societies, as it needs large aggregated national datasets to draw from. The capabilities approach as argued by Sen addresses this challenge by defining and distinguishing the relationship between an individual and a group (Sen, 1985). Sen foregrounds individual well-being as an end in itself, which can also be used as a means to a societal end.

To be precise, one of the biggest advantages of the capabilities approach over other evaluative frames of wellbeing in creating poverty indices is its ability to facilitate the modelling of individual capabilities (Sen & Nussbaum, 1993). Subsequently, the multidimensionality of individual capability sets allows capabilities-based indices to provide a depth which may be missing in other income-based indices. This is not just on a macro level; Brandolini and D'Alessio (1998) argue that the capabilities approach is powerful in creating micro poverty indices.

In as much as the capabilities approach is potent, there are however, a number of limitations cited in literature regarding my chosen framework. Comim (2001) singles out weighting and incompleteness, aggregation and availability of data as the key challenges that can be found in operationalising the capabilities approach, especially where indexing is carried out. These areas of concern have been also been noted by leading researchers on the capabilities approach like Sen (1992; 1999). I addressed these in my research design.

8.3.3 Empirical viewpoints

Interviews conducted with key stakeholders (see Section 4.5.1.2), as well as focus group discussions (see Section 4.5.1.3) conducted with students, highlighted that the prevailing conception is that finances are a pivotal part of student wellbeing. However, they are not the only aspect (see Section 7.3). There are about twenty-five areas of deprivation which emerged from the data which are grouped in five broad dimensions (see Section 5.8). I will expound on these in response to the second research question. The existence of a number of categories of deprivation, coupled with sentiments from students shown in the empirical chapters, suggest that students view poverty as multidimensional in nature. Most students believe that these dimensions are related and that they

feed into each other, meaning some deprivations make one prone to other deprivations. I shall summarise the findings in more detail below.

8.3.4 Reflections and recommendations on the indicators and dimensions of student poverty (RQ2)

Having consolidated the conceptions and understandings of student poverty, which formed the first research question, the second research question is as follows:

Which contextual (economic, social, educational, etc.) factors shape and reflect multidimensional student poverty?

This particular question was answered in the qualitative phase of the exploratory sequential mixed methods research design I chose. As explained in the methodology chapter (see Chapter 4), exercises done in all the phases of the qualitative data collection and analysis were informed by participatory methods, particularly the Individual Deprivation Measure which promotes the foregrounding of participant voices and views. Students and student affairs practitioners gave insight into this question through focus group discussions and in-depth interviews respectively. I then analysed the data, with the assistance of Nvivo software. I coded the data in four different ways. The first round of coding was open coding, followed by descriptive coding, then thematic coding and finally a second round of thematic coding, having analysed the emerging themes in order to consolidate related and repeated codes. To ensure that my results reflect the views of the students, and in the true spirit of participatory student research (Calitz, 2017; Bertrand, 2018), I took the data back to the participants in another focus group and the emerging themes and indicators were discussed and refined, where need be, guided by the collected data.

Part of the mandate of the last focus group discussion (see Section 5.3) was to run a number of exercises including classifying the indicators of student poverty into definite dimensions, named and defined by the students. The other task involved democratically developing cut-off points and weights for the indicators using participatory exercises. The focus groups also helped in the poverty mapping exercises, as well as in the ranking of indicators.

The evidence in the data from the students who participated in this study as described above answers the research question by confirming that students face a number of deprivations. These were grouped into five broad dimensions, namely basic needs which are most vital for student functioning

or survival, essential resources for learning and living as a student, the living conditions and living arrangements of students, freedom of participation, and aspects of psychological and psychological wellbeing. The five broad dimensions of deprivation were coupled with twenty-five informing and corresponding indicators. As cited above, students also worked in a focus group to ratify the dimensions and to assign weights to the different dimensions, which they did as follows: basic needs (30%), learning resources (25%), living conditions (20%), psychological wellbeing (15%) and participation (10%). I will summarise each of the dimensions presently. Beyond summarising the deprivations, I also highlight probable solutions to the deprivations.

8.3.5 Basic needs

The indicators that formed this dimension included food security, amenities, shelter, and access to basic health care and physical health. This dimension was given the greatest weight in terms of its contribution to multidimensional student poverty (see Section 5.6). More so, the data collected reviewed why this was so; both in the qualitative and quantitative phases of the research (see Section 6.3.4). The first indicator was food security. The data showed that many students (23.7% of those who participated in the study) struggle to secure two healthy/nutritious meals a day. Though the institution has schemes to give students food, the participants indicated that the criteria used to award these were either not clear or too strict. Another concern raised around food is that those who are on government funding like NSFAS, who make up about 40% of the students, receive only R800 per month for food, which is inadequate. Therefore, those students face extreme food shortages. I give a practical recommendation to address this challenge at institutional level in the next subsection.

The data showed that although there are a few students who do not have their own accommodation, i.e., who are squatting or living illegally (10.6%) of all students, almost all of the students facing accommodation problems are multidimensionally poor (censored head-count of 8.0%). This means that students who are struggling with multidimensional poverty, almost exclusively face an accommodation deprivation. Thus, accommodation status is an apt proxy for multidimensional poverty, meaning officials can investigate the deprivations faced by students who do not have accommodation at all and use that as a basis to know the most pressing dimensions of student deprivations. The qualitative data resonates with this point, with many students citing that they sleep in the study halls and bathrooms because they do not have a place to sleep. The same students report falling victim to sexual assault and other security-related challenges. One of my recommendations

emanating from the study is that allocation for on-campus accommodation should be reviewed to find ways to prioritise students from lower-income households. A prioritisation of this nature would drastically reduce the deprivations faced by the general student populace.

Most students indicated that they have access to water and electricity (90.2%), meaning those deprived in this dimension were extremely few. This is unlike health, where 32% of the students indicated that they have health challenges and 15.2% have no access to basic healthcare. The study showed that students who struggle with health often face a myriad of other deprivations, which lead them to worry and fall prey to stress-related diseases. The centrality of health in the perpetuation and deepening of deprivations answers the research question by suggesting that physical health and healthcare access are appropriate indicators of student deprivations/poverty. The university currently gives students only three free visits to the university's clinic and psychology services for the year, which are not sufficient. As a result, healthcare is unattainable for students who are multidimensionally poor which in turn, as proven in the study, worsens their deprivations even more. My recommendation would be that more counselling sessions should be made available to all students if possible. Alternatively, fellow students could be trained to provide peer counselling and mentorship, especially for off-campus students who reported higher deprivation scores.

8.3.6 Learning resources

As mentioned in Chapter 7, the students did not rank resources the highest of all the deprivations, which was a surprise considering that that was the assumption at the beginning of the study. Rather, they ranked worry the highest of all their deprivations. The worry about future study resources was not just limited to multidimensionally poor students but was shared by all students. The statistics show that up to 57.2% of all students did not have all the resources they need for learning and out of these, 22.9% were multidimensionally poor, meaning that all students experienced worry. The study showed that most students worried more about funding for future studies than they did about funding for their current studies. This is a challenge for sponsors and universities to find means to give some sort of security for students' future studies. The absence of such security has been proven to be a cause of great distress and worry. An initial recommendation on resources I would make is that students need training on how to manage their resources so that they can get the most out of their usually limited resources. This can be done by formalising the training and mentorship around

these issues either within particular orientation study modules like UFS101⁷⁶ or within Student Affairs' student life programmes in residences (both on-campus and off-campus). The study showed that multidimensionally poor students performed poorly academically, hence addressing multidimensional poverty in the above manner is likely to improve the performance of students by reducing the deprivations they have to worry about.

The study showed that students on NSFAS had an MSPI score of 24%, which is 6% above the average MSPI, meaning that they are among the most multidimensionally poor students on campus. The stories shared and reported in Chapter 7 also showed the depth to which NSFAS students suffer just to get by. Some of them reported that they have to use the money they get to take care of families back home, among many other responsibilities. I would recommend that the government should further review its NSFAS grant allocations so that students have more for food. This can be done by consulting universities in order to find ways of ensuring food security on campuses. Having the government establish partnerships with universities may facilitate the formalisation of university interventions and also galvanise universities which are not doing enough into taking greater action. At the very least, universities should provide the government with their official reports on what they are doing to improve food security on campuses. The UFS has recently started consultations led by Student Affairs to address food security on campus and I believe having government support will ensure that their interventions are sustainable. I appreciate that the underlying challenge affecting student poverty is the scarcity of finances at both national and household level. Therefore the only way for the state to fully address the challenge of student poverty, accounting for fiscal feasibility, is to partner with various stake holders, within and beyond the usual players in higher education.

8.3.7 Living conditions

31.5% of all students reported living in conditions that are not conducive for studying. Such a percentage is high and worrisome. The findings show that some of these environments are either too crowded, too far from campus or unsafe. Most of the students who complained about living conditions reside off-campus, though just a few complained about restrictive rules imposed on them in campus residences. On-campus students complained mostly about the residence policy not being racially inclusive, that is, students are placed in particular residences, or floors within residences, and

⁷⁶ "UFS101 is a compulsory, 16 credit-bearing module at the University of the Free State. The aim of the programme is to create an opportunity for students to learn the skills and capabilities that would enable them to be more successful in their academic careers. This learning takes place through structured workshops that are themed according to the five units of the transition programme. These units are academic skills, academic and career advising, financial management, leadership skills, and health and wellness."-UFS <https://www.ufs.ac.za/ctl/home-page/focus-areas/high-impact-practices-transition-programme---ufs101-pass>

even rooms⁷⁷ based on the grounds of skin colour (see Chapter 5 Section 5.2.3). Another concern raised by on-campus students was that residence policies do not reflect different sexualities and students are placed and managed based on traditional gender classifications. The students claim that homosexual and transsexual students are not catered for in the policy. Furthermore, first-year students indicated that their freedom of movement is restricted. The challenges raised by on-campus students will be reported to Housing and Residence Affairs, and to the Student Representative Council to encourage appropriate action and consultations to address them.

Off-campus students, however, reported a host of deprivations. These ranged from transport, food, security and support. As mentioned above, off-campus students have a higher MPSI score (21%) than their on-campus counterparts. The deprivation of staying off-campus was shown to be corrosive, meaning it leads to many other deprivations, especially for vulnerable groups like black students and female students. For instance, multidimensionally poor students who stay off-campus struggle to complete their assignments due to limited internet access (no Wi-Fi). They also face security risks when they travel to campus. Poor students residing off-campus are also constantly stressed about the harassment they experience from landlords regarding payments and that has an effect on their emotional health. My recommendations would be that the university in particular should provide transport for off-campus students, as this will address the security challenges. More research needs to be done by the university to check the feasibility of this and I recommend that the university management liaise with and benchmark from the management of other universities that are running successful off-campus student shuttles. To whatever extent possible, evening classes should not be scheduled for undergraduate students to ensure that all students can travel home during the day while it is still light and somewhat safer. This will lower the number of students who are assaulted off-campus (20.1% report having been assaulted off-campus in this study). My final recommendation to the UFS SRC is that they encourage off-campus students to join city or day residences⁷⁸ where they can find mentorship, be advised when struggling, and can be given overall emotional support which is essential in academic progress.

⁷⁷ Most residences place people of the same race in the same rooms.

⁷⁸ These are residences which cater for off-campus students. They allow students to have a place to interact with other students and participate in student life activities as a collective. The UFS has 8 such residences.

8.3.8 Psychological wellbeing

Deprivations or poverty by nature affects individual wellbeing (Laderchi, Seth, & Stewart, 2003). The findings from this research confirm this by firmly placing the psychological wellbeing dimension at the centre of multidimensional student poverty. Though there was a strong positive correlation between students' poverty scores and their emotional health variable, deprivations were not just experienced by poor students. Up to 82%⁷⁹ of students worried constantly and close to 30%⁸⁰ did not have anyone to talk to when stressed. This, together with the empirical findings from the interviews, showed that mental and emotional health is a big problem at the university, which ought to be addressed⁸¹. As part of the recommendations I am tabling in this thesis, structures to deal with mental illness and mental health issues should be strengthened and capacitated. The university currently waits for students to approach the clinic before intervening and I recommend that a more proactive approach be taken. I recommend, as suggested by the students (see Section 7.4.4) that campaigns be run where well-marketed and free counselling sessions are offered to students.

Existing student poverty interventions use criteria which are too strict. Most of them look at student academic performance and require them to complete online applications. This further disadvantages the extremely poor students, who either are failing because they are worried about their state of lack, or fail because they do not have sufficient resources to access knowledge. My findings show that poor students are withdrawn in participating on campus, thus they may not even know about the interventions. Hence, my recommendation is that the university should audit and review how it allocates resources to students who are deprived, and adopt empirically tested rubrics to determine the extent of these students' needs. Further, the university should also take into account how information is disseminated, given that most students reported a shortage of information as a cause for low participation. Communication on social media may not work for all students, especially the poor who cannot afford to use social media. Consequently, communication should be done on official online study platforms, which are accessed by all students.

⁷⁹ Though 46.2% of them were not multidimensionally poor

⁸⁰ 8.7% of which were not multidimensionally poor

⁸¹ News: 1 in 4 university students had been diagnosed with depression.

<https://www.parent24.com/Family/Health/1-in-4-sa-varsity-students-have-been-diagnosed-with-depression-20181010>

8.3.9 Participation

The other dimension of deprivations was termed “participation” and included three key variables, namely *participation in study-related activities*, *participation in leisure* and *the university environment*. This variable was ranked the lowest by the students in the focus group discussions, arguing that there are more immediate deprivations in their context than freedom of participation. The findings showed that on aggregate terms, most students do not have any major barriers which affect their participation. The few who have limited participation noted language and accents as a limiting aspect in academic spaces, while those who faced exclusion from leisure activities indicated a lack of funds as a restraining factor. The emerging sentiment from the students was that poor and black students are marginalised at the university and they do not have a sense of belonging or ownership. Interestingly, the sense of marginalisation did not come from cultural differences or student background, but segregation and exclusion from participation was enforced by language (accents that bring shame), funding, safety and security and residential status. Therefore, all the aspects in this dimension can be addressed if the university increases safety and security for students on and off-campus and remains committed to social cohesion, racial and class integration among students.

8.4 Reflections on the methodology and research design (RQ3)

The third research question of this study was:

How can the above-mentioned contextual factors be incorporated in creating a South African-based Multi-dimensional Student Poverty index?

To answer the above question, based on a critique of existing methods and on the uniqueness of student poverty, I designed my own exploratory sequential mixed methods research design influenced by the Individual Deprivation Measure and the Alkire-Foster methodology. The methodology I designed and employed was within a human development framework, operationalised through the capabilities approach in a socially just and reflexive manner. The methodology was also confined to the pragmatist research paradigm. The sections above reiterated that there are many non-commensurable dimensions of student poverty, which would be neglected if student poverty is observed from a purely monetary perspective. The nuances unearthed and themes reflected were based on direct student voices collected through the chosen design. The initial phases of the research were the qualitative data collection processes where iterative rounds of

interviews (2 x N=3) and focus groups (3x N=8 plus 1xN=8 follow-up) were conducted. The participatory nature of the data collection was informed by the Individual Deprivation Measure. The full students' understanding of student poverty was constructed by triangulating three sources; namely, the initial qualitative results from the focus group discussions and interviews, and eventually, at the end of the data collection process, from quantitative results and final qualitative results from anonymous students in the survey.

After rigorous and consultative analysis was done, indicators and dimensions of student poverty were obtained which were then incorporated into a survey questionnaire. The quantitative part allowed for the voices of many students to be expressed in the study, about 2300 in total. An index of multidimensional student poverty was constructed guided by the Alkire-Foster methodology. The approach led to an index which showed that 18% of students are multidimensionally poor. The Alkire-Foster method allows for the index to be decomposed across different demographics and gives a more expansive perspective of the incidence and intensity of student poverty, showed which dimensions contribute most to student poverty and also gives a picture of how poverty is distributed in different sub-groups.

The mixed methodology was powerful because a purely quantitative approach would not have given a detailed and nuanced account as done provided by a qualitative approach. Neither would a purely qualitative approach have given the breadth which I obtained from the quantitative process. The adopted approach possesses the strengths of both approaches and makes a unique and valuable methodological contribution in student poverty measurement. Using the way students understand poverty to identify factors influencing student poverty, and then using this information to create a multidimensional student poverty index, places students at the centre and foregrounds their experience in a real and emancipatory way.

8.4.1 Student poverty reduction (RQ4)

The fourth and final research question was:

How can this index help to understand and reduce poverty in higher education?

One of the main challenges posed by the Department of Higher Education and Training (DHET) (2010, p. 128) is that the current methods used to gauge student deprivations or needs necessitate reappraisal as they are failing in practice to identify all the students in need. Consequently, this

research provides an alternative way to identify student deprivations (Bhorat, Poswell, & Naidoo, 2004). I argue that student poverty should be framed within human development discourses, and research on student poverty should be approached from a multidimensional perspective. In so doing, multidimensional student poverty will be identified and possibly addressed. Essentially, the methodology I designed and employed in this study can be adopted and implemented at national policy level. The flexibility of the methodology allows for the dimensions of student poverty chosen to be revised in a participatory manner.

The index reviewed a number of conversion factors. These factors either allow or constrain students in translating their capabilities or freedoms to live deprivation-free lives into functionings or realisations of deprivation-free lives. A number of such conversion factors were identified. Language was seen as one such conversion factor which hinders or enables participation in both leisure and academic activities. Understanding the power of language in either separating or uniting students is important in order to assist those who struggle to fit in and flourish within the university environment. This factor highlights the importance of language classes for those who may need extra help. Helping students master the language of instruction not only helps them academically but also improves their confidence and social participation as seen in the study.

The findings discussed in earlier chapters showed that there are some students who are more prone to multidimensional poverty than others. These include black students, students from low-income households, off-campus students, and students from rural and township schools. Identifying students who are at risk of multidimensional poverty is an important step in mitigating the problem. Early identification allows policy makers and university officials to find fitting interventions in time. In this way, student poverty will be reduced. Accordingly, the index helps in the understanding and reduction of student poverty.

8.5 Original contributions

There are a number of original contributions made by this research project. These range from conceptual and empirical contributions to methodological and policy contributions. The first contribution is that I used student voices in an iterative and participatory manner, framed within a robust research design and informed by concrete methods, to define and conceptualise student poverty. This is a first within both the University of the Free State and the general South African higher education context. The novel conceptualisation of student poverty by students themselves

gives a student-elicited opinion on the constituencies of student poverty beyond the monetary aspects for the first time (Matsolo, Ningpuanyeh, & Susuman, 2018) and highlights the inadequacies of the measures used in the past (Wamala, 2010).

Apart from the study being one of very few studies which explore multidimensional student poverty in South Africa, this study is the only one that has done so using the capabilities approach, which, as I argued throughout the thesis, is a socially just and potent framework in the assessment of multidimensional poverty. The study, as a result, makes an original contribution through positioning student poverty within the broader human development poverty discourse, around which the global multidimensional poverty index and other national multidimensional indices are constructed.

The mixed research design I used had a rigorously implemented qualitative element and an equally expansive and strong quantitative component. This did not only allow me to reap the benefits of both quantitative and qualitative research, it also increased the number of claims which could be made from the study, and validates the basis for such claims empirically through evidence. This is principally significant in that the findings have the capacity to appeal to people of both quantitative and qualitative inclinations and persuasions. The presentation and dissemination of the findings of this study have been and can continue to appeal to and be understood by a wider audience. Moreover, the deliberate sequential nature of the research design warranted that the two phases, qualitative and quantitative, be done extensively and thoroughly, which not only speaks to the rigour of the research process but contributes to the overall reliability and validity of the study. Another advantage of the design I used is that very rich qualitative data as well as very rich quantitative data was obtained. This means that the qualitative component can be a stand-alone data source with results that can be used without the context of a student index. In like manner, the quantitative data can also be further analysed and interpreted without further qualitative data collection. Thus, my contribution is significant in that my design provides actionable and valid findings on three distinct levels, namely qualitative and quantitative levels, as well as on a pooled level, as was presented throughout the thesis.

In as much as I made considerable contributions to knowledge production by presenting a global South African conceptualisation of student poverty, developing student poverty measurement indicators, and designing a multidimensional student poverty index, the most persuasive contribution this study makes is its appeal to policy makers in the South African higher education landscape. I witnessed the potential of this contribution during my two years of data collection, when for

example, university officials and students alike indicated tremendous interest in the study and its envisaged findings. I received a lot of support from officials and students, evidenced by the high response rate in the survey. The staff members voiced that they hoped I would disseminate my findings to them and help in constructing appropriate mitigation measures for student poverty. The students were also appreciative of the opportunity to participate in the study and mentioned that they found the focus groups very empowering and liberating (see comments in Appendix O). Sharing their experiences with one another was therapeutic for some and enlightening for others. As such, their agreed positions and conceptualisations of poverty were rich and expansive. Involving students in the data creation process was in line with the values of social justice I alluded to in the methodology chapter.

I also made a methodological contribution as mentioned above. In order to come up with the best framework to answer my research questions, I exercised pragmatism in employing an exploratory sequential mixed design to design a novel methodology guided by the tenets of the Alkire-Foster Methodology and the Individual Deprivation Measure. My pragmatism and flexibility in choosing and designing a methodology is another contribution this thesis makes. I show that the best solutions to real world problems, especially in higher education, should be approached in a reflexive and problem-solution driven manner. I argue that methodological rigidity should be spurned in studies involving students and that existing tools should be modified and adapted where need be. The capabilities approach, which I operationalised, places the individual student at the focal point and calls for researchers to make methodological considerations that enhance the students' pursuance of their valued beings and doings.

8.6 Limitations of the study

Notwithstanding that the study enables a fresh and innovative look at student poverty, the specific nature of the dimensions identified in this study means that the index in its current form cannot be generalisable to broader populations. By implication, any adaptation of the design I used would require that indicators and dimensions be developed afresh to suit local needs. Furthermore, the indicators I identified are valid for the current cohorts of students at the university and may not reflect the reality of students who may register in coming years. Therefore, the index needs to be updated regularly, which though cumbersome and time-consuming, is necessary for appropriate needs assessment and monitoring of change.

Although the literature review identified that the Alkire-Foster Methodology is potent in measuring multidimensional poverty, it however uses binary classifications of deprivation; with poles of 1 if deprived and 0 if not deprived. Dichotomising student poverty is a methodological weakness, as I have observed from this project that student poverty is more nuanced than that, and there are many grey areas in between the poles. The alternative to this would have been the Fuzzy Set methodology. However, I could not operationalise this methodology in this study because it has its own weaknesses, especially considering that depending on the type of membership function used, fuzzy set measures may not satisfy other properties usually considered key in multidimensional poverty measurement, like the focus, weak transfer, and, in some cases, subgroup decomposability (see Chapter 3 Section 3.3.2). My recommendation for future studies on this matter would be to find a way to accommodate fuzziness within the Alkire-Foster Methodology. Another limitation of the study was that the Individual Deprivation Measure is only going to be released for full public use in 2020, therefore I could only operationalise some of its components. I am of the opinion that the methodology has great potential and will rival mainline methodologies.

Another limitation of the study is the reliability of the self-reported data collected in this study. Given the fact that there is a degree of shame attached to student poverty, the authenticity of the responses is concomitantly questionable. This together with the specificity of the accounts collected, means that the reports given by the students cannot be generalized. Future work in this area should consider how to discount the bias introduced by employing self-reported data.

The study was bound by strict timelines and limited funding, being a three-year funded PhD project. I therefore could not perform some of the phases I would have wanted including collecting data again over another two-year period and tracking changes over time. Ideally the survey should be run at university registration time to ensure the entire student population gets a copy, but that was not feasible due to various constraints. My study focused mainly on the conceptualisation of poverty and its measurement; little was done to discover and test practical ways to reduce multidimensional student poverty. Further research is needed in this regard.

The identified limitations are, however, also avenues for future research.

8.7 General recommendations and future directions in research

Having come to the end of this study, one thing that has been made patently clear through my interaction with my research participants (students and staff) and reflected in the findings is that student poverty is a significant issue, one which has not been receiving as much attention as it should, both from policy makers and from researchers. The student affairs officials interviewed indicated that they are constantly interacting with students in dire situations, who they are not capacitated to help, and that this tends to take a toll on their emotional health. They yearn for a research-backed policy intervention on this matter. This research is a step in that direction. My recommendation to policy makers would be that they allow sound research to guide their policy decisions when it comes to student poverty.

I gave most of my specific recommendations in the sections above, but I would like to emphasise that universities should take extra care when dealing with students who are multidimensionally poor. My findings show that there is a strong link between mental health and poverty, therefore universities should find ways of ensuring balanced mental health for all students. Further, as far as possible, university events should be made free or accessible to all students. Students at risk should be identified early, as I discussed in previous sections, and they should be helped before their deprivations compound.

In light of the limitations cited above, I would recommend that future research addresses the challenge of binary classifications and that my proposed methodology be refined and tweaked to enable it to be a template for measuring student poverty nationally. My other recommendation to other and future researchers on this problem is that they should take time to understand student experiences before imposing solutions, in order to gain greater buy-in and support. Finally, another interesting line of research, given the introduction of fee-free education and the fact that universities may not always have the resources to alter students' financial positions, would be to identify and test practical ways of reducing multidimensional poverty with unchanging finances. In other words, ways of reducing the MSPI for students by improving non-monetary dimensions would be a valuable topic for future research.

8.8 Conclusion

In as much as student poverty is complex, nuanced, and difficult to identify and measure, this research has shown that using the right theoretical lenses, well thought-out methodologies, and robust analysis yields positive and actionable results. I argued that student poverty is multidimensional and should be investigated from a human development perspective in a way that foregrounds student voices. To that end, this study sustained the argument and backed it with standpoints from the literature juxtaposed with empirical findings. In so doing, I managed to answer all the research questions I set out at the beginning of the study. Although I achieved the aim of this study by answering my research questions, I did not answer all the questions that exist around student poverty, and much more needs to be done. My study therefore makes a contribution to a hopefully emerging and growing body of multidimensional student poverty literature in South Africa.

The process of carrying out this study and the voices I interacted with in the research field and scholarly literature resulted in me seeing my role in studying student poverty differently. I am persuaded that it is not enough for researchers to write about student poverty in a context like South Africa and leave it at that. There is an unwritten prerogative for researchers to table practical solutions and pursue their implementation over time. The nature of the research, the needs of the students and the expectations of the research participants, all demand that the findings from this project be transformative. To that end, I intend to disseminate my findings to policy makers, the University at large and to the participants in this study, to enable further engagement on the topic. Hopefully, the quandary of student poverty, especially multidimensional student poverty, will find its way to drawing the attention of the powerful few who can act on the recommendations tabled in this thesis.

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Appendices

i. Appendix A: Important definitions

Appendix A: Important definitions adopted from OPHI working paper No. 86 (Alkire, et al., 2015)

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|---|
| <p>Adjusted Headcount Ratio (M_0) – Interpretation The proportion of deprivations that poor people in a society experience, as a share of the deprivations that would be experienced if all persons were poor and deprived in all dimensions of poverty. It is the product of two intuitive partial indices, the Incidence and Intensity of Poverty ($H \times A$).</p> |
| <p>Alkire–Foster methodology</p> <p>The AF methodology uses dual cut-offs to identify who is poor according to the count of ‘joint’ deprivations a person experiences and measures poverty using an extension of the FGT measures. AF measures are consistent with subindices that show the incidence and intensity and dimensional composition of poverty and, for cardinal variables, the depth and severity of deprivations in each dimension. The AF methodology can be used with different indicators, weights, and cut-offs to create measures for different societies and situations.</p> |
| <p>Censored headcount ratios</p> <p>The proportion of people who are multidimensionally poor <i>and</i> deprived in each of the indicators.</p> |
| <p>Censoring</p> <p>This is the process of removing from consideration deprivations belonging to people who do not reach the poverty cut-off and focusing in on those who are multidimensionally poor.</p> |
| <p>Decomposition</p> <p>The process of breaking down the Adjusted Headcount Ratio to show the composition of poverty for different groups. Groups might include countries, regions, and ethnic groups, urban versus rural location, gender, age or occupational categories, or other groups.</p> |
| <p>Deprivation cut-offs (z_j)</p> <p>The achievement levels for a given dimension below which a person is considered to be deprived in a dimension.</p> |
| <p>Deprived</p> <p>A person is deprived if their achievement is strictly less than the deprivation cut-off in any dimension.</p> |

Functionings

Functionings are ‘the various things a person may value doing or being’ (Sen 1999: 75). In other words, functionings are valuable activities and states that make up people’s wellbeing—such as being healthy and well nourished, being safe, being educated, having a good job, and being able to visit loved ones. They are related to resources and income but describe what a person is able to do or be with these, given their particular ability to convert those resources into functionings.

Incidence (H)

The proportion of people (within a given population) who experience multidimensional poverty. This is also called the ‘multidimensional headcount ratio’ or simply the ‘headcount ratio’. Sometimes it is called the ‘rate’ or ‘incidence’ of poverty. It is the number of poor people q over the total population n .

Intensity (A)

The average proportion of deprivations experienced by poor people (within a given population) or the average deprivation score among the poor. The intensity is the sum of the deprivation scores, divided by the number of poor people.

Percentage contribution of each indicator

The extent to which each weighted indicator contributes to overall poverty.

Poor

A person is identified as poor if their deprivation score (the sum of their weighted deprivations) is at least as high as the poverty cut-off.

Poverty cut-off (k)

This is the cut-off or cross-dimensional threshold used to identify the multidimensionally poor. It reflects the proportion of weighted dimensions a person must be deprived in to be considered poor. Because more deprivations (a higher deprivation score) signifies worse poverty, the deprivation score of all poor people meets or exceeds the poverty cut-off.

Uncensored or raw headcount ratios

The deprivation rates in each indicator, which includes all people who are deprived, regardless of whether they are multidimensionally poor or not.

ii. **Appendix B: Information Letter**

Researcher: Anesu Ruswa
Room 114 Benito Khotseng Building
University of the Free State
Telephone: 0713417598
Email: anesuruswa@yahoo.co.uk

12 July 2016

Dear Participant,

RE: INFORMED CONSENT

I am a doctoral student at the Centre for Research in Higher Education and Development (CRHED) at the University of the Free State. I would like to invite you to take part in my research project entitled: Designing a Multi-dimensional Higher Education Student Poverty Index at a South African University.

The study is aimed at understanding how students view poverty in order to design a multidimensional student poverty index which takes into account the various dimensions of poverty as identified by the students.

Study procedures: The study has three main phases. The first involves interviewing those who work with student to understand their view of poverty. The second phases involves conducting in-depth interview with students from various residences to ascertain the dimensions of poverty. The final step involves compiling the dimensions into a questionnaire and administering it to a great student population.

Benefits: There are no direct benefits for participating in this study, however the information that you provide might contribute towards an understanding of student poverty and shape how the multidimensional student poverty index would look.

Confidentiality: The information that I will obtain from you will be stored safely, although it will be shared with my supervisor and co-supervisor who are involved in this study. Excerpts from the interview may be included in the final dissertation and may also be published in journals. The interview will be conducted in a private place and your name will not be written down or recorded anywhere. Furthermore, the study does not require you to disclose or name any specific individuals and you do not have to discuss any personal information that you do not feel comfortable talking about.

Risks: There is no major anticipated risk that will be encountered by your participating in this study.

Voluntary participation: Participation in this study is voluntary and you are under no obligation to conduct the interview. If you have any concerns with the way the research is being conducted, please feel free to contact and discuss it with my supervisor, whose contact details are given below.

Please feel free to ask any questions on any aspect of this study that is unclear to you.

Yours sincerely,

Anesu Ruswa
Supervisor: Dr. M Wilson-Strydom
Co-Supervisor: Prof M Walker
Email: anesuruswa@gmail.com
Email: wilsonstrydommg@ufs.ac.za

iii. **Appendix C: Informed consent page**

Study: Designing a Multi-dimensional Higher Education Student Poverty Index at a South African University.

Researcher: Anesu Ruswa

By signing below, I agree to the following statements:

- 1) I have read and understood the attached information sheet giving details of the project.
- 2) I have had the opportunity to ask the researcher any questions that I had about the project and my involvement in it, and I understand my role in the project.
- 3) My decision to consent is entirely voluntary, and I understand that I am free to withdraw at any time without giving a reason.
- 4) I understand that data gathered in this project may form the basis of a report or other form of publication or presentation.
- 5) I have given the researcher permission to audio record the interview.
- 6) I understand that my name will not be used in any report, publication or presentation and that every effort will be made to protect my confidentiality.

Participant's Signature: _____ Date: _____

Participant's name _____

Researcher's Signature: _____ Date: _____

Please fill in and return this page. Keep the letter above for future reference.

Please only sign this form if you agree to participate in the study.

iv. **Appendix D: Interview Guide**

Key Informant Guide (3 participants)

Study: Designing a Multi-dimensional Higher Education Student Poverty Index at a South African University

Researcher: Anesu Ruswa

Table D1: Focus Group discussions

| Theme | Guiding questions |
|----------------------------------|--|
| Introduction | <ul style="list-style-type: none"> • Would you kindly tell me about yourself? • What has been your experience with students? (Position held and years of service) • Where did/do you study? |
| Understanding of student poverty | <ul style="list-style-type: none"> • How do you define student well-being? • What factors lead to ill-being? • How do you define student poverty? • How do you think ill-being and student poverty relates? • Which factors impoverish students? • What can the university do to alleviate student poverty |
| Poverty measurement | <ul style="list-style-type: none"> • Is there anything you would wish to change with how poverty is being understood and measured? • What is your understanding of a poverty index? • Do think a student poverty index is useful? Is so, how? |
| Poverty mapping | <ul style="list-style-type: none"> • Are there any risk factors which can make a student poorer? • Are there any risk factors which make a student poorer? • Where do we find the poorest students on our university campuses? • How would you describe an absolutely poor student, moderately poor, not poor and rich/well-off student? |

v. **Appendix E: Focus group discussion guide**⁸²

GFG (3 groups with 8 participants each)

Study: Designing a Multi-dimensional Higher Education Student Poverty Index at a South African University

Researcher: Anesu Ruswa

Table E1: Focus Group discussions

| Theme | Guiding questions |
|----------------------------------|--|
| Introduction | <ul style="list-style-type: none"> • Can we all introduce ourselves? • Do we have diverse student experiences in the group? Course pursued, schooling history, interests etc. • Which positions in the executive committees |
| Understanding of student poverty | <ul style="list-style-type: none"> • How do you define student well-being? • What factors lead to ill-being? • How do you define student poverty? • How do you think ill-being and student poverty relates? • Which factors impoverish students? • What can the university do to alleviate student poverty |
| Poverty Measurement | <ul style="list-style-type: none"> • Is there anything you would wish to change with how poverty is being understood and measured? What? • Do you think a student poverty index would be helpful? Is so, why? |
| Poverty Ladder | <ul style="list-style-type: none"> • Which factors could be seen as dimensions of poverty • Can we rank these in terms of severity |
| Poverty mapping | <ul style="list-style-type: none"> • Are there any risk factors which make a student poor? • Are there any risk factors which make a student poorer? • Where do we find the poorest students on our university campuses? • How would you describe an absolutely poor student, moderately poor, none-poor and rich student? |

⁸² The questions were modified to reflect the views of the key-informants as discussed in the methodology

vi. **Appendix F: Elementary dimensions and indicators**

| Dimension | Indicator | Preliminary Evidence 1 | Preliminary Evidence 2 | Preliminary Evidence 2 |
|---|---|--|---|---|
| Basic Survival <i>(Absolute poverty)</i> | Food security | “So your total package of wellbeing can suffer serious effects if you cannot contribute to that student’s upliftment. Introducing him to this new environment but making him feel at home by helping him, by assisting him to get onto perhaps the No Student Hungry program, onto financial aid, and onto proper accommodation. “Staff (Male Housing and Residence Affairs) | “That okay, first thing that you have to do [after receiving money] you have to buy something that you really need, especially food because you can't study without food. You buy food then you are sorted.”-Student (On-campus Male 3rd year Marketing) | “And also we have things like health, those issues aren’t really accounted for so we can’t really say, this percentage of students is depressed, or this percentage of students is malnourished. We know that they’re there but they’re not in your face – it’s like the varsity hides it in a sense.”- Student (On-Campus Female 4th year Medicine) |
| | Shelter | | | |
| | Health | | | |
| Learning resources <i>(Financial and Other)</i> | Tuition Fees – For previous, current and future years | “When you talk about poverty, I mean, it’s about access. It’s about being able to have access let’s say from an academic perspective, being able to pay your fees in time and in advance, and knowing that that’s the one thing that you do not have to worry about versus somebody who does not have to worry about that because you know already your fees are paid, you know you have enough books, you have enough of this, you have enough food, you have accommodation that is decent. You live a fairly decent lifestyle.”- Staff Member (Male Student Affairs) | “So, you have to put aside money for projects as well, which you have to do Off-campus, have to get there so, transport, you have to pay for using that computer because we don’t really pay to search things on the internet but now there, you have to pay and you have to print as well. So, resources.” Student (Off-Campus Female 2nd year Accounting) | “Some people cannot budget at all so, they will end up looking poor because they used all of their money...so we’ll see you as poor but you’re actually not poor.”-Student (Off-Campus Female 1st year Consumer Science) |
| | Resources for learning (Learning materials, technology, stationary, ability of print, internet access etc) | | | |
| | Management of resources-budgeting | | | |
| Living arrangements | Conducive study environment | “..Off-campus, they will tell you, “this is a commune...we’re going to make a noise, we’re going to party if we want to party.” So, staying Off-campus is really bad. It needs someone that can stand for themselves and be positive and know that okay, I’m here to study. Because some people leave and go home and they like, I cannot do | “I think a totally poor student is one that literally struggles. Everything for them is a struggle. For them to even come to campus is a struggle. ... it’s a struggle for them to have transport money enough...” -Staff member (Male Student Affairs) | “First and most foremost, my priority in life is security, I cannot come here and want to better my life and my family’s life and then, my wellbeing and my security’s being compromised because I’m living Off-campus. Because while you’re on campus, security is here 24/7, you hardly hear problems of people getting mugged, |
| | Access to transport | | | |
| | Safety and security | | | |

| | | | | |
|--------------------------------|--|---|---|--|
| | | <p>this, I rather just go and stay at home and not study at all. Because of the pressure you get, one day of not paying your rent, your room is locked.”</p> <p>Student (Off-Campus Female 2nd year Accounting)</p> | | <p>people getting raped.” - Student (Off-Campus Female 2nd year Education)</p> |
| Participation | Participation in learning | <p>“As soon as you have one experience like that where you are cut off from something because of funny accents [for example] you will pull out completely from ever participating. Like, I don't even want to do sport because you know when you get there you are going to be asked to buy a shirt of a hoodie.” -Student (On-Campus Female 2nd year Law)</p> | <p>“... Can't the university make sure that all of the things that we are supposed to do [student empowerment/enrichment programs], are accessible on campus and do not need the use of money. Unless it's entertainment which has nothing to do with my academics, that I can pay for myself....” - Student (Off-Campus Female 2nd year Education)</p> | <p>“By virtue, I feel a lot of the time I go to one module specifically where the only black person who is actually involved in the module is still seen as a teacher's assistant even though she probably has more credentials within that module – because she's not a doctor, she's seen as slightly less because she's teaching anatomy and in that module at the end of the year everyone gets and then the module leader Tannie what, doctor walks around and takes a picture of you with your group and then whenever it came to the English class groups, especially with non-white groups, she takes a picture of your group, not with the group, so there's a distance. I would never approach her if I had a problem with studying” -Student (On-Campus Male 3rd year Medicine)</p> |
| | Participation in Leisure activities (i.e. co-curricular/social activities) | | | |
| | Belonging | | | |
| Psychological wellbeing | Social support | <p>“I think food, nutrition like she mentioned, finances and lack of a rigid support structure lead you into a depressive state to a point where you feel overwhelmed, and everything is just overwhelming. The place, the environment which you live in, whether here, on campus or Off-campus. Until you feel, I can't concentrate anymore...you become antisocial until you even become suicidal.”- Student (Off-Campus Female 1st Year Law)</p> | <p>“We see people who are lacking financially that they don't know what tomorrow holds, so they lose the motivation to even try and work hard if at the end of the day I'm not coming back to school next year. We don't have the money so why should I even pass?”- Staff Member (Female Student Representative Council)</p> <p>“..If you don't have a support system back home or at school level to prepare you for coming to university you will come to this whole different environment. It's a big</p> | <p>“I think it's on various levels, but I think for me, wellbeing for me equals dignity, just dignity that comes from a human being, and being able to live and to have experiences that each and every other student should have” –Staff (Male Student Affairs)</p> <p>“...I think we are going to start having a high rate of suicide and what not here on campus if that [Psychological and emotional needs of students] are neglected,</p> |
| | Dignity | | | |
| | Stress | | | |

| | | | | |
|--|--|--|--|---|
| | | | environment, it's a big change from school level to university level, and suddenly you find you're out of our turf." -Staff member (Male Housing and Residence Affairs) | if they are just shoved at the back." -Student (On-Campus Male 3rd year Medicine) |
|--|--|--|--|---|

vii. **Appendix G: Ethical Clearance**



Faculty of Economic and Management Sciences

23-Nov-2016

Dear **Mr Anesu Ruswa**

Ethics Clearance: **Multi-dimensional student poverty at a South African university: a capabilities approach**

Principal Investigator: **Mr Anesu Ruswa**

Department: **Centre for Development Support (Bloemfontein Campus)**

APPLICATION APPROVED

With reference to your application for ethical clearance with the Faculty of Economic & Management Sciences, I am pleased to inform you on behalf of the Ethics Committee of the faculty that you have been granted ethical clearance for your research.

Your ethical clearance number, to be used in all correspondence is: **UFS-HSD2016/1286**

This ethical clearance number is valid from **23-Nov-2016** to **23-Nov-2021**. Should you require more time to complete this research, please apply for an extension.

We request that any changes that may take place during the course of your research project be submitted to the ethics office to ensure we are kept up to date with your progress and any ethical implications that may arise.

Thank you for submitting this proposal for ethical clearance and we wish you every success with your research.

Yours Sincerely

A handwritten signature in black ink, appearing to read 'nel'.

Dr. Petrus Nel

Chairperson: Ethics Committee Faculty of Economic & Management Sciences

Economics Ethics Committee

Office of the Dean: Economic and Management Sciences

T: +27 (0)51 401 2310 | T: +27(0)51 401 9111 | F: +27(0)51 444 5465

205 Nelson Mandela Drive/Ryalaan, Park West/Parkweg, Bloemfontein 9301, South Africa/Suid Afrika P.O. Box/Posbus 339, Bloemfontein 9300, South Africa/Suid Afrika www.ufs.ac.za



viii. **Appendix H: Research Assistance information sheet and Consent form**

Researcher: Anesu Ruswa
Room 114 Benito Khotseng Building
University of the Free State
Telephone: 0713417598
Email: anesuruswa@yahoo.co.uk

17 May 2018

Dear Participant,

RE: INFORMED CONSENT

I am a doctoral student at the Centre for Research in Higher Education and Development (CRHED) at the University of the Free State. I would like to invite you to take part in my research project entitled: Designing a Multi-dimensional Higher Education Student Poverty Index at a South African University.

The study is aimed at understanding how students view poverty in order to design a multidimensional student poverty index which takes into account the various dimensions of poverty as identified by the students.

Study procedures: The study has three main phases. The first involves interviewing those who work with student to understand their view of poverty. The second phases involve conducting in-depth interview with students from various residences to ascertain the dimensions of poverty. The final step involves compiling the dimensions into a questionnaire and administering it to a great student population.

Benefits: There are no direct benefits for participating in this study, however the information that you provide might contribute towards an understanding of student poverty and shape how the multidimensional student poverty index would look.

Confidentiality: The information that I will obtain from you will be stored safely, although it will be shared with my supervisor and co-supervisor who are involved in this study. Excerpts from the interview may be included in the final dissertation and may also be published in journals. The interview will be conducted in a private place and your name will not be written down or recorded anywhere. Furthermore, the study does not require you to disclose or name any specific individuals and you do not have to discuss any personal information that you do not feel comfortable talking about.

Risks: There is no major anticipated risk that will be encountered by your participating in this study.

Voluntary participation: Participation in this study is voluntary and you are under no obligation to conduct the interview. If you have any concerns with the way the research is being conducted, please feel free to contact and discuss it with my supervisor, whose contact details are given below.

Please feel free to ask any questions on any aspect of this study that is unclear to you.

Yours sincerely,

Anesu Ruswa
Supervisor: Prof. M Wilson-Strydom
Co-Supervisor: Prof M Walker
Email: anesuruswa@gmail.com
Email: wilsonstrydommg@ufs.ac.za

Research Assistant Informed consent page

Study: Designing a Multi-dimensional Higher Education Student Poverty Index at a South African University.
Researcher: Anesu Ruswa

This document serves as a contract between the researcher and the research assistant. The research assistant shall assist in collecting data from agreed sources. The terms of this contract are as follows:

- 1) I have read and understood the attached information sheet giving details of the project.
- 2) I have had the opportunity to ask the researcher any questions that I had about the project and my involvement in it, and I understand my role in the project.
- 3) My decision to consent is entirely voluntary, and I understand that I am free to withdraw at any time without giving a reason.
- 4) I understand that data gathered in this project may form the basis of a report or other form of publication or presentation.
- 5) I will collect the data in ethical and honest means
- 6) I understand that the names of the participants will not be used in any report, publication or presentation and that every effort will be made to protect their confidentiality.
- 7) I agree to a payment of **R5 per completed** script when I return the forms.
- 8) Forms should be return within 7 days from the date of collection.

Research Assistant’s Name:.....

Signature: _____

Date: _____

Researcher’s Signature: _____ Date: _____

Please fill in and return this page. Keep the letter above for future reference.

ix. Appendix I: Survey⁸³

Multidimensional student poverty survey⁸⁴

Introduction

My name is Anesu Ruswa. I am a Doctoral Research Fellow at the University of the Free State. My study seeks to understand and measure multidimensional student poverty. Part of the research involves asking a sample of students to complete a survey that I have designed to measure student poverty.

Your participation in this survey is highly appreciated but this is completely voluntary. Kindly complete this survey only once.

All your responses will immediately be entered into a database and treated confidentially. You do not need to record your name, student number or any other identifying information.

If you have any questions regarding this research please feel free to email me at: anesuruswa@yahoo.co.uk, or my supervisor, Prof Wilson-Strydom at: wilsonstrydommg@ufs.ac.za

The survey is divided into two parts and should take you no more than 15mins to complete. Thank you in advance for your support.

Section 1: Demographics

Instructions

Mark with an X the option which applies to you

1. Gender:

- 1) Male
- 2) Female
- 3) Other

| |
|---|
| 1 |
| 2 |
| 3 |

⁸³ The online version of the survey is found on <http://surveys.ufs.ac.za/evasys/online.php?p=THK7Y>

⁸⁴ The Survey was administered in **Evasys** therefore the formatting was different in the final version. This Word document is just an example of the questions

2. What is your age group?

- 1) younger than 18years
- 2) 18-20
- 3) 21-23
- 4) 24-26
- 5) 27-29
- 6) 30 and above

| |
|---|
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |
| 6 |

3. Residential status:

- 1) On campus
- 2) Off-campus with family
- 3) Off-campus in student accommodation (e.g. student commune)
- 4) Off-campus in private accommodation (not with other students)
- 5) Other

| |
|---|
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |

If Other please specify: _____

4. Race

- 1) Asian
- 2) Black
- 3) Coloured
- 4) White
- 5) Other

| |
|---|
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |

5. Faculty

- | | |
|--------------------------------------|---|
| 1) Economic and Management Sciences | 1 |
| 2) Education | 2 |
| 3) Health Sciences | 3 |
| 4) Humanities | 4 |
| 5) Law | 5 |
| 6) Natural and Agricultural Sciences | 6 |
| 7) Theology | 7 |

6. What is your current level of study?

- | | |
|-------------------------|---|
| 1) Undergraduate | 1 |
| 2) Honours | 2 |
| 3) Postgraduate Diploma | 3 |
| 4) Masters | 4 |
| 5) Doctorate | 5 |

7. Indicate the academic year of your **current qualification**:

- | | |
|--------------------|---|
| 1) 1 st | 1 |
| 2) 2 nd | 2 |
| 3) 3 rd | 3 |
| 4) 4 th | 4 |
| 5) Other (specify) | |

8. On average, my marks for this semester are in the following range:

- 1) 0-40%
- 2) 40-50%
- 3) 50-60%
- 4) 61-70%
- 5) 71-80%
- 6) 81-100%

9. What type of high school did you attend?

- 1) Rural public school
- 2) Township public school
- 3) Ex-model C school,
- 4) Urban private school,
- 5) Rural private school (e.g. farm school, mission or Catholic school),
- 6) Home school

| |
|---|
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |
| 6 |

10. I would categorize my family as:

- 1) Lower Class
- 2) Middle Class
- 3) Upper Class

| |
|---|
| 1 |
| 2 |
| 3 |

11. How are you paying for your studies? (select all relevant options)

- 1) Family (Parents, other family members or friends)
- 2) National Student Financial Aid Service (NSFAS)
- 3) National Skills Fund (NSF)
- 4) Loan (commercial bank or private loan)
- 5) Part-time work
- 6) Bursary
- 7) Other

| |
|---|
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |
| 6 |
| 7 |

Please specify other: _____

12. The following people in my family have been to university

- 1) No one, I am the first
- 2) One parent
- 3) Both parents
- 4) Sibling(s)
- 5) Parent(s) and sibling(s)
- 6) Close extended family member(s) (Grandparents, cousins, aunts, etc.)

| |
|---|
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |
| 6 |

13. How many people are in your household (at home) **excluding** yourself?

- 1) 0
- 2) 1

- 3) 2
- 4) 3
- 5) 4
- 6) 5
- 7) 6
- 8) More than 6

14. How many people in your household (at home) are currently employed?

- 1) 0
- 2) 1
- 3) 2
- 4) 3
- 5) 4
- 6) More than 4

| |
|---|
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |
| 6 |

15. Do you have any dependants (i.e. someone you are financially responsible for such as a child, parent, grandparent)?

- 1) No, I do not have dependants
- 2) one dependant
- 3) two dependants
- 4) three or more dependants

| |
|---|
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |

Section 2: Dimensions of student poverty

Instructions

All questions refer to your experiences as a university student.

For the questions below, please mark your choice with an X

| | | | |
|--|---|--|---|
| <i>Disagree strongly</i> 1 (DS=1) | <i>Disagree Moderately</i> 2 (D=2) | <i>Agree moderately</i> 3 (A=3) | <i>Agree strongly</i> 4 (AS=4) |
|--|---|--|---|

Basic needs

| | <i>DS</i> 1 | <i>D</i> 2 | <i>A</i> 3 | <i>AS</i> 4 |
|---|-----------------------|----------------------|----------------------|-----------------------|
| 16) I enjoy at least two healthy and adequate meals a day | | | | |
| 17) I have some form of accommodation i.e. I am not squatting or living illegally | | | | |
| 18) I have access to clean water, electricity and decent sanitation | | | | |
| 19) I have access to basic healthcare | | | | |
| 20) I struggle with my physical health | | | | |

Learning resources

| | <i>DS</i> 1 | <i>D</i> 2 | <i>A</i> 3 | <i>AS</i> 4 |
|--|-----------------------|-------------------------------|--|---|
| 21) I struggle with outstanding debt | | | | |
| 22) I have means of paying my study fees this year | | | | |
| 23) I have means of paying for other university expenses (accommodation, clothes, food, etc.) this year | | | | |
| 24) I have means of paying my study fees in coming years | | | | |
| 25) I have means of paying for other university expenses (accommodation, clothes, food, etc.) in coming years | | | | |
| 26) I am able to manage my financial resources (i.e. to budget well) | | | | |
| 27) I have all the resources I need to learn and study well | | | | |
| 28) Mark all the resources you need for learning which you DO NOT have | | | | |
| Critical technology e.g. computer or internet | Prescribed books | Access to printing facilities | Essential stationery e.g. pens, pencils, calculators | Other learning material e.g. study guides |
| | | | | N/A |

Living conditions

| | <i>DS</i> <i>1</i> | <i>D</i> <i>2</i> | <i>A</i> <i>3</i> | <i>AS</i> <i>4</i> |
|--|-----------------------|----------------------|----------------------|-----------------------|
| 29) I live in accommodation which is conducive for my studies (e.g. there is somewhere I can study without disturbances) | | | | |
| 30) I experience challenges with transport that negatively affect my studies | | | | |
| 31) I feel safe and secure where I live | | | | |
| 32) I have not been a victim of assault on campus | | | | |
| 33) I have not been a victim of assault off-campus | | | | |

Personal wellbeing

| | <i>DS</i> <i>1</i> | <i>D</i> <i>2</i> | <i>A</i> <i>3</i> | <i>AS</i> <i>4</i> | | | | | | | | | |
|---|-----------------------|----------------------|----------------------|-----------------------|---------------|------------|------------|-------|-------|--|--|--|--|
| 34) I have adequate social support to succeed in my studies (From friends, family, mentors, housemates, roommates etc.) | | | | | | | | | | | | | |
| 35) I am sometimes ashamed of who I am because of what I have or what I do not have (For example, the food I eat, the way I present myself, the clothes I wear, my hairstyles, my gadgets, etc.) | | | | | | | | | | | | | |
| 36) I am a self-confident person | | | | | | | | | | | | | |
| 37) I have someone to talk to when I feel worried or anxious | | | | | | | | | | | | | |
| 38) I am often worried or anxious about the challenges I face as a student | | | | | | | | | | | | | |
| 39) I worry about: (Mark all relevant) | | | | | | | | | | | | | |
| <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%;">Funding</td> <td style="width:10%;">Learning resource</td> <td style="width:10%;">Workload</td> <td style="width:10%;">Family</td> <td style="width:10%;">Relationships</td> <td style="width:10%;">Health</td> <td style="width:10%;">Disability</td> <td style="width:10%;">N/A</td> <td style="width:10%;">Other</td> </tr> </table> | Funding | Learning resource | Workload | Family | Relationships | Health | Disability | N/A | Other | | | | |
| Funding | Learning resource | Workload | Family | Relationships | Health | Disability | N/A | Other | | | | | |
| Specify Other: | | | | | | | | | | | | | |

Participation

| | <i>DS</i> <i>1</i> | <i>D</i> <i>2</i> | <i>A</i> <i>3</i> | <i>AS</i> <i>4</i> | | | | | | | | | | | | | | |
|--|-----------------------|------------------------|------------------------|-----------------------|------------|------------|-------------------|-------------------|--------------------|---------------------|---------------------|-------------|-----------|-----|--|--|--|--|
| 40) The university environment is socially inclusive of diverse students. | | | | | | | | | | | | | | | | | | |
| 41) I participate freely in study related activities | | | | | | | | | | | | | | | | | | |
| 42) I participate freely in valued leisure activities | | | | | | | | | | | | | | | | | | |
| 43) The following reasons limit my participation in study activities (mark all relevant) | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%;">Background</td> <td style="width:10%;">Culture</td> <td style="width:10%;">University Environment</td> <td style="width:10%;">Safety and security</td> <td style="width:10%;">Finances</td> <td style="width:10%;">Disability</td> <td style="width:10%;">Health</td> <td style="width:10%;">Political reasons</td> <td style="width:10%;">Race</td> <td style="width:10%;">Residential status</td> <td style="width:10%;">Language and accent</td> <td style="width:10%;">Information</td> <td style="width:10%;">Knowledge</td> <td style="width:10%;">N/A</td> </tr> </table> | Background | Culture | University Environment | Safety and security | Finances | Disability | Health | Political reasons | Race | Residential status | Language and accent | Information | Knowledge | N/A | | | | |
| Background | Culture | University Environment | Safety and security | Finances | Disability | Health | Political reasons | Race | Residential status | Language and accent | Information | Knowledge | N/A | | | | | |
| 44) The following reasons limit my participation in leisure activities (mark all relevant) | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|------------|---------|---------------------------|---------------------------|---------|------------|--------|----------------------|------|-----------------------|---------------------------|-------------|-------------------------|-----|-------|
| Background | Culture | University Environment | Safety and security | Finance | Disability | Health | Political reasons | Race | Residential status | Language and accent | Information | Skills or ability | N/A | Other |
|------------|---------|---------------------------|---------------------------|---------|------------|--------|----------------------|------|-----------------------|---------------------------|-------------|-------------------------|-----|-------|

45) Do you have any further comment on this survey, student poverty or any other comments?

Thank you for your time in completing this survey!

x. Appendix J: Indicators

| Dimension Name | Indicator (Number of students who mentioned it) |
|---------------------------|---|
| Basic Needs | Food security (232) |
| | Amenities (12) |
| | Shelter (156) |
| | Access to basic healthcare (79) |
| | Physical health (46) |
| Learning resources | Tuition Fees – For previous, current and future years (308) |
| | Resources for learning (211) (Learning materials, technology, stationery, ability to print, internet access, etc.) |
| | Management of resources-budgeting (8) |
| Living conditions | Conducive study environment (182) |
| | Access to transport (145) |
| | Safety and security (74) |
| Participation | Participation in learning (55) |
| | Participation in Leisure activities (i.e. co-curricular/social activities) (89) |
| Personal wellbeing | Social support (121) |
| | Dignity/Shame (65) |
| | Stress (379) |

xi. **Appendix K: Type of school Anova**

| ANOVA type of school | | | | | | |
|---------------------------------|----------------|----------------|------|-------------|--------|------|
| | | Sum of Squares | df | Mean Square | F | Sig. |
| Basic Needs | Between Groups | 65.900 | 4 | 16.475 | 60.895 | .000 |
| | Within Groups | 580.866 | 2147 | .271 | | |
| | Total | 646.766 | 2151 | | | |
| Learning resources | Between Groups | 113.338 | 4 | 28.335 | 59.874 | .000 |
| | Within Groups | 1013.679 | 2142 | .473 | | |
| | Total | 1127.017 | 2146 | | | |
| Living Conditions | Between Groups | 24.085 | 4 | 6.021 | 16.614 | .000 |
| | Within Groups | 773.395 | 2134 | .362 | | |
| | Total | 797.480 | 2138 | | | |
| Psychological Well-being | Between Groups | 18.030 | 4 | 4.508 | 13.556 | .000 |
| | Within Groups | 707.920 | 2129 | .333 | | |
| | Total | 725.950 | 2133 | | | |
| Participation | Between Groups | 5.038 | 4 | 1.260 | 3.066 | .016 |
| | Within Groups | 871.315 | 2121 | .411 | | |
| | Total | 876.353 | 2125 | | | |

xii. **Appendix L: food security by family economic class and funding**

| | | | | Food | |
|-----------------------|--------------|---------|---|--------------|----------|
| | | | | Non-deprived | Deprived |
| Family Economic Class | Lower class | Funding | Bursary | 68.8% | 31.2% |
| | | | Family (Parents, other family members or friends) | 69.2% | 30.8% |
| | | | Loan (commercial bank or private loan) | 70.0% | 30.0% |
| | | | National skills Fund (NSF) | 60.0% | 40.0% |
| | | | National Student Financial Aid Scheme | 64.4% | 35.6% |
| | | | Part-time work | 60.0% | 40.0% |
| | | | Other | 57.1% | 42.9% |
| | Middle class | Funding | Bursary | 83.3% | 16.7% |
| | | | Family (Parents, other family members or friends) | 82.4% | 17.6% |
| | | | Loan (commercial bank or private loan) | 81.7% | 18.3% |
| | | | National skills Fund (NSF) | 80.0% | 20.0% |
| | | | National Student Financial Aid Scheme | 79.9% | 20.1% |
| | | | Part-time work | 85.1% | 14.9% |
| | | | Other | 79.7% | 20.3% |
| | Upper class | Funding | Bursary | 90.0% | 10.0% |
| | | | Family (Parents, other family members or friends) | 95.2% | 4.8% |
| | | | Loan (commercial bank or private loan) | 100.0% | 0.0% |
| | | | National skills Fund (NSF) | 0.0% | 0.0% |
| | | | National Student Financial Aid Scheme | 0.0% | 100.0% |
| | | | Part-time work | 100.0% | 0.0% |
| | | | Other | 100.0% | 0.0% |

xiii. Appendix M: Robust test for Gender

Robust Tests of Equality of Means

| | | Statistic ^a | df1 | df2 | Sig. |
|--------------------------|-------|------------------------|-----|--------|------|
| Basic Needs | Welch | 5.984 | 2 | 26.607 | .007 |
| Learning resources | Welch | 10.952 | 2 | 26.760 | .000 |
| Living Conditions | Welch | 5.584 | 2 | 26.677 | .009 |
| Psychological Well-being | Welch | 2.491 | 2 | 26.681 | .102 |
| Participation | Welch | .177 | 2 | 26.650 | .838 |

a. Asymptotically F distributed.

xiv. **Appendix N: Robust test Race**

Robust Tests of Equality of Means

| | | Statistic ^a | df1 | df2 | Sig. |
|--------------------------|-------|------------------------|-----|--------|------|
| Basic Needs | Welch | 52.311 | 4 | 68.872 | .000 |
| Learning resources | Welch | 71.561 | 4 | 69.232 | .000 |
| Living Conditions | Welch | 23.239 | 4 | 69.138 | .000 |
| Psychological Well-being | Welch | 14.272 | 4 | 69.084 | .000 |
| Participation | Welch | 4.277 | 4 | 68.640 | .004 |

a. Asymptotically F distributed.

xv. Appendix O: Online survey results

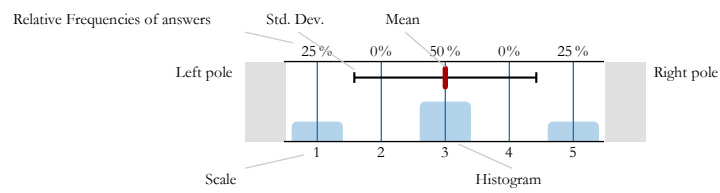
PhD Multidimensional Student Poverty
Multidimensional Student Poverty Survey
A total of 1791 respondents completed the questionnaire.



Survey Results

Legend

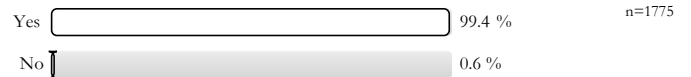
Question text



n=No. of responses
av.=Mean
dev.=Std. Dev.
ab.=Abstention

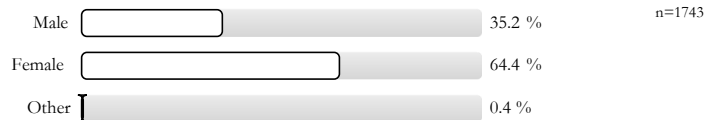
1. Introduction

^{1.1)} I am willing to participate in the survey

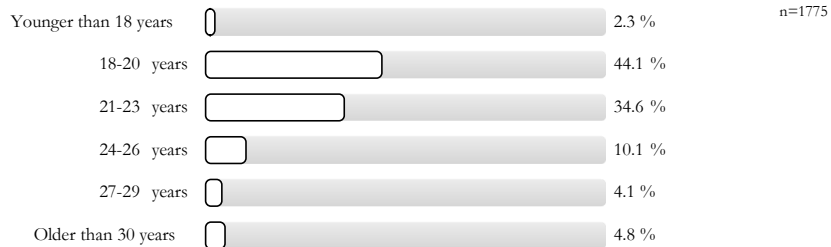


2. Personal demographic information

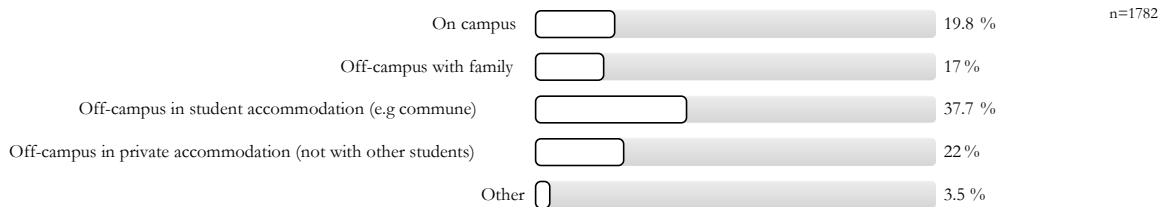
^{2.1)} Gender:



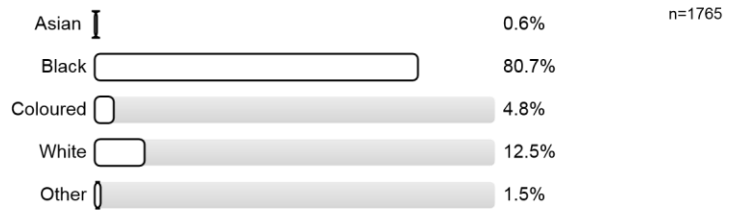
2.2) What is your age group?



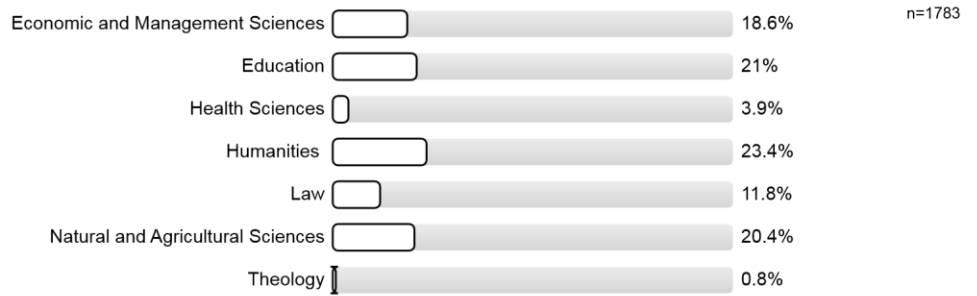
2.3) Residential status:



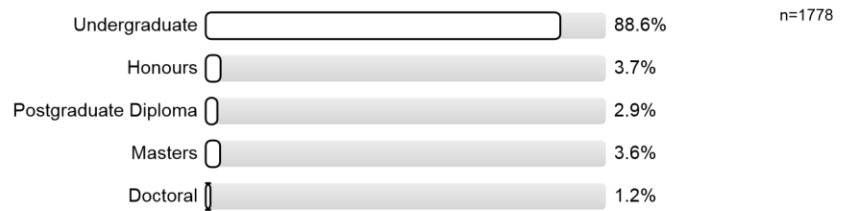
2.4) Race:



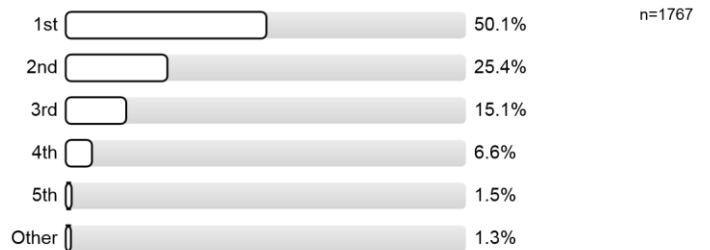
2.5) Faculty



2.6) What is your current level of study?



2.7) Indicate the academic year of your current qualification

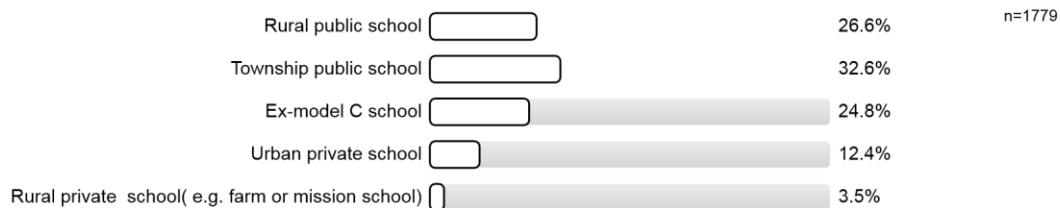


2.8) On average my marks for this semester are in the following range:



3. Family and background demographics

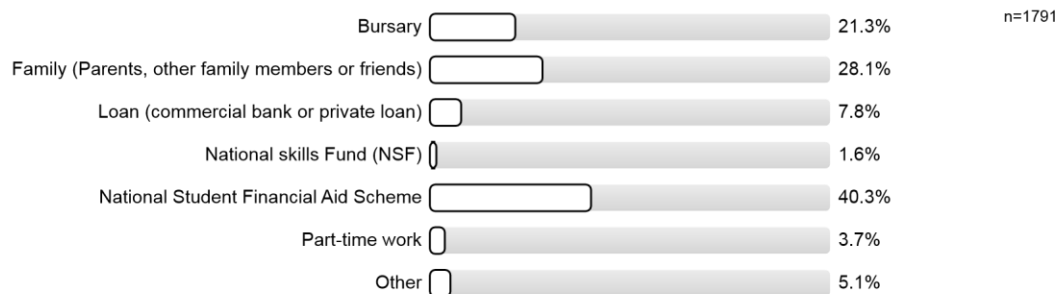
3.1) What type of high school did you attend?



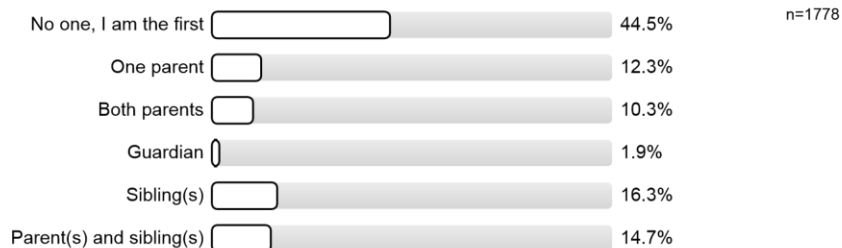
3.2) I would categorize my family as:



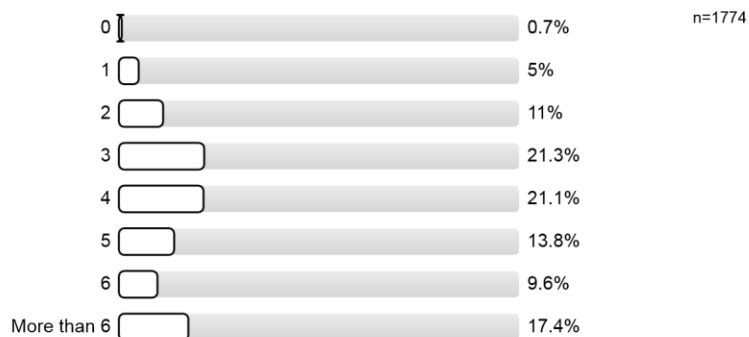
3.3) How are you paying for your studies? (select all relevant options)



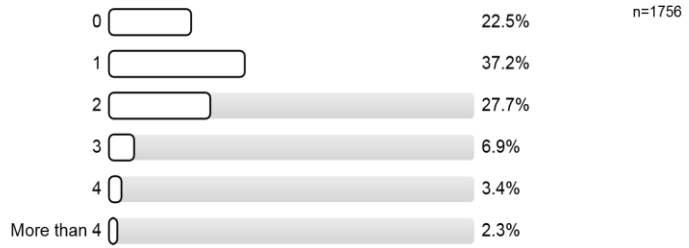
3.4) The following people in my immediate family have pursued a tertiary qualification



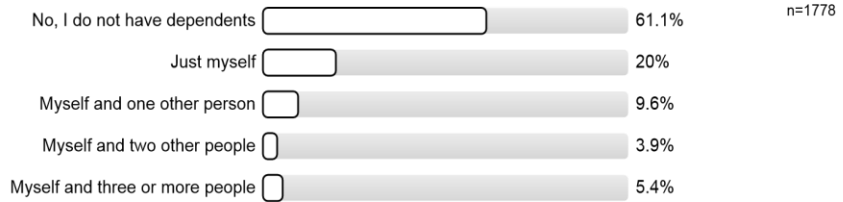
3.5) How many people are in your household (at home) excluding yourself?



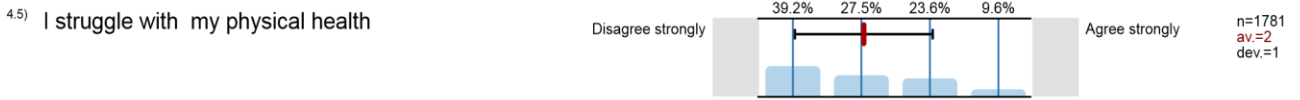
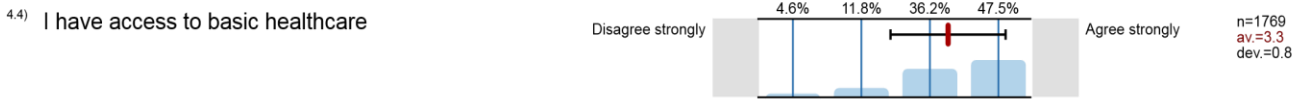
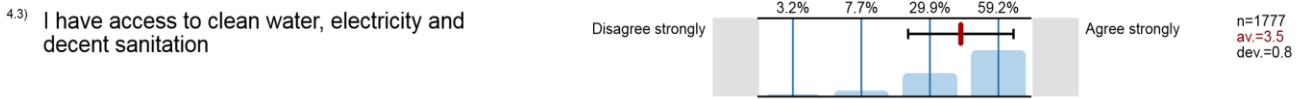
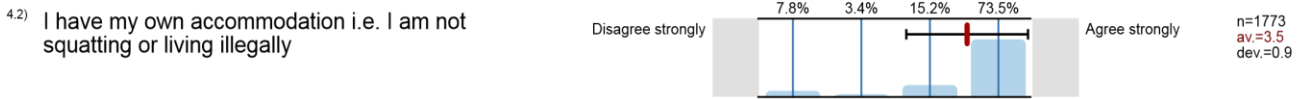
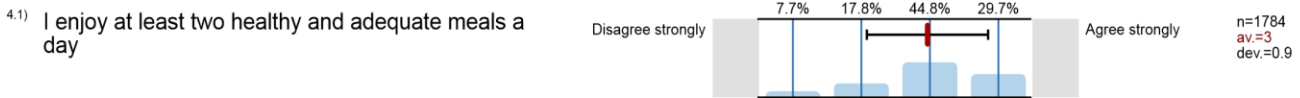
3.6) How many people in your household (at home) are currently employed



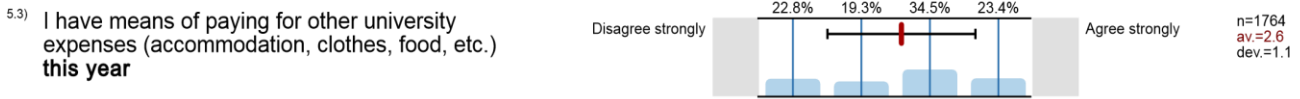
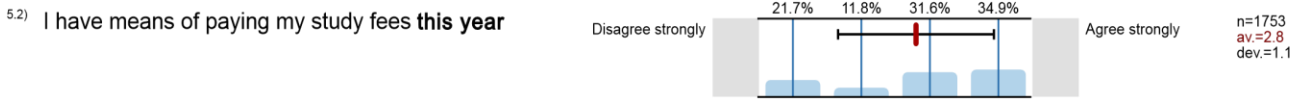
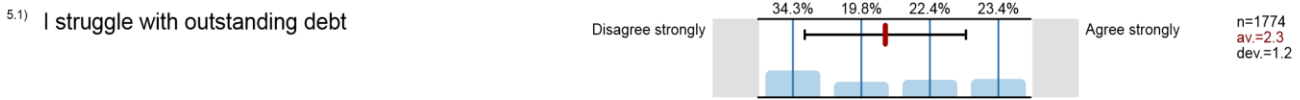
3.7) Do you have any dependents (i.e. someone **you are** financially responsible for such as a child, parent, grandparent)?

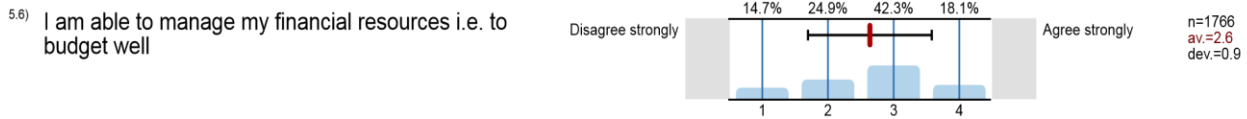
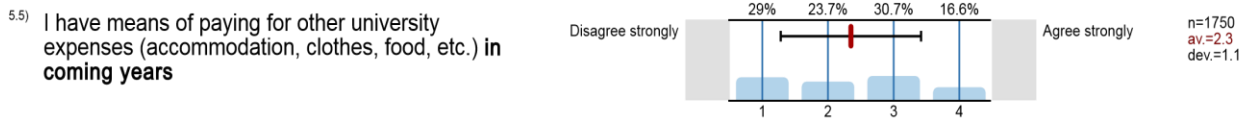
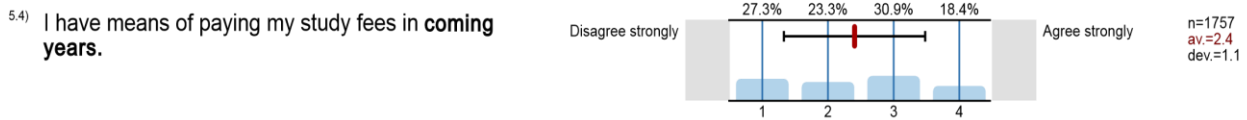


4. Basic needs

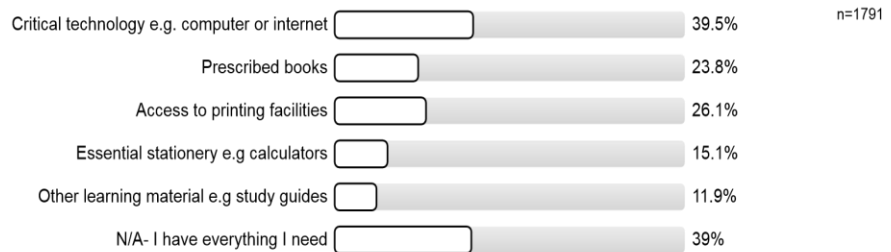


5. Resources

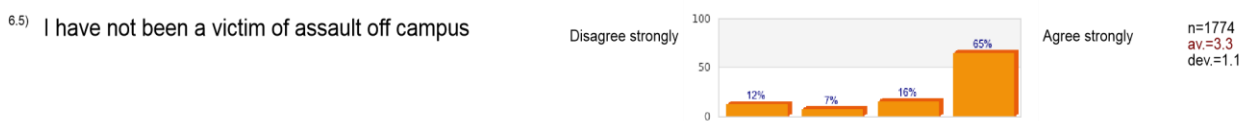
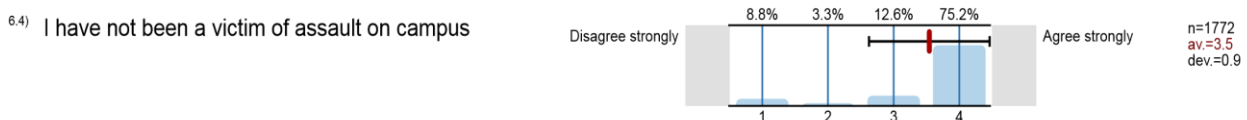
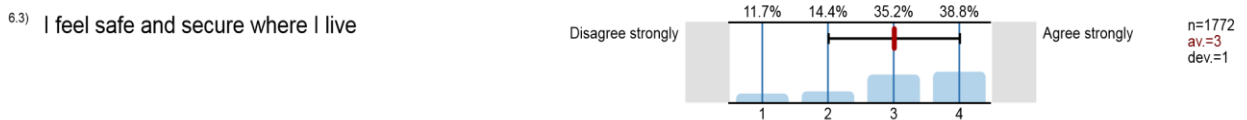
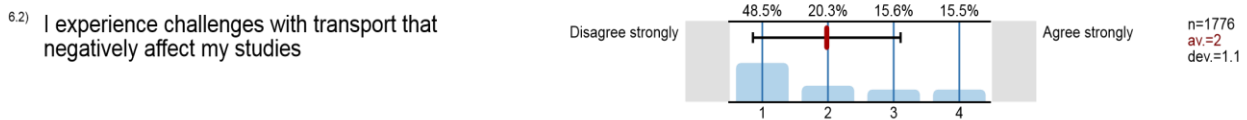
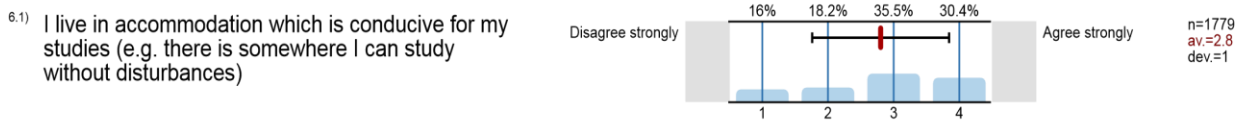




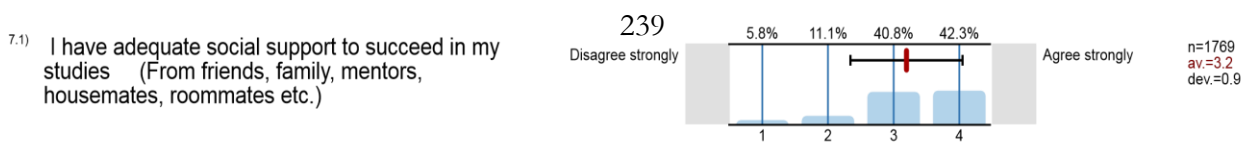
5.8) Mark all the resources you need for learning which you **DO NOT** have

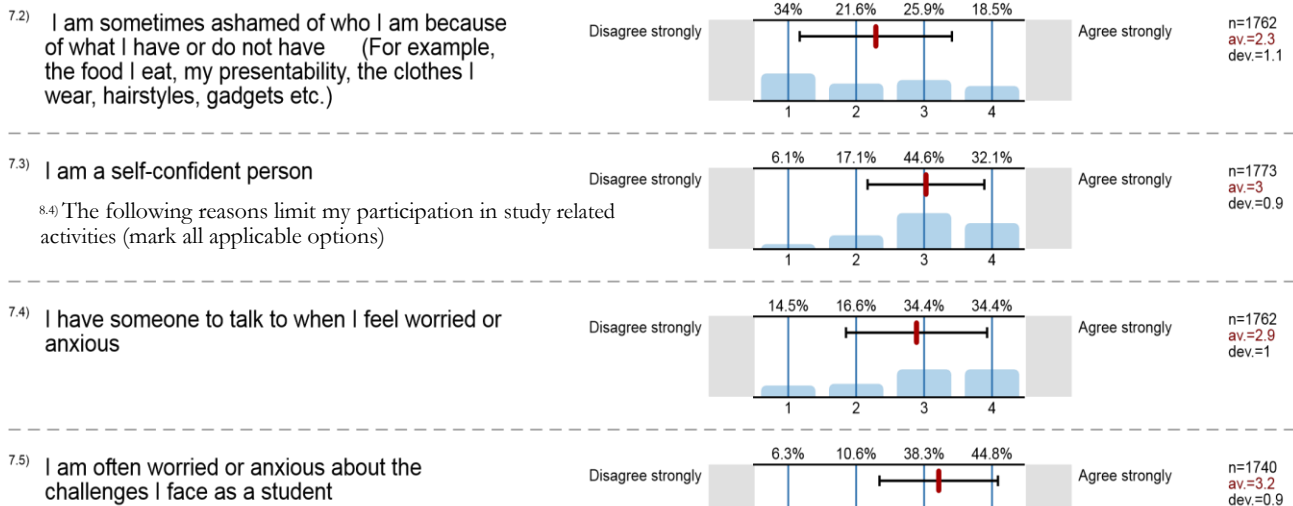


6. Living conditions

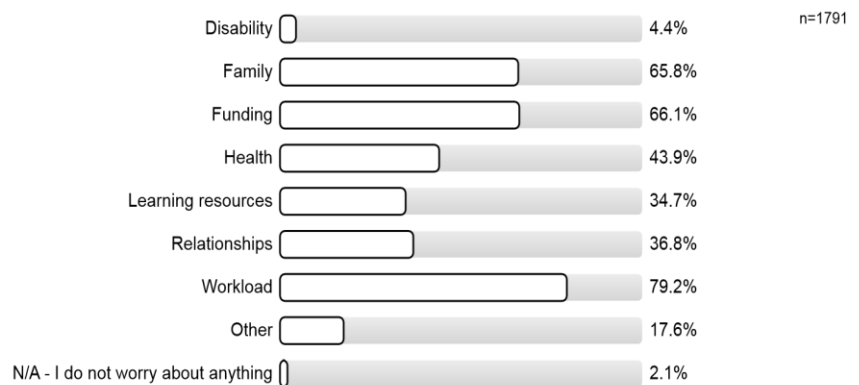


7. Personal Wellbeing

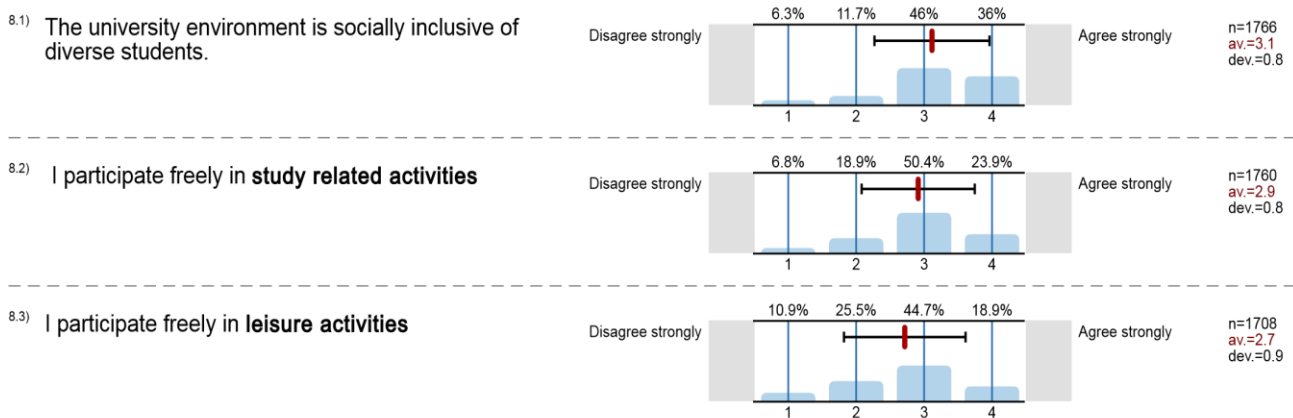


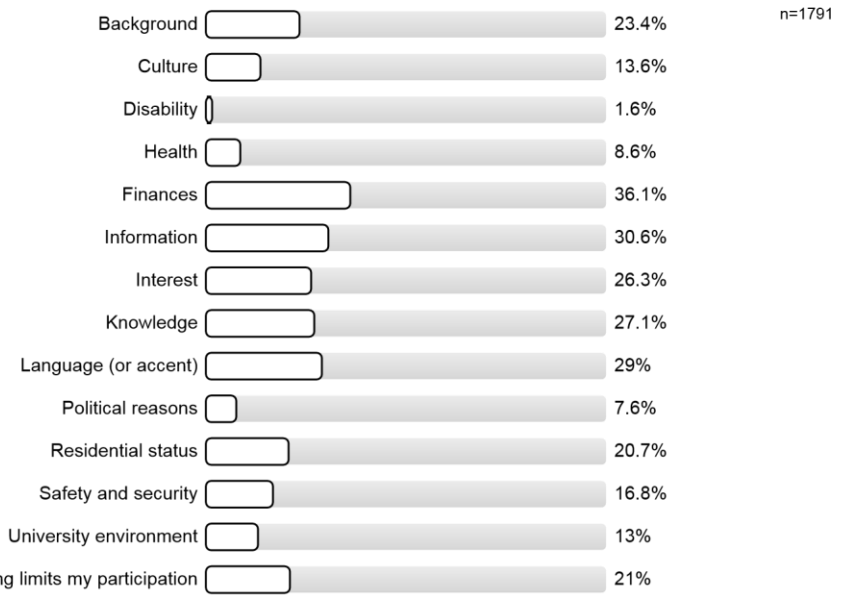


7.6) I worry about: (Mark all relevant)

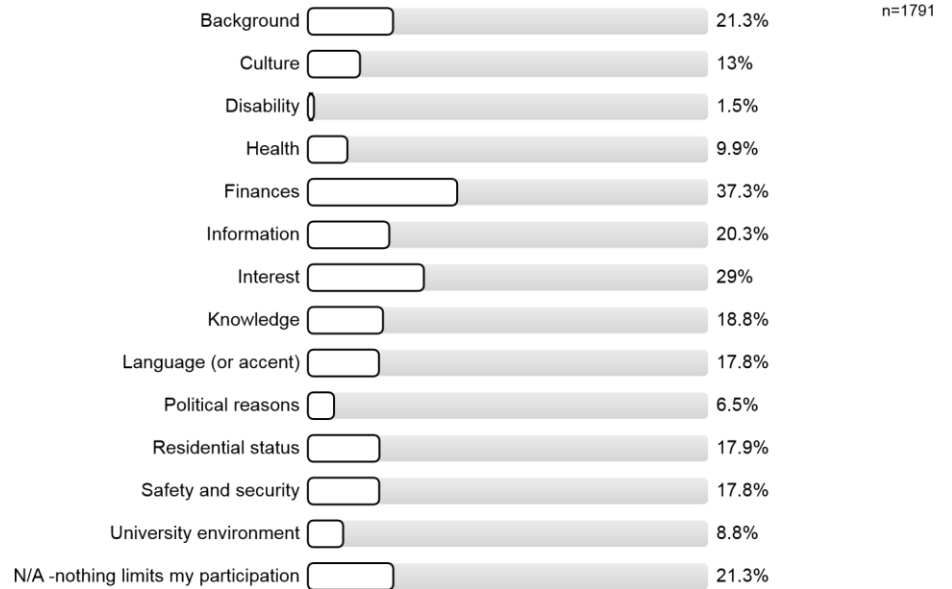


8. Participation





8.5) The following reasons limit my participation in **leisure activities** (mark all applicable options)

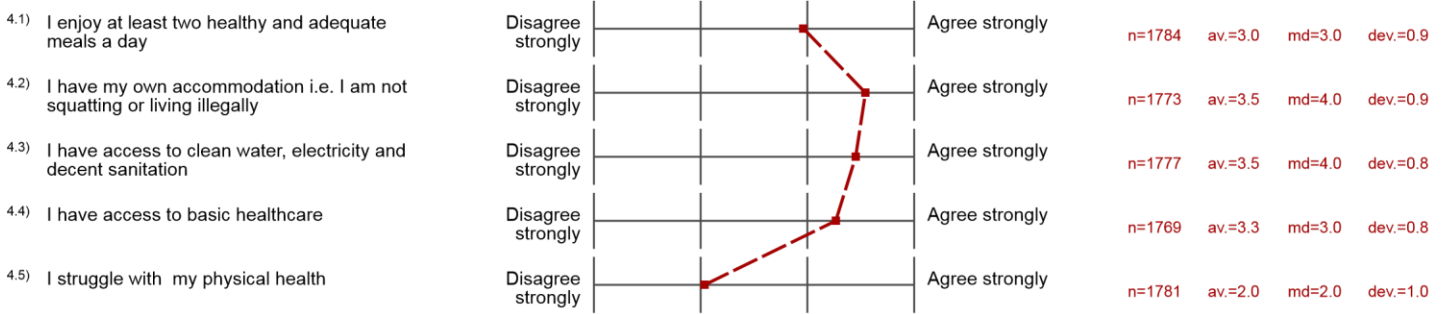


Profile

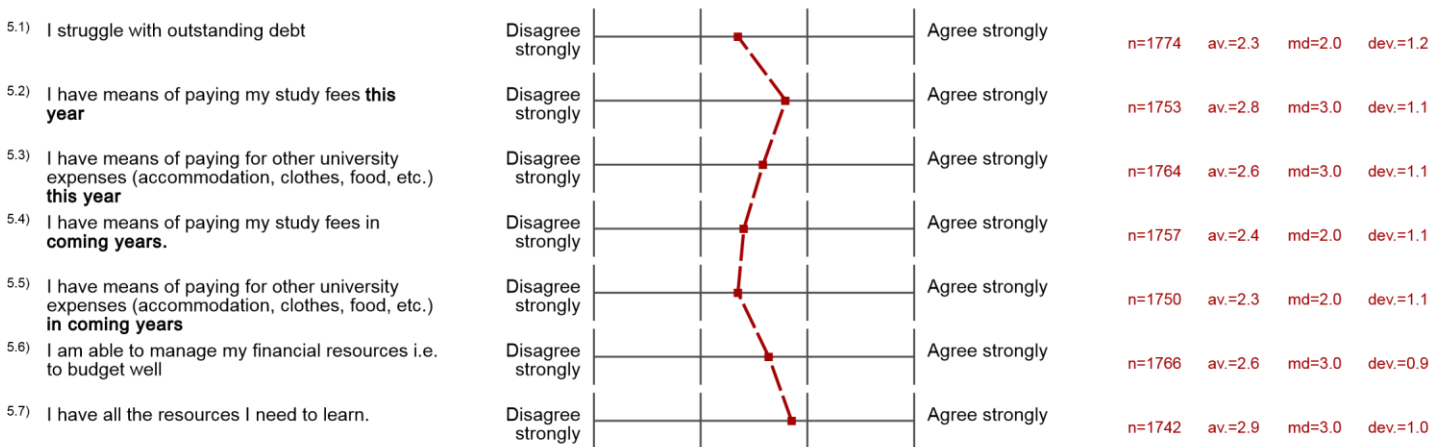
Subunit: CRHED
 Name of the trainer: PhD Multidimensional Student Poverty
 Name of the course: Multidimensional Student Poverty Survey
 (Name of the survey)

Values used in the profile line: Mean

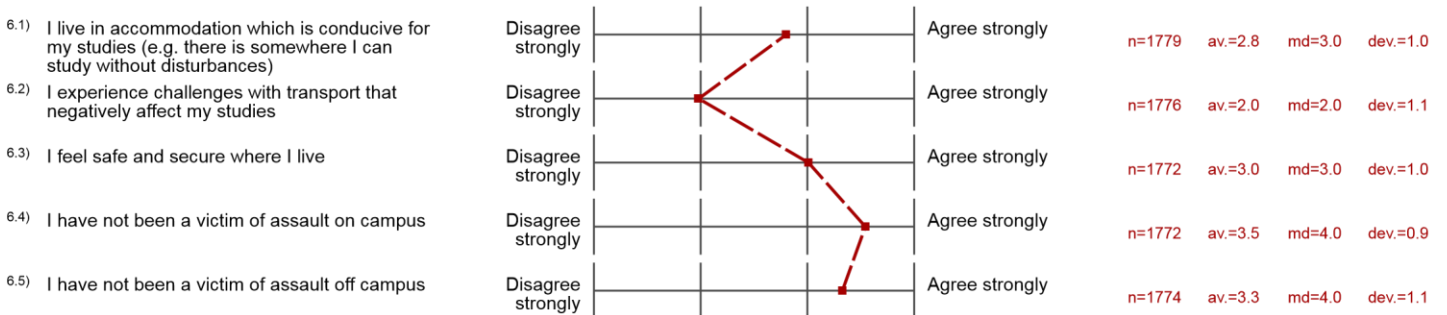
4. Basic needs








5. Resources



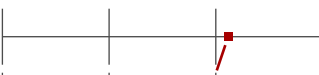


6. Living conditions



7. Psychological wellbeing

| | | | | | | | |
|--|-------------------|--|----------------|--------|---------|--------|----------|
| 7.1) I have adequate social support to succeed in my studies (From friends, family, mentors, housemates, roommates etc.) | Disagree strongly |  | Agree strongly | n=1769 | av.=3.2 | md=3.0 | dev.=0.9 |
| 7.2) I am sometimes ashamed of who I am because of what I have or do not have (For example, the food I eat, my presentability, the | Disagree strongly |  | Agree strongly | n=1762 | av.=2.3 | md=2.0 | dev.=1.1 |
| 7.3) I am a self-confident person | Disagree strongly |  | Agree strongly | n=1773 | av.=3.0 | md=3.0 | dev.=0.9 |
| 7.4) I have someone to talk to when I feel worried or anxious | Disagree strongly |  | Agree strongly | n=1762 | av.=2.9 | md=3.0 | dev.=1.0 |
| 7.5) I am often worried or anxious about the challenges I face as a student | Disagree strongly |  | Agree strongly | n=1740 | av.=3.2 | md=3.0 | dev.=0.9 |

8. Participation

| | | | | | | | |
|--|-------------------|--|----------------|--------|---------|--------|----------|
| 8.1) The university environment is socially inclusive of diverse students. | Disagree strongly |  | Agree strongly | n=1766 | av.=3.1 | md=3.0 | dev.=0.8 |
| 8.2) I participate freely in study related activities | Disagree strongly |  | Agree strongly | n=1760 | av.=2.9 | md=3.0 | dev.=0.8 |
| 8.3) I participate freely in leisure activities | Disagree strongly |  | Agree strongly | n=1708 | av.=2.7 | md=3.0 | dev.=0.9 |

Comments Report⁸⁵

8. Participation

^{8.6} Do you have any comment on student poverty or any other additional comments?

- I believe students who come to school on empty stomach are really struggling with their studies. It is a privilege for me that i am using bursary for all my varsity life including food. I really feel very touched when I think of other students who might be here at the university struggling to learn due to poverty. I think there could be some measures that could be taken to identify such students. It is my pleasure to participate in this survey.
- yes because we receive small money of pocket food from NSFAs i think they have to increase it because we are affected by poverty.
- I believe that students who are not funded by NSFAS because of their poor academic performance on valid causes that resulted to their poor academic performance are completely ignored by the institution and strongly believe that they also should be granted an opportunity thank you.
- no, I honestly don't have any comments on students poverty
- The private accommodation I live in is not conducive for learning. It usually cold and when it rains the water gets inside. It causes health problems because i often have constant colds and flu. I also experience back pain because the beds provided to us by the landlords are uncomfortable, they have no mattress. Another thing is that on top of the rent i pay i also have to buy electricity. This becomes a problem because we are restricted from buying electricity with the bursary money.
- i would like the university to attend to my financial problems quickly to help in fighting the poverty that i am currently facing, and i would also like my culture and tradition to be respected at the university, including in lecture classes
- I am sometimes worried about where will I get the meal for the day because the bursary students get food allowance once in three months and when they no longer have money they dont know where to get the money, for example, No one works at my family and my granny supports the family of 6 people including me with her pension grant of R1690 which is not enough to buy the food and toiletry for people back home and for me. If the admin office could at least give us money like NSFAS students I will be glad
- Student poverty its a hindrance to student performance.
- Yes, how exactly do we get help here on campus on cases like the ones i just mentioned above?...Are the any places where i could go and address my situation on someone in this institution?
- Student poverty is a vital issue in our days more especial the student, some student mostly depend on NSFAS only no other external source it become a problem even to get transport fee that can take them back homes on holidays they have to make a plan from the food pocket money and that really not easy for us we a struggling.
- The pain some students go through everyday just to get by for the day is unbelievable. As an Off-campus student you gotta count yourself lucky to have found accommodation then count your self blessed if it's near transportation routes and safe
- Yes, Many of the students are from poor family and not having financial aid from bursaries that promised to pay for them, can results in the students not performing well for they know that if they don't pay in time, they might be deregistered.
- only when approached face to face
- I am a first year student i live on campus. in my residence they have rules for first year students that they are not allowed to go out at night not considering the fact that some of us are more

⁸⁵ An example of some of the comments (I only took the top 10%). I kept them unedited to ensure authenticity.

comfortable when studying at night in the study logs, whereas in res they do not have enough p.c's. you find that you want to go on the lab that is in res but you cant use them because they are full. This really needs to be taken care of. the other problem is that i am a bursary holder and my bursary has not paid yet and i am struggling financially, i do not have food and i find it difficult for me to study on an empty stomach. please help. Here at school there are translation services but they do not benefit everyone but only the coloured student, i mean black students are majority but they are not considered for the service. we cant turn a blind eye on the fact that we as black students are struggling when it comes to English and the accent in which the facilitators use with us. we are all paying fees and therefore the treatment should be the same.

- Student poverty is real and some students don't see it either because they are ignorant or for some other reason. Some students try so hard to fit in without realising their current situation
- well i have a question that what is the whole purpose of this survey?
- It is often easy for one to go to bed without having anything to eat, everything is expensive and most student are from poor financial backgrounds. Learning on an empty stomach makes all the means of coming to university in search for a better future useless, because concentration levels decrease and one ends up failing. Talking from experience it is real.
- I hope this will reach out to students out there, who really have it bad, I know people who don't even eat because they don't have bursaries or any form of income. May this research reach out to those people and be a success, I hope my participation makes a difference too.
- sStudent safety Off-campus is a serious problem and the university seems to be taking it lightly. fellow students get robbed, raped and assaulted on their way to their designated accommodations. we live in fear in our communes because landlords do not ensure our safety at communes, there has been two break ins at my current commune in a matter of one month. OFF-CAMPUS STUDENT SAFETY.
- So many students do not have basic clothes to wear to campus, winter is approaching and I only have 2 jerseys . Students even with NSFAS funding do not always have groceries after the 15th of the month because R800 really doesn't get you a lot and there's really a limit to what you can buy and eat . More Accommodation should be made available to the university cos very rarely you can stay at a place without paying rent till NSFAS pays out. I know people who have had to move to 2 different places since the beginning of the academic year because of this. There really should be a clothing allocation from NSFAS at least twice a year even if it's R300 to buy a jean and t-shirt.
- If it weren't for my girlfriend and her parents letting me stay with them till I finish my studies. I wouldn't have been able to study. I would have had to go back to my hometown and work in the mines.
- It is unfortunate that students have to get certain marks to earn a plate of food whilst juggling the social aspect of University
- Please help the students who are on the Funza Lushaka bursary, they haven't received any payment as yet from the organization itself and are left to fend for themselves. Thank you for this opportunity.
- It is always hard for us to do anything at university level. Not that we don't want to but because we don't have means to. No one tries to help and we fell neglected.
- Student poverty is a real problem and that's why we need to help each other out. Cooking together or catching a lift with one another can help save money and time. It's also helps relieve stress by knowing you are not alone.
- I would like people to realise (including lecturers) that it's not only the black students that struggle with poverty. I know I am privileged enough due to my father's income, but I know of many white and coloured students that struggle. These students get ignored because of the colour of their skin. We are supposed to be equals, then why are 'some more equal than others'?
- Student poverty is growing rapidly and funding is getting harder to access.

- There students like me who are really suffering and who are working so hard to make ends meet. But when we get denied funding that's when life becomes more difficult for us. As a student it is really not nice not knowing what you going to eat tomorrow and still worry about being deregistered because you don't know how you going to pay up the fees. Assistance from the university is need more. And more bursaries are needed. There are a lot of suffering students out there that need help.
- University is difficult. You think you have it under control, then you lose it. go for therapy sessions at kovsie health, break down a week later. I am on the edge of giving up. i go on just for the people who are supporting me, NSFAS, my parents & my friends. I feel sad for people who don't have the support I do because t when the intrinsic motivation dies out, they don't have anything else keeping them on track.
- Student poverty goes as deep as affecting the physiological health of students and it requires the impoverished students to work twice or even thrice as hard to achieve what should be achieved in record time, it is like a magnet that keeps pulling you back unto poverty the more you try to leave. Being a poor student also hampers with participation in other activities in that one has to make ends meet just so that they can stay in school, you literally have no time for anything else, and funding is for other courses and other fields of study, the call for free higher education was one that would have seen the majority of students less burdened and even flourishing in what they do if it were to actually get implemented and stops being a rhetoric in this country. Poverty is a serious problem, it is a lot like a disease, more especially to the youth of this country, and if it is not dealt with, it may completely ruin the future of this country. I hope this is somewhat helpful.
- We need more information with regards to how to cope in university socially and academically. social clubs should be available and introduced to us so that students can engage with each other and we can assist each other with issues we are dealing with.
- Yes, most learners especially those without funding they suffer poverty a lot and something has to be done about it because they end up doing things they shouldn't do.
- I think there are student that has the opportunity to become 'someone ' and they waste it because they think it is a joke. Yes every one should be given the chance to learn and have a degree, but this opportunities should be given to those who crave the knowledge and not those who wants to waste it just because they can. Thank you for the survey. I did not say what race I am because my skin colour does not define who I am . Have a nice day*
- Thank you for making me do this survey
- Even though some students who are poor receive financial aid funding, they should also be checked regularly by those companies or financial aid schemes if they are living good and are coping in their studies.
- Student poverty can be very disturbing especially academically because you worry about what you'll eat the next day, or what you will wear to school.
- One can NEVER blame his background, or circumstances for not performing in life or as a student at a tertiary institution or any other place or situation he or she finds him or herself, to become something or to make something of life. Nothing comes or is easy in this life, but you ALWAYS have a choice! Life and especially SA does not owe anyone anything. You get what you work for. I lost both my parents when I was 11 years old, and still I became an excellent product of my history!! CHOICES!! Take care
- student poverty is real, and it somehow impacts students negatively because we tend to isolate ourselves because we feel we are not competent enough, and its not even easy trying to explain all that pain we feel with someone who has never experienced all of that and it somehow becomes a burden and then all of that reflects on the studies-low marks.it even leads to depression.
- We are unable to pay for our fees as we are from low class families
- Yes, I think there is huge problem due to student private accommodation because our poor families can't afford both rent and food money. At least if we had accommodation allowance we would live better with no financial stressfully

- Poverty is the state of mind, regardless of how you struggle with some certain things such as clothes or hairstyles do not look down on yourself just take that as a challenge not a problem because in future it going to be a story you are going to tell people or your family. SO BE YOURSELF AND BE PROUD OF WHO YOU ARE.
- We need to allow small businesses to operate freely on campus.
- We will on fighting
- Yes, I think it is very good that this survey is done because there are people who are affected by external factors which in turn restricts them performing to the best of their abilities academically.
- The study poverty can be reduced by the university by giving certain people who struggle financially bursaries that will enable them to cope financially and able to further their studies and must ensure that their allowance is received every month end without fail. Thank You very much
- Student poverty should be assisted as soon they need help. From my experience, it is not good to come to school hungry and walking from township to school. I am so delight regarding this survey. Thank you so much.
- It just has to be the biggest factor that the school is not taking seriously. Yes, there are societies on campus helping out but the school, I feel needs to contribute alot more than it is.
- Many students are not yet being funded, and I am the one of them. This effect my studies so badly because sometimes I had to go to campus with an empty stomach.
- We all come from different background where sometime it's very hard to ask for something because you feel like you are bothering people. But it's cool because we all are hare to better ourselves and hopefully become responsible good people. Thanks For letting me participate.
- Can you please help us with study resources. It is no longer safe to go to library during the night.
- The food allowance is very small especially now that the taxi has increased, an R800 groceries cannot last for the whole month. By the time we get the money we be sleeping without food because some of us do not get allowance from parents
- So far I can say no.
- There are some students (that i know of) who has REAL issues regarding poverty. Most of them are done studying (Currently Working) and grateful for their struggle, yet some are still struggling. Some of the most intelligent and open -minded people that i know. It is saddening !!!
- I really need funds for my 2nd etc years. The university didn't accept my NSFAS application for some reason. Probably because I'm white and have a disability
- Study costs are heavy on a lot of people who are not from Bloemfontein because such costs are not limited to tuition only but include living expenses ranging from accommodation, day to day basic needs and transportation if you so happen to live outside the city center.
- During exam students have problems with regards to their funding more especially NSFAS students they delay to release the money for food and buy that time student have to study and they is no food or money pocket in the student card.
- A lot of students suffer because of poverty. Poverty is a sad reality which limits student's abilities.
- No, am not having any comments, NSFAS is trying by all means to provide us and even NO STUDENT HUNGRY tend to provides us as students
- Yes I do have suggestion like, at least if we could find some community activities that could help us as students, because sometimes we are struggling especial from where we come from. I came from rural areas where there are no jobs at least to do them part time.
- No comment
- Most students struggle with bursaries that either pay out late or pay money that doesn't cover the whole month, for instance; the R800 NSFAS gives out does not afford to buy food that last the whole month.
- This matter is a serious and needs maximum attention in universities.
- I studied through another University, and find the questions a bit ambiguous, as I do not know if they are applicable to me, in the current year, or from history through other Universities that I

studied through. Thank you for showing me, through your questions, what I can be thankful for, but also, that I am not alone in worrying about inconsolable debt and financing for furthering my studies.

- Being an Afrikaans speaking student, I find it sometimes difficult to adapt to study material being in English only, as I wrote matric in Afrikaans, where other students may have done matric in English. I find some classes difficult, where there is antagonism towards my home language. I, however, have far more friends from other cultures than friends who are also white. I do not have many friends who are from my own cultural background and most of my friends are from different cultural backgrounds. We all have the same struggles and worries with regards to safety, finances, etc. Student poverty is a problem, but students are confident to get loans and bursaries and extra pocket money. Students in my group are less worried about poverty as they work hard for academic bursaries as well. Students are worried about the huge number of students in classes, meaning that everybody is studying a subject, but will there be work for everyone? Our main worry is that we do not always feel safe on campus and especially in the student accommodation neighbourhoods, like Brandwag and Universitas. We are also not pleased about political driven unrest on campus, e.g. Fees Must Fall, e.g. as it makes us feel unsafe. We are also worried about depression amongst students, drug and alcohol abuse, especially amongst younger students and ignorance towards HIV/Aids, etc.
- Thank you so much for researching on this topic! However, kindly pay attention to even international students that struggle with fees. As for students that experience poverty, I'd advise that there should be activities implemented to support them and they should try as much as not to consider students who'd be given these 'funds' or 'perhaps financial support' based on academic merits. These activities can involve student leaders campaigning to privately owned companies or even donations from academic staffs within the university. I'd advise that the students rendered financial support should give back to the society through involving in social activities. At least they do say, one good turn deserves another. Many thanks!
- Some students should not be afraid of their background or where they come from because of their financial problems
- Yes i have them, since I'm the one other those students who experience poverty due to the fact that I'm unemployed and I don't have a bursary that funds me with meals, accommodation, books and tuition fees, so I need help.
- Yes. It would be so kind of universities to ensure that every student is supported financially where needed. Thank you.
- I would really appreciate if i can be helped in getting an accommodation that accommodates NSFAS students
- As students we all face different challenges such as lack of finances but we never give up on our dreams even if it means going to bed without a decent meal .
- I do not how am I struggling in terms of financial while I have funding under NSFAS. I am owing an institution an amount of R173 000+. This is the reason why I am struggle also in terms of private accommodation. My funding never ever give me that money.
- In Sesotho we say 'mpa ha e kolotwe' which simply means a 'stomach must not be owned food'. My point with this idiom is that a student is only going to reach his/her full potential when he/she is full. I believe that student poverty must be dealt with harshly .No student should sleep on an empty stomach! And if there are means to eradicate student poverty, I'm all for it!
- I do not have much to say but I trust in God alone He do things for me.
- I as a student sometimes do not have enough money to provide for additional needs such as clothes because i have no money. Even though my mother is working but it's really hard for her to send some money because she has lots of debts to settle. I am grateful from the allowance i get from NSFAS but to be really honest it is not enough because food nowadays is very expensive. So with the allowance i have i am not able to survive for the whole month with it and i have no place or

person to support me financially. My struggle is real because even where i am staying, i am being chased out because i lived there illegally without the concern of the landlord.

- I wish someday all of our problems could be carried away so that we could study freely and express our knowledge in making the world a better place for all.
- As I'm a student in the Qwaqwa campus i feel I'm not exposed to the things that the main campus has to offer that way i feel oppressed and still not given enough credit to ensure my success in academics
- No, I just feel like some of us as student from rural areas it takes us a long time to adapt to the environment and the technology that is used by the university where at some point we will feel low self-esteem.