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Food security at the University of the Western Cape: An exploration of actions and programmes to address student hunger

by

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ABSTRACT

Food is a basic human need – for survival, health and productivity. At the national level, South Africa is food secure; however, many households remain food insecure. Hunger amongstudents has been identified as a significant challenge at South African universities. Studies onstudent hunger have been conducted at some universities in the country but little is known about the nature and prevalence of student hunger at the University of the Western Cape. The aim of this study was to investigate the various food programmes in operation at the universityand to explore the perceptions of stakeholders, such as academic staff and students, about student hunger and their respective roles in combating hunger on campus.

The study employed both quantitative and qualitative research methods. The researcher collected data using two different questionnaires. The sampling methods used were snowballing for the food programmes and total population sampling for academic staff. The study also used secondary data on University of the Western Cape students which were collected in 2017. The student online survey made use of the HHS to collect data. The data in this study were analysed using the Statistical Package for SocialSciences (SPSS). Numerical methods were used to interpret the quantitative findings, and themes were employed to analyse the qualitative data. All ethical considerations pertaining topermission and consent were adhered to.

The study identified 14 food programmes on campus. The findings revealed that a lack of financial and human resources were the major challenge confronting the food programmes. Fourteen percent (14%) of students were engaged in more than one job while studying, to have enough money to buy food. HHS calculations show that 78% of students were found to be food secure, while 22% were found to experience hunger. Although students reported assisting eachother and several lecturers also gave support to those who asked for help, there is a need for programmes to support food-insecure students. Participants in this study strongly felt that suchassistance to students must not be discriminatory and must be administered in a way that doesnot compromise their dignity. In addition, food provided to students must be healthy and filling.

Key words

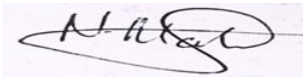
Students, University, Food, Food Security, Hunger, Food Programmes, Academic Staff

DECLARATION

I declare that 'Food security at the University of the Western Cape: An exploration of actions and programmes to address student hunger' is my work. It has not been submitted before for any degree or examination in any other university. All the sources that I have used or quoted have been acknowledged and fully referenced.

Full name: Nolukholo Mabharwana

Date: March 2022



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ABBREVIATIONS AND ACRONYMS

CHS	Community and Health Sciences
CPUT	Cape Peninsula University of Technology
CSI	Coping Strategy Index
DAFF	Department of Agriculture, Forestry and Fisheries
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
DOA	Department of Agriculture
DSD	Department of Social Development
DUT	Durban University of Technology
DVC	Deputy Vice Chancellor
EMS	Economic and Management Sciences
FANTA	Food and Nutrition Technical Assistance
FAO	Food and Agriculture Organization
GFN	Global Foodbanking Network
GHS	General Household Survey
HDDS	Household Dietary Diversity Score
HFIAS	Household Food Insecurity Access Scale
HHS	Household Hunger Scale
HLPE	High-Level Panel of Experts
HSRC	Human Sciences Research Council

MUT	Mangosuthu University of Technology
NGO	Non-Governmental Organisation

DEFINITION OF TERMS

Food: Any substance consumed to provide nutritional support for an organism. It is usually of plant, animal or fungal origin, and contains essential nutrients, such as carbohydrates, fats, proteins, vitamins or minerals.

Food security: Food security is realised when all people at all times have physical, social and economic access to sufficient, safe and nutritious food, which meets their dietary needs and food preferences for an active and healthy life (FAO, 2009).

Hunger: 'Usually understood as an uncomfortable or painful sensation caused by insufficient food energy consumption' (FAO, 2008a:1).

Food access: 'Having personal or household financial means to acquire food for an adequate diet at a level to ensure that satisfaction of other basic needs are not threatened or compromised; and that adequate food is accessible to everyone, including vulnerable individuals and groups' (HLPE, 2020a:10).

Household Hunger Scale (HHS): 'A household food deprivation scale, derived from research to adapt the United States (U.S.) household food security survey module for use in a developing country context and from research to assess the validity of the Household Food Insecurity Access Scale (HFIAS) for cross-cultural use' (Ballard et al., 2011:2).

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CHAPTER 1
INTRODUCTION AND BACKGROUND

1.1 Introduction

The World Food Programme (WFP) (2009a: 14) defines hunger as 'a condition in which people lack the required nutrients, both macro- and micronutrients, for fully productive, active and healthy lives'. It is an uncomfortable or painful sensation caused by insufficient food energy consumption (Food and Agriculture Organization [FAO], 2008a: 3). This can extend over a short or long period and range from mild to severe (WFP, 2009b).

In South Africa, hunger is measured annually by Statistics South Africa (STATS SA) in the General Household Survey (GHS) using a shortened version of the Household Food Insecurity Access Scale (HFIAS) (STATS SA, 2020b). The HFIAS method is based on the idea that the experience of food insecurity causes predictable reactions and responses, which can be captured and quantified through a survey and summarised on a scale (Coates et al., 2007: 1). The HFIAS evaluates food insecurity within a population and provides details about food insecurity over time (Coates et al., 2007). The tool is both convenient and easy to understand and is able to identify who is food secure and who is not (Job, 2014).

In South Africa, the 2019 GHS revealed that the proportion of people who experienced hunger had decreased from 29.3% in 2002 to 11.1% in 2019. Likewise, the percentage of households that were vulnerable to hunger had declined from 24.2% in 2002 to 10.3% in 2019. At the same time, the percentage of households that had limited access to food had decreased from 21.2% in 2011 to 17.8% in 2019, while the percentage of people with more limited access to food had declined from 25.2% in 2011 to 19.5% in 2019 (STATS SA, 2020a).

What happens in households also occurs at universities (Department of Higher Education and Training [DHET], 2011). Research projects documenting student hunger have been conducted at a few universities. Results from a study conducted by Rudolph et al. (2018) at University of the Witwaterstrand University demonstrated that 19% of students sometimes had no food, while 6% went to bed hungry. Research conducted by Jackson (2015) at the Nelson Mandela University (NMU) revealed that student hunger is more prevalent at the beginning of the year. Another recent study conducted by Sabi et al. (2020) at the University of KwaZulu-Natal (UKZN) showed that48.1% of students had no food because of a lack of resources, while 39.6% of students went tobed hungry.

Against this background, this study aimed to investigate student hunger at the University of the Western Cape (UWC). In particular, the study investigated perceptions about student hunger, the student food programmes that exist at the university, and the level of involvementof the university's academic staff and students in various programmes, actions and interventions that address hunger and food insecurity.

1.2 Problem statement

Existing research shows that food insecurity affects students from disadvantaged backgrounds (Sabi et al., 2015), and this has long-term implications for society (Van den Berg and Raubenheimer, 2015). Student hunger is deemed to be more prevalent and pronounced at the end of a semester and during examination time (Dominguez-Whitehead, 2017). This negatively impacts students' academic success and graduation potential (Van den Berg and Raubenheimer, 2015) and also has knock-on effects in society as a whole since it deprives the economy of knowledge and productive human capital (Job, 2014). Rising food prices also negatively affect students, prompting them to survive on non-nutritious, cheap food (Gwacela, 2014).

The programmes that currently address hunger at universities are not of an enduring, long-term nature and depend on the goodwill of organisations and other donors. Limited information is available on the range of food/feeding programmes at the UWC campus, the work being done to provide hungry students with food, and the role of the university's academic staff in addressing the problem of hunger among students. This study sets out to investigate these aspects.

1.3 Research aim

The primary aim of this study was to investigate the various food programmes, activities and/or interventions taking place at UWC and to explore the role and perceptions of stakeholders, such as the university's academic staff and students, in terms of the actions needed to combat hunger on campus. More specifically, the study aimed:

- To identify and describe all programmes at UWC that contribute to the eradication of hunger among students;
- To identify the challenges associated with the implementation of these programmes;

- To investigate perceptions about student hunger and the level of involvement of the university's academic staff and students in programmes, activities and/or interventions that address hunger and food insecurity.

The recommendations from the study will inform strategies for enhancing the different food programmes provided by UWC, including the role that the university should play in ensuring that the programmes are more effective and sustainable, and reach more students.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter discusses the research conducted that broadly relates to food security. First, the chapter provides definitions of concepts associated with food security as well as an overview of food security at the national and household levels. It then highlights the existing food programmes offered by universities and how universities have responded to the problem of student hunger. Finally, it briefly reports on the impact of COVID-19 on food security in South Africa and universities in particular.

Allen (1990: 456) defines food as a nutritious substance that can be consumed by animals, humans and plants in order to sustain life and growth. Food is any substance – whether liquid, solid, frozen, dried or concentrated – that is consumed by humans for reasons of taste and nutritional value (Weingartner, 2000: 1). It also satisfies a basic human need for survival, health and productivity (Sekhampu, 2017: 158). For example, food is a major determinant of mental, physical and social health and also boosts productivity (Ndobo, 2013). Insufficient food intake due to a lack of food, a lack of access to food and/or a lack of resources to procure food results in food insecurity (Von Grebmer et al., 2019).

2.2 Food security

Food security is a term that has evolved over time (Sekhampu, 2017). It first attracted people's attention in the 1940s (Hendriks, 2015: 1). In the beginning, the term was used to describe whether a country had enough food to meet the dietary requirements (primarily energy) of its people (Pinstrup-Andersen, 2009). In the 1970s, the definition of food security was expanded to 'access by all people to enough food to live a healthy and productive life' (Pinstrup-Andersen, 2009: 5). The FAO (1983) identified a gap between the supply of and demand for food, with many people being food insecure because of constrained access to food – even though food was available (Sen, 1981). This resulted in the definition of food insecurity being expanded in the 1980s to include both physical and economic access to food (FAO, 1983).

The FAO extended the definition still further to include nutritional value and food preferences (Pinstrup-Andersen, 2009: 5). Then, in 1996, the World Food Summit agreed to define food security as follows: 'when all people, at all times, have physical and economic access to

sufficient safe and nutritious food to meet their dietary needs and food preferences for a healthy and active life' (Pinstrup-Andersen, 2009: 5). However, according to Hendriks (2015: 609), 'the usefulness of the concept is constrained by the plurality of ways of understanding the causes and consequences of food insecurity and the effects of economic, social, political and environmental intervention'.

The concept of food security has developed over time and now includes agency and sustainability as new dimensions, in addition to food availability, food access, food utilisation and food stability (HLPE, 2020a). The High-Level Panel of Experts (HLPE) (2020a: 10) define agency as individuals or groups having the capacity to act independently to make choices about what they eat, the foods they produce, how that food is produced, processed and distributed, and to engage in policy processes that shape food systems. The protection of agency requires socio-political systems which uphold governance structures that facilitate the achievement of food and nutrition security for all (HLPE, 2020a). Sustainability is defined as 'food system practices that contribute to long-term regeneration of natural, social and economic systems, ensuring the food needs of the present generations are met without compromising the food needs of future generations' (HLPE, 2020a:9). These six dimensions are all interconnected through a complex web of relationships (HLPE, 2020a). These dimensions are discussed further in Chapter 3 as part of the conceptual framework.

2.3 Food security in South Africa

Labadarios et al. (2009: 9) define food security at the national level as a condition whereby a country is able to manufacture, import, retain and sustain food needed to support its population with minimum per capita nutritional standards. South Africa is food secure at the national level but is still food insecure at the household level, as many households do not have access to adequate food (STATS SA, 2020b).

2.3.1 The state of food security in South Africa prior to 2020

Figure 2.1 below shows the number of people and households experiencing hunger in South Africa up until 2017, i.e. prior to the COVID-19 pandemic. In particular, it shows the progress that the country made in addressing hunger from 2002 to 2017. The number of people experiencing hunger declined by 6.7 million over the 15-year period. Across South Africa, the

number of households experiencing hunger also declined during the period, from 2.7 million to 1.7 million (STATS SA, 2020a).

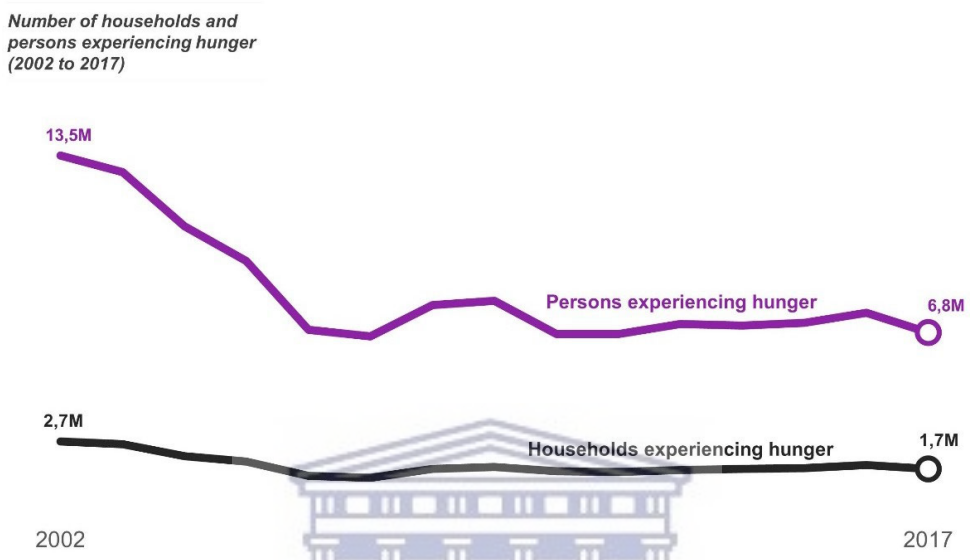


Figure 2.1: Number of households and people experiencing hunger 2002–2017

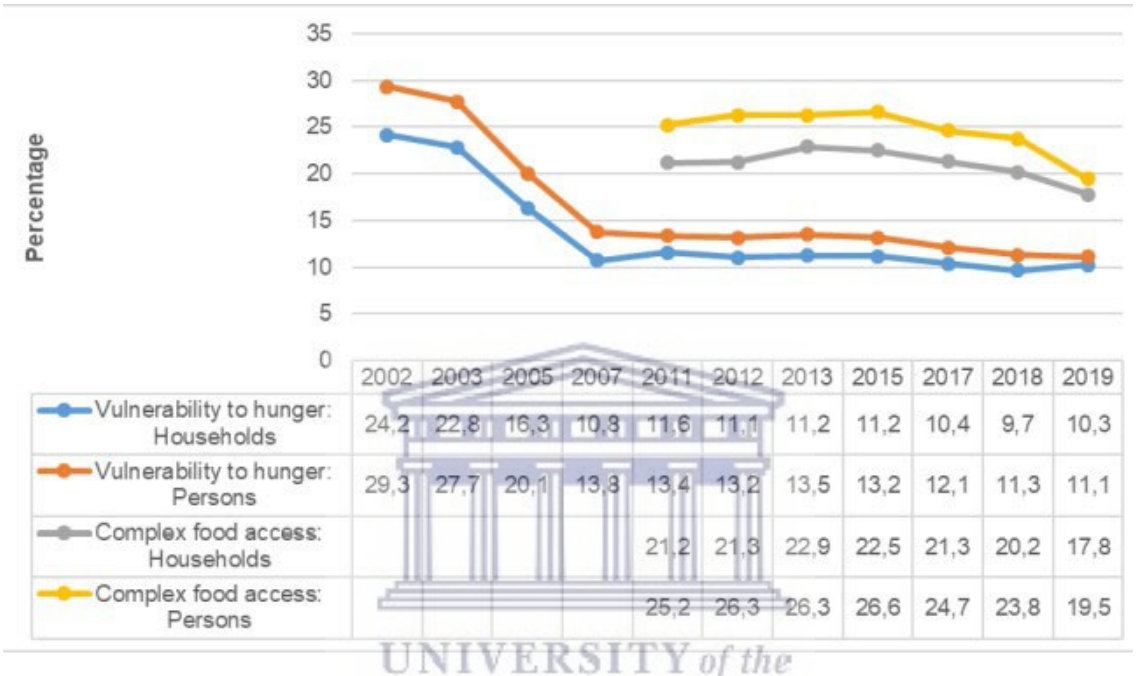
Source: STATS SA (2020a: 8)

Figure 2.2 shows that the number of people who experienced hunger declined from 29.3% in 2002 to 11.1% in 2019. The percentage of households that were vulnerable to hunger reflected the same trend as that of people, declining from 24.2% in 2002 to 10.3% in 2019. These results also reveal that the percentage of households with limited access to food decreased from 21.2% in 2011 to 17.8% in 2019. The number of people with limited access to food also decreased from 25.2% in 2011 to 19.5% in 2019 (STATS SA, 2020a).

2.3.2 The state of food security during and after the COVID-19 lockdown in South Africa

In December 2019, scientists identified a coronavirus outbreak in China (Felman, 2021), which became known as the severe acute respiratory syndrome coronavirus 2. The virus spreads through human-to-human transmission (sneezing, touching, coughing, speaking or breathing heavily) when infected people are in close contact with others (WHO, 2020). To curb the virus, people were urged to follow strict hygiene rules and stay at home (Atalan, 2020). The

most restrictive measures implemented to curb the spread of the virus were lockdowns, which were enforced by many countries across the globe (Stigler and Bouchard, 2020). Under a lockdown, schools, restaurants and shops were closed, and all non-essential activities were suspended.



	2002	2003	2005	2007	2011	2012	2013	2015	2017	2018	2019
Vulnerability to hunger: Households	24,2	22,8	16,3	10,8	11,6	11,1	11,2	11,2	10,4	9,7	10,3
Vulnerability to hunger: Persons	29,3	27,7	20,1	13,8	13,4	13,2	13,5	13,2	12,1	11,3	11,1
Complex food access: Households					21,2	21,3	22,9	22,5	21,3	20,2	17,8
Complex food access: Persons					25,2	26,3	26,3	26,6	24,7	23,8	19,5

Figure 2.2: Vulnerability to hunger and access to food, 2002–2019
Source: STATS SA (2020a: 59)

A study conducted by Atalan (2020) found lockdowns to be effective in suppressing the virus; however, they caused major disruptions to food systems and undermined efforts to achieve zero hunger (HLPE, 2020b). In addition, lockdown-related restrictions and disruptions have increased hunger. The HLPE (2020b) predicts that these measures may pose a threat to food and nutrition as time goes by. In this regard, universities have been particularly vulnerableas, initially, they had to suspend many of their activities, especially in-person classes. University students were not spared from the increasing prevalence of hunger that affected the global population at the time.

A national lockdown was implemented in South Africa on 27 March 2020 to curb the spread of the virus. This meant increased vulnerability among the poor. The wave 1 National Income Dynamics Coronavirus Rapid Mobile Survey (NIDS-CRAM) revealed that 3 million South

Africans lost their jobs between February and April 2020 (Spaull et al., 2020), implying a loss of income and greater food insecurity and hunger. Poor South Africans said that they were more fearful of dying of hunger than of COVID-19 (Mpofu, 2020). The NIDS-CRAM wave 4 2021 report shows that 47% of respondents ran out of money to buy food in wave 1, 38% in wave 2, 41% in wave 3 and 39% in wave 4. The report further shows that 23% of households experienced hunger in wave 1, 16% in wave 2, 18% in wave 3 and 17% in wave 4.

2.3.3 Food insecurity during the COVID-19 lockdown

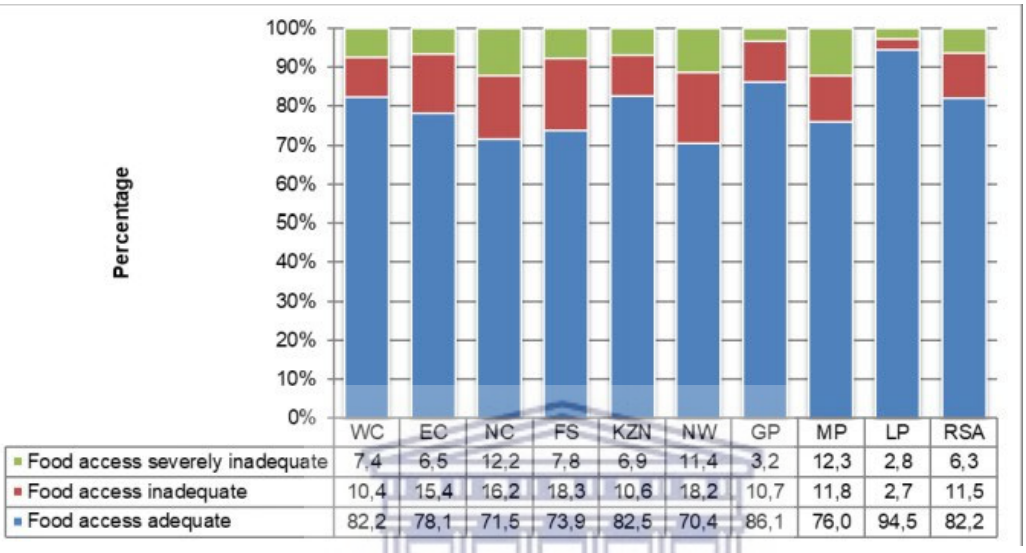
According to the Pietermaritzburg Economic Justice and Dignity Group (PMBEJD) (2020a), increases in food prices make it difficult for households to effectively deal with hunger. Arecent survey conducted by STATS SA (2020c) revealed that hunger increased by 3% during the lockdown, as accessing food was not easy. In a report by the Human Sciences Research Council (HSRC) (2020) it was revealed that almost a quarter (24%) of people in South Africadid not have money to buy food, while 55% of informal settlement residents and two-thirds oftownship residents did not have money to buy food.

The wave 1 NIDS-CRAM 2020 survey conducted by Van der Berg et al. (2020), which focused on hunger, produced the following results: 47% of respondents reported that their household ran out of money to buy food in April 2020; one out of five respondents reported that someone in their household went hungry during the previous seven days; one out of eight respondents reported frequent hunger in their household (three or more days in the previous seven days); and one out of 14 reported perpetual hunger almost every day. In households with children: one out of seven respondents reported that a child had gone hungry during the previous seven days; one out of 13 respondents (8%) reported frequent child hunger in the household (three days or more in the previous seven days); and one in 25 (4%) reported perpetual child hunger almost every day.

2.4 Food security at the household level

Household-level food security refers to the household's access to and availability of food (Department of Agriculture, Forestry and Fisheries [DAFF], 2011). According to DAFF (2011), this means that households do not live in fear of hunger and starvation. A 2019 GHS report published in 2017 revealed that 82.2% of households nationally considered their access to food to be adequate. Food access challenges were most common in the North West province, where 29.6% of households had inadequate or severely inadequate access to food. Inadequate

or severely inadequate access to food was also observed in the Northern Cape (28.5% of households), Free State (26.1% of households) and Mpumalanga (24% of households). Limpopo had the lowest number of households experiencing inadequate or severely inadequate access to food (5.5% of households) (STATS SA, 2020a). See Figure 2.3.



	WC	EC	NC	FS	KZN	NW	GP	MP	LP	RSA
Food access severely inadequate	7,4	6,5	12,2	7,8	6,9	11,4	3,2	12,3	2,8	6,3
Food access inadequate	10,4	15,4	16,2	18,3	10,6	18,2	10,7	11,8	2,7	11,5
Food access adequate	82,2	78,1	71,5	73,9	82,5	70,4	86,1	76,0	94,5	82,2

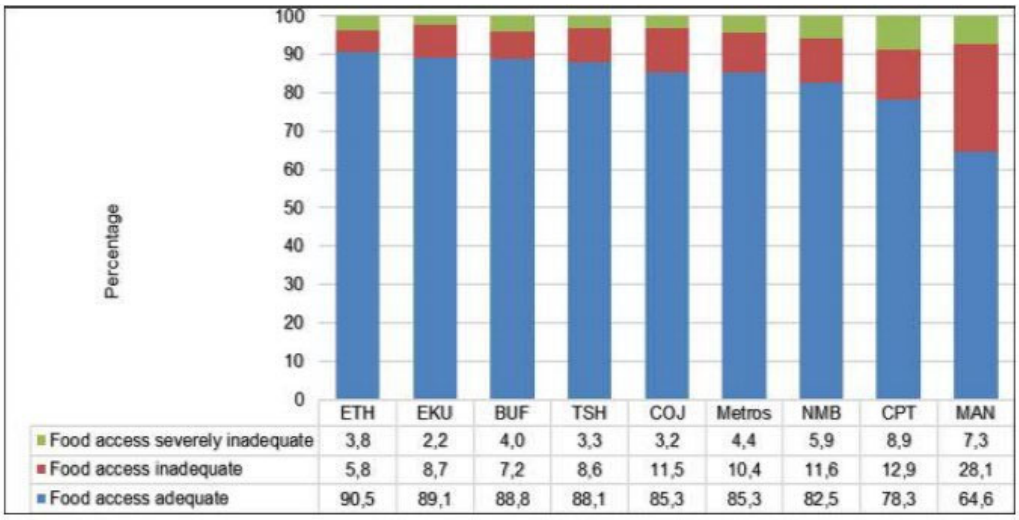
Figure 2.3: Households experiencing adequate and inadequate access to food by province, 2019

Source: STATS SA (2020a: 60)

Figure 2.4 shows that 14.8% of households that lived in metropolitan areas had experienced inadequate or severely inadequate access to food during the 2019. Food access problems were most common in Mangaung (35.4%), City of Cape Town (21.7%) and Nelson Mandela Bay (17.5%). The City of Ethekwini (9.6%) had the least number of households experiencing inadequate and severely inadequate food access. Adequate food access was mostcommon in Ethekwini (90.5%), Ekurhuleni (89.1%) and Buffalo City (88.8%). Figure 2.4 shows that across the metros, 85.3% of households had adequate food access (STATS SA, 2020a).

2.5 Student food security in South Africa

Student food insecurity in South Africa is not well documented. The literature reveals only a few studies that document evidence of food insecurity on university campuses. This section provides the results of studies conducted at the University of Free State (UFS), Wits University and the University of KwaZulu-Natal (UKZN).



	ETH	EKU	BUF	TSH	COJ	Metros	NMB	CPT	MAN
Food access severely inadequate	3,8	2,2	4,0	3,3	3,2	4,4	5,9	8,9	7,3
Food access inadequate	5,8	8,7	7,2	8,6	11,5	10,4	11,6	12,9	28,1
Food access adequate	90,5	89,1	88,8	88,1	85,3	85,3	82,5	78,3	64,6

Figure 2.4: Households experiencing adequate and inadequate access to food by metropolitan area, 2019

Source: STATS SA (2019: 60)

A study conducted by Van den Berg and Raubenheimer at UFS in 2013 showed that 65% of students were food insecure and that only 26% of students always had enough money for food. Furthermore, 7% of students reported that they never had enough money to buy food. The study also revealed that food insecurity was significantly greater among students who obtained money for food from their parents, their allowance or their study loan (Van den Berg and Raubenheimer, 2015).

Results from a study conducted by Rudolph et al. published in (2018) at Wits University showed that 19% of students sometimes had no food, 6% went to bed hungry and 2% sometimes went the whole day without food. The study further revealed that 6% of student were experiencing severe hunger. A similar study conducted in 2019 published in 2021 by Wagner et al. found that 38% of Wits students in a specific year group followed over 3 years, were severly food insecure and another 24% had low food security, 5% experienced severe hunger (Wagner et al., 2021).

A study conducted by Sabi et al. in 2015, published in 2020 at UKZN, it was revealed that 48.1% ofstudents had no food (owing to a lack of resources), 39.6% went to bed hungry and nearly 28%stayed hungry for the whole day and night due to a lack of food (Sabi et al. 2020). The study further revealed that 53% of students ate fewer than three meals a day, 44% ate two meals a day and 9.2% ate one meal a day. Students funded by the National Student Financial

Aid Scheme (NSFAS) andstudent loans were found to be more vulnerable to hunger than those who were self-funded orfunded by their families (Sabi et al., 2020). The stdy also revealed that 64.6% of students found that hunger affected their concentration/effectiveness, while 27.7% reported that they missed classes due to an insufficiency of food. The majority (25.7%) of those who missed classes were undergraduate students; only 2% of postgraduates missed classes for this reason (Sabi, 2020).

A study conducted by Jackson (2018) at NMU indicated that student hunger was more prevalent at the beginning of the academic year especially in the first three months of the year. This finding is consistent with a finding from astudy conducted by Mansvelt (2021) at NMU, i.e. that hunger is more common at the beginningof the year because student funding has not yet been secured at that time.

2.6 Measurement of food security

This section provides an overview of selected instruments used to measure food security: the Household Food Insecurity Access Scale (HFIAS), the Household Hunger Scale (HHS), the Household Dietary Diversity Score (HDDS) and the Coping Strategy Index (CSI).

2.6.1 Household Food Insecurity Access Scale (HFIAS)

The Household Food Insecurity Access Scale (HFIAS) was developed by the Food and Nutrition Technical Assistance Project (FANTA) in 2006 with the aim of providing a valid tool, for use in a developing-country context, that is capable of measuring food insecurity in a comparable way, i.e. with cross-cultural equivalency (Coates et al., 2007: 2). Information collected for the HFIAS is useful for assessing the prevalence of household food insecurity and for tracking changes in household food insecurity in a population over time (Coates et al., 2007).

The HFIAS comprises nine occurrence questions and nine frequency-of-occurrence questions. These questions probe whether or not a specific condition associated with the experience of food insecurity occurred during the previous four weeks (30 days) (Ballard et al., 2011). The HFIAS questions were formulated to reveal varying levels of food insecurity, while also depicting three domains understood to be central to the experience of cross-cultural food insecurity. These domains are anxiety about household food supply, insufficient food quality, which includes variety, preferences and social acceptability, and insufficient food supply and intake, and the physical consequences thereof (Ballard et al., 2011).

The HFIAS food quality questions do not refer directly to nutritional quality. Rather, the questions attempt to capture the household's perception of changes in the quality of their diet, regardless of their diet's objective nutritional composition. For example, a household may perceive that a change from rice to corn has led to a decline in the quality of their diet when the nutritional quality has not in fact changed significantly (Coates et al., 2007).

The following questions underpin the HFIAS:

Q1. In the past 4 weeks (30 days), did you worry that your household would not have enough food?

Q2. In the past 4 weeks (30 days), were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources?

Q3. In the past 4 weeks (30 days), did you or any household member have to eat a limited variety of foods due to a lack of resources?

Q4. In the past 4 weeks (30 days), did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food?

Q5. In the past 4 weeks (30 days), did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?

Q6. In the past 4 weeks (30 days), did you or any household member have to eat fewer meals in a day because there was not enough food?

Q7. In the past 4 weeks (30 days), was there ever no food to eat of any kind in your household because of a lack of resources to get food?

Q8. In the past 4 weeks (30 days), did you or any household member go to sleep at night hungry because there was not enough food?

Q9. In the past 4 weeks (30 days), did you or any household member go a whole day and night without eating anything because there was not enough food?

Each of these questions is answered with a Yes or a No answer, where No = 0 and Yes = 1. Individuals who answer yes then proceed to answer follow-up questions which are concerned

with how often the lack of food occurred. The occurrence is measured according to degree: 1 = Rarely (1–2 times), 2 = Sometimes (3–10 times) and 3 = Often (more than 10 times). A total score is calculated for all 9 questions and sub-questions, and households are categorised according to their score.

2.6.2 Household Hunger Scale (HHS)

The Household Hunger Scale (HHS) is centred on the food quantity component of food access and is unable to measure dietary quality (Ballard et al., 2011). The shorter HHS, which contains only three questions and sub-questions, has been validated to: reflect the prevalence of hunger over time across countries and regions; to assess progress towards meeting international development commitments, and to assess the food security situation in a country or region; to provide evidence for the development and implementation of policies and programmes that address food insecurity and hunger; to monitor and evaluate the impact of anti-hunger policies and programmes, including those funded by a specific donor across a number of cultures and countries; to provide information for early warning or nutrition and food security surveillance, and to inform standardised food security/humanitarian phase classifications.

HHS data are collected over a four-week (30-day) recall period (Ballard et al., 2011). The HHS comprises three questions and three frequency-related questions that, when administered in a population-based household survey, allow the estimation of the percentage of households affected by three different levels of household hunger: 1) little to no household hunger; 2) moderate household hunger; and 3) severe household hunger.

The questions are as follows:

> *Q1. In the past 4 weeks (30 days), was there ever no food to eat of any kind in your household because of a lack of resources to obtain food?*
>
> *Q1a. How often did this happen in the past 4 weeks (30 days)?*
>
> *Q2. In the past 4 weeks (30 days), did you or any household member go to sleep at night hungry because there was not enough food?*
>
> *Q2a. How often did this happen in the past 4 weeks (30 days)?*
>
> *Q3. In the past 4 weeks (30 days), did you or any household member go a whole day and night without eating anything at all because there was not enough food?*

Q3a. How often did this happen in the past 4 weeks (30 days)?

Questions 1, 2 and 3 have response options of No coded as (0) and Yes coded as (1). Questions Q1a, Q2a and Q3a have responses 1 = Rarely (1–2 times), 2 = Sometimes (3–10 times) and 3 = Often (more than 10 times). After recoding to collapse Rarely and Sometimes into one score, a total score is calculated and households are categorised according to their total score with 0–1 interpreted as little or no hunger, 2–3 as moderate hunger and 4–6 as severe hunger (Ballard et al., 2011).

2.6.3 Household Dietary Diversity Score (HDDS)

The purpose of the Household Dietary Diversity Score (HDDS) is to reflect the economic ability of a household to access a variety of foods (Ballard et al., 2011; Kennedy et al., 2011). Swindale and Bilinsky (2006: 1–2) highlight that it is an attractive proxy indicator for the following reasons: a more diversified diet is an important outcome in and of itself; a more diversified diet is associated with a number of improved outcomes in areas such as birth weight, child anthropometric status and improved haemoglobin concentrations; and a more diversified diet is highly correlated with such factors as caloric and protein adequacy, percentage of protein from animal sources (high-quality protein) and household income. Even in very poor households, increased food expenditure resulting from additional income is associated with the increased quantity and quality of the diet. Questions about dietary diversity can be asked at the household or individual level, making it possible to examine food security at the household and intra-household levels.

HDD data can be collected during the period of greatest food shortages (Swindale and Bilinsky, 2006). Information on household food consumption is collected using the previous 24 hours as a reference period, following the 24-hour recall method without quantification (Swindale and Bilinsky, 2006). In the HDD questionnaire, respondents must first disclose the foods they consumed and drank on the previous day (during the day and night), whether at home or outside the home. They start with the first food or drink of the morning. This includes food eaten by any member of the household but excludes foods purchased and consumed outside the home.

Table 2.1: Consumption of HDDS food groups by respondents

Question number	Food group	Examples	Yes/No
1	Cereals	Corn/maize, rice, wheat, sorghum, millet or any other grains or foods made from these (e.g. bread,noodles, porridge or other grain products) + insert local foods, e.g. ugali, nshima, porridge or paste	
2	White roots and tubers	White potatoes, white yam, white cassava or other foods made from roots	
3	Vitamin A-rich vegetables and tubers	Pumpkin, carrot, squash or sweet potato that are orange inside + other locally available Vitamin A-rich vegetables (e.g.sweet red pepper)	
4	Dark green, leafy vegetables	Dark green, leafy vegetables, including wild forms + locally available Vitamin A-rich leaves such asamaranth, cassava leaves, kale, spinach	
5	Other vegetables	Other vegetables (e.g. tomato, onion, eggplant) + other locally availablevegetables	
6	Vitamin A-rich fruits	Ripe mango, cantaloupe, apricot (fresh or dried), ripe papaya, dried peach, and 100%fruit juice made from these + other locally available Vitamin A-rich fruits	
7	Other fruits	Other fruits, including wild fruits and 100% fruit juice made from these	
8	Organ meat	Liver, kidney, heart or other organ meats or blood-based foods	
9	Flesh meats	Beef, pork, lamb, goat, rabbit, game, chicken, duck, other birds, insects	
10	Eggs	Eggs from chicken, duck, guinea fowl or any other egg	
11	Fish and seafood	Fresh or dried fish or shellfish	
12	Legumes, nuts and seeds	Dried beans, dried peas, lentils, nuts, seedsor foods made from these (e.g. hummus,peanut butter)	
13	Milk and milk products	Milk, cheese, yoghurt or other milk products	
14	Oils and fats	Oil, fat or butter added to food or used for Cooking	
15	Sweets	Sugar, honey, sweetened soda or sweetened juicedrinks, sugary foods such as chocolates, candies, cookies and cakes	
16	Spices, condiments, beverages	Spices (black pepper, salt), condiments (soy sauce, hot sauce), coffee, tea, alcoholic Beverages	
Household level only	Did you or anyone in your household eat anything (meal or snack) OUTSIDE the home yesterday?		
Individual only	Did you eat anything (meal or snack) OUTSIDE the home yesterday?		

Source: Ballard et al. (2011)

Dietary diversity scores are calculated by summing the number of food groups consumed in the household or by the individual respondent over the 24-hour recall period. The HDDS is calculated on the basis of different numbers of food groups because the scores are used for different purposes. The HDDS is meant to provide an indication of household economic access to food; thus, food items that need household resources to obtain, such as condiments, sugar, sugary foods and beverages, are included in the score. The potential range for the HDDS is 0–12 (Ballard et al., 2011).

2.6.4 Coping Strategy Index (CSI)

The CSI is 'a unique food security indicator that captures the concept of vulnerability, explicitly measuring the extent of coping behaviour practised by a household' (Maxwell and Caldwell, 2008:2). This experience-based tool (Coates et al., 2007) captures food consumption behaviour in households which are vulnerable to food insecurity (Anderson, 2010). The CSI is also used to monitor the impact that interventions have on households and acts as an indicator of long-term changes in food security status (Maxwell and Caldwell, 2008).

The CSI builds on possible answers to one single question: 'What do you do when you don't have adequate food, and don't have the money to buy food?' (Maxwell and Caldwell, 2008). According to the United States Agency for International Development (USAID) (2008), the CSI can be used for a variety of purposes, including providing a quick, current status indicator of the extent of food insecurity; measuring or monitoring the impact of food assistance programmes; acting as an early warning indicator of an impending food crisis; identifying areas and population groups where the needs are greatest; and shedding light on the causes of malnutrition.

The CSI has three pillars. The answers to the general question must be based on the right list of coping behaviours. Other questions relate to how often these specific behaviours have been displayed in the recent past and how 'severe' each of these individual coping strategies is considered to be. This information is collected from community-level focus groups, and a weight is provided for the perceived severity of each strategy (Maxwell and Caldwell, 2008: 4). The CSI uses a seven-day recall period because a week is the longest time in which people can remember their behaviours.

In view of there being different applications of the CSI, various individual coping strategies have been identified and grouped into four categories: dietary change; short-term measures to

increase household food availability; short-term measures to reduce numbers of people to feed; and rationing or managing the shortfall (Maxwell and Caldwell, 2008)

Table 2.2 explores how often during the previous seven days, a household had to rely on each individual coping behaviour. Maxwell and Caldwell (2008: 12) explain that the frequency is a measure of the number of days in the past week that a household had to rely on various coping strategies – ranging from 'Never' (0) to 'Every day' (7). That frequency score is then multiplied by the severity weight. If a household scores 35 and another household scores 55, it shows that the one that scored 35 is less food insecure than the one that scored 55 – provided they are both from the same community, location or culture for which the CSI tool was adapted. It is important to note that the values for both the frequency and the severity influence the CSI score in the same way. In this regard, the higher the frequency, the higher the score; also, the greater the severity, the higher the severity weighting.

Table 2.2: Consumption Coping Strategy Responses (CSI)

Behaviours: In the past seven days, if there have been times when youdid not have enough food or money to buy food, for howmany days has your household had to:	**Frequency:** Number of days out of the past seven days (Use numbers 0–7 for numberof days; use NA for not applicable)
a. Rely on less preferred and less expensive foods?	
b. Borrow food or rely on help from a friend or relative?	
c. Purchase food on credit?	
d. Gather wild food, hunt or harvest immature crops?	
e. Consume seed stock held for next season?	
f. Send household members to eat elsewhere?	
g. Send household members to beg?	
h. Limit portion sizes at mealtimes?	
i. Restrict consumption by adults so that small children can eat?	
j. Feed working members of the household at the expense of non-working members?	
k. Reduce the number of meals eaten in a day?	
l. Go entire days without eating?	

Source: Maxwell and Caldwell (2008)

2.7 Strategies to address student food insecurity

2.7.1 National Student Financial Aid Scheme (NSFAS)

The National Student Financial Aid Scheme (NSFAS) was set up by the government to assist students from disadvantaged backgrounds to access higher education (Gwacela, 2014). In 2017, the NSFAS introduced a new funding model at all institutions of higher learning in SouthAfrica. Described as a 'student-centred' model because it involved the direct funding of students by the Scheme, the new model made provision for bursaries, in contrast to the previousmodel, which involved the provision of loans (DHET, 2020a).

The new funding model is sufficient to cover the cost of tuition and food. This is reflected in the 2020 DHET Bursary Scheme Guidelines report (DHET, 2020c), which indicates that the model covers registration fees and tuition costs and gives students a R5 200 allowance for learning material. Students also receive a 'living allowance' to cover food and incidental expenses. In 2020, a student was allocated an annual amount of R15 000, which for UWC students translated into R1 440 a month. This amount was meant to address food insecurity and was deposited into the student's personal bank account. However, this living allowance (to cover food) did not apply to students residing at home or in unaccredited private accommodation. The new model is therefore based on the assumption that students staying at home are food secure and that it is only students living in university accommodation who experience food insecurity. Those staying at home or in unaccredited private accommodation only qualify for an incidental annual allowance of R2 900.

The effectiveness of the new system has been constrained by a series of challenges, however, such as delays in paying student fees and allowances, thus exposing students to the risk of starvation (Head, 2020).

2.7.2 Operational programmes at universities

According to a report by the DHET (2011), several universities ran programmes that provided students with food at the time. The Tiger Brands programmes at UWC and Wits University, respectively,are not mentioned in the report as they did not exist at the time.

2.7.3 Criteria for intervention

Gallegos et al. (2014) state that giving food to students must be done in a manner that does not strip away their dignity. Instead of food handouts, students should this rather be given access to affordable food. The rolloutof emergency food initiatives provides only short-term relief in the face of food insecurity; therefore, other strategies need to be employed to deal with the issue of student hunger (Gallegos et al., 2014).

Several authors have suggested that a national review of the NSFAS be conducted, including an assessment of the adequacy of the amounts allocated to students for different purposes (Job, 2014; Van den Berg and Raubenheimer, 2015 Munro et al., 2013), the feasibility of personalising allocations in line with students' situation (Munro et al., 2013) and the prospects of continued external support and food-provisioning campaigns at institutions of higher learning (Van den Berg and Raubenheimer, 2015).

Job (2014: 65) believes that food gardens need to be strongly encouraged at universities. Food gardens are a way of increasing students' access to fresh food and thus afford students an opportunity to address food insecurity (Dubick et al., 2016). For example, in Howard College at UKZN, the student counselling office established a food garden (Collins, 2009) to promote self-reliance among students. The food garden provided students with fresh food and also enabled students to acquire new skills (Collins, 2009). Job (2014) suggests that university partnerships be established with the Department of Agriculture (DOA) and other interested organisations (Job, 2014). Gardens can work closely with campus food vendors by providing fresh foods to food banks or dining halls on campus (Dubick et al., 2016). Community gardens have been found to increase students' preference for, and encourage their consumption of, fruits and vegetables (Alaimo et al., 2008).

Table 2.3: Food programmes at South African universities

University	Who led the programme	Criteria	Type of assistance	When distributed	Funding
University of KwaZulu-Natal[1]		Food-insecure students referred by staff and Student Representative Council (SRC)	Food parcels and vouchers		
University of KwaZulu-Natal[2]	Staff	Any student	Fruit	During exams	Contributions from staff
Mangosuthu University of Technology[3]	Vice Chancellor	Food-insecure students	Any food donations		Donations of food
University of Fort Hare[4]		Food-insecure students			Directed funds from sporting activities and cultural societies
University of Zululand[5]		NSFAS students in university residence	Voucher of a certain amount per day	Daily voucher	
Durban University of Technology[6]		NSFAS students in university residence	Voucher of a certain amount per day	Daily voucher	
University of Free State[7]	Vice Chancellor	Food-insecure students with a good academic record	Daily R25 food voucher	Daily voucher	University bursary programme

[1] https://www.ukzn.ac.za/wp-content/mediaFiles/media-releases/food-security-program-at-ukzn.pdf
[2] Munro (2013)
[3] DHET (2011)
[4] DHET (2011)
[5] Sabi et al. (2015)
[6] Sabi et al. (2015)
[7] https://www.ufs.ac.za/giving/unlisted-pages/lead-projects/the-no-student-hungry-programme#:~:text=The%20project%3A%20The%20No%20Student,giving%20back%20to%20the%20community

Table 2.3: Food programmes at South African universities (continued)

University of the Western Cape[8]	Deputy Vice Chancellor: Student Development and Support	Students without funding	Food parcels	Monthly	Tiger Brands
University of the Western Cape[9]	Gender Studies Department	Students in need	Canned foods	Monthly	Donations
University of the Western Cape[10]	ResLife	Food-insecure students	Food parcels	Parcels are distributed for up to three months	Office of Student Development and Support
Wits University[11]			Meals	Daily meals	Gift of the Givers
Wits University[12]		Students in need	Food parcels	Monthly	Tiger Brands
North-West University[13]		Needy students			Fund raising and collection of canned food donations

[8] Institutional Advancement (2017)
[9] Adeniyi and Durojaye (2020)
[10] Adeniyi and Durojaye (2020)
[11] Rudolph et al. (2018)
[12] Rudolph et al. (2018)
[13] DHET (2011)

Another way universities may address food insecurity is to start their own food banks (Mukigi et al., 2018). The Global Foodbanking Network (GFN) described South Africa as a perfect place to establish a food bank system in view of its sound infrastructure, political stability, wealthy private sector, strong food manufacturers and food retailers, and vibrant non-governmental organisation (NGO) sector (Warshawsky, 2011). Food banks are student friendly because they are located on campus, andtherefore students do not need to travel. They are also easy to access, and students feel free toutilise the services offered because the food bank is perceived as 'their' programme – in contrast to a community-based programme (Dubick et al., 2016). Food banks often provide non-perishable foods which can be donated by interested organisations. However, food banks remain a short-term relief mechanism and will never eradicate food insecurity (Gallegos et al.,2014; Mordaunt, 2016).

2.7.4 University efforts during lockdown

When the South African government announced that by 27 March 2020 full lockdown level 5 would come into effect, universities responded promptly and overhauled their campus operations. Many students were forced to go home and adjust to remote learning (Mofolo, 2020). The DHET announced that all those students on the NSFAS would continue to receive their food allowances while at home (DHET, 2020c). However, students might have used their allowances to take care of financial responsilities at home. A study conducted by Gwacela in UKZN showed that utilize their NSFAS allowances to relieve some some of the financial responsibilities at home (Gwacela, 2014). It was revealed that students who sent money home were students from families who depended on social grants, informal trading as a sources of income (Gwacela, 2014). However, no announcement was made about (nor provision made for) nutritional support for those who did not receive food allowances. Not allstudents heeded the call, and some remained in university residences during the lockdown (Table 2.4). These students received some food support.

Table 2.4: Support for students remaining in residences during lockdown

University	Number of students	Type of support	Funding
University of Stellenbosch[14]	971	Food parcels containing dry food and food vouchers	Donations from community and faith-based organisations
Cape Peninsula University of Technology[15]	1853; however, efforts made to feed 420	Food parcels	University, NGOs, staff and student leadership formed partnership to establish a food parcel drive
University of Free State[16]	105	Weekly food allowances and one balanced meal daily	No Hungry Student programme
University of KwaZulu-Natal[17]	11	Food parcels	UKZN Hardship Fund
University of the Western Cape[18]		Food parcels	Tiger Brands
Durban University of Technology[19]		Food parcels	Donations from a local Spar

[14] Stellenbosch University (2020)
[15] Boyce (2020)
[16] https://www.bloemfonteincourant.co.za/ufs-help-students-with-food-parcels-during-lockdown/
[17] https://ukzn.ac.za/news-archive/ukzn-establishes-hardship-fund-to-address-food-insecurity-and-menstrual-hygiene-among-students-and-staff/
[18] https://www.uwc.ac.za/news-and-announcements/news/uwc-and-tiger-brands-launch-food-security-programme-834
[19] https://www.dut.ac.za/glenwood-superspar-supports-dut-to-ensure-that-no-student-goes-hungry/

Despite these efforts, an HSRC study conducted in April 2020 found that the highest prevalence of hunger (44%) was reported in worker hostels and student residences (HSRC, 2020).

When the lockdown was announced, many students in residences left and went home (Tlou, 2020). While at home, they experienced challenges with access to food. This is reflected in a South African study conducted by Feenix (2020), which found that students had difficulty studying at home, with 30% of students severely impacted by a lack of food and other critical resources. Despitethis revelation, neither universities nor the DHET considered providing food support to students who had gone home (Feenix, 2020).

2.8 Coping strategies

When students are faced with hunger, they employ different strategies to deal with their plight (Gwacela, 2014). Research conducted by Van den Berg and Raubenheimer (2015) at UFS revealed that 87% of students reported borrowing money from friends, relatives (16%) or parents (14%) in order tobuy food. However, this is not a standard solution for all students. For example, research conducted by Job (2014) at UKZN revealed that borrowing money from relatives or parents was not an option for students because they came from underprivileged backgrounds and understood that their families did not have the money (Job, 2014). Gwacela (2014) says that when students borrow money, they run the risk of incurring debt as they have no means of paying the money back.

At UFS, 20% of the students reported that they regularly combined their money with that of their friends to buy food and contribute the ingredients for a meal (Van den Berg and Raubenheimer, 2015). This system only works well for those who contribute; those who cannot contribute are stigmatised and labelled ‘food beggars’ (Gwacela, 2014). Students also resort to stealing food from communalfridges in residences (Dominguez-Whitehead, 2015). Those who opt to steal are more food insecure than others (Van den Berg and Raubenheimer, 2015). Stealing food is an emergency food-acquisition strategy (Hughes et al., 2011 and is detrimental to food stability and availability (Hart, 2009).

Some students opt to take part-time jobs (Hughes et al., 2011; Kassier and Veldman, 2013). The idea of securing employment sounds good. However, according to Van den Berg and Raubenheimer (2015), employment interferes with students’ academic progress. Some students dispose of their belongings to earn money (Van den Berg and Raubenheimer, 2015) or drink water to fill their stomachs. Asking for food from friends (Gwacela, 2014) is a last resort as it

leaves no choice but to take whatever is provided, even if it is inadequate (Gwacela, 2014). A study conducted by Jackson (2018) at NMU showed that students adopted different coping strategies. Some students resorted to getting part-time jobs and established strong social networks; others abused drugs and alcohol to escape the experience of hunger.

2.9 Conclusion

This chapter provided key definitions of concepts such as hunger and food security. It also differentiated between food security at the national and household levels and confirmed that South Africa is food secure as a country and the prevalence of hunger had been improving at the household level since 2002. However, the situation changed with the advent of COVID-19. Studies conducted in various universities demonstrate food insecurity exists in universities and it presents a challenge for students.

CHAPTER 3

CONCEPTUAL FRAMEWORK

3.1 Introduction

A conceptual framework is a structure employed by a researcher to describe the natural progression of the phenomenon being investigated (Camp, 2001). It is usually used in the absence of a suitable theory that effectively describes the phenomenon being studied (Akintoye, 2015). For this study, the conceptual framework of food security, as proposed by the HLPE (2020a), is used. This chapter describes the six main dimensions of food security: availability, access, utilisation, stability, agency and sustainability (see Figure 3.1). It then applies these within the context of the study.

Figure 3.1: Diagrammatic representation of the six dimensions of food security

Source: HLPE (2020a: 10)

3.2 Availability

Food availability implies that there should be a sufficient supply of food both nationally and at the household level (DOA, 2002). It also reflects the degree to which food is within reach of households, such as local shops and markets, both in terms of adequate amounts and quality of food (FAO, 2006; Pieters et al., 2013). The WFP (2009b: 23) indicates that food availability is determined by: production (food produced in the area); trade (food brought into the area through market mechanisms); stocks (food held by traders and in government reserves); and transfers (food supplied by the government or aid agencies).

The availability of food incorporates home-based food production, transport frameworks to guarantee the availability of food at source points that are removed from where the food is grown, and exchange systems for food (Ashby et al., 2016). At a local and community level, this dimension incorporates the location of the stores/food outlets; the price, quality and diversity of the food; core and traditional foods; and food aid (Lawlis et al., 2018).

Food availability can be affected by various factors, such as political instability, inefficient market structures and inadequate transportation (Benson, 2004: 8). Inefficiencies in production, problems with post-harvest handling and transport, food losses and waste, weak storage infrastructure, declining public-sector investment in agriculture, and climate change allaffect production and thus food availability (HLPE, 2020a: 22).

3.3 Access

For food access to be achieved, food availability must first be established. Access is realised when people have a satisfactory level of economic resources and adequate physical access to food (Ashby et al., 2016). Physical access refers to the distance to markets, while economic access refers to the affordability of food (Devereux and Waidler, 2017). Both are needed for household members to satisfy their dietary needs and food choices as well as to achieve and maintain a healthy nutritional status (Ashby et al., 2016).

Food access is largely determined by food costs and household assets (Pieters et al., 2013). The capability to spend one's income on food is a good measure of access to food (Opara, 2013). Poor households are unable to secure access to nutritious food (Boussard et al., 2006). This study, therefore, sought to understand what can be done to assist those students who cannot afford nutritious food and the strategies that students adopt when they run out of food. Those who have an income are not guaranteed to have nutritious food, as the existence of a household income does not fundamentally lead to an increase in the quantity or quality of food consumed (Banerjee and Duflo, 2006).

Food access can be disrupted by various challenges: the inability to afford healthy food; dependence on food imports; poverty and precarious livelihoods; income inequality; uneven quality of food; gender, class, age and intra-household differences in access; weak infrastructure for distribution and access to markets for small-scale producers; concentrated

retail markets; and long distances between production and consumption points (HLPE, 2020a: 22)

3.4 Utilisation

Ashby et al. (2016) define food utilisation in three ways: it relates to the intake of adequate and safe food which satisfies both physiological and cultural needs; it refers to the physical, social and human resources required to transform food into meals; and it revolves around people's ability and capacity (including resources) to select and prepare healthy and safe foods. The effective utilisation of food is dependent on a person's comprehension of what constitutes an adequate diet, which will guarantee a state of nutritional wellbeing and meet all human physiological needs (Lawlis et al., 2018).

Utilisation does not only refer to food; it is also concerned with water, sanitation, cultural considerations, social environments, food preparation and storage, and cooking skills (Lewis et al., 2018). There are two forms of utilisation, i.e. the physical means to use available food (cooking utensils, knowledge) and the biological means and capacity of the body to utilise the nutrients consumed (Renzaho and Mellor, 2010). Moreover, utilisation of food not only speaks to the amount of food consumed but also to the quality of the diet (Pieters et al., 2013). The food that one consumes must be of an adequate quantity and quality to satisfy the subsistence and energy needs required for daily activity (WFPb, 2009). Access to food, for example, does not necessarily translate into healthy food choices and balanced diets.

3.5 Stability

Stability is a cross-cutting dimension that refers to food being available and accessible, and utilisation being adequate, at all times. This removes the stress associated with possible food insecurity experienced during certain seasons or caused by external events (Leroy et al., 2015). Availability, access and utilisation must be stable over time and not subject to change due to external factors, such as altered weather patterns, economic crises, seasonality of food, civil conflicts and price shifts (Ashby et al., 2016). Food insecurity is caused by instability in the three dimensions, which together should ensure that everyone is food secure at all times, with continuous access to sufficient quantities of healthy food (Lawlis et al., 2018).

The stability component of food security acknowledges that food and nutrition status may change (Pangaribowo et al., 2013). In the case of South Africa, the pandemic has changed the status of many people, with STATS SA (2020b) recently reporting that hunger has increased by 3% during the pandemic.

3.6 Agency

According to the HLPE (2019: 66), the definition of agency – as adapted from Ganges (2006) and Chappell (2018) – is the capacity of individuals or communities to define their desired food systems and nutritional outcomes, and to take action and make strategic life choices in securing these. This study investigates participants' ideas about how food insecurity can be addressed, what role they are willing to play in the process and what types of food they think are appropriate to give to students. This requires socio-political systems in which the policies and practices reflect the will of society and are reflected in governance structures that promote food security and nutrition for all.

The HLPE (2020a) argues that agency is well captured in the definition of food security, with reference to 'all people' and 'food preferences', signalling that these are key components of agency. It also serves to emphasise the capacity of individuals and groups to take part in policymaking and decision-making processes that shape other dimensions of food security (Rocha, 2007; Chappell, 2018; HLPE, 2020a). At the same time, agency requires that rights are recognised and upheld. This is reflected in the HLPE (2019: 66) and HLPE (2020a: 8) which state:

> *"Achieving agency implies the need for access to accurate information, the right to such information and to other aspects of food security, as well as the ability to secure such rights, including access and control over the resources required for production, harvesting and preparation of foods."*

The concept of agency in food systems is linked to human rights, including the right to food. Human rights are fundamentally about individual and community capabilities and freedoms (HLPE, 2020a). The FAO's Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food (Right to Food Guidelines) reinforce the importance of agency in realising the right to food by calling on countries to 'promote and safeguard a free, democratic and just society in order to provide a peaceful, stable and enabling economic, social, political

and cultural environment in which individuals can feed themselves and their families in freedom and dignity' (FAO, 2005: 9 Guideline 1). The Guidelines further call on countries to promote freedom of opinion and expression, freedom of information, freedom of the press and freedom of assembly and association, which enhance the progressive realisation of the right to adequate food in the context of national food security.

Food should not, however, be used as a tool for political and economic pressure (FAO, 2005: 9). The HLPE (2017) and HLPE (2019) further highlight that governments have a significant role to play in enhancing both the individual and collective capacity of disempowered people to play a prominent role in shaping their own food systems, including creating political spaces for debate where power differences are minimised, and their food security outcomes are enhanced through improvements in their nutritional capabilities.

3.7 Sustainability

Sustainability refers to 'the long-term ability of food systems to provide food security and nutrition today in such a way that does not compromise the environmental, economic, and social bases that generate food security and nutrition for future generations' (HLPE, 2020a: 9). The HLPE further explains that sustainability as a dimension of food security implies protection of ecosystems over the long term and an understanding of their complex interrelationships with the economic and social systems needed to ensure food security and nutrition (El Bilali et al., 2018; Meybeck and Gitz, 2017; Carlsson et al., 2017; HLPE, 2020a: 9).

The sustainability dimension has also been captured in the definition of food security as 'at all times' refers to the 'long-term ability' embodied in the concept of sustainability. The inclusion of the sustainability dimension (which has a long-term time horizon) was necessary because sustainability was not initially captured in the stability concept, which refers only to short-term disruption. This longer-term perspective acknowledges the linkages between the natural resource base, livelihoods and society and the need to maintain systems that support food security for current and future generations (HLPE, 2020a). This study investigated the sustainability strategies that UWC could adopt to ensure the continuity of its food programmes.

The HLPE (2020a) highlights the importance of including sustainability in the concept of food security, emphasising that evolving trends such as climate change and degradation of natural resources, as well as growing social and economic inequality, undermine the capacity of

ecological systems to interface with social and economic systems to support diverse and healthy food production and livelihoods into the future. To ensure that sustainability is maintained, the FAO's Right to Food Guidelines highlight the need to:

> *"Consider specific national policies, legal instruments and supporting mechanisms to protect ecological sustainability and the carrying capacity of ecosystems to ensure the possibility for increased, sustainable food production for present and future generations, prevent water pollution, protect the fertility of the soil, and promote the sustainable management of fisheries and forestry"* (FAO, 2005: 19).

3.8 Conclusion

The conceptual framework for food security discussed in this chapter comprises six pillars: availability, access, stability, utilisation, agency and sustainability. These pillars are important for understanding and analysing food security in a different context. As the focus of this study isan investigation into food security among students at UWC, it is important to employ this framework.

In this chapter, the conceptual framework was discussed and the conditions under which it is used were highlighted. There was also a discussion of the different dimensions of food security which will be employed to analyse the study's findings. The dimensions of agency and sustainability were included as they were recently introduced as considerations by the HLPE (2020a).

CHAPTER 4

METHODOLOGY

4.1 Introduction

Rajasekar et al. (2013) define research methodology as 'the procedures by which researchers go about their work of describing, explaining and predicting phenomena'. Almalki (2016) and Bailey (1994) argue that a methodology provides a piece of research with its philosophy, the values and assumptions that drive the rationale for the investigation as well as the standards that will be utilised to interpret information and draw conclusions. This chapter presents the research methodology used in this study. The research instruments used to collect data are described, sampling methods outlined and an overview provided of methods used to analyse data. The ethical considerations adhered to by the researcher are also presented.

4.2 Study design

This study employed a cross-sectional, descriptive study design. The purpose of cross-sectional studies is to acquire reliable data at a fixed point in time, which makes it possible to generate robust conclusions and to create new hypotheses that can be investigated through new research (Zangirolami-Raimundo et al., 2018). The advantage of cross-sectional studies is that it allows the researcher to engage in direct observation of the phenomena investigated, collect data in a short space of time and produce faster results at lower cost (Zangirolami-Raimundo et al., 2018).

This is a mixed-methods study. Mixed methods refer to a research methodology that advances the systematic integration or mixing of quantitative and qualitative data within a single investigation (Wisdom, 2013). Mixed methods offer deeper insights into the phenomenon being studied and allow the capturing of more information that might otherwise be missed if only one research methodology was used (Caruth, 2013). Mixed methods entail different study designs. This study utilised the concurrent transformative design, which involves the collection of qualitative and quantitative data at the same time. The conducting of the study was informed by a theoretical perspective and data were integrated during the interpretation phase (Andrew and Halcomb, 2009).

Haradhan (2018) defines qualitative research 'as a form of social action that focuses on the way people interpret and make sense of their experiences to understand the social reality of

individuals. The author further states that this research method explains 'why' and 'how' particular social phenomenon occurs in a particular context. Tong et al. (2012) explain that the primary aim of qualitative research is to arrive at a detailed understanding of human behaviour, emotions, attitudes and experiences. Qualitative research employs methods such as focus groups, open-ended interviews, case studies, participant observation, introspection and discourse analysis (Cibangu, 2012). This study employed interviews as the qualitative data collection method.

Bryman (2012:35) defined quantitative research as "a research strategy that emphasises quantification in the collection and analysis of data. This research method seeks to investigate the answers to the questions such as how many, how much, to what extent (Rasinger, 2013). It depends on measuring something or variables that existed in the social world (Rahman, 2017). Quantitative data is collected using various methods such as face to face interviews, telephonic interviews, surveys and structured questionnaires (Kabir, 2016). The scientific methods used for data collection and analysis allow the findings to be generalised (Daniel, 2016). Quantitative data for this study were collected through an online survey.

4.3 Sampling

Alvi (206: 11) defines sampling 'as the process through which a sample is extracted from the population'. Sampling is important because it is impossible to evaluate the entire population; therefore, the findings from the sample are generalised and represent the whole population (Alvi, 2016). This study had three targets. First, it studied the food programmes that exist on campus. It then looked at the academic staff and students at UWC, and their perceptions of the needs and the contribution of food programmes to students who are food insecure. Accordingly, the sampling techniques for each differed.

To study the food programmes on campus, snowball sampling was used as there was no formal register of individual or department-initiated programmes. It was desirable to include all programmes to ensure inclusivity and diversity in responses. Vogt (1999) defines snowball sampling as a technique to find research participants where one participant refers the researcher to another participant, and so on. This study depended on participants' referrals to other programmes.

To study the academic staff at the university, the study used total population sampling, which involved sending an email invitation to all academics to take part in the online study. Etikan et

al. (2016: 3) describe total population sampling as a sampling technique whereby the whole population who meet the criteria are included in the research.

The third component of the research, i.e. students, was based on secondary data analysis from a study conducted at the end of 2017 by the study leader (project number BM17/8/1). The total student population was eligible for inclusion in the survey. This study explored students' perceptions about and steps taken to reduce student hunger on campus. Interviews for this component were conducted outside lecture venues according to a fixed roster over a period of two weeks. Every fifth student who stepped out of the venue was invited to participate if they were interested. The findings from the above-mentioned 2017 online survey of students were also used in this study as secondary data.

The study explored suggestions on how to address food insecurity among students and examined the measures that students take when faced with hunger. Table 4.1 provides an overview of the various components of this study.

Table 4.1: Study population, study sample, selection strategy and instruments used for different components of the study

Study Population	Study sample	Selection strategy	Instrument	Main research question
Academic staff	Total population	Self-selection/volunteer to participate following invitation	Online survey	Investigate academic staff members' perceptions about student hunger and their level of involvement in addressing food insecurity
Students	Total population	Volunteer to participate following an invitation (key informants invited until sample of 200 reached)	Structured questionnaire with open-ended questions	Investigate students' perceptions about student hunger and their level of involvement in addressing food insecurity

Table 4.1 (continued): Study population, study sample, selection strategy and instruments used for different components of the study

Study Population	Study sample	Selection strategy	Instrument	Main research question
Students	Total population	Self-election / volunteer o participate following an invitation	Online survey	Explore suggestions on how to address student food insecurity and examine measures students take when hungry
Food programmes	All programmes	Snowballing	Structured interviews	Identify and describe all programmes at UWC that aim to contribute to the eradication of hunger and identify challenges facing the programmes

4.4 Data collection

Data for this study were collected using questionnaires. A questionnaire is a well-established tool in social sciences research, which is used to acquire information on participants' social characteristics, present and past behaviour, attitudes and beliefs about actions needed regarding the topic under investigation (Bird, 2009: 1307; Bulmer, 2004). The questionnaire comprised both closed and open-ended questions. Bird (2009) says that closed questions are easy to quantify and allow comparisons, while open-ended questions give freedom to participants to provide detailed answers.

As the study focused on three populations – academic staff, students and food programmes – the manner in which the questionnaires were distributed differed. The questionnaires were distributed to the academic staff via emails. In accordance with the Protection of Personal Information (POPI) Act, the researcher did not have access to academics' email addresses; as a set questionnaire with open ended questions a result, the link to the survey was sent to all staff by the office of the Deputy Registrar and Information and Communication Services.

Jotform was used to construct the online questionnaires (See Appendix A). For the food programmes, the questionnaires (Appendix B)were administered manually by the researcher through a structured interview process. Student data included the results of two surveys (secondary data). These surveys were conducted in 2017 through key informant interviews using a structured questionnaire (see Appendix C). Students also completed an online survey in 2017 (see Appendix D) where they were sent a link by email. All students were sampled for the study. Even though the entire student population was sampled and received the online link to participate in the study, only 200 students participarted.

The researcher did secondary analyses, the researcher did not have access to students' emails. Individual interviews were conducted with 14 people responsible for running food programmes on campus, who had been identified through snowball sampling. Participants had to sign a consent form before participating in the study, and the purpose of the study was explained to them. Participants consented to take part in the study after reading the online information sheet. The researcher recorded notes during the interviews. The interviews aimed to develop an understanding of the challenges that the food programmes were experiencing.

The student and staff online surveys contained questions designed to solicit qualitative data. The surveys were conducted to solicit participants' perceptions and opinions about student hunger and to acquire insights into participants' involvement in programmes that address student food insecurity. Findings from the study were compiled according to identified themes.

The student online survey made use of the HHS to collect data. The HHS is centred on the food quantity component of food access; it is unable to measure dietary quality (Ballard et al., 2011). The shorter HHS, which contains only three questions and sub-questions, has been validated to reflect the prevalence of hunger over time across countries and regions, to assess progress towards meeting international development commitments, and to assess the food security situation in a country or region. These yield valuable information for the purposes ofdeveloping and implementing policies and programmes that address food insecurity and hunger; monitoring and evaluating the impact of anti-hunger policies and programmes, including those funded by a specific donor across a number of cultures and countries; providingearly-warning information for nutrition and food security surveillance; and informing standardised food security/humanitarian phase classifications.

No.	Question	Response Option	Code
Q1	In the past [4 weeks/30 days], was there ever no food to eat of any kind in your house because of lack of resources to get food?	0 = No (Skip to Q2) 1 = Yes	
Q1a	How often did this happen in the past [4 weeks/30 days]?	1 = Rarely (1–2 times) 2 = Sometimes (3–10 times) 3 = Often (more than 10 times)	
Q2	In the past [4 weeks/30 days], did you or any household member go to sleep at night hungry because there was not enough food?	0 = No (Skip to Q3) 1 = Yes	
Q2a	How often did this happen in the past [4 weeks/30 days]?	1 = Rarely (1–2 times) 2 = Sometimes (3–10 times) 3 = Often (more than10 times)	
Q3	In the past [4 weeks/30 days], did you or any household member go a whole day and night without eating anything at all because there was not enough food?	0 = No (Skip to the next section) 1 = Yes	
Q3a	How often did this happen in the past [4 weeks/30 days]?	1 = Rarely (1–2 times) 2 = Sometimes (3–10 times) 3 = Often (more than 10 times)	

Figure 4.1: Recommended format for the HHS module

Source: Ballard et al. (2011)

HHS data were collected over a four-week (30-day) recall period (Ballard et al., 2011). The HHS consisted of three questions and follow-up questions (see Figure 4.1), which helped to establish the number of food-secure and insecure students.

4.5 Data analysis

Marshall and Rossman (1999: 150) describe data analysis as the process of bringing order, structure and meaning to a mass of collected data. This study employed both quantitative and qualitative methods. According to Algia and Gunderson (2000), quantitative methods interpret data using vehicles such as tables and graphs. Quantitative data were analysed using Statistical Package for Social Sciences (SPSS) version 25. SPSS was used to formulate tables and graphs that summarised the quantitative data collected through the online student survey.Braun and Clarke's (2012) six steps of thematic analysis were used to analyse the qualitative findings in this study. The authors define thematic analysis as a technique of systematically identifying, categorize and offering insight into patterns of meaning (themes) across a dataset. They further explain that this method gives the researcher the freedom to see and make sense of collective or shared meanings and experiences. Braun and Clarke (2012) list the steps as follows:

- Step 1: Familiarising yourself with the data. This step allows the researcher to immerse themselves in the data by reading and re-reading textual data and making notes about the data as they proceed.
- Step 2: Generating initial codes. Here a systematic analysis of the data begins through a

process of coding. Codes identify and provide a label for a distinctive feature of the data that is potentially relevant to the research question.

- Step 3: Searching for themes. This step involves reviewing the coded data to identify areas of similarity and overlap between the codes.
- Step 4: Reviewing potential themes. This step entails a recursive process where the developing themes are reviewed in relation to the coded data and entire data set.
- Step 5: Defining and naming themes. This step involves deep analytical work involved in thematic analysis, which is the crucial shaping and fine-tuning of the analysis.
- Step 6: Producing the report. This step involves writing up and analysing the findings in an integrated, qualitative research report.

4.6 Ethics statement

The researcher received permission from the Humanities and Social Sciences Research Ethics Committee for the overall study (ref HS19/8/32). See Appendix E. The study had low levels of harm and did not inflict discomfort on participants as they were talking about others and not themselves. The participants were informed about the purpose of the study, their rights, and the issues of confidentiality and anonymity. It was not necessary to record participants' personal identification during data collection. Moreover, the researcher did not have access tostudent or staff emails as online posting was done by the university communication system. Each food programme participant was assigned numbers from the alphabet for identification purposes. The participants were assured that their privacy would be respected and was requested to give their consent to take part in the study (See Appendix F & G). Permission forsecondary data analyses was provided by the PI (See Appendix H).

The study was done on a voluntary basis; therefore, participants had the right to withdraw at any time if they wished.

4.7 Validity and reliability

According to Bryman (2012), reliability focuses on whether the results of a study are repeatable, while validity refers to whether the tool used to measure the concept produces stable and consistent results. Motheral (1998: 384) states that 'both these concepts deal with the faith and trust one has in the findings and conclusion made from findings'. According to De Vos et al. (1998: 83), 'a valid instrument measures the concept in question, and it measures it accurately'. Motheral (1998: 385) describes construct validity as the degree to which a variable accurately reflects the phenomenon it purports to measure.

To ensure validity and reliability, the HHS was used. Ballard et al. (2011: 1) argues that:

> *"HHS produces valid and comparable results across cultures and settings so that the statusof different population groups can be described in a meaningful and comparable way – to assess where resources and programmatic interventions are needed and to design, implement, monitor, and evaluate policy and programmatic interventions."*

Polit and Hungler (1999: 252) argue that the sampling method also affects the generalisability of the study and could threaten the external validity of the results. Burns and Grove (2001: 789) define external validity as the extent to which the results can be generalised beyond the sample used in the study. Regarding the academic staff population, the entire population was sampled. However, the response rate was low. All students were sampled in the student online quantitative survey, the targeted sample of 200 was reached for the student key-information interviews.

4.8 Trustworthiness of the study

The trustworthiness of a study refers to the level of confidence in the data, the interpretation thereof and the methods employed to ensure the quality of the study (Connelly, 2016). The researcher used member checking and peer checking to ensure the trustworthiness of the qualitative component of the study.

Member checking is a process of returning the interview transcript or data to the participants to check or confirm the results (Brit et al., 2016). The researcher returned to the food programme participants to validate their responses and thereby ensure the trustworthiness of the study. Peer checking entails using a colleague to reanalyse some of the data to ensure that

the researcher analysed the data correctly (Gunawan, 2015). In this study, the researcher worked with a learned colleague to ensure that all the qualitative data were analysed accurately.

CHAPTER 5

RESULTS

5.1 Introduction

The purpose of this study was to identify food programmes on campus, identify the challenges they face and investigate students and staff members' perceptions about student hunger. This chapter presents the findings and the data analysis. Each section of the research is reported independently, with the various qualitative and quantitative components then integrated into the conclusions in Chapter 7**.**

5.2 Programmes at UWC that aim to eradicate student hunger

Information on food security programmes at UWC was collected during structured interviews in 2019. These programmes are food handouts, students do not pay for the food. The focus was on any food programme at the university. During the snowballing period, no differentiation was made according to the size of the programme or even whether the programme was active at that point in time. Fourteen (14) programmes were identified using the snowballing technique. Three of these programmes were initiated in 2018, with the rest starting in 2019 (see Table 5.1). A total of 2500 students were said to benefit from these programmes. Five of these programmes could be classified as small, serving <50 students, fivewere medium, serving 50–200 students, and three were large, serving 400, 500 and 700 students, respectively.

Two of the food programmes were in operation primarily during examination periods, while others functioned over the longer term to help alleviate student hunger. Only three of the programmes had been active for one year or longer, with the number of beneficiaries totalling around 1000 per day, while the duration of the others ranged from two weeks to two months. Twelve (12) of the programmes did not use specific criteria to target students. Only two of the programmes required their beneficiaries to give back.

Table 5.1: Summary of student food provisioning programmes at UWC

Programme	Owner	Target beneficiaries	Number of beneficiaries	Composition of food provisioning	Characteristics	Duration (months) over 24-month period (2018/2019)	Source of finance
A	NGO	Registered students without funding	+/- 400	Food parcels	During the examination period	2/24	Donations
B	UWC	Students without funding	700	Food parcels	February–November	20/24	University Council
C	Student organisation	Any student	8–100	Sandwiches and cooked meals	During the examination period	2/24	Budget from Council
D	Individual	Registered students	+/- 25	Dry food parcels	Anytime of the year when there are funds	5/24	Donations
E	NGO	Any registered students	+/- 500	Food parcels/ cooked food	During the examination period	2/24	Donations
F	Student organisation	Any registered students	+/- 30	Sandwiches and fruit	During the examination period	2/24	Budget from Council
G	Student organisation	Any registered students	+/- 400	Noodles, instant porridge and canned food	Any time of the year when there are funds	12/24	Budget from Council

Table 5.1 (continued): Summary of student food provisioning programmes at UWC

H	Department	Any registered students	200	Soup and bread	During examination period	2/24	Contributions from people in the department
I	Department	Registered students	+/- 50	Sandwiches and fruit	During examination period	2/24	Contributions from people in the department
J	Student organisation	Registered students	+/- 200	Cooked meals, sandwiches, coffee, muffins	During examination period	2/24	Budget from Council
K	Student organisation	Registered students	+/- 100	Sandwiches and coffee	During the examination period	2/24	Budget from Council and donations
L	Student organisation	Registered students	+/- 250	Sandwiches and fruit	During the examination period	2/24	Budget from Council
M	Christian organisation	Registered students	30–40	Fruits, vegetables and tinned food	During the examination period	2/24	Budget from Council
N	NGO	Registered students	+/- 150	Cooked food	Monthly	12/24	Donations

5.2.1 Reasons for starting food programmes

All the food programmes at UWC were initiated to address the challenge of student hunger. Some programme owners were motivated by the need to provide food as a human right and to ensure academic success. One participant stated:

'We advocate for all students and food access is a basic human right and students need food for academic success.'

The majority of these programmes were operated during the examination period. A UWC administrator remarked:

'Because we just want to give students food so that they can write their exams on full stomach and prepare well for their exams while full.'

5.2.2 Food included in the programmes

To address the issues surrounding student hunger highlighted above, several food programmes had been initiated to offer temporary relief to students. Food was served according to different schedules – some daily, some weekly and some on a monthly basis. Those programmes that operated on a daily basis provided ready-made foods, such as sandwiches, fruits, coffee and muffins, once a day. Programmes that operated on a weekly basis provided food such as rice, macaroni, soup, bread and vegetables. Programmes that operated on a monthly basis mainly comprised food parcels containing dry and non-perishable foods.

5.2.3 Criteria used to identify student beneficiaries of the programmes

The majority of programmes did not follow specific criteria when providing food to students. Beneficiaries just had to be registered students of UWC; no background checks were done to verify whether the students were in need. The programmes used different strategies to target students and operated on a first-come first-served basis. For example, they used social media to communicate with students and targeted hotspots where students were studying. Those programmes that did follow specific criteria targeted students who did not have any form of funding, including those who were not supported by the NSFAS.

5.2.4 Challenges experienced by food programmes on campus

A lack of resources (financial and human resources, as well as a lack of food) was highlighted as the major obstacle to the continuation of food programmes on campus. Funding from

sponsors had dried up and some programmes had run out of money, signalling that they needed additional funding and an efficient budget to become more sustainable. The availability of funds depended on seasonal movements and successful fundraising efforts.

A shortage of human capital to assist with running programmes was identified as another challenge. In particular, they needed more people (particularly during the busy examination period) to assist with food preparation and distribution – both time-consuming activities. To alleviate this problem, some programmes asked their beneficiaries (depending on their availability) to give back by giving some of their time to preparing and distributing food. Programme managers expressed the concern that there were large numbers of students in need of food, but due to food shortages, the programmes were unable to help everyone and unfortunately had to turn some students away. One manager reiterated this by saying:

'Running such a daily programme requires constant supply of food donation or financial resources, however, lacking these is a huge constraint.'

Managers also indicated that supplies of food from sponsors had been declining. The majority of food programmes received some support from the UWC Council. Participants proposed that the university provide reliable and ongoing support to these programmes. One participant suggested that the continuation of the National School Nutrition Programme (NSNP) run in schools by the Department of Basic Education (DBE) be considered for universities. The manager expressed the view:

'We need food programmes to be introduced in universities the same way we have them in public schools. It is not correct that children in public schools grow up with feeding schemes from Grade R to Grade 12 then when it comes to universities it stops, because those students still need the support they received in high school.'

Participants suggested that not only should the university close this gap, but also that government should have a designated budget to fund these programmes. It was suggested that the DHET needs to form a partnership with the Department of Social Development (DSD) to ensure the constant supply of food and a sustainable programme funded by government. One participant said:

'We need the government to enact new legislation that seeks to address food insecurity in our society through this legislation, the Department of Social Services in partnership with

Department of Higher Education to implement permanent and sustainable food programme that will address all our hungry students.'

5.3 Perceptions of academic staff about student food insecurity

The online survey was distributed from 24 April 2020 and was intended to run for one month. During this period, weekly reminders were sent out. Owing to a very poor response rate (probably as a result of the COVID-19 pandemic and the associated lockdown periods), the survey response period was extended until 30 June 2020. A total of 31 responses were eventually received.

Table 5.2 below shows the distribution by demographic characteristics, namely sex (gender), age, position and faculty. Slightly more respondents were female (55%), with almost a quarter (23%) in the age group 55– 64 years. The majority of the respondents were from the Faculty of Community and Health Sciences (CHS) (32%), with no responses emanating from academics in the Faculty of Education. Fifty-five percent (55%) of responses were from the lecturer category (including associate and senior lecturer) and 39% were from the professorial level (including associate professor).

Table 5.2: Sociodemographic profile of academic staff who responded to the online survey

Variable	Category	Number of respondents (n)	Proportion (%)
Sex	Female	17	55
	Male	14	45
Age bracket	18–34	6	19
	35–44	6	19
	45–54	4	13
	55–64	7	23
	65–74	1	3
	Unspecified	7	23
Faculty	Arts	4	13
	CHS	10	32
	Dentistry	2	6
	EMS	5	16
	Law	3	10
	Science	7	23

Table 5.2 (continued): Sociodemographic profile of academic staff who responded to the online survey

Position	Associate Lecturer	4	13
	Lecturer	6	19
	Senior lecturer	7	23
	Associate Professor	8	26
	Professor	4	13
	Researcher	1	3
	Other	1	3
	Total	31	100

5.4 Reasons for student food insecurity

Academic staff members identified the economic profile of UWC students and the price of food as the two primary reasons for student hunger.

5.4.1 Poverty

Disadvantaged backgrounds, low-income families and high unemployment rates were mentioned as important reasons for student hunger. Alongside the socioeconomic disadvantages, the relatively high cost of living in Cape Town was identified as a further contributor to students' financial burden. Many students depend solely on the NSFAS and when the latter fails students by disbursing allowances late, the students are left very vulnerable. It was also the perception of the academics that some students had to share their NSFAS allowances with their families because their families did not have an income.

5.4.2 Prices of food

The rising prices of food were of great concern. One participant highlighted:

'Students simply don't have money. Coming from disadvantage background make it worse for students. Food is also expensive in and around campus with a meal on campus costing up to R60–R80 per meal.'

Another participant argued:

'The vendor is out to make money out of students that is already struggling before they even thought of enrolment at the institution.'

Participants highlighted the need for food prices and food quality to be subject to specific policies on campus. One participant expressed the following view:

'Create a fund @UWC to assist students and to have a food policy on campus to guide food prices, and availability of healthy food.'

5.5 What can be done to assist students who do not have food or money to buy food?

When presented with the question, 'what should be done to assist students who do not have food or money to buy food?' academic staff responded by calling for the subsidisation of meals which could make food more accessible for students. Participants said that this could be done by revitalising university food halls to provide affordable and nutritious food. The money for meals could be charged together with fees. One participant asserted that this should cater for those who are not funded. In addition, students should be able to swipe their card in any food outlet on campus. Some participants raised the idea of a food pantry which would rely on donations from sponsors. As one participant remarked:

'A food pantry based on donated food – which is available for needy students to collect food. Ideally I would like to see this as a "virtual" store. An electronic database where a student in need can search resources as well as submit a request. Subsidised meals that can be purchased from any food outlet on campus.'

The introduction of food gardens run by students was also mentioned as a possible intervention to address student hunger. One participant explained:

'There should also be food gardens on campus. These could be both educational and community building as well as there for providing food.'

Apart from the above-mentioned proposed programmes, participants also suggested the idea of food vouchers where money or tokens can be loaded onto the voucher and students can either purchase food on campus or in supermarkets of their choice. In this regard, one participant explained:

'Students who are struggling with food must email or notify an office that is responsible for food security, where they will then be handed a voucher to go buy themselves food in their own choice supermarket.'

This could be sustained through fundraising efforts. The university could establish a fund aimed at assisting students with food. Participants also suggested that the university engage large retailers and catering companies to supply students with food (for free) that is soon to expire. One participant expressed the view:

'Work closer with major retailers, e.g. PnP, Woolworths, to supply soon to expire food for free to UWC or major catering companies to deliver leftover food to campus.'

Participants also highlighted their own efforts in improving food access for students. Some participants had donated money or food to students or had given their time to various initiatives organised by faculties and departments. Others indicated that they indirectly contributed by raising the issue of student hunger in management meetings. However, a number of participants indicated that they were unable to contribute due to financial constraints and/or they felt it was not their responsibility. For example:

'This is not the responsibility of the staff members. Many of staff struggle as it is. Best make it an institutional venture run by the office of the Deputy Vice Chancellor (DVC).'

5.6 Quality of food that must be provided to students

Although one staff member did suggest that food retailers provide soon-to-expire food to students for free, most participants were against the distribution of expired food or any substandard items. Furthermore, participants advised against the provision of junk or fast food and also 'no more outsourcing of food on campus'. Participants suggested the provision of healthy, nutritious and filling foods. For example:

'A healthy meal. NOT fast foods, sugary beverages or any foods high in sugar, saturated fat or salt.'

Instead, they suggested foods such as fruits, vegetables, legumes, dairy, bread, non-perishable foods, sandwiches, protein foods, soup and rice, among others.

5.7 How should the provision of assistance to students who do not have food be managed in a respectful and dignified way?

Food programmes need to respect people's dignity, and their confidentiality and anonymity must be prioritised. Participants suggested a number of ways in which dignity can be

maintained at all times. For example, they proposed that student details must not be disclosed in public, nor their names called out in public. One participant explained:

'*The process should remain confidential and perhaps food vouchers can be arranged – this can easily be sent via an sms, thus no one needs to know.'*

In addition, students' photos must not be posted publicly which, to one participant, would be 'distasteful and disrespectful'. Participants also expressed the view that food must not be specially labelled; it must be available for all students. Another way of ensuring that students' dignity remains intact is by giving them food that is of a good quality and nutritious – food that donors themselves would eat. A participant who ran a food programme added that instead of giving students food, they should be given money so that students themselves can decide what suits their diet. She explained:

'99% of our assistance is purely monetary, i.e. not giving food hampers, thereby allowing students to exercise their autonomy and buy the food items they want, rather than being expected to express gratitude for a pre-picked hamper of items they might be allergic to or intolerant.'

Students should also not be made to queue for food as this is dehumanising and creates a stigma. To avoid this, participants suggested that students be given meal cards or vouchers which they would swipe at a vendor of their choice on campus when making food purchases. The transaction could be expedited via a digital payment platform and communicated via sms or email so that no one will know. Moreover, the voucher would not expose the individual student as it would apply to everyone. One participant reiterated:

'They can obtain vouchers from vendors on campus so they do not have to access food at a special place which could lead to labelling.'

Participants expressed the view that all students must be treated equally and receive the same amount and quality of food.

5.8 Student–lecturer assistance

When faced with hunger, students sometimes ask for assistance from their lecturers. Lecturers assist in different ways. Some participants reported that when students asked them for help, they gave students money. One participant said:

'I had a diabetic student who suffered for four years. I provided student money out of my pocket to sustain her when possible ...'

Other participants highlighted that they not only gave students money but also referred them to other offices for help, such as *'the office of DVC–SDS (Student Development and Support)'*. Another participant *'gave money and assisted with work opportunities'*. Some participants did not give students immediate help but provided funding for their studies. For example, one participant explained:

'I tried to support the student with a bursary from my research funds.'

Lecturers not only helped their students with money; some shared their own food with their students. For example:

'I have provided food directly at the moment (my own lunch that I bring from home); I have provided money to purchase food ... I have taken the student to buy food and have eaten together with them.'

Another participant emphasised that they bought food for them or gave them nuts from a jar on their desk. In some instances, it was not an individual undertaking; departments also made an effort to assist students. One participant explained:

'In our Dentistry faculty, we have a programme that makes sandwiches for students, any students can come to grab one. There is also a voucher programme, staff, and alumni can donate.'

Another participant reported:

'Within the department, staff collected food and made the kitchen available for the students to treat themselves to sandwiches.'

5.9 Criteria used to identify students who should benefit from a food programme

When it came to the question of criteria, participants were divided. Some believed that there should be no criteria at all. Some thought that the focus should be on the funding status of the student and others believed that the socioeconomic background of the student must be scrutinised.

5.9.1 All students should qualify

The majority of participants indicated that no criteria should be used to identify hungry students. Some participants argued that students who said that they were hungry must be given food, without any questions asked. If students indicate that they are hungry, the university must just trust their word. To reiterate this point, one participant explained:

'Do criteria really need to apply ... if you hungry ... you need food. Without food students can't concentrate on empty stomach.'

Another participant advised against assigning students to 'boxes', explaining:

'I don't think there should be boxing of students as "hungry students"; food affordable to most students will eliminate the need to identify hungry students.'

Another participant noted:

'There should be no other criteria than a student indicating they need food.'

5.9.2 Students should qualify on the basis of their backgrounds

Some of the participants reported that for students to qualify for food, their socioeconomic background must be scrutinised to eliminate possible hoaxers. One participant explained:

'Use checklists that eliminate hoaxers and users who make it difficult for students who really need opportunities to earn - lazy hoaxes live off handouts and will not lift a finger to change their narrative.'

Students should produce their bank statements to reveal their spending habits. A participant argued:

'Bank account statements must be scrutinised because some students live above their material means.'

Students must also declare the employment status of their parents and provide documentary evidence of family finances.

5.10 How will COVID-19 and future lockdowns affect students' food security?

COVID-19 has made a significant contribution to job losses and badly affected those who run their own small businesses as many business operations were suspended at the beginning of the lockdown period in 2020. The loss of jobs has impacted food security in households. Without income, many people have been plunged into a state of hunger. Many students were forced to go home where there was less food because of the loss of income. One participant argued:

'It will affect them badly because some students who depend on parents who own small enterprises means that there's no income; as a result they do not have money to buy food, many people are losing jobs and income they cannot afford to send their children who are in varsity money to buy food.'

Some students who used their food parcels and bursary money to buy food at home were also adversely affected as they no longer had access to these. One of the participants explained:

'At home there may be less food as they may need to share their bursary money for food. They may also need to buy data and use their food money.'

It was not only those students who were at home who were affected; even those who remained in residences experienced hunger because of the lockdown. Because of COVID-19, students' access to food was restricted. One participant said:

'Where food was provided, we are now restricted. See what is happening in primary schools. Kids are without food.'

Many food programmes that provided food relief to students such as meals and food parcels also stopped operating during this time. One participant spoke of the negative impact:

'Access to UWC campus where they collect food parcels or food from the dining hall remain closed or funding will be given to some other aspects.'

The demand for food increased in one of the food programmes that operated during the lockdown. The participant who ran the programme explained:

'At the time of writing I have processed 98 grocery requests for April. On average I process 78 requests monthly, which comprises a mix of grocery requests and a taxi and bus fare

requests. In other words, there has been a massive increase in need this month and it has all been groceries.'

5. 11 Perceptions of students about food insecurity

Table 5.3 shows the sociodemographic distribution of students who participated in the online survey according to sex (gender), age, year of study, faculty and living arrangements. Sixty-seven percent (67%) of the participants in the study were women. More than half (67%) of the respondents belonged to the age group 18–27, followed by 14% in the age group 28–37. The Faculty of Science had more responses (22%), with Economic and Management Sciences (EMS) and Community and Health Sciences (CHS) each having 20% of respondents.

The majority of respondents (21%) were third-year students, followed by 16% of second-year students. The smallest proportion of responses was from PhD candidates (3%). About half the participants (48%) lived at home and about one-quarter (24%) lived in campus residences. More than half (55%) of the students indicated that they had no form of employment. Thirty percent (30%) of students were part-time income earners and 14% indicated that they worked full time. Only 1% of the respondents opted not to specify how they earned an income.

Table 5.3: Sociodemographic profile of students who participated in the online survey (n=279)

Demographics	Number of respondents (n)	Proportion (%)
Sex		
Female	187	67
Male	82	29
Age		
18–27	183	66
28–37	38	14
38–47	15	5
48–57	6	2
Faculty		
Arts	47	17
CHS	56	20
Dentistry	9	3
EMS	57	20
Education	14	5
Law	27	10
Science	61	22

Table 5.3 (continued): Sociodemographic profile of students who participated in the online survey (n=279)

Demographics	Number of respondents (n)	Proportion (%)
Year of registration		
1st	56	20
2nd	44	16
3rd	58	21
4th/5th	37	13
Honours/PG Diploma	22	8
Master's	43	15
PhD	9	3
Living arrangement		
Kovaks[1]	1	0
Living at home	133	48
Own my flat	1	0
Rent room/flat	39	14
Residence off campus	34	12
Residence on campus	66	24
Temporary living arrangement	1	0
Employment status		
Full-time	39	14
No income	153	55
Part-time	83	30

The largest share (32%) of students indicated that they spent between R100 and R500 per month on food. This was followed by 25% who spent between R500 and R999 per month on food. As many as 20% spent between R1000 and R1999 per month on food. Only a small percentage (1%) spent R4000 or more on food per month (Table 5.4).

Table 5.4: Students' monthly food expenditure

Amount spent on food	Frequency	Percentage
Less than R50	6	2
R50–R99	16	6
R100–R499	90	32
R500–R999	71	25
R1000–R1999	55	20

[1] Private student accommodation inside UWC main campus

Table 5.4 (continued): Students' monthly food expenditure

Amount spent on food	Frequency	Percentage
R2000–R2999	27	10
R3000–R3999	7	3
R4000 or more	4	1

When it came to food insecurity, students had different lived experiences. The majority of students (59%) reported that their concentration levels had been impaired due to hunger. This includes those who agreed and strongly agreed. The ability to concentrate is vital for student learning and progress. Only a minority of students (8%) strongly agreed and agreed (22%) to resort to drastics measures to acquire food.

Table 5.5: Lived experiences of student hunger

	Strongly agree	Agree	Strongly disagree	Disagree
Concentration levels impaired	64 (23%)	102 (36%)	45 (16%)	63 (23%)
Resorted to drastic measures to acquire food	22 (8%)	60 (22%)	89 (32%)	99 (35%)

Many students (39.6%) indicated that drastic measures to obtain food were not applicable to them. Fourteen percent (14%) of students worked in more than one job at a time, while also studying. Results also showed that 4.8% of students resorted to taking or stealing food, while 3.5% revealed that they exchanged sexual favours for food. Those who used other students' student card constituted 2.5% of the sample. Only a tiny minority (0.3%) resorted to asking for food from the Reslife offices (Table 5.6).

Table 5.6: Students who resorted to drastic measures to obtain food

Drastic measures	Frequency	Percentage
I ask for food from the Reslife offices	1	0.3
I exchange sexual favours for food	11	3.5
My boyfriend offers to buy us both fast food	1	0.3
None of the above	102	32.9
I use my credit card	1	0.3
I borrow money to buy food I work at more than one job while alsostudying	3 45	0.9 14.0
I take food or money (i.e. steal)	15	4.8
I use another student's card	8	2.5
Not applicable	123	39.6

Twenty-eight percent (28%) of participants indicated that they had to go without food in the previous 30 days, 22% indicated that they went to bed hungry and 11% indicated that they had to go without food for a whole day. In most cases, this was a regular occurrence (i.e. it happened often).

Table 5.7 HHS results

Questions	Yes	No
In the past 4 weeks (30 days), was there ever no food to eat of any kind in your household because of a lack of resources to get food?	28	70
In the past 4 weeks (30 days), did you or any household member go to sleep at night hungry because there was not enough food?	22	75
In the past 4 weeks (30 days), did you or any household member go a whole day and night without eating?	11	87

Table 5. 8 Frequency of responses to HHS questions

Number	Questions	Rarely	Sometimes	Often
Q1a	In the past 4 weeks (30 days), was there ever no food to eat of any kind in your household because of a lack of resources to get food?	48	37	15
Q2a	In the past 4 weeks (30 days), did you or any household member go to sleep at nighthungry because there was not enough food?	50	44	6
Q3a	In the past 4 weeks (30 days), did you orany household member go a whole day and night without eating?	43	44	13

After applying the HHS calculation as per the guidelines by Ballard et al. (2011), it was revealed that 22% students were found to be food insecure and 78% were found to be food secure.

5.12 Reasons for student food insecurity

During the key information interviews, students identified inconsistences in the NSFAS and the prices of food as the two main causes of student hunger.

5.12.1 The NSFAS does not distribute food vouchers in time

Participants described the sociodemographic profile of students as poor, from disadvantaged social backgrounds. Students' families were unable to financially support the students. One participant argued:

'A lot of the students have to travel far distances as well and come from poor backgrounds financially. They do not have money.'

As a result, these students depend on the financial assistance provided by the NSFAS.However, one participant noted that even though they were on NSFAS, they still could not afford food.

'The majority of the students who are on NSFAS are the ones in need of food.'

Participants said that this is the result of failures of the NSFAS system, such as late replies to students and distributing allowances late in the year. A participant explained:

'Most students are funded by NSFAS and most of the time they usually receive their food allowances in the middle of the academic year. Before that time, they receive their allowances most students go hungry.'

Another participant noted:

'Students rely on NSFAS which takes long to get back to students.'

5.12.2 High prices of food on campus

Participants revealed that prices of food on campus were exorbitant. One participant explained:

'Food on campus is very expensive. Some students may not even have food at home.'

Some participants asserted that food should be sold at reasonable prices that students can

afford. Some even suggested that the current prices should be reduced. One participant argued: *Do not increase prices, shops should understand that students struggle. Some students do work, with that money they pay fees*.'

To address the issue of high prices, the university must subsidise the food on campus, it was suggested. One participant argued:

'Basic food like bread and milk available at a campus store must be subsidised by the university so the prices are lower.'

Another participant suggested a feeding scheme that sells food at cheaper prices. The participant emphasised:

'There should be a feeding scheme or cheaper food at the cafeteria.'

5.13 What could be done to address student hunger?

Participants had different ideas about what could be done to ensure that student hunger is addressed. Some participants asserted that students must be provided with meals for free. For example:

'Have free parcels of food that are distributed to those who cannot afford and soup kitchens on campus, food vouchers.'

'Have a free meal available to students once a day. Even if it is just breakfast (a sandwich, a fruit portion, a cup of coffee).'

'*Supply free food in the cafeteria (breakfast and lunch).'*

Some participants stressed that food prices on campus must be affordable and accessible. For example:

'Food must be available for a cheaper price. Free fruits. University can pay a percentage of the costs.'

'The cost of meals on campus should be drastically reduced to make feeding on campus more affordable.'

The participants also raised the need for more support for students living in residences. For example:

'There must be food packages for students who GENUINELY struggle especially students in residences. Food insecurity is surprisingly high there.'

'There should be a canteen on campus, free to those in res and highly subsidised so that it is very cheap to get a healthy hot meal for those who do not stay in res.'

Some participants offered solutions beyond actual food, highlighting that opportunities should be created for students to sustain themselves. For example:

'Maybe create part-time employment for students without food, so they can make money and buy food.'

'*Create more jobs for current students at the university to get some sort of income.'*

'More bursaries for both international and local students can be made available.'

5.14 How should the provision of assistance to students who do not have food be managed in a respectful and dignified way?

Some participants proposed that information on beneficiaries should not be publicised; nor should their names and photographs be released on any platforms. Participants also emphasised that confidentiality and anonymity must be observed. For example:

'*Students shouldn't be singled out and confidentiality must be maintained.'*

'There should be confidentiality about who goes and takes the food parcels and not be made public.'

Participants also noted that students benefiting from any of these efforts should not be belittled or made to feel inferior, suggesting:

'*This could be run discreetly but also run in a manner that doesn't make the students feel "othered" or inferior.'*

Food assistance should not be categorised or labelled as being intended for the 'poor' or 'hungry'. In other words, there should be no stigmatisation or discrimination; the programmes must be for anyone. One participant argued:

'Students should come there voluntarily so that there is no stigma attached. It should not be for poor but for anyone who does not have food at the time.'

Participants highlighted that equality needed to prevail and also that food parcels should not be handed out in public as it would be embarrassing for the students in question. Rather:

'Students should be given a specific time and venue to collect food individually (nobody else present).'

Participants were critical of students having to queue for food as it exposed their identity. As one participant pointed out:

'The food should be provided in venues that are not public. Students should be contacted by email and confirm time slots so that they do not get to queue.'

Participants added that those who volunteered to help must create a safe space for beneficiaries. For example:

'The people who are willing to help must be discreet and ensure to maintain confidentiality at all times.'

'Create an environment where students do not feel ashamed to ask for help.'

Participants suggested that communication must remain confidential and discreet, with individual emails used to communicate.

5.15 What do you think can be done to assist students who do not have food or money to buy food?

Participants had a range of ideas as to how to ensure food access for students, including the establishment of soup kitchens, food banks and feeding schemes and the distribution of food parcels. Soup kitchens and feeding schemes can support students on a daily basis, while food parcels can be distributed on a monthly basis. One participant explained:

'I would suggest that there should be a food bank where those who have food can donate. Those who not have, can come and collect food parcels from the food bank.'

Participants were of the view that food parcels must contain basic or staple foods and non-perishable foods. Participants also suggested that a certain amount must be added to a student's fess to cover meals. One participant explained:

'*Food programmes be set up from the university fees at least 5% of it, ready-made food can be distributed 3 meals per day from the university food.'*

One participant said that students should be given one main meal a day and personal hygiene products. Another said that students must be given one 'proper meal', as opposed to fast food, and food vouchers. Yet others suggested two meals a day.

Some participants proposed that vouchers be introduced, valued at R50–R70 per day, which students could spend at their discretion. These vouchers should also be usable off campus at large retail outlets. However, others raised concerns about the possible abuse of the voucher system. For example:

'The food vouchers shouldn't allow students to buy any other thing such as alcohol. It should only be for selected food items.'

One participant argued that some students exchange their vouchers for cash and continue to ask for food:

'When they get their vouchers, they exchange them for cash and come back to be asking for food.'

Furthermore, it was suggested that management should donate a portion of their salaries towards efforts to ensure food access for students. One participant argued:

'UWC executive must cut certain portion on the salaries to assist in food security.'

Others suggested that the university must engage private donors, such as large retailers, to donate to food banks. For example:

'There should be sponsors like Pick n Pay or Shoprite to help develop a kitchen to help students who cannot afford.'

The university could also partner with on-campus food vendors to ensure that they play a part in alleviating hunger on campus. One participant argued:

'University must work with campus vendors to ensure that students can swipe for food on campus when they are hungry.'

Participants highlighted that students who can afford to buy food can also assist those students who cannot afford it. Several students indicated that they had already started playing their part in contributing to food relief efforts. Some participants, for example, gave money or shared a meal and some food items with students who approached them for help. Others highlighted that they contributed to food programmes by getting involved in the preparation, distribution and packing of food. For example:

'I assist my friend all the time. This works because he also helps me. I only help my friend because I can trust him to do the same for me.'

'Whenever there are students who do not have food at my residence, I would try to assist them with food and money. Sometimes our residence tends to collect food donations from those who have and give it to those who do not have.'

Some participants indicated that they have not assisted anyone but would be willing to do so if they were approached for help.

5.16 The quality of food that students must enjoy

Participants were against the distribution of low-quality, substandard and junk food. One participant reiterated:

'Do not give out food that will not sustain students and do not give out junk food.'

Participants proposed that nutritious, quality and healthy food be considered for students, which would promote student health. Participants also cautioned against assuming what kind of meals or food students needed; students themselves must decide the kinds of food that theywant. Nevertheless, participants provided a lengthy list of food items that, in their opinion, must be given to students. These included bread, dairy products, legumes, lentils, non-perishables, maize meal, pasta, cereals, fruit, vegetables, juice, salads, chicken and sandwiches, among others.

5.17 Student–student assistance

The results showed that students assisted each other when one was experiencing hunger, such as by sharing their food. One participant reported:

'*Yes, I have shared my lunch with my peers and that worked. And what would not work would be sharing with students I do not know then that would be a problem, they would think I think less of them*.'

Two other participants said:

'*I halved my lunch and extra's I had - giving of food to a fellow Tut-mate who had asked for some*.'

'*I dish for them after cooking and one other I gave raw food to cook for himself and the last one I bought bread and half a dozen of eggs*.'

Some students contribute to ongoing efforts to address student hunger. For example:

'I donated food towards the breakfast served at the Community Health Department.'

'Donating food to people collecting for the students at Reslife and at the CHC office.'

Spending their own money was another way in which students assisted each other. For example:

'... bought them food with my money and share my food with them.'

'... bought food for students (associates). Always worked (no student ever turned down offer to buy food).'

'... sometimes give them the little money I have for them to buy some fruits.'

5.18 Criteria to be used to identify students who will benefit from food programmes

This section examines the types of criteria that should be used to identify students who are food insecure and should benefit from food programmes. Views differed, with some participants advocating that all students should qualify and others pointing to the need for background checks to determine students' food (in)security status.

5.18.1 All students should qualify

A number of participants indicated that there should not be any criteria – all students in need should have access to the food programmes because hunger is a common experience and challenge for students. Some participants believed that enforcing a set of criteria would not only give rise to class distinction among students but would also lead to stigmatisation. According to two participants:

'Open the food programme to everyone (those who want will go and those who don't will not go). Excluding people will highlight the differences (stigmatisation) circumstances differ regardless of income.'

'It should be open to all the students even those who live off campus. Also students who feel they are in need should be able to get.'

Some participants suggested that even those who were not poor should also qualify because *'even those who have sufficient money to buy food can sometimes run short at any time of the month'*.

5.18.2 Whether students qualify should depend on their background

The majority of participants indicated that eligibility for food programme assistance should be determined by a student's socioeconomic background. In this regard, a student's background should be thoroughly investigated. One participant explained:

'Students should submit some proof that they are from poor background or that they cannot afford to buy food. This is important because students lie.'

Some participants suggested that a means test be conducted to verify students' circumstances. For example:

'Means tests must be conducted to determine the needs of each student. As some struggle because they misuse their funds.'

It was highlighted that for students to qualify, they should come from improvised, low-income areas. Distance to campus is also a factor that should be considered. For example:

'Distance from home to campus, the amount of money that they earn and times that they are in campus.'

'They need to live far from campus and be financially disadvantaged.'

Participants also expressed the view that students need to produce documents such as payslips as evidence of their household finances and that a household should be below a certain income threshold to qualify. In addition, the financial responsibilities of the household should be taken into account. One participant asserted:

'The university must check each student's home income and responsibility. This will assist in terms of determining hunger of the students.'

Participants also highlighted that the status of the household should be taken into account. For example, single-headed households should be given priority in the process.

5.19 Conclusion

This chapter presented the research findings in line with the study's aims. The investigation revealed 14 food programmes on the UWC campus. However, a lack of resources was found to be a major challenge for these programmes, which was revealed and reinforced in the perceptions of the staff and students who participated in the study.

CHAPTER 6

DISCUSSION

6.1 Introduction

This chapter provides a discussion of the results presented in Chapter 5 as well as an integration of the findings from the different components of the study. Published literature on food security in South Africa is used as a comparative backdrop when discussing the findings in this study. In addition, the discussion and analysis of the results are guided by the conceptual framework presented in Chapter 3 as well as the aims of this study.

6.2 Programmes at UWC that aim to eradicate hunger

6.2.1 Student hunger

The results indicated that the establishment of food security programmes stems from a humanitarian desire to address student hunger. Research projects undertaken at other universities have highlighted the need to provide food to assist students in need. Results from a study conducted by Rudolph et al. (2018) at Wits University revealed that 19% of students sometimes had no food, 6% went to bed hungry and 2% sometimes went the whole day without food. A recent study conducted by Sabi et al. (2020) at UKZN showed that 48.1% of students had no food due to a lack of resources, 39.6% went to bed hungry and nearly 28% were hungry the whole day and night in the absence of food.

6.2.2 Criteria

Most of the food programmes did not use specific eligibility criteria, but rather assisted anyone who was a registered student and needed food. In other words, the approach was inclusive and based on the principle that anyone can be hungry, irrespective of their social status. However, this applied to the informal programmes which are different from the institutional programmes. The food programme run by the DVC's office, for example, has the criterion that a student must be without funding to qualify for food assistance. The Reslife food programme, in turn, screens students according to their circumstances (Adeniyi and Durojaye, 2020). A food programme at Durban University of Technology (DUT) requires students to submit documents, such as bank statements, death certificates, affidavits and so on, confirming that they do not have any form of financial support.

6.2.3 Sustainability

The study's findings revealed that food programmes have no sustainability strategy in place to ensure long-term viability. It was suggested that universities themselves, government and the private sector play a stronger, more coordinated role in this regard. Gwacela (2014: 11) argues:

> *"The involvement of the university could create and manage a database that will not only capture student cases of food insecurity, but also its subsequent impacts. This will not only keep a record but will also inform future interventions in tackling food insecurity by means of empirical records. Having a support institution/stakeholder on board to address student food insecurity will assist the university in alleviating food insecurity and its associated negative impacts."*

It is clear from the findings that without multi-stakeholder support, programmes are not sustainable.

6.3 Challenges experienced by food programmes on campus

6.3.1 Lack of resources

A lack of financial and human resources was highlighted as the core challenges affecting programmes' sustainability and longevity. Inadequate resources are detrimental to students as this threatens the availability of and students' access to food. A study conducted by Gwacela (2014) at UKZN provides an example of the challenges confronting institutional food programmes. Owing to financial constraints, the programme in question could not reach everyone in need. Moreover, it lacked the capacity to operate efficiently and effectively (Gwacela, 2014).

The human capacity shortage problem can be addressed by beneficiaries becoming part of a programme and contributing to its operations. Of course, only those who are willing to make such a contribution can help to drive such a process.

6.4 Perceptions of academic staff and students about student hunger

6.4.1 Drastic measures

The study found that the students who participated in the study had more than one job while studying. The idea of finding employment to supplement their earnings sounds sensible.

However, according to Van den Berg and Raubenheimer (2015), employment interfered with students' academic momentum and progress. No student in this study reported asking the university for help or borrowing money from anyone, and only a tiny minority admitted to exchanging sexual favours for food or cash. This was in contradiction to the study conducted by Gwacela (2014) at UKZN which showed that 37% of students asked friends for food, 21% drank water (because they did not have money), 20% borrowed money from friends, 17% called home and asked for help, and 2% approached the student counselling centre for help.

6.4.2 Food costs

Pieters et al. (2013) describe food availability as the degree to which food is within reach of households (such as from local shops and markets), both in terms of adequate amounts and quality of food (Pieters et al., 2013). This dimension speaks to the location of stores/food outlets and the price, quality and diversity of food, and also encompasses core and traditional foods and food aid (Lawlis et al. 2018). The findings showed that the food prices charged by outlets on campus were not affordable for all – which was clearly articulated by students and academic staff. A study conducted at Wits University yielded the same result – that food available from campus outlets is expensive (Rudolph et al., 2018). Van den Berg and Raubenheimer (2015), in turn, highlight that unpublished data from 2010–2013 from UFS confirm that food prices are not affordable, thus forcing students to source food from elsewhere. High food prices suggest that food may be available, but not everyone will have access to it.

6.4.3 Food vouchers

Food vouchers were named by both staff and students as one of the options ensuring that students can access food. The advantage of vouchers is that they allow recipients to follow their food preferences and decide what to buy. Some participants indicated that students should be able to use these vouchers both at on-campus food outlets and at major food retailers off campus. However, having the ability to buy their own food from preferred stores does not necessarily translate into students making nutritionally sound food choices as they might still choose hyper-caloric food (Pieters et al., 2013). People need good dietary knowledge to make informed food choices (Lawlis et al., 2018).

The University of Cape Town (UCT) has a food voucher programme where students receive two R55 vouchers daily (Knowler, 2017). Students have 48 hours to redeem the vouchers. If

they miss a meal, no refund is applicable and they are not entitled to an extra meal the following day. Students can redeem their vouchers at selected Pick n Pay stores and fast-food outlets. UFS has a similar programme in which students receive a food voucher for one balanced meal per day.

6.4.4 Food gardens

Academic staff proposed that food gardens form part of the strategy to address the issue of food access among students. The students did not raise the idea of food gardens as a way of tackling food insecurity but indicated that they would be willing to help out in a food garden when needed. Food gardens offer easy, day-to-day access to different fresh and nutritious foods (Marsh, 1998).

The most significant benefit of a food garden is that it directly contributes to household food security by enhancing availability, accessibility and utilisation of food products (Galhena et al., 2013). Food gardens also give people the power to produce their own food using sound ecologically responsible and sustainable methods. UFS has a Community Garden and Food Initiative, which aims to contribute to food security on campus and feed food-insecure students. To date the initiative has been responsible for the establishment of 40 vegetable gardens (Calitz, 2020).

6.4.5 Impact of COVID-19

Stability refers to the ability to ensure food security in the event of sudden shocks, such as an economic, health, conflict or climatic crisis, or cyclical events (HLPE, 2020a). The COVID-19 pandemic has seriously threatened the stability of food security. Lockdown levels 5 and 4 had particularly severe impacts on food security as all informal activities, including the sale of cooked food and the operation of informal retail stalls, were suspended and people could only purchase food at supermarkets. Those with their own transport or within walking distance of supermarkets were not really affected by this disruption.

Participants had similar perceptions about the impact (both past and future) of COVID-19 on the country. They highlighted that hunger would increase and there would be further losses of income and jobs. A report by the PMBEJD (2021) confirms that prices are continuing to rise. A report by STATS SA (2020b), focusing on the impact of COVID-19 on employment and income, indicated that hunger increased from 4.3% to 7.0% during level 5 lockdown.

6.4.6 Food quality

Food utilisation is not only concerned with the amount of food consumed but also the quality of one's diet (Pieters et al., 2013). It centres on whether or not individuals and households make effective use of the food to which they have access (Barret, 2001). Both student and staff participants in this study had the same sentiments regarding the types of food that should be distributed. For example, both groups emphasised that no substandard or junk food should be served to students; rather, they should be given healthy, nutritious food. A study conducted at UFS to assess the food choices that students had when buying food on campus (Meko and Jordaan, 2016) revealed that the availability of healthier food options was limited. Therefore, when the issue of food security at universities is addressed, the quality and diversity of food must be considered.

6.4.7 Stigma

Food insecurity is perceived as a 'shameful secret' among students at institutions of higher learning in South Africa, with an unfortunate social stigma attached to it (Sabi et al., 2020). This problem was strongly emphasised by the students participating in the study; the staff participants did not highlight it – undoubtedly because students are the ones experiencing the shame and stigma associated with food insecurity.

The results of this study revealed that students felt ashamed when collecting food parcels. These findings resonate with the findings at other institutions. For example, a study conducted by Gwacela (2014) at UKZN revealed that being food insecure is accompanied by a sense of shame, which is not spoken about among students. Participants in this study also reported that they felt embarrassed when carrying a food parcel on campus. Similarly, in a study at UFS where 60% of students were food insecure, it was reported that some students were hesitant to apply for the 'No Student Hungry Programme' (a university food insecurity intervention) as they thought that this would expose their poor economic status on campus and they would then be stigmatised. According to Sabi et al. (2020), their reluctance to take advantage of the available assistance stemmed from the name of the programme, which categorised them as poor.

6.5 Conclusion

This chapter analysed and discussed the results of the study. These results were contextualised within the broader body of literature and the conceptual framework. The results serve to demonstrate that students and staff share similar sentiments and perceptions about

theexperience of student hunger. Surprisingly, however, only the student participants (not the staff) emphasised feelings of shame and stigmatisation that come with being food insecure.

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

This chapter presents the conclusions of the study, with reference to the research objectives. It also provides a number of final recommendations.

7.2 Conclusions

The study identified 14 food security programmes at UWC, all of which had been motivated by a humanitarian desire to address the challenge of student hunger. Some programmes have been running consistently over the academic year, while others operate during the examination period only. Furthermore, some programmes are run by NGOs while others are run by student organisations. The results showed that the food served by the programmes differs, from warm meals to food parcels or sandwiches. Most of the food security programmes do not have any eligibility criteria; they are inclusive and open to all students. The few that follow specific criteria focus only on the funding status of students. The majority do not compel their beneficiaries to give back, although a few request students' assistance – depending on the latter's availability. Clearly, all these programmes play a significant role in ensuring food availability and access to students.

None of the food security programmes has any funding model or sustainability strategy to ensure their long-term operation. They are heavily dependent on funding from the UWC Council and donations – hence the challenges they are experiencing, including a shortage of funds, a shortage of human capacity to run the programmes and a shortage of food in the face of high demand. Funders have also been inconsistent. In some months, donations do not arrive. The programmes, therefore, need long-term funding strategies to ensure more consistent and reliable revenue streams.

Student hunger is a huge challenge in institutions of higher learning in South Africa, including UWC. While the university, through various food programmes and the NSFAS, is trying to address the problem, more needs to be done. For example, the prices of food sold on campus are very high for students, most of whom come from disadvantaged backgrounds. This demonstrates that even though food is available, some students lack the means to access it.

Participants in this study had contradictory views about the need (or otherwise) for criteria when giving assistance. Some were of the view that thorough screening should be done to check if students are deserving, while others asserted that assistance should only apply to those who do not have funding. The majority of participants, however, said that there should be no criteria for assistance; any and all students should be eligible and should be treated equally, irrespective of their socioeconomic background. Students and staff also highlighted the need to provide students with quality food. Serving students quality, nutritious food not only reinforces their sense of dignity but it is also good for their health.

COVID-19 has severely disrupted food systems in South Africa. People have lost their jobs, hunger has increased and prices of food have risen. Students have not been spared the negative impact of the pandemic. The NSFAS continued to distribute food allowances even though physical contact was suspended at the university for many months. However, there is no literature providing evidence that those who did not have funding did in fact receive support.

7.3 Recommendations

Food security (and insecurity) among university students is an under-researched focus area in South Africa. A nation-wide study is needed which looks at the nature and extent of student hunger. Currently few universities are documenting the state of food insecurity on their campuses. Similarly, there is a lack of information in the literature on student hunger at colleges in South Africa, which are also important institutions of higher learning. Thus, the national study needs to go beyond universities and include colleges as well.

The findings from an extensive, inclusive study would provide important insights into how the problem can be addressed nationally (not just at selected universities) and would inform food programme sustainability strategies at all universities. For example, food halls need to be revitalised and suitably equipped to serve up to three nutritious, quality meals a day. This model could be funded by adding an amount to the fees of those students who have funding. Government in turn needs to contribute more to cater for those students who do not have funding. This would extend access to university food halls both for students living on and off campus.

It is the responsibility of universities to take steps to ensure that students have sustainable means of acquiring food. They also need to consider the diversity of the student population when addressing food accessibility and quality. The introduction of food gardens would be a

significant supplemental source of food, contributing to food and nutritional security as well as livelihoods. It is also one of the surest ways to give students responsibility for and discretionover what they choose to eat.

REFERENCES

Adeniyi, O & Durojaye, E. (2020). 'The Right to Food of Students in Tertiary Institutions in South Africa (Dullah Omar Institute).

Akintoye, A. (2015). Developing theoretical and conceptual frameworks. Jedm. oauife. edu.ng>uploads>2017/03/07 (accessed 13 October 2020).

Alaimo, K., Packnett, E., Miles, R. A. and Kruger, D. J. (2008). Fruit and vegetable intake among urban community gardeners. *Journal of Nutritional Education Behaviour,* 40, 94–101.

Aliaga M. and Gunderson, B. (2000). *Interactive Statistics*. New Jersey: Prentice Hall.

Allen, R. E. (ed.) (1990). *The Concise Oxford Dictionary of Current English*. 8th ed. United States of America: Oxford University Press.

Almalki, A. (2016). Integrating quantitative and qualitative data in mixed methods research: Challenges and benefits. *Journal of Education and Learning*, 5(3).

Alvi, M. H. (2016). *A Manual for Selecting Sampling Techniques in Research*. University of Karachi, Iqra University

Anderson, E. S. (2010). *Technical Report: Coping Strategies Index (CSI) Development*. European Commission.

Andrew, S. and Halcomb, E. J. (2009). *Mixed Methods Research for Nursing and the Health Sciences*. Wiley-Blackwell, Hoboken, ISBN: 9781444316506

Ashby, S., Kleve, S., McKechnie, R. and Palermo, C. (2016). Measurement of the dimensions of food insecurity in developed countries: A systematic literature review. *Public Health Nutrition*, 19(16), 2887–2896.

Atalan, A. (2020). Is the lockdown important to prevent the COVID-19 pandemic? Effects on psychology, environment and economy-perspective. Annals of Medicine and Surgery. 56, 38-42

Bailey, K.D. (1994). Methods of social research. The Free Press, New York

Ballard, T., Coates, J., Swindale, A. and Deitchler, M. (2011). Household Hunger Scale: Indicator Definition and Measurement Guide. Washington, DC: Food and Nutrition Technical Assistance II Project, FHI 360.

Banerjee, A. and Duflo, E. (2006). The Economic Lives of the Poor. CEPR Discussion Paper 5968. C.E.P.R. Discussion Papers.

Barrett, C. B. (2001). Does food aid stabilize food availability? *Economic Development and Cultural Change,* 49(2), 335–349. doi: 10.1086/452505

Benson, T. (2004). African food and nutrition situation: Where are we and how did we get here. 200 discussion paper. Washington DC: International Food Policy Research Institute.

Bird, K. D. (2009). The use of questionnaires for acquiring information on public perception of natural hazards and risk mitigation – a review of current knowledge and practise. *Natural Hazards and Earth System Science*, 9, 1307–1325.

Boussard, J., Francoise, B. D. and Voituriez, G. T. (2006). *Sub regional office for southern and eastern Africa.* Rome: International Cooperation Centre of Agricultural and Research and Development

Boyce, A. (2020). Food parcels for vulnerable students. Cape Peninsula University of Technology (accessed 4 October 2020). https://www.cput.ac.za/newsroom/news/article/3987/food-parcels-for-vulnerable-students

Braun, V. & Clarke, V. (2012) Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds), APA handbook of research methods in psychology, Vol. 2: Research designs: Quantitative, qualitative, neuropsychological, and biological (pp. 57-71). Washington, DC: American Psychological Association

Brit, L., Cavers, D., Scott, S. and Campbell, C. (2016). Member checking: A tool to enhance trustworthiness or merely a nod to validation? *Qualitative Health Research*. 26(13), 1802–1811

Bryman, A. (2012). *Social research methods*. New York: Oxford University Press.

Bulmer, M. (2004). Questionnaires, V.1. Thousand Oaks, CA: Sage Publications.

Burns, N. and Grove, S.K. (2001) The Practice of Nursing Research, Conduct, Critique, and Utilization. 4th Edition, W.B. Saunders Company, Philadelphia.

Calitz, E. (2020). Improving student well-being through collaborative food provisioning initiatives. University of Free State.

Camp, W. G. (2001). Formulating and evaluating theoretical frameworks for career and technical education research. *Journal of Vocational Educational Research*, 26(1), 27–39.

Carlsson, L., Callaghan, E., Morley, A., & Broman, G. (2017). Food system sustainability across scales: a proposed local-to-global approach to community planning and assessment. Sustainability, 9(6), 1061.

Caruth, G. D. (2013). Demystifying mixed methods research design: A review of the literature. *Mevlana International Journal of Education*, 3(2), 112–122.

Chappell, M.J. (2018). Beginning to end hunger: food and the environment in Belo Horizonte, Brazil, and beyond. Oakland, USA, University of California Press.

Cibangu, S. (2012). Qualitative Research: The Toolkit of Theories in the Social Sciences, Chapters, in: Asun Lopez-Varela Azcarate (ed.). Theoretical and Methodological Approaches to Social Sciences and Knowledge Management, IntechOpen.

Coates, J., Deitchler, M., Ballard, T and Swindale, A. (2011). Introducing a Simple Measure of Household Hunger for Cross-Cultural Use. Food and Nutrition Technical Assistance II. Technical Note No. 12.

Coates, J., Swindale, A. and Bilinsky, P. (2007). HFIAS for measurement of household food access: Indicator guide (volume 3). Washington DC: Food and nutrition technical assistance

project, Academy for Educational Development.

Collins, L. (2009). Students grow their own veggies. *Student Counselling Quarterly*, 5(1), University of KwaZulu-Natal.

Connelly, L. M. (2016). Trustworthiness in qualitative research. *Medsurg Nursing*, 25(6), 435–436.

Daniel, E. (2016). The Usefulness of Qualitative and Quantitative Approaches and Methods in Researching Problem-Solving Ability in Science Education Curriculum. Journal of Education and Practice. 7(15).

De Vos, A. S., Strydom, H., Fouche, C. B. and Delport, C. S. L. (1998). *Research at grass roots.* Pretoria: Van Schaik.

Department of Agriculture (DOA) (2002). *The Integrated Food Security Strategy for South Africa*. Pretoria. Department of Agriculture.

Department of Agriculture, Forestry and Fisheries (DAFF). (2011). Food Security. Pretoria. https://www.nda.agric.za/docs/genreports/foodsecurity.pdf

Department of Higher Education and Training (DHET) (2011). Report on the Ministerial Committee for the review of the provision of housing at South African universities. Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training (DHET) (2020a). Treasury Regulations (2005), Regulation 20: Appointment of Ministerial Committee of Inquiry to Conduct an Independent Investigation into the Business Processes, Systems and Capacity of the National Student Financial Aid Scheme (Notice 584). Government Gazette, 43345: 21 May 2020.

Department of Higher Education and Training (DHET) (2020b). Higher Education & Training updated response to Coronavirus Covid-19. 28 March. Accesses 5 October 2020. https://www.gov.za/speeches/minister-blade-nzimande-higher-education-training-updated-response-coronavirus-covied-19-28

Department of Higher Education and Training (DHET) (2020c). Guidelines for the

Department of Higher Education and Training Bursary Scheme for Students at public Universities. Pretoria. Department of Higher Education and Training.

Devereux, S. and Waidler, J. (2017). 'Why does malnutrition persist in South Africa despite social grants?' Food Security SA Working Paper Series No.001. DST-NRF Centre of Excellence in Food Security, South Africa.

Dominguez-Whitehead, Y. (2015). Students' food acquisition struggles in the context of South Africa: The fundamentals of student development. *Journal of College Student Development*, 56(3), 292–308.

Dominguez-Whitehead, Y. (2017). Food and housing challenges: (Re)framing exclusion in higher education. *Journal of Education*, 68.

Dubick, J., Mathews, B. and Cady, C. (2016). Hunger on Campus: The challenge of food insecurity for college students. Temple University.

El Bilali, H., Callenius, C., Strassner, C. & Probst, L. (2018). Food and nutrition security and sustainability transitions in food systems. Food and Energy Security, 8(2): 1–20.

Etikan, I., Musa, A., Sunusi, R. and Alkassim, S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4.

Evans, J. (2021). NSFAS delays: 'We can't study with an empty stomach,' says student. *Groundup*. https://www.groundup.org.za/article/we-cant-study-with-an-empty-stomach-says-student/ (accessed 14 August 2021).

Feenix (2020). Insight and Learning Report. www.feenix.org (accessed 9 February 2021)

Felman, A. (2021). What to know about viruses. *Medical News Today*, 31 January 2021. https://www.medicalnewstoday.com/articles/256521 (accessed 9 February 2021).

Felman, A. (2021). What to know about Corona viruses? Medical News Today. 31 January 2021. https://www.medicalnewstoday.com/articles/256521 31 January 2021

Food and Agriculture Organization (FAO) (1983). World Food Security: a Reappraisal of the Concepts and Approaches. Director Generals Report, Rome

Food and Agriculture Organization (FAO) (2005). Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security. Rome. http://www.fao.org/3/y7937e/Y7937E00.htm#TOC

Food and Agriculture Organization (FAO) (2006). *The state of food insecurity in the world.* Rome: Food and Agriculture Organization of the United Nations.

Food and Agriculture Organization (FAO) (2008a). Food security concepts and frameworks: What is food security? http://www.fao.org/elearning/Course/FC/en/pdf/trainerresources/learnernotes0411.pdf (accessed 13 October 2020) .

Food and Agriculture Organization (FAO) (2008b). An introduction to basic concepts of food security. http://www.fao.org/docrep/013/al936e/al936e00.pdf (accessed 23 March 2021).

Galhena, D.H., Freed, R. & Maredia, K.M. Home gardens: a promising approach to enhance household food security and wellbeing. Journal of Agriculture & Food Security. 2 (8). https://doi.org/10.1186/2048-7010-2-8

Gallegos, D., Ramsey, R. and Wen Ong, K. (2014). Food insecurity: Is it an issue among tertiary students. Journal of Higher Education. 67, 497–510.

Ganges, S. (2016). From agency to capabilities; Sen and sociological theory. Current Sociology, 64(1): 22–40. https://doi.org/10.1177/0011392115602521

Gunawan, J. (2015). Ensuring trustworthiness in qualitative research. *Belitung Nursing Journal*, 1(1), 10–11.

Gwacela, M. (2014). Exploring food insecurity and socio-economic factors affecting academic performance: A case study of first year students on probation and at-risk of academic exclusion. University of KwaZulu-Natal. Master's dissertation

Haradhan, M. (2018): Qualitative Research Methodology in Social Sciences and Related Subjects. Journal of Economic Development, Environment and People, 7, (1), pp. 23-48.

Hart, T. (2009). Exploring definition of food insecurity and vulnerability: Time to refocus assessment. *Agrekon*, 48(4), 362–383.

Head, T. (2020). NSFAS December Allowance: Students fear 'starvation' as payments withheld. *The South African*, 1 December 2020. https://www.thesouthafrican.com/news/nsfas-when-will-december-allowance-be-paid-students-cput/ (accessed 11 February 2020)

Hendriks, S. (2015). The food security continuum: A novel tool for understanding food insecurity as a range of experiences. *Springer*, 7, 609–619.

High-Level Panel of Experts (HLPE) (2019). Agro ecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition. A report by the High-Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security. HLPE report 14. Rome. 163 pp. http://www.fao.org/3/ca5602en/ca5602en.pdf

High-Level Panel of Experts (HLPE) (2020a). Food security and nutrition: building a global narrative towards 2030. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome.

High-Level Panel of Experts (HLPE) (2020b). Impacts of COVID-19 on food security and nutrition: Developing effective policy responses to address the hunger and malnutrition pandemic, Rome. https://doi.org/10.4060/cb1000en

High-Level Panel of Experts (HLPE). (2017). Nutrition and food systems. A report by the High-Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security. HLPE report 12. Rome. 152 pp. http://www.fao.org/3/a-i7846e.pdf

Hughes, R. I., Serebryanikova, K., Donaldson, K and Leveritt, M. (2011). Student food insecurity: The skeleton in the university closet. *Nutrition & Dietetics,* 68, 27–32.

Human Science Research Council (HSRC). (2020). Social impact of the COVID-19 pandemic on youth in the Post School Education and Training (PSET) Sector in South Africa. DHET. Pretoria.

Institutional Advancement. (2017). UWC and Tiger Brands Launch Food Security Programme. University of the Western Cape. https://www.uwc.ac.za/News/Pages/UWC-and-Tiger-Brands-Launch-Food-Security Programme.aspx.

Jackson, N. N. A. (2018). Students' experiences of hunger at an institution of higher learning in South Africa. Nelson Mandela University, Gqeberha (Master's dissertation).

Job, N. (2014). Food Security Status and Related Factors of Undergraduate Students Receiving Financial Aid at the University of KwaZulu-Natal, Pietermaritzburg Campus., University of KwaZulu-Natal. (Master's dissertation)

Kabir, S.M.S. (2016). Methods of data collection. Researchgate

Kassier, S. and Veldman, F. (2013). Food security status and academic performance of students on financial aid: The case of University of KwaZulu-Natal. *Alternation*, 9, 248–264.

Kennedy, G., Ballard, T. and Dop, M. (2011). Guidelines for measuring household and individual dietary diversity. Food and Agriculture Organization.

Knowler, W. (2020). University students make use of emergency food vouchers. Sunday Times. 12 June 2017. https://www.timeslive.co.za/news/south-africa/2017-06-12-university-students-make-use-of-emergency-food-vouchers/

Labadarios, D., Davids ,Y. D., Mchiza Z. and Weir-Smith. G. (2009). *The assessment of food insecurity in South Africa*. Pretoria: Human Sciences Research Council.

Lawlis, T., Islam, I & Upton, P. (2018). Achieving the four dimensions of food security for resettled refugees in Australia: A systematic review. Journal of Nutrition and dietetics. 75: 182–192

Leroy, J. L., Ruel, M., Frangillo, E. A., Harris, J. and Ballard, T. J. (2015). Measuring the food access dimension of food security: A critical review and mapping of indicators. *Journal of Nutrition and Dietetics*, Vol. 36(2), 167–195.

Mansvelt, N. (2021). Co-generating a people-centred approach to addressing student hunger at a South African university. Nelson Mandela University, Gqeberha (PhD thesis).

Marsh, R, 1998. Building on traditional gardening to improve household food security. www.fao.org/docrep/x0051t/X0051t02.htm. Accesses on 01 December 2021.

Marshall, C. and Rossman, B. (1999). *Designing qualitative research*. 3rd ed. London: Sage Publications .

Maxwell, D. and Caldwell, R. (2008). The Coping Strategies Index: A tool for rapid measurement of household food security and the impact of food aid programs in humanitarian emergencies. Office of Food for Peace, Bureau of Democracy, Conflict and Humanitarian Assistance, U.S. Agency for International Development and CARE.

Meko, N. M., & Jordaan, E. (2016). The food environment of students on a financial assistance programme at the University of the Free State, Bloemfontein. South African Journal of Clinical Nutrition, 29(3), 34-36. Retrieved from http://www.sajcn.co.za/index.php/SAJCN/article/view/1066

Meybeck, A. & Gitz, V. (2017). Sustainable diets within sustainable food systems. Proceedings of the Nutrition Society, 76(1): 1-11.

Mofolo, K. (2020). SA's student hunger crisis – and how to address it. *Daily Maverick*, 11 September. https://www.dailymaverick.co.za/article/2020-09-11-sas-student-hunger-crisis-and-how-to-address-it /

Mordaunt, E. (2016). *The downside of food banks*. The Nutrition Press.

Motheral, B.R. (1998). Research methodology: Hypothesis, measurement, reliability and validity. *Journal of Managed Care Pharmacy*. 4(4), 382-390

Mpofu, R. (2020). We are afraid of dying from hunger, says Gauteng grandmother. IOL. 01 May 2020. https://www.iol.co.za/sundayindependent/news/we-are-afraid-of-dying-from-

hunger-says-gauteng-grandmother-47433970

Mukigi, D., Thornton, K., Binion, A., Brown, K., Church, M. et al. (2018). Food insecurity among college students: An exploratory study. *Journal of Nutrition Health Science*, 5(1), 106. doi:10.15744/2393-9060.5.106

Munro, N., Quayle, M., Simpson, H. and Barnsley, S. (2013). Hunger for knowledge: Food insecurity among students at the University of KwaZulu-Natal. *Perspectives in Education*, 31(4), 168–179.

Ndobo, P. F. (2013). Determining the food security status of households in a South African town. North-West University. Kimberly. (Master's dissertation).

Opara, U. L. (2013). Perspective: The evolving dimensions and perspectives on food security – what are the implications for postharvest technology research, policy and practice? *International Journal of Postharvest Technology and Innovation*, 3(3), 324–332.

Pangaribowo, E. H., Gerber, N. and Torero, M. (2013). Food and nutrition security indicators: A review. ZEF Working Paper Series, No. 108, University of Bonn, Centre for Development Research (ZEF), Bonn.

Pietermaritzburg Economic Justice and Dignity Group (PMBEJD) (2020a). Food prices up again in August. Research Report, 26 August 2020. https://pmbejd.org.za/wp-content/uploads/2020/08/PMBEJD-Research-Report-26082020.pdf

Pietermaritzburg Economic Justice and Dignity Group (PMBEJD) (2020b). Household Affordability Index. https://pmbejd.org.za/wp-content/uploads/2020/08/August-2020-Household-Affordability-Index-PMBEJD.pdf (accessed 21 October 2020)

Pietermaritzburg Economic Justice and Dignity Group (PMBEJD) (2021). Household Affordability Index, 27 January 2021. https://pmbejd.org.za/wp-content/uploads/2021/01/January-2021-Household-Affordability-Index PMBEJD_27012021.pdf

Pieters, H., Guariso, A & Vanderplas, A. (2013). Conceptual framework for the analysis of the determinants of food and nutrition security. FOODSECURE Working paper no. 13.

Pinstrup-Andersen, P. (2009). Food security: Definition and measurement. *Springer*, (1)1, 5–7.

Polit, D. and Hungler, B. (1999). *Nursing Research: Principle and Method*. 6th ed. Philadelphia: Lippincott Company, pp. 416–417.

Rahman, S. (2017). The Advantages and Disadvantages of Using Qualitative and Quantitative Approaches and Methods in Language "Testing and Assessment" Research: A Literature Review. Journal of Education and Learning. 6(1), 102-112.

Rajasekar, D., Philominaathan, P. and Chinnathambi, V. (2013). Research Methodology. http://arxiv.org/pdf/physics/0601009.pdf (accessed 8 April 2015)

Rasinger, S. M. (2013). Quantitative research in linguistics: An introduction. A & C Black.

Renzaho, A. M. N. and Mellor, D. (2010). Food security measurement in cultural pluralism: Missing the point or conceptual misunderstanding?, *Nutrition,* Vol. 26, No. 1, pp.1–9.

Rocha, C. (2007). Food insecurity as market failure: a contribution from economics. Journal of Hunger & Environmental Nutrition, 1.4: 5-22.

Rudolph, M., Kroll, F., Muchesa, E., Manderson, A., Berry, M. and Richard, N. (2018). Food insecurity and coping strategies amongst students at University of Witwatersrand. *Journal of Food Security*, 6(1), 20–25.

Sabi, S. (2018). Too hungry to go to class: South Africa's university students need better support. *The Conversation*. https://phys.org/news/2019-10-hungry-class-south-africa-university.html (accessed 20 October 2020)

Sabi, S. C., Kolanisi, U., Siwela, M & Naidoo,D. (2020). Students' vulnerability and perceptions of food insecurity at the university of KwaZulu-Natal, South African Journal of Clinical Nutrition, 33:4, 144-151, DOI: 10.1080/16070658.2019.1600249

Sabi, S. C., Kolanisi, U., Siwela, M. and Naidoo, D. (2015). Investigating Perceptions of Food Insecurity Complexities in South African Higher Learning Institutions: A Review. University of KwaZulu-Natal.

Sabi, S.C. (2018). Development of a framework for managing food security programme: an analysis of student food insecurity and the interventions at the University of KwaZulu-Natal, South Africa. PhD Thesis. University of KwaZulu-Natal. Pietermaritzburg.

Sekhampu, J. T. (2017). Association of food security and household demographics in South African townships. *International Journal of Social Sciences and Humanity Studie,* 9(2).

Sen, A. (1981). *Poverty and famines: An essay on entitlement and deprivation*. New York: Oxford University Press.

Spaull et al. (2020). NIDS-CRAM Wave 2 Synthesis Findings.

Statistics South Africa (STATS SA) (2020a). General Household Survey 2019. Pretoria. Statistics South Africa.

Statistics South Africa (STATS SA) (2020b). Towards measuring the extent of food security in South Africa: An examination of hunger and food inadequacy. Report no. 03-00-14. Pretoria. Statistics South Africa.

Statistics South Africa (STATS SA) (2020c). Results from Wave 2 survey on the impact of the COVID-19 pandemic on employment and income in South Africa. http://www.statssa.gov.za/publications/Report-00-80-03/Report-00-80-03May2020.pdf (accessed 21 October 2020)

Statistics South Africa (Stats SA). (2019). General Household Survey 2017. Pretoria. Statistics South Africa.

Statistics South Africa (Stats SA). (2020). General Household Survey 2019. Pretoria. Statistics South Africa.

Stellenbosch University. (2020). Stellenbosch University student support during the COVID-19 pandemic. http://www.sun.ac.za/english/Documents/Stellenbosch%20University%20student%20support%20during%20the%20COVID%20final%2025%20May%202020.pdf#search=student%20food (accessed 4 October 2020)

Stigler, N., Bouchard, JP. (2021). South Africa: Challenges and successes of the COVID-19 lockdown. Ann Med Psychol. 178(7): 695–698.

Swindale, A., Bilinsky, P. (2006). Household Dietary Diversity Score (HDDS) for Measurement of Household Food Access: Indicator Guide Version 2. FANTA. https://www.fantaproject.org/sites/default/files/resources/HDDS_v2_Sep06_0.pdf

Tlou, G. (2020). Students scramble to find money to go home amid universities shutdown. *The Star*, 17 March 2020. https://www.iol.co.za/the-star/news/students-scramble-to-find-money-to-go-home-amid-universities-shutdown-45039764 (accessed 9 February 2020)

Tong, A., Flemming, K., McInnes, E. et al. (2012). Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ. BMC Med Res Methodol 12 (181). https://doi.org/10.1186/1471-2288-12-181

United States Agency for International Development (USAID) (2008). The Coping Strategies Index: Field Methods Manual. 2nd ed. http://www.fsnnetwork.org/sites/default/files/coping_strategies_tool.pdf

Van den Berg, L. and Raubenheimer, J. (2015). Food insecurity among students at the University of the Free State. *South African Journal of Clinical Nutrition*, 28(4), 160–169.

Van der Berg, S., Zuze, L. and Bridgman, G. (2020). Coronavirus, lockdown and children: Some impacts of the current crisis in child welfare using data from NIDS-CRAM Wave 1. NIDS-CRAM Working Paper 11.

Vogt, W. P. (1999). Dictionary of Statistics and Methodology: A Non-Technical Guide for the Social Sciences (2nd ed.). London: Sage Publications.

Von Grebmer, K., Bernstein, J., Mukerji, R., Patterson, F., Wiemers, M., Ní Chéilleachair, R., Foley, C., Gitter, S., Ekstrom, K. and Fritschel, H. (2019). 2019 Global Hunger Index: The Challenge of Hunger and Climate Change. Bonn: Welthungerhilfe; and Dublin: Concern Worldwide.

Wagner, F., Kaneli, T., & & Masango, M. 2021. Exploring the relationship between food insecurity with hunger and academic progression at a large South African University. South African Journal of Higher Education, 35(5): 296–309

Warshawsky, D. N. (2011). FoodBank Johannesburg, State and Civil Society Organisations in Post-Apartheid Johannesburg. *Journal of Southern African Studies*, 37(4).

Weingartner, L. (2000). Food Nutrition Security Assessment Instruments and Intervention Strategies: The Concept of Food and Nutrition security. Background Paper No.1.

Wisdom. J. (2013). Mixed Methods: Integrating Quantitative and Qualitative Data Collection and Analysis While Studying Patient-Centred Medical Home Models. Rockville, MD: Agency for Healthcare Research and Quality. AHRQ Publication No. 13-0028-EF.

World Food Programme (WFP) (2009a). World Hunger Series: Hunger and Markets. Earthscan. https://www.wfp.org/publications/world-hunger-series-hunger-and-markets

World Food Programme (WFP) (2009b). Emergency Food Security Assessment. https://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp203244.pdf (accessed 13 August 2021)

World Health Organization (WHO) (2020). Coronavirus disease (COVID-19): How is it transmitted? 9 July 2020.

Zangirolami-Raimundo, J., Echeimberg, J. O. and Leone, C. (2018). Research methodology topics: Cross-sectional studies. *Journal of Human Growth and Development*, 28(3), 356–360.

APPENDICES

APPENDIX A: QUESTIONNAIRE TO STAFF 2020 (online – including information sheet & consent form)

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E-mail: ***pkippie@uwc.ac.za*** *or* *mdinbabo@uwc.ac.za*

Information Sheet for Academic Staff

Project Title:
Food Security at UWC: An Exploration of actions and programmes to address student hunger.

The researcher is aiming to identify and describe all food programs and their challenges at the University of the Western Cape. The researcher also seeks to investigate the perception on student hunger and the level of involvement of Academic Staff and students in programmes that address food insecurity.

You are requested to take part in this study. You are requested to give a written consent. You will be asked to partake in a questionnaire which should not take longer than 75 minutes. Questions answered must please be done so as honestly and truthfully as possible. After completion of study you will be given feedback at a seminar to be held at the University of the Western Cape. Confidentiality will be maintained. If at any time prior to or during the interview you feel uncomfortable in any way, you can withdraw from the research project without fear of negative consequences or repercussions.

This research is being conducted by **Nolukholo Mabharwana** a student at the University of the Western Cape. His contact number is 0835415348.If you have any questions about the research study itself, please contact Prof. Rina Swart at The School of Public Health (SOPH), University of the WesternCape, her telephone number (021) 959 2852. Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced relatedto the study, please contact:

Prof Mulugeta Dinbabo
Acting Director
Institute for Social Development
School of Government
University of the Western Cape
Private Bag X17
Bellville 7535
021 959 3855

UNIVERSITY of the WESTERN CAPE

INSTITUTE FOR SOCIAL DEVELOPMENT
University of the Western Cape

UNIVERSITY of the WESTERN CAPE

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Telephone :(021) 959 3858/6 Fax: (021) 959 3865
E-mail: **pkippie@uwc.ac.za** *or* spenderis@uwc.ac.za

Letter of consent to Academic Staff

I....., have had the opportunity to ask any questions related to this study, and received satisfactory answers to my questions, and any additional details I wanted.

I agree to take part in this research.

I understand that my participation in this study is voluntary. I am free not to participate and have the right to withdraw from the study at any time, without having to explain myself.

I understand that I can withdraw from the study at any time, without having to explain myself.

I am aware that the information I provide on the interview might result in research which may be published.

I understand that my signature on this form indicates that I understand the information on the information sheet regarding the nature of the questions.

I have read the information regarding this research study.

I agree to answer the questions to the best of my ability.

I understand that if I don't want my name to be used that this will be ensured by the researcher.

I may also refuse to answer any questions that I don't want to answer.

By continuing with the online questionnaire, I give free and informed consent to participate in this research study.

Date:……

Participant
Name:……..

Participant
Signature:…….

UNIVERSITY of the WESTERN CAPE

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Questions to Academic Staff

This questionnaire consists of 4 sections

Section 1: Socio-demographic Information

Section 2: Perceptions on student food insecurity

Section 3: Actions to address student food security

Section 4: Food security questionnaire

Section 1: Socio-demographic Information

1. Please indicate your age in years.

2. Indicate the faculty in which you are currently employed as an Academic Staff member.
   - Arts
   - Education
   - Law
   - EMS
   - CHS
   - Dentistry
   - Science

3. What position do you hold in the faculty?
    - Associate Lecturer
    - Lecturer
    - Senior Lecturer
    - Associate Professor
    - Professor
    - Senior Professor
    - Researcher
    - Other

    If other, please specify

4. Please indicate your gender.
- Male
- Female

5. Please indicate your ethnicity (optional)
    - Black
    - White
    - Coloured
    - Indian
    - Asian
    - Other

If other, please specify

6. Please indicate your nationality
    - South African
    - Other

If other, please specify

7. Which language do you speak most of the time at home?
- English
- IsiXhosa
- Afrikaans
- IsiNdebele
- IsiZulu
- Sesotho
- Setswana
- Xitsonga
- Siswati

- Tshivenda
- Other

If other, please specify

Section 2: Perceptions on student food insecurity

8. What proportion of UWC students do you think go hungry because they do not have food or money to buy food? (State a proportion between 0 and 100%).

9. In your opinion, what is the most important reason for students who do not have food or money to buy food?

10. Please state any other factors that you think can contribute to students not having food or money to buy food.

Section 3: Actions to address student food insecurity

11. Have you had any of your students complain of hunger?
    - Yes
    - No
12. If yes, what did you do to assist the student?

13. If yes, what worked and what did not work?

14. What do you think can be done to assist students who do not have food or money to buy food?

15. How should assistance to students, who do not have food, be managed so that it will be respectful and dignified towards them?

16. What should not be done?

Section 4: Food Security questionnaire

17. If food is made available to students, what type of food/support should be considered?

18. What, according to your own opinion, should be the criteria used to identify deserving students for food if they are hungry?

19. In what way(s) will you be willing to assist students who are hungry?

20. What role do you think Academics should play to alleviate hunger on campus?

Thank you for taking time to complete this questionnaire

APPENDIX B: QUESTIONNAIRE TO PROGRAMMES 2019

Private Bag X17, Bellville 7535, Cape Town, South Africa
Telephone :(021) 959 3858/6 Fax: (021) 959 3865
E-mail: ***pkippie@uwc.ac.za*** *or* *mdinbabo@uwc.ac.za*

Questions to the Feeding Programme Representative

1. What is the name of the programme?			
2. When did the programme start?			
3. Who started the programme?			
4. Why was the program started?			
5. How many students benefitted in the programme per week?			
6. Was it new students or was it same students coming?	YES	NO	(if yes skip to 11, if NO continue to 7)
7. Is the programme still continuing?			
8. If NO, how long did the programme run?			
9. If NO, Why did the programme stop?			
10. If NO, what was the criteria used to identify students who benefitted from the programme?			
11. If YES what criteria do you use to identify students that benefit from the programme?			
12. If YES, what challenges do you experience running the programme?			

13. What do you think can be done to make the programme sustainable?				
14. What food do students receive as part of the programme?				
15. When do students receive the food?	Daily	weekly	Monthly	Other
16. Does this programme have any form of support from the university?	YES	NO	(if no skip to 18, if yes continue to 17)	
17. If YES, what form of support?				
18. If students receives food from the programme, do you require them to give back?	YES	NO	(If yes skip to 19, if no skip to 20)	
19. If YES, what do you expect in return?				
20. If NO, why not?				
21. What other actions/ programmes besides feeding, do you think can be done to assist hungry students?				

Thank you for taking time to complete this questionnaire

APPENDIX C: QUESTIONS – KEY INFORMANT INTERVIEWS 2017

Food and nutrition security of students registered at the University of the Western Cape (BM17/8/1)

Interviewer: …….. Venue …….. Date……..

Key informant Questions

1. In your opinion what proportion of UWC students go hungry because they do not have food or money to buy food?
2. What do you think can be done to assist students who do not have food ? (if you are hungry what will help to assist you?)
3. How should assistance to students, who do not have food, be managed so that it will be respectful and dignified towards them?
4. What should **NOT** be done?
5. If food/support is made available to students, what type of food/support should be considered.
6. Have you ever assisted students who do not have food and if so, what worked and what did not work?
7. In what way will you be willing to assist to participate in activities such as cooking, packing, food gardens etc. to contribute towards those that are hungry
8. What, according to your own opinion, should be the criteria used to identify deserving students to be supported?

APPENDIX D: Questionnaire – Student food security 2017 (online)

Assessing food and nutrition security of University of the Western Cape students

Consent Form and Student Questionnaire – Electronic

You are being invited to take part in a research project. The aim of this study is to investigate food insecurity and the factors associated with it of UWC students. We aim to recruit about **2200** participants and your input is highly appreciated.

Food security is defined in its most basic form as access at all times to the food needed for a healthy and productive life, which also implies the ability to acquire acceptable food in a socially acceptable way.

As a registered student at University of the Western Cape your participation in this research study is invaluable and the data gathered will be vital in obtaining information to assess and gain a better understanding of the current situation. A concurrent qualitative study will explore the lived experience as well as perceptions of potential interventions to alleviate the problem from randomly selected key informants.

The research group would like you to complete a survey which requires of you to be as frank as possible. This survey will take about 15-20 minutes of your time. There are no risks involved in partaking in this research as anonymity and confidentiality will be maintained at all times. Participation is completely anonymous.

You can contact the researchers should you have any further queries or encounter problems.
EC Swart (rswart@uwc.ac.za), CJ Schenck (cschenck@uwc.ac.za)

This study has been approved by the Biomedical Research Ethics Committee (BMREC) of University of the Western Cape (Ethics reference number: BM17-8-1) and will be conducted according to the ethics guidelines and principles of the international Declaration of Helsinki, South African Guidelines for Good Clinical Practice and the Medical Research Council (MRC) Ethical Guidelines for Research. Approval was also obtained from the Office of the Registrar and the DVC Student Development and Support.

You can contact the Dean of the Faculty of Community and Health Sciences at 021-959-2631 if you have any concerns or complaints that have not been adequately addressed by the researchers. Alternatively you can contact the BMREC if you have any queries or complaints:

The Chairperson
Biomedical Research Ethics Committee
University of the Western Cape
Private Bag X17
Bellville 7535
Tel: 021-9592988
Email: research-ethics@uwc.ac.za

Declaration by student

By clicking on the link to continue with the questionnaire, I consent to participating in this research study. I declare that:

I understand the purpose, scope and potential outcomes of the study.

I understand that taking part in this study is voluntary and I have not been pressurized to take part.

I may choose to leave the study at any time and will not be penalized or treated unfairly towards in any way.

☐ Yes, I consent to participate and continue with the questionnaire.

☐ o, I do not consent to participate [link will be removed].

Screening section

1. How old are you (in years)?

Type your age in years here

1) Indicate the Faculty where you are **currently** registered as a student.
[Screening question- drop box with list of Faculties- reject if military or health sciences selected]

- Arts
- Community and Health Sciences
- Dentistry
- Economic and Management Sciences
- Education
- Law
- Science

Questionnaire

This questionnaire consists of 5 sections.
Section 1: consists of socio-demographic and socio-economic.
Section 2: Factors affecting nutritional well-being
Section 3: Consists of 24 hour dietary recall
Section 4: Food security questionnaire
Section 5 Physical activity questionnaire

Answer all questions in the spaces allocated.

SECTION 1 SOCIO -DEMOGRAPHIC AND SOCIO-ECONOMIC INFORMATION

1. In what year of study are you now?
[drop box]

	1st year
	2nd year
	3rd year
	4th year
	Honours
	Masters
	PhD

2. Please indicate your gender

Male☐ Female☐

3. Please indicate your ethnicity (optional)

Black☐ White☐ Coloured☐ Indian☐ Asian☐ Other☐

4. Please indicate your nationality

South African☐ Other☐ Specify ……..

5. Which language do you speak most of the times at home?

English	1
IsiXhosa	2
Afrikaans	3
IsiNdebele	4
IsiZulu	5
Sesotho	6
Setswana	7
Xitsonga	8
SiSwati	9
Tshivenda	10
Other:	11 Specify……..

6. Please indicate your current form of accommodation (during academic semester)

Residence on campus☐

Residence off campus☐

Private/rent room or flat☐

Living at home☐

Other ☐

7. How are your university fees paid for? (choose one option)

☐Bursary

☐Parent/Guardian

☐Student loan

☐Employment

☐Other (please specify)_____

8. Where do you get most of the money for your living expenses from? (choose one option)

☐Bursary

☐Parent/Guardian

☐Student loan

☐Employment

☐Other (please specify)_____

9. What is your marital status

   Married ☐ Single ☐ Living together ☐

10. Does your partner earn an income which contributes to your living expense?

    Yes ☐ No ☐ Not applicable ☐

11. Are you currently receiving an income on a part time or full time basis

    Yes ☐ No ☐ Not applicable ☐

12. How much money do you have available per month as an allowance / pocket money for living expenses? (choose one option)

    ☐<R100

    ☐R100-R499

    ☐R500- R999

    ☐R1000- R1999

    ☐R2000-R2999

    ☐R3000-R3999

    ☐>R4000

13. How much money do you spend on **food** per month? (choose one option)

    ☐ Nothing, or included in accommodation / living at home

    ☐<R50

    ☐R50-R99

    ☐R100-R499

    ☐R500- R999

    ☐R1000- R1999

    ☐R2000-R2999

    ☐R3000-R3999

    ☐>R4000

SECTION 2 FACTORS AFFECTING NUTRITIONAL WELL-BEING

14. How many main meals (breakfast, lunch and supper) do you consume daily?

None	1	2	3

15. How many times do you consume fruit and vegetables per week? (choose one option)

☐Never

☐1-2 times per week

☐3-4 times per week

☐5-6 times per week

☐≥7

16. What sources of **dairy** do you consume (such as milk, yoghurt, cheese, buttermilk, amasi)? (please specify)

_____

17. How does alcohol impact on your studies (choose one option)

	Positive impact
	Negative impact
	Neutral
	I don't know

18. During stressful periods (examinations, social pressures) please explain how your eating patterns change?

_____

_____

19. I am satisfied with my body image (choose one option)

	Strongly agree
	Agree
	Disagree
	Strongly disagree

20. My religion restricts the food choices I have available to me (choose one option)

	Strongly agree
	Agree

	Disagree
	Strongly disagree

21. Media (magazines, internet etc.) influences the way in which I view my body (choose one option)

	Strongly agree
	Agree
	Disagree
	Strongly disagree

6. If you want to lose weight, please indicate the preferred method/s you would use (select all the appropriate options)

	Reducing fat consumption
	Exercise
	Eat smaller meals
	Skipping meals
	Special diet (LCHF, detox, Gluten-free)
	Self-induced vomiting
	Calorie Restriction
	Not applicable

7. How many times per week do you purchase **fast food**? (choose one option)

☐Never

☐1-2 times per week

☐3-4 times per week

☐5-6 times per week

☐≥7

8. If you do purchase fast food, please specify your reason/s why

---

6. How many times per week do you purchase **sweetened beverages**? (choose one option)

☐Never

☐1-2 times per week

☐3-4 times per week

☐5-6 times per week

☐≥7

7. How many times do you drink alcohol per week? (choose one option)

☐Never

☐1-2 times per week

☐3-4 times per week

☐5-6 times per week

☐≥7

8. Over the course of how many hours to you typically drink? (never drink alcohol =00) ☐☐

9. After a night out consuming alcohol what food do you tend to eat? (select all the appropriate options)

☐I do not eat

☐Take-aways (e.g.: McDonalds, KFC)

☐Snacks (chips, chocolates, samosas)

☐Anything that I find in the fridge (left-overs)

☐Other (please specify): _____

10. Have you ever smoked tobacco products?

☐Yes, and I am currently still smoking

☐Yes, only occasionally (<1x/day)

☐Yes, but I stopped smoking

☐No, have never smoked

11. I have enough money to pay for textbooks, transport and stationary (choose one option)

	Strongly agree
	Agree
	Disagree
	Strongly disagree

12. At the end of the month what do you compromise on due to running out of money (select all appropriate options)

	Food

	Clothes
	Social life
	Toiletries
	Books/stationary
	Transport
	Not applicable

13. Who prepares most of your meals for you? (choose one option)

☐Yourself

☐The residence canteen

☐Parent/Guardian

☐Take away outlets/ restaurants

☐Other (please specify): _____

14. My concentration levels are hindered as a result of being hungry (choose one option)

	Strongly agree
	Agree
	Disagree
	Strongly disagree

15. When I don't have money to purchase food, I become anxious and resort to alternative measures to obtain food. (choose one option)

	Strongly agree
	Agree
	Disagree
	Strongly disagree

16. I shall or have resorted to drastic measures to obtain money for food, SUch as:.(choose all relevant options)

	Use another student's card
	Taking money
	Taking food
	Performs more than one job AS WELL as studies
	Exchange sexual favours
	None of the above
	Other: please specify

SECTION 3 - DIETARY RECALL

The following section is a recall based on the diet consumed in one day (24 hours). To ensure that the most accurate recall is given, we request that you base your answers on your dietary intake yesterday.

Please state what you ate yesterday (Breakfast, Morning Snack, Lunch, Afternoon snack, Dinner and late night snack.)

Please be as honest as possible.

Please indicate the ingredients that make up each meal (where possible) and we request that you are as detailed as possible.
Quantities/amounts do not apply

Breakfast	Snack	Lunch	Snack	Dinner	Snack	Other

What did you drink during the day?
(If beverages such as coffee or tea are consumed, please indicate if you add anything to it, such as milk, sugar, sweetener, creamer, etc.)

***Please review your answers to ensure that everything that was consumed has been included**

SECTION 4 FOOD SECURITY QUESTIONNAIRE

HUNGER SCALE

No.	Question	Response Option
Q1	In the past [4 weeks/30 days], was there ever no food to eat of any kind in your house because of lack of resources to get food?	0 = No (Skip to Q2) 1 = Yes
Q1a	How often did this happen in the past [4 weeks/30 days]?	1 = Rarely (1–2 times) 2 = Sometimes (3–10 times) 3 = Often (more than 10 times)
Q2	In the past [4 weeks/30 days], did you or any household member go to sleep at night hungry because there was not enough food?	0 = No (Skip to Q3) 1 = Yes
Q2a	How often did this happen in the past [4 weeks/30 days]?	1 = Rarely (1–2 times) 2 = Sometimes (3–10 times) 3 = Often (more than10 times)
Q3	In the past [4 weeks/30 days], did you or any household member go a whole day and night without eating anything at all because there was not enough food?	0 = No (Skip to the next section) 1 = Yes
Q3a	How often did this happen in the past [4 weeks/30 days]?	1 = Rarely (1–2 times) 2 = Sometimes (3–10 times) 3 = Often (more than 10 times)

SECTION 5 PHYSICAL ACTIVITY QUESTIONNAIRE

We are interested in finding out about the kinds of physical activities that people do as part of their everyday lives. The questions will ask you about the time you spent being physically active in the last 7 days. Please answer each question even if you do not consider yourself to be an active person. Please think about the activities you do at work, as part of your house and yard work, to get from place to place, and in your spare time for recreation, exercise or sport.

Think about all the vigorous and moderate activities that you did in the **last 7 days**. **Vigorous** physical activities refer to activities that take hard physical effort and make you breathe much harder than normal. Think *only* about those physical activities that you did for at least 10 minutes at a time.

1. During the last **7 days**, on how many days did you do **vigorous** physical activities like heavy lifting, digging, aerobics, or fast bicycling?

   _____ days per week

   _____ No vigorous job-related physical activity → Skip to question 3

2. How much time did you usually spend on **vigorous** physical activities on one of those days?

   _____ hours per day

_____ minutes per day

_____ Don't know / Not SUre

Think about all the **moderate** activities that you did in the last 7 days. **Moderate** activities refer to activities that take moderate physical effort and make you breathe somewhat harder than normal. Think *only* about those physical activities that you did for at least 10 minutes at a time.

3. During the last **7 days**, on how many days did you do **moderate** physical activities like carrying light loads, bicycling at a regular pace, or doubles tennis?

_____ days per week

_____No moderate physical activity → Skip to question 5

4. How much time did you uSUally spend doing **moderate** physical activities on one of those days?

_____ hours per day

_____ minutes per day

_____Don't know / Not SUre

Think about the time you spent **walking** in the **last 7 days.** This includes at work and at home, walking to travel from place to place, and any other walking you have done solely for recreation, sport, exercise, or leiSUre.

5. During the **last 7 days**, on how many days did you walk for at least 10 minutes at a time?

_____ days per week

_____No walking → Skip to question 7

6. How much time did you uSUally spend **walking** on one of those days?

_____ hours per day

_____ minutes per day

_____Don't know / Not SUre

The last question is about the time you spend **sitting** on weekdays during the **last 7 days**. Include time spent at work, at home sitting at a desk, while ding course work and during leisure time. This may include time spent sitting at a desk, visiting friends, reading, or sitting or lying down to watch television.

7. During the **last 7 days**, how much time did you usually spend sitting on a day?

_____ hours per day

_____ minutes per day

_____Don't know / Not sure

END OF QUESTIONNAIRE

Thank you for your participation in this study.

If you would like to receive a copy of the research report, please provide your email address below:

_____

"This information will remain confidential and will not be shared with anyone outside of this research team. Email addresses obtained will be kept separate from the study data. Contact details will be deleted/ discarded after the research report has been forwarded to the email address."

APPENDIX E: Ethics approval for study

UNIVERSITY of the WESTERN CAPE

OFFICE OF THE DIRECTOR: RESEARCH
RESEARCH AND INNOVATION DIVISION

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06 November 2019

Ms N Mabharwana
Institute for Social Development
Faculty of Economic and Management Sciences

Ethics Reference Number: HS19/8/32

Project Title: Food security at UWC: An exploration of actions and programmes to address student hunger.

Approval Period: 04 November 2019 – 04 November 2020

I hereby certify that the Humanities and Social Science Research Ethics Committee of the University of the Western Cape approved the methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report in good time for annual renewal.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

HSSREC REGISTRATION NUMBER - 130416-049

FROM HOPE TO ACTION THROUGH KNOWLEDGE

APPENDIX F: Information sheet (Food programmes)

Private Bag X17, Bellville 7535, Cape Town, South Africa
Telephone :(021) 959 3858/6 Fax: (021) 959 3865
E-mail: ***pkippie@uwc.ac.za*** *or* *mdinbabo@uwc.ac.za*

INFORMATION SHEET
For
Food Programmes

Project Title: Food Security at UWC: An Exploration of actions and programmes to address student hunger.

What is this study about?

This research project is being conducted by Nolukholo Mabharwana, a student at the University of the Western Cape. You are invited to participate in this project as an administrator/leader of the food programme. The researcher is aiming to identify and describe all food programs and their challenges at the University of the Western Cape. The researcher also seeks to investigate the perception on student hunger and the level of involvement of Academic Staff and students in programmes that address food insecurity.

What is the interview about?

This interview seeks to:

- Identify and describe all programmes at UWC that aims to contribute to eradicating hunger.
- Identify challenges that these programmes experience.

Would my participation in this study be kept confidential?

All participation will be treated with confidentiality and integrity. All personal information will be kept confidential and will remain anonymous. You will be required to sign a consent form before partaking in the study to protect your privacy and confidentiality. The researcher shall not reveal the identity of the participants and will safeguard the confidential information obtained in the course of the study.

What are the risks of this research?

The study will cause no harm and will not inflict discomfort in participants involved.

What are the benefits of this research?
The study is important in understanding the food security challenges at UWC and where the University is in addressing student hunger. The study will benefit the UWC community by informing where and how the university is addressing food insecurity, informing policy direction the university can take and ensuring that proper recommendations can be made to ensure that the food programmes are sustainable.

Do I have to complete the questionnaire and may I stop participating at any time?
Your participation in this research is completely voluntary. You can withdraw anytime you wish.

How long will it take to complete the questionnaire?
The full questionnaire will not take more than 30-45 minutes to complete.

Do I need to bring anything to the interview?
You do not have to bring anything.

Is any assistance available if I am negatively affected by participating in this study?
There are no negative effects that could happen from participating in this study.

What if I have questions?
This research is being conducted by **Nolukholo Mabharwana** a student at the University of the Western Cape. Her contact number is 0835415348.

If you have any questions about the research study itself, please contact **Prof. Swart** at the Department of Dietetics and Nutrition, University of the Western Cape. Her telephone number 0834824113.

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Prof Mulugeta Dinbabo
Acting Director
Institute for Social Development
School of Government
University of the Western Cape
Private Bag X17
Bellville 7535
021 959 3855

This research project has received Ethical Approval from the Humanities and Social Science Research Ethics Committee of the University of the Western Cape, Tel: 0219594111, Email: research-ethics@uwc.ac.za.

APPENDIX G: Consent form (Food programmes)

ISD

Private Bag X17, Bellville 7535, Cape Town, South Africa
Telephone: (021) 959 3858/6 Fax: (021) 959 3865
E-mail: pkippie@uwc.ac.za

UNIVERSITY of the WESTERN CAPE

LETTER OF CONSENT: Food Programme

I……., have had the opportunity to ask any questions related to this study, and received satisfactory answers to my questions, and any additional details I wanted.

I agree to take part in this research.

I understand that my participation in this study is voluntary. I am free not to participate.

I understand that I can withdraw from the study at any time, without having to explain myself.

I am aware that the information I provide in this interview might result in research which may be published, but my name will not be used.

I understand that my signature on this form indicates that I understand the information on the information sheet regarding the structure of the questions.

I have read the information regarding this research study regarding urban agriculture and food security.

I agree to answer the questions to the best of my ability.

I may also refuse to answer any questions that I don't want to answer.

I agree to the audio recording of my response and its use in this research.

By signing this letter, I give free and informed consent to participate in this research study.

Date: _____

Participant Name: _____

Participant Signature: _____

Interviewer name: _____

Interviewer Signature: _____

This research is being conducted by **Nolukholo Mabharwana**, a student at the University of the Western Cape. Her contact details are as follows:

Cell: +27 83 5415 348 Email: 3226761@myuwc.ac.za

If you have any questions about the research study itself, please contact **Prof. Rina Swart** at the Department of Dietetics and Nutrition, University of the Western Cape. Her contact details are as follows:

Tel: 0834824113 Email: rswart@gmail.com

This research project has received Ethical Approval from the Humanities and Social Science Research Ethics Committee of the University of the Western Cape, Tel: 0219594111, Email: research-ethics@uwc.ac.za.

APPENDIX H: Letter of permission from PI for use of secondary data

UNIVERSITY of the
WESTERN CAPE

FACULTY OF COMMUNITY AND HEALTH SCIENCES

DEPARTMENT OF DIETETICS AND NUTRITION

16 October 2018

The Chairperson
Higher Degrees Committee
Faculty of Economics and Management Sciences
University of the Western Cape
Robert Sobukwe Road
BELLVILLE
7535

Dear Sir

PERMISSION TO DO SECONDARY DATA ANALYSES ON EXISTING DATA

During 2017 I conducted a survey on student food security at UWC (reference number BM17-8-1). All students were invited to participate in the online component and students leaving lecture venues were invited to participate in the focus group interviews over a period of two weeks.

Hereby I grant permission to Nolukholo Mabharwana (student number 3226761) to use the data generated by this survey for her mini-thesis. She will have access to anonymized survey data on perceptions of students on student food insecurity as well as student suggestions for and actions to support hungry students.

Kind regards

RINA SWART
Supervisor

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