



Student Food Security and the Role of Food Aid Programs at the University of the Western Cape.

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Abstract

Background: Food insecurity is a phenomenon affecting many developed countries, among them susceptible to food insecurity are tertiary students. Food insecurity affects the livelihoods of students and is a global problem. This causes doubt and anxiety which affects the educational outcome of students and losing focus on academic excellence. This study focuses on student food security and the role of campus food aid programs at the University of the Western Cape. Food security is an important aspect of people's lives globally. While food insecurity is a significant challenge experienced by many South Africans nationally. Thus, necessary to shed light on the challenges of food among tertiary institutions and the relevance of food aid programs.

Methods: The present study employed a mixed-method which has provided both significant elements of quantitative and qualitative research methods. A comprehensive review of the literature was employed, this includes both academic literature and grey literature on student food insecurity globally, nationally, and at UWC. Primary data and secondary data were collected to answer the research questions. The quantitative element of this study was conducted through an online questionnaire with thirty postgraduate students. While the qualitative element was conducted semi-structured with ten postgraduate students.

Results: Students from low socio-economic backgrounds, without funding, covid 19, and expensive food on campus are some of the main causes of food insecurity. Students experiencing food insecurity have lost interest in their academics, performed less than their potential in academic assessments, some have failed the academic year and dropping out before time. The discontinuation of some food aid programs has increased the demand for food and the need for more food initiatives to be established. The role of food aid programs provided positive results in the alleviating of food insecurity during covid 19 and have proven consistency in the provision of food.

Conclusion: This study aimed to bring awareness about the existence of food insecurity among postgraduate students. Stakeholders of the university, policymakers, and researchers must take into consideration the various effects of food insecurity and investigate the alleviation strategies. This prevents the increase in dropping out, students repeating the academic year, and getting an improvement in academic excellence and graduation rates.

Keywords: food security, student food insecurity, reasons, postgraduate students, the role of food aid programs

Abbreviations

BNA: Basic Needs Approach

DUT: Durban University of Technology

FAO: Food and Agricultural Organisation

ILO: International Labour Organization

MDG: Millennium Development Goals

RDP: Reconstruction and Development Programme

SA: South Africa

SASSA: South African Social Security Agency Act

SRC: Student Representative Council

SU: University of Stellenbosch

UFS: University of the Free State

UJ: University of Johannesburg

UKZN: University of KwaZulu-Natal

UWC: University of the Western Cape

WITS: University of the Witwatersrand

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Chapter One

1.Introduction

Globally, food insecurity is a phenomenon affecting many developed countries such as the United States, Australia, and Canada (Barret, 2010). It is a global issue that affects the livelihoods of individuals nationally and extends to university campuses. South Africa is food secured nationally and has the capability of producing and importing food that meets the basic needs of its population. While households are faced with challenges of accessing adequate food (Du Toit, 2011). In South Africa, food aid programs are more prioritized in rural and poor communities and as part of school feeding programs (Munro et al (2013). Tertiary food security is not prioritized as much as high school level. While students who have been benefiting from primary and secondary school feeding programs are affected by food insecurity at university unless food aid programs are made available to them. (Gwacela, 2013).

Food security can be defined as a situation where all individuals always have access to adequate food, at all times to have an active and healthy lifestyle. While food insecurity is a situation whereby individuals have limited food security and uncertainty exists about food (Campbell, 1991). Food insecurity is a situation that occurs when students are running out of food, skipping meals, and rationing meals (Campbell, 1991). Students that experience food insecurity is most likely to be coming from low-income households (Sabi, 2018). Tertiary institutions have opened access to education to everyone irrespective of their socio-economic statuses (Gwacela, 2013). As a result, tertiary institutions have taken actual steps to start food aid programs that will help feed their students as the prevalence of food insecurity has been realized (Van den Berg, 2015).

Researchers found that university students are not immune to this global phenomenon. This prompted universities across the world to introduce student food aid programs in response to student hunger and food security-related issues. These issues include academic failure,

increased drop-out rates, and graduation retention. The acknowledgment by tertiary institutions that food insecurity exists has disregarded any doubt that students may have in terms of securing their next meal. Using food aid programs to prove that food insecurity is indeed embedded in the lives of postgraduate students.

According to Ndobu (2013), research and engagement on food aid programs have positive impacts in enhancing academic excellence, decrease drop-out rates, and increase graduation retention. Food insecurity creates awareness about the existence of food insecurity at tertiary institutions, particularly the assessment of food security is necessary. Placing them at the epicenter of the broader economic context. The roles of food aid programs are closely linked with the institutional systems in which they operate. Food aid programs go far beyond the basics of providing food it allows postgraduate students to reach their full potential academically. The role of food aid programs is to understand how food insecurity is influenced and the context in which it manifests.

Food aid programs have a huge impact on the students, campus community, institutional level, and economic growth. Section 26 of the Bill of Rights confirms the position of the food aid programs in tertiary institutions, whereby all individuals have the right to adequate food, water, and security (RSA,1996). This can be achieved through social assistance by the government when individuals are unable to support themselves (Bonti-Ankomah,2001). The prevalence of food insecurity at the University of the Western Cape (UWC) was used as a baseline to further assess the roles of food aid programs.

This study focuses on student food security and the role of campus food aid programs at the University of the Western Cape. Food security is an important aspect of people's lives globally. While food insecurity is a significant challenge experienced by many South Africans nationally. The South African economy is facing complex issues relating to poverty (Ndobu,2013). This highlights an important point that has been overlooked and undermined by tertiary institutions, the challenges of food insecurity among postgraduate students. Overshadowed by formal institutional systems that universities are for the elite and not commonly associated with food insecurity (Van den burg, 2015). Thus, necessary to shed light on the challenges of food among tertiary institutions and the relevance of food aid programs.

1.1 Background and Contextualization

Food insecurity is a significant challenge globally and cannot be ignored (Barret,2010). Food insecurity has hit the southern African region in 13 countries, affecting 44.8 million people

(Paul, 2020). The main factors that led to the increase of food insecurity between 2019-2020 by 10% are coronavirus and economic challenges. Other factors that may influence food security are the rise in food prices, fuel prices, and shortages of food (Barret, 2010). According to Stats SA (2017) 6.8 million people have been facing issues of food insecurity in South Africa. While the coronavirus pandemic is not the cause of food insecurity but rather has contributed to the status of food insecurity.

Development studies have recently been drawn to the alarming increase of studies about the prevalence of food insecurity in tertiary institutions (Gallegos,2014). This has triggered researchers to study the extent of food insecurity and how tertiary institutions can address this emergence (Davidson,2020). The emergence of food insecurity has led to tertiary institutions committing to alleviating food insecurity. Tertiary institutions such as the University of the Free State (UFS), the University of Stellenbosch (SU), the University of KwaZulu-Natal, Durban University of Technology (DUT), the University of the Witwatersrand (Wits), the University of Johannesburg (UJ) have prioritized food security among their students. These are some of the tertiary institutions that have been at the forefront of advocating for food security among their students.

To enhance food security, tertiary institutions must allow intervention strategies to operate and to genuinely feed their students. This phenomenon has attracted academics, shareholders, university executives, and representatives from the state and civil society to address this issue (Adeniyi, 2018). The high barriers to accessing food have a huge impact on student's well-being. Tertiary institutions cannot afford to shift away from food initiatives as the most affected students come from underprivileged backgrounds. These students face absolute poverty because of the inability of households to access sufficient food (Adeniyi, 2018).

South Africa is one of the most unequal countries in the world owing to the apartheid legacy which influences the realities of poverty (Adeniyi,2018). There is uncertainty that exists about the number of students that are food insecure. The emphasis is on national household surveys since food insecurity has significantly intensified. Students are considered to be part of the vulnerable group, and sustainable food aid programs should be made available to alleviate food insecurity and poverty at tertiary institutions. Food programs not only challenge the traditional way of giving food aid such as implementing food gardens but also drives efficient applications for food through online applications.

Parents often experience higher vulnerability to food insecurity as they have little or no money to feed themselves (Bonti-Ankomah, 2001). Parents struggle to sustain themselves and to send money to their children who are at tertiary institutions. Instead, they depend on remittances from bursaries and loans received by the students. The dependence on wage income means parents live on hand to mouth basis and cannot ensure sustainability for themselves and family (Bonti-Ankomah, 2001). In most situations, parents are depended on social grants to feed themselves and this is often the only source of income (Gwacela, 2013). There is a growing number of initiatives that are directed to feeding students, this creates an environment whereby students gain access to support services on campus. Food aid programs have been a great forerunner in improving and ensuring that students are food secured. Tertiary institutions need to undergo transitional changes that will accommodate students from disadvantaged difficulties by aiming to address food insecurity.

UWC is no exception in moving towards securing food and providing quality food to disadvantaged students. The role of food aid programs is significant, and the extent to which administrators have responded to the issue of food insecurity. Food insecurity affects the educational outcomes of students and warrants a great response from university management. The outcomes can be attributed to underperformance academically and eventually to drop-outs (Cady, 2014). Students' academic performance is significant as it contributes to the university graduation rates and retention rates. This demonstrates that food aid programs play a huge role in not only eliminating food insecurity but address issues affecting overall student success.

1.2 Significance and Rationale of the study

This paper sets out some of the reasons that students found themselves to be food insecure. Thus, economic inequalities are one of the reasons that the poor are unable to have adequate access to food (Ndobu, 2013). Some of the factors limit individuals to have access to adequate food include unemployment and low wages (Ndobu, 2013). In South Africa, one in five households cannot access adequate food and suffers the risk of being food insecure (Stats SA, 2011). South Africa is supposed to produce adequate food for all individuals however there is no assurance of food security at individual levels (Bonti-Ankomah, 2001).

Many students affected by food insecurity may produce different results than students that are not exposed to food insecurity. The difference between students who are not at risk of food insecurity is that they are more focused on their academics than having to worry about accessing food (Cady, 2014). The aim is to explore the nature of food insecurity among students

while studying. Students become susceptible to food insecurity as financial aid takes longer to respond to their financial needs. Students have no source of income and are dependent on loans and bursaries for financial support. Students become susceptible to food insecurity as they misdirect their funding to other items that are not food-related. In addition, students experience food insecurity because of the expensive food sold in the campus cafeteria.

Tertiary institutions have ensured sustainability and that food aid programs take prominence in eradicating food insecurity on campus. The food aid programs focus largely on providing food parcels, academic support and offer counseling sessions. Food aid programs on campus can be linked to food security among students. Food aid programs can be considered to play a fundamental part in the students' lives and have the potential to benefit the student throughout their academic journey. In addition, food security offers students meaningful benefits such as academic success. This suggests that food insecurity among tertiary institutions is more prominent than has been envisaged and calls for concern (Cady, 2014). Many students rely on food aid programs and tertiary institutions have started # movements against food insecurity. This has identified the challenges faced by students in different universities such as the University of KwaZulu-Natal (UKZN) (Gwacela, 2013).

1.3 Problem Statement

Food insecurity is experienced worldwide and is perceived as one of the most challenging problems about hunger (Van den Berg, 2015). The main dominant factor that contributes to student drop-out in South Africa is food insecurity. While Sub-Saharan Africa is plagued with the lowest tertiary enrolment in the world. Tertiary institutions are faced with the challenges of students dropping out which delays the process of producing graduates. This eventually affects the social and economic development that would have been contributed to by graduates. South Africans have been reduced by economic inequalities reflected by the current state of the economy concerning access to available food resources (Ndobu, 2013).

Food insecurity has hit many tertiary institutions. It has devastating impacts on how students access food. The failure of tertiary institutions to address food insecurity has many consequences. Students had to ask friends, supervisors, and corridor mates for food (Paul, 2020). Accessing food goes beyond collecting food parcels, it extends to staying food secured. Without disregarding other impacts on food insecurity, there is a strong correlation between food insecurity and coronavirus disease. Many students struggle to get access to food due to

lockdown; students did not have access to food programs due to restriction movements. Some food aid programs discontinued making food inaccessible to more students.

This had led to limited resources as more students were exposed to vulnerability and needed support to navigate through university without experiencing negative eating patterns. However, tertiary institutions have made efforts to provide more effective food aid programs that will be successful in sustaining students despite the challenges of covid19. The existence of the coronavirus challenged the availability of food within tertiary institutions and has threatened existing food aid programs about the adequacy of food. The coronavirus proved to have a critical implication on the livelihoods of households as the food aid programs played a big role in students staying off-campus with their families. Many households depend on food due to economic hardship influenced by the coronavirus. The coronavirus challenged the strategies put in place by tertiary institutions to ensure that students always have access to food and the role of each food aid program.

Tertiary institutions not only create a space for learning to students but must promote a space where students can learn without experiencing any impediments of food insecurity. Education is considered an investment towards economic growth in the long term (Gwacela, 2013). Part of achieving the long-term goals is to investigate the impacts of food insecurity concerning academic success and retention rates (Cady, 2014). Tertiary institutions must therefore provide students with resources that will allow them to achieve the intended long-term goal. Some of the barriers that will prevent the achievement of development include food insecurity. This contributes (15 %) as the lowest graduation rates in SA universities as many students are performing poorly in their academics (Gwacela, 2013).

Factors that contribute to student food insecurity should be investigated to put appropriate measures that will help reduce food insecurity. Socio-economic factors of students include but are not limited to this, students disadvantaged backgrounds and financial instability should be considered when addressing food insecurity. This plays a huge role in understanding the extent to which the student needs support with food, academics, and often psychological support. This confirms that when students cannot afford to buy food, and there is no access to food aid programs, students are more likely to be food insecure.

1.4 Research Aim

This study aims to bring a holistic view and understanding of food insecurity among postgraduate students and its context. The knowledge that is produced in this study will be

useful in the context of developing food aid programs on other universities in South Africa, and in improving the existing programs at UWC.

1.5 Research Objectives

The following primary and secondary research objectives were developed for this study.

1.5.1 Primary Objective

The primary objective of this study is to investigate the state of food security among postgraduate students at the University of the Western Cape (UWC). This objective will be achieved by pursuing secondary objectives.

1.5.2 Secondary Objectives

The primary research objective will be achieved by the following secondary objectives which were developed for this study:

Secondary Objective One: This study will determine how UWC postgraduate students access food aid programs as part of being food secured.

Secondary Objective Two: The study will determine how postgraduate students experience the benefits of food aid programs.

Secondary Objective Three: To assess the role of food aid programs in enhancing food security at UWC.

Secondary Objective Four: To establish a relationship between food aid programs and postgraduate students.

1.6 Research Questions

In response to achieving the primary objectives, the following questions were developed. These questions will be examined to acquire conclusions and further make recommendations about how food aid programs have become instrumental to student food security.

- 1) How do UWC students living on campus access food?
- 2) How, why, and when do students at UWC make use of on-campus food aid programs?
- 3) How is food accessed through food aid programs part of their overall food access strategy?

- 4) Do UWC students who make use of campus food aid judge the food aid as sufficient in quantity, quality, diversity, and health?
- 5) What factors determine whether students are assisted through the food aid program?
- 6) Are there any complementarities or redundancies between the programs?

1.7 Hypothesis

The following hypothesis was developed to come up with a solution that has been presented in the problem statement:

Hypothesis One: Postgraduate student's food security status has been undermined and food aid programs play an instrumental role in enhancing their food status by providing them access to food.

Hypothesis Two: This situation has been overlooked and the focus is mainly on undergraduate students hence many postgraduate students suffer the brunt of such ignorance. The emphasis is to be aware of the needs of postgraduate students by bringing more access to food than ever before.

Hypothesis Three: Acknowledged and monitored food aid programs contribute to the sustainability of the overall community campus.

1.8 Structure of the Research

The following will represent how the research is structured:

Chapter One: The current chapter is the introduction of the research conducted. It focuses on the background and contextualization of the research study. Followed by the significance and rationale of what prompted the need of this study, this includes the research problem. It will provide the research aim, primary and secondary research objectives. It will further provide the research questions and hypotheses that were developed for the research. Finally, it will provide an overview of the research structure followed in this study.

Chapter Two: This chapter explores the definition of food security and food insecurity. The chapter will provide an overview of food security in South Africa, student food insecurity, food initiatives at universities in South Africa, and food security at UWC. The role of food aid programs will be discussed and the importance of food distribution. The chapter provides the various reasons that contribute to student food insecurity. The correlation between food

insecurity and academic performance will be discussed. In addition, it will provide a discussion on covid 19 and food insecurity. Finally, it provides the theoretical application of this study.

Chapter Three: This chapter will present the research design and methodology used in this study. It will outline the research approaches and places emphasis on the use of mixed methods for this study. It comprises the characteristics of the research design, the research process, and the research strategies used in this study. It will introduce the data collection methods such as sampling techniques, and which is the most appropriate sampling practice for this research. Furthermore, it will discuss the process of data collection, data analyses, and how each data is collected to derive the outcomes of the research. Importantly, it addresses ethical considerations and the limitations of the study.

Chapter Four: This chapter presents the research finding and discussion based on the information gathered from postgraduate students. It will discuss the findings from the online questionnaires and semi-structured interviews. This includes the demographical information of the participants, general challenges, aspects that can be improved, and stigmatization. The discussion will be based on food sources, approaches to food, the collection process, the impact of food aid at UWC, and covid restrictions.

Chapter Five: Chapter five provides the conclusion and recommendations derived from the research findings of this study. Firstly, it will provide an overview of all the chapters documented in this study. Secondly, it will describe how each research objective and research questions were achieved. Thirdly, the recommendations will be discussed in detail each recommendation. Lastly, future research will be provided for further research.

1.9 Conclusion

This chapter has served as an introduction to this research study and the ways it will be achieved. The chapter outlined the research problems emerging in tertiary institutions and presented the significance of the study. The research aim, research objectives, and research questions were highlighted. The proposed hypothesis was identified for this study. This was followed by outlining the structure that will be followed in this research.

Chapter Two

2. Literature Review

2.1 Introduction

This chapter reviews the literature on food security, student food insecurity and assesses the role of food aid programs at the University of the Western Cape. It provides both international and national contexts on food insecurity among students. It defines food security and food insecurity, including the reasons that may lead to food insecurity among students. It provides the context of food insecurity within UWC, including the process of distribution. It also highlights the importance of participation and the programs involved in creating a sustainable environment for students. It further examines the state of covid 19 concerning food insecurity. In addition, this chapter provides a theoretical framework that is deemed suitable for this research.

2.2 Food Security

According to Pinstrup-Anderson (2009), food security means different things to different individuals. However, food security is when individuals have enough food available to feed themselves. The availability of food could be nationally, provincially, at an individual level, or within campus communities. According to the Food and Agricultural Organisation (FAO) (1996) notes that “that food security exists 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”. This means that individual nutritional needs must be met to be food secure. It is about having access by all people to enough food to live a healthy and productive life. Furthermore, when all people are always deemed to have access to nutritious food, they can live a healthy and active life (Pinstrup-Anderson, 2009).

Sabi (2018) notes that food insecurity is acknowledged as an essential socio-economic factor. According to Rule (2018) food insecurity “is a household-level economic and social condition of limited or uncertain access to adequate food”. Gundersen and Ziliak, (2015) note that food insecurity is a condition experienced by individuals who lack access to adequate nutritious food. Food insecurity exists when there is uncertainty about where the next meal will come

from. This definition can be best understood in the context of student food security and the purposes of this research.

2.3 Overview of Food Security in South Africa

According to Gwacela (2013) in the year 2000, it was estimated that about 14.3 million people experienced food insecurity in South Africa. Van den Berg (2015) adds that in 2012 54% of households experienced food insecurity. Hendricks (2014) notes that South Africa can provide enough food for all its people as stated by agricultural policies. Sehlabane (2014) note that the rights of citizens are protected by several legislations that have been put in place to ensure that government does not infringe upon these rights. The Constitution of the Republic of South Africa of 1996 and the 2004 South African Social Security Agency Act (SASSA) are some of the legislative bodies that uphold and regulate the right to food (Sehlabane, 2014).

According to Sehlabane (2014), South Africa has taken necessary measures to ensure that its citizens have access to sufficient food. It recognizes the obligation of meeting the citizen's basic food needs which are aligned with the first Millennium Development Goals (MDG) by prioritizing its citizens. If the right to food is not met it can have an impact on the health, dignity, and well-being of individuals (Sehlabane, 2014). Individuals lack this fundamental human right as they are unable to provide for themselves. Classen et al (2016) note that the government has created policies, safety nets, nutrition programs that will ensure the availability, accessibility, and affordability of safe and nutritious food for food-insecure households and individuals.

According to Adeniyi and Durojaye (2020) other policies and programs that understand the importance of access to food in South Africa, provide social security services. They include the Reconstruction and Development Programme, Agriculture White Paper, Integrated Food Security Strategy, National School Nutrition Programme and Food for All Programme, National Policy on Food and Nutrition Security, Household Food and Nutrition Security Strategy, Fetsa Tlala (End Hunger) Food Production Intervention. These are government programs that aim to reduce food insecurity in South Africa (Adeniyi and Durojaye, 2020). In addition, these programs indicate that poverty and hunger are national issues that extend globally (Du Toit, 2011). These programs target national, household, and individual levels of food security regardless of the food insecurity experienced by individuals daily.

These initiatives need the co-operation of various stakeholders such as the Department of Social Development and Agriculture, National Food Fortification programs. It is very crucial for agricultural policies to provide adequate food for its people to have an acceptable economic, political and social order and for stability (Hendricks,2014). These include community-based projects such as gardens, food subsidies that the government has started to meet its obligation of providing adequate food (Drewett, 2018). The national government has acknowledged that households experience food insecurity, and the need for food programs such as feeding schemes, social grants, and food gardens to be created (Hendricks,2014).

Classen et al (2016) adds that these programs are there to help existing programs improve and grow to be able to manage the distribution of food and introduce community food depots. Adeniyi and Durojaye (2018) note that many students do not enjoy the right to food as enshrined in the Constitution. This can be influenced by several factors that include unemployment, poverty, race, and inequality. These are the major factors that contribute to food insecurity because South Africa lacks economic opportunities that will create self-reliance and self-sustainability. Devereux (2018) adds that race is one of the strongest contributors to food insecurity, particularly black and colored students. Drewett (2018) notes that universities recognize that food insecurity exists and have become active in establishing intervention strategies that will ensure food security within the institutions.

2.4 Student Food Insecurity

Barret (2010) notes that food insecurity is a global issue. South Africa is one of the most unequal countries in the world and students have been affected by the realities of poverty (Adeniyi, 2018). Davidson (2020) notes that numbers about food insecure students are unknown as they have been excluded from the national surveillance data. The impacts of food insecurity go beyond the borders of university campuses, they are experienced in South Africa and other countries. Gallegos (2014) notes that the prevalence of food insecurity among students at universities has drawn great attention in development studies. This has prompted further research to have a better understanding and the extent to which food insecurity needs to be addressed at universities (Davidson,2020).

Some tertiary institution nationally has started initiatives to feed its students through food aid programs (Van den Berg, 2015). According to Van den Berg (2015), the graduation rate is 15% of all the 23 universities in South Africa and the dropout rate is 50%. Sabi (2018) notes that education is very important in South Africa as it holds the key to economic development. The

aim is to ensure that South Africans engage in academic activities so that they can acquire the necessary qualifications that contribute to the labor market.

According to Drewett (2018) research emerging from food insecurity among students is influenced by the current poor academic performance of students, who have been hindered by hunger. Food insecurity has emerged like a skeleton in the closet of university students. Rich countries have also been affected by food insecurity among their students (Van den Berg, 2015). Developed countries such as the United State of America also experience food insecurity among their students. Students were confronted with food insecurity and did not know how, where, and when they will get their next meal (Rule, 2018). Nazmi (2019) notes that tertiary students between the ages of 18-24 are exposed to food insecurity in the United States. This affirms that food insecurity is a crippling problem that affects students globally (Gcwacela, 2013).

In countries such as Canada and Australia, there are food aid programs for their students. In Canada, the first food bank was established in 1991 (Munro et al, 2013). Van den Berg (2015) notes that this addresses the racial inequality in South Africa by enrolling disadvantaged students into higher education. This is the outcome of apartheid as the challenge of the dropout rate is consistent. Food insecurity at the tertiary level can be expected as the proportion of the students are coming from food insecure communities (Meko and Jordaan, 2016). Many households lack self-sufficiency even though South Africa can secure food and produces sufficient food (Drewett,2018).

Students coming from these households find themselves battling the same problems at university. Micevski (2014) notes that the steps taken by the universities to provide food security among their students benefit mostly the on-campus residence. The most affected students are those staying away from their parents than the ones staying off-campus with their parents. Students who are staying with their parents are in a better position, as parents are responsible for providing food in households. Hence, the importance of food assistance so that the most vulnerable group can have access to food (Micevski,2014).

2.5 Food initiatives at Universities in South Africa

According to Van den Berg (2015), South Africa does not fall short of food rather it is the inadequate access to food by students. Among the vulnerable group, students suffer the brunt of a lack of nutritious food. Gwacela (2013) notes that for food-insecure students, access to education is seen as a gateway to a rewarding and fruitful life. In so doing, educational

resources should be made available and accessible to achieve academic success. It is feasible that food insecurity may contribute to poor student success, as it is known to be a continuous threat if not addressed at university (Van den Berg, 2015). South African university graduation rate of 15 % is one of the world's lowest (Gwacela, 2013). And faculties experience high dropout rates, increasing cases of failed courses, and growing numbers of students on probation and at risk of academic exclusion, amongst others due to these complexities (Gwacela, 2013).

Food has become part of policy issues recognized at the university level. And that food is not easily attainable for students (Dominguez-Whitehead, 2015). According to Van den Berg (2015), numerous studies have been emerging about food aid programs because of the growing numbers of food-insecure students on campus. Students are trying to escape the socioeconomic factors experienced in poor communities; however, food insecurity seems to be impossible to escape even at university (Gwacela, 2013). Letseka and Cosser (2010) note that poverty is not only experienced by historically black universities, but white universities also experience student food insecurity. Stigmatization makes it difficult for students to acknowledge that they are struggling with accessing food (Gwacela, 2013).

Food insecurity affects students in the College of Science and Agriculture, at the University of KwaZulu-Natal on the Pietermaritzburg campus. This has raised critical concerns as the most affected students by food insecurity are first-year students (Dominguez-Whitehead, 2015). However, graduates also come from poor backgrounds as dropouts (Breier, 2010). According to Van den Berg (2015), the University of the Free State is one of the universities that is situated in the Free State province, where food insecurity in the general population is higher (at 61%) than the national average. Food remains unattainable to their students as there are insufficient available resources and programs.

A student struggling with acquiring food varies from one food insecure student to another, as some will struggle with affording to buy food while the other will struggle to access food because there is no money to buy food. Often individual staff members help struggling students with necessities because financial aid does not offer sufficient support. However, these efforts are not sustainable because they are under-resourced (Dominguez-Whitehead, 2015). According to Van den Berg (2015), the UKZN has 20% of underperforming first-year students who regularly sent remittances diverted from their loans or bursaries home, leaving very little on which to survive. These students often feel obliged to send financial aid money home to support their families. Stigmatization has made students not openly speak about food insecurity

aid food aid and would be embarrassed to be seen as part of food aid programs (Gwacela, 2013).

According to Meko and Jordaan (2016), the University of Free State launched a campaign to combat student hunger. The campaign was known as the No Student Hungry which specifically provided students with a daily allowance to purchase food on campus. This was one of the efforts by the university to show commitment to alleviating food insecurity among students. Munro et al (2013) add that the effort made by institutions gives a fair chance to all students to succeed by providing them with resources such as food. This is a significant effort because the challenge of experiencing hunger while studying compromises the student's chances of succeeding academically. The Student Representative Council at Stellenbosch University was able to launch a #Move4Food drive to ensure that no student goes hungry by building a sustainable solution for students (SU News, 2018). Students who are experiencing food insecurity at Stellenbosch University are being assisted by initiatives such as Vouch4US programmes in 2015 that provide vouchers to students to buy basic needs such as food and medication because there has been an increase of food-insecure students. The Tygerberg Food Pantry programme was established by students for students in 2015, by creating food services on campus that creates a culture of empathy and caring for students (SU News, 2018).

2.6 Food Security at UWC

The University of the Western Cape was established in 1960 during apartheid. The foundational basis that it was established for coloured students was rejected by its council in 1978 (Keats,2009). It later became known as the intellectual home of the left in the late 1980s (Breier, 2010). The university played a huge role in South Africa's liberation struggle against discrimination. According to Letseka and Cosser (2010), UWC has come a long way and has transformed itself from an institution of coloureds by relaxing its admission policies. The proportion of African student enrolment grew more significantly over the years from 13% to 58% because of the changes in the university policy on student access (Letseka and Cosser, 2010).

UWC transitioned from difficult financial times and created a new vision that aligns itself with sustainable processes that enhance student development (Keats,2009). The university accommodated many impoverished student's and some of these students left the university without completing their qualifications because they were too poor to stay (Breier,2010). The major challenge faced by students experiencing food insecurity is dropping out of university

because the student cannot handle being food insecure. Dereveux (2018) notes that students are the most vulnerable group to be food insecure, then the rest of the population. There is almost a third of students among universities that live with food insecurity, but there might be more students as some remain hidden and ashamed to speak up (Dereveux,2018).

Adeniyi et al (2018) note that since the #FeesMustFall movement food insecurity among students has been recognized by university administrators. UWC has responded to the increase of food aid programs since 2015 by exploring a wide range of solutions. In so doing, increasing access to food and ensuring that the processes for distribution of food are properly maintained (Buch et al, 2016). UWC addresses food insecurity through research, education, and partnerships (Adeniyi, 2018). Seminars have been introduced to engage in ways that address food insecurity and what universities can do to alleviate it. Seminars about food access and research can be done around food security discourses (Breier,2010). The University of the Western Cape, the Dullah Omar Institute (DOI), and the Centre of Excellence in Food Security (CoE) support seminars that have to do with alleviation strategies of food insecurity (Adeniyi and Durojaye,2020). The center conducts formative research that supports a sustainable food system that ensures food security for marginalized and vulnerable groups.

Adeniyi et al (2018) note that university administrators are taking active roles in participating in discussions about the lack of the basic needs of food and shelter of students. These roles include taking part in the national colloquium that engages with other universities. The University of the Western Cape and the University of Pretoria, with the support of the Ford Foundation, looked at ways that students can have access to food, this was hosted by the Dullah Omar Institute. The discussions were about putting measures that minimize the stigma around food insecurity and how students should not be embarrassed in asking for assistance, and that they should not compromise themselves in the process of feeling ashamed, because food insecurity is worse than what has been measured (Adeniyi et al, 2018). It looks at ways that will increase the availability and accessibility of food on campus as a basis for providing essential nutrients for students.

Rule (2018) notes that the self-esteem of the student is severely affected socially and often experience anxiety about the accessibility of food. The prevalence of food insecurity has led to a variety of awareness activities that have been hosted annually in the student center to increase knowledge about nutrition and food insecurity. University administrators, corporations and business entities, non-governmental organizations, and other actors can play an important role

in ensuring access to food for everyone, including students in tertiary institutions (Adeniyi and Durojaye, 2020). The increase in demand for food assistance has created solutions by asking for assistance from different donors such as Tiger Brands. UWC opened its first pantry in 2017 to many students who are food insecure. This partnership is aimed at taking 3-5 years because it realizes that students need to be empowered for effective learning.

The institution recognizes the informal efforts made by staff members, fellow students, and residential services to address food insecurity. Some programs have been established as additional programs such as exam food aid programs. The Student Representative Council also serves meals for students as part of their initiative to end food insecurity among students by serving lunch and supper during the exam period using the #No Hunger Can Stop Our Success as their slogan. In partnerships with local grocery stores such as Pick n Pay, students were given vouchers to buy from the store (Adeniyi and Durojaye, 2020). Adeniyi (2018) adds that innovative ways of creating access to food should be adopted through food procurement systems.

2.7 Roles of food aid programs

UWC has a history of solving its problems differently from other universities, it uses strategies that ensure that no student is left behind (Breier, 2010). UWC has more than 23 000 students with seven faculties. It strives in helping the historically marginalized to participate in a society in transition by responding to the needs of a society (Breier, 2010). The focus is on the ability to be an agent of change not only on academic support but on basic needs such as food security and nutrition. The idea is opening opportunities for support in different departments such as the Centre for Student Support Services and the Gender Studies Department that also distributes food packages to students in need (Buch et al, 2016).

UWC has several strategies that have been formulated in creating an enabling environment that ensures access to food for students (Adeniyi and Durojaye, 2020). These range from the efforts made in the alleviation processes of food insecurity. This is an investment in education and has been supported by NGOs, professional alumni, and the campus community. This has drawn food alleviation activities taking place annually hosted by the different departments within the university (Buch et al, 2016). Students have taken it upon themselves to support their existing programs by introducing student-driven fundraising initiatives that are towards greater food security. The role played by NSFAS disbursement to students is often seen as a solution to food insecurity on campuses. The disbursement is handled by the financial aid office of the

university, which ensures that funds are allocated to students accordingly (Adeniyi and Durojaye, 2020).

UWC makes fundamental contributions to the development of the student community by implementing various programs that promote academic success (Breier, 2010). The campus community is motivated by the strength of the students coming forward for assistance regardless of the stigma attached to such programs. This ignited the establishment of other programs established by faculties, Gender Equity Unity, and platforms such as Facebook: UWC Fairy Godmother, seminars hosted by the Dular Omar institute to discuss food insecurity (Buch et al, 2016). The Tiger Brands initiative strengthens internal partnerships to help alleviate food insecurity as many campus community members understood the scope of the problem at UWC. The university acknowledges the provision of food parcels is not a long-sustainable solution. Students understand that food packages are not hand-outs but make a huge difference as most are dependent on them each month. UWC has made great strides in the measures taken to respond to food insecurity alleviation.

According to Breier (2010), the Gender Equity Unity was established in 1995 and contributes to the alleviation of food insecurity at UWC. And it does not only focus on non-discrimination and fighting gender issues. It facilitates the empowerment of marginalized groups and has a food programme that is geared at making sure that no student is hungry. Rule (2018) notes that food insecurity may affect first-generation students, undergraduates, older students, students identified as LGBTQ, and students from foster systems. Adeniyi and Durojay (2020) note the Reslife Division of UWC identifies students at risk of hunger through its Development Officers by using a needs assessment. Reslife provides students with dry food and toiletry parcels monthly, for up to three months, depending on the student's circumstances.

Some staff members and student activists feel that they are morally obligated to assist students who reach out to them for assistance. Now and then boxes will be made available to donate food comprised of non-perishable foods such as beans, mix veg, pilchard, chakalaka, and jam (Buch et al, 2016). However, students who do not ask for assistance cannot be identified and assisted with the available resources offered. The university would know if they were dealing with episodic or chronic food insecure students (Rule,2018). Students asking for assistance can help the success of a food aid program, to help understand the magnitude of food insecurity and how many resources are needed to make the program effective (Rule,2018).

2.8 Food Distribution

Food insecurity has created food aid programs that focused on finding innovative responses. UWC's administration, in partnership with Tiger Brands, distributes dry-produced food packs to identified food insecure students (Adeniyi and Durojaye,2020). The nutrition program is run by the Office of Student Development and Support (SDS) with help from the SRC members who have been in the forefront, and student assistants in addressing food insecurity. Students become active participants by volunteering to stock the pantry shelves and re-opening the pantry. UWC campus community was motivated by the strength of the students coming forward for assistance regardless of the stigma attached to such programs.

To minimize the stigma of food insecurity, bags are used to distribute food. This preserves the dignity of the student and the bags are reusable, customized with the UWC logo (Buch et al, 2016). This prevents the reluctance of food insecure students to access food aid programs because of the fear of being marginalized (Sabi, 2018). The distributional areas of food are only known by the food insecure students. Students are sent emails for the time of collecting their food bags to avoid the influx of students at the same time. Distribution is made during the university lunch break, by following the student timetable, and after hours. The distribution is made to the convenience of the availability of the student. However, the operation hours are Mondays to Fridays from 12:45 pm -1:45 and 3:30 pm- 5 pm (Buch et al, 2016).

The disproportionate number of students has been divided accordingly, and these students do not know each other. The pantry has a criterion of students who receive food assistance. Each student is required to sign a food insecurity pledge before receiving their food bags and a register is signed each time a student collects food (Buch et al, 2016). This tracks the number of students each month because some student's food insecurity is temporary. However, the pantry guarantees students food every month (Adeniyi and Durojaye). Rule (2018) adds that food insecurity does not affect the students equally. A database is maintained for all the beneficiaries to help with the process of monitoring. Efforts have been made to improve the pantry and more strategies have been put in place to better meet the food security needs of all students. In so doing, diversifying food.

2.9 On-Campus Food Aid Programs

Barret (2010) notes that universities must be able to address this issue to maintain it as more students are seeking help. As food insecurity deepened more support is needed to minimize the scourge of hunger. According to Van den Berg (2015), food intervention programs have been

sought out by universities to prevent student dropouts. This acknowledges that food insecurity does exist. Addressing the issue of food insecurity has shown the importance of student success which has a huge impact on the economy when students do not graduate (Van den Berg, 2015). Efforts to respond to the students struggles should be formalized because staff members and fellow students contribute to the sustainability of the student's needs (Dominguez-Whitehead, 2015). The establishment of different food aid programs at UWC suggests that there is a huge need for different food interventions that could ensure the alleviating of food insecurity.

Food aid programs introduce coping strategies by guaranteeing food security strategies because food insecurity is a continuous threat (Nazmi,2019). Research from other countries shows that other universities opted for food gardens for their students, food stamps, food vouchers, and food parcels, and cooked food (Chaparro et al, 2009). Gcwacela (2014) notes food aid programs need various stakeholders for them to be successful. It needs students' structures (SRC), students, university management, NGOs, the university community, businesses, food brands, and grocery stores. The participation of each stakeholder is very important as each plays a vital role in addressing food insecurity. When stakeholders have one mutual understanding the purpose of the food aid program becomes clear to everyone involved (Hendricks,2014).

Food aid programs that have been recently established must learn from other food aid programs about the disadvantages and advantages so that they can be effective. Davidson (2020) notes that social and emotional well-being is most negatively affected by food insecurity, more especially their academics and physical health. The measures that are taken by the university to ensure that there is available resources available shows commitment to the fight against food insecurity. This commitment confirms that students are given support by the university to access nutritious food that meets their basic needs (Hendricks,2014).

In response to combat student hunger, food aid programs assisted with food hampers and vouchers. This allows access to balanced meals daily. The University of Free State launched a No Student Hungry (NSH) campaign that provides students with a daily allowance, which can be used to purchase meals at selected food outlets on campus (Meko and Jordaan, 2016). According to Devereux (2018) staff are aware that students are struggling with food insecurity and are often hamstrung by socio-economic situations. This has led to the creation of a Facebook page initiated by a staff member to help alleviate food insecurity. The role played by this page has changed the lives of many students and has a huge impact on the role played by the funder (Devereux, 2018).

The funders often fund more than one student monthly. UWC registered students can join the page, they can request by writing about their situation and a donor will contribute to their needs. Food insecurity affects students differently and this page offers a range of assistance. This could be in a form of a food voucher sent by an overseas funder, course readers and textbooks, travel expenses, printing credits, data, electricity, warm clothing, and bags for books, all student requests are posted on the page anonymously. When a suitable funder is identified that funder will make an EFT payment directly into the student's bank. The student's identity is posted anonymously to preserve the student's dignity (Devereux, 2018).

2.10 Reasons for Student Food Insecurity

According to the Food Insecurity Brief (2006), students may be vulnerable to food insecurity, which consists of different factors leading to vulnerability. Some of these factors may include household demographics, social and institutional access rights. Chaparro et al (2009) note that the prevalence of food insecurity may also be linked to a certain ethnic group. Food insecurity may be caused by a lack of financial resources and geographical differences in the cost of food (Chaparro et al, 2009). According to Dominguez-Whitehead (2015), students are considered to have the necessary financial resources, bursaries, or have access to family allowance. However, this is not true as student's struggles about food extend to many other reasons. The costs of tuition fees and accommodation have increased over the years which is another factor that exposes students to food insecurity (Rule, 2018). Sabi (2018) notes that students who are food insecure resort to food theft as an emergency measure to securing food. This happens in the residence's communal kitchen and between roommates. Students use food theft as a coping strategy to survive.

2.10.1 Students from a low socio-economic background

According to Kassier and Veldman (2013), student enrolment from economically disadvantaged backgrounds has increased which has introduced the realities of socio-economic disparities of student backgrounds within universities. This contradicts that being at university is a privilege because many students are faced with financial difficulties. The idea is that students' basic needs are being met at university hence less is said about food insecurity because universities are considered elite (Dominguez-Whitehead, 2015). Sabi (2018) notes that students who experience food insecurity are most likely to be from low-income households. Duffy (2002) notes that some of the households are headed by single parents that are struggling economically. A single-headed household is more likely to struggle financially than households

headed by two parents. Gwacela (2013) notes that low-income households are more likely to purchase cheaper, refined grains while high-income households purchase healthier and quality food.

The academic performance of Black students from disadvantaged backgrounds is severely affected by the lack of access to accommodation, clothing, and food (Dominguez-Whitehead, 2015). Financial support from the student family is limited because of low-income levels (Gwacela, 2013). Gwacela (2013) notes that students from disadvantaged backgrounds have taken advantage of the opportunities of education opened to them since the democratic elections. Universities have made education available to all individuals that qualifies, this has given more access to the disadvantaged to enter university. Students who are often exposed to food insecurity depend on households whose main source of income is from child support grants, old-age pensions, and wage employment (Nazmi, 2019). Students who receive funding choose to send remittances to their families and skip meals (Rule, 2018). Students' financial backgrounds have a huge impact on how they choose to spend their funds and the kind of food they are accessible to (Gwacela, 2013).

Gwacela (2013) notes that most university students in South Africa come from households whose income is R1600. Parents of these students are unable to cover additional costs such as accommodation fees, books, transport, tuition fees, and food. Students share their funding with their families because of the low socio-economic backgrounds they come from, this depletes their funding in advance and leads to food insecurity. The remittances would have been adequate and sustained the student by purchasing enough food (Gwacela, 2013). These students understand their financial situation back at home and that their parents do not have enough resources to support them. Students who receive food assistance may be faced with financial difficulties.

2.10.2 Financial Aid

According to Kassier and Veldman (2013), the government provides financial assistance for tertiary students through National Student Financial Aid Scheme (NSFAS). This ensures that students have a sustainable financial aid system that provides them with loans and bursaries. The aim is to make a difference in the lives of students who cannot afford to pay university fees (Kassier and Veldman, 2013). Students from poor families apply for financial assistance (NSFAS) to help with the costs of education (Gwacela, 2013). Sabi (2018) notes that students qualify through a means test and if the family can pay towards the studies. Financial aid is

unable to provide a sustainable system that covers all the student tuition fees, accommodation, books, and food.

This makes it more difficult for the student who has limited or no financial resources (Kassier and Veldman, 2013). If there is a stipend available for the student, it will depend on the institution to distribute it and how the student manages their finances (Sabi, 2018). However, in most cases, NSFAS does not cover all the basic needs such as the stipend that is mostly needed for food. This opens the financial gap which makes it difficult for the student to stay or drop out. And this delays the process of the student completing their qualifications by the required time. Students from poor backgrounds who have not escaped their socio-economic issues still experience food insecurity within the university. The funding may fall short which creates a gap between the money received and what is needed by the student to survive (Rule, 2018).

NSFAS firstly covers tuition, accommodation, and uses what is left from the funding for food. This always leaves the student with insufficient funds to feed themselves, especially after long delays with the distribution of funds (Adeniyi, 2018). Sabi (2018) notes that other additional costs such as transport, stationary, and books that may not be covered by NSFAS become a problem for the student. This puts the student in a position of financial strain especially if there is also no food allowance. This exposes the student to food insecurity. Van den Berg (2015) notes that NSFAS has been facing challenges of not being able to pay for all the students who qualify to be funded because of insufficient funds. The government financial aid encountered a problem in 2009 of running out of funding to cover study fees for students (Van den Berg, 2015).

2.10.3 Expenditure on Other Items

According to Chaparro et al (2009), food insecurity exists when students misdirect their funding on other items that are not food related. This increases the chances of the student being food insecure as these items are not food related. Sabi (2018) notes mismanagement of money occurs irrespective of the student financial status. They expose themselves to food insecurity because they misdirect their funds. They lack budgeting skills, food use, and not prioritizing grocery listing. (Gwacela, 2013). The management of finances by students often lack the necessary skills to manage money to buy groceries that will stretch to the next month's budget (Chaparro et al, 2009). This often leads to the funding being depleted before the academic year ends (Dominguez-Whitehead, 2015).

The spending patterns of the students makes it difficult to meet the student basic needs. Students would buy takeaways, go out for entertainment, shopping, instead of buying groceries, and cooking regularly (Chaparro et al, 2009). Mismanagement of funds includes buying alcohol, luxury items, and clothing than buying nutritious food (Gwacela, 2013). This often disrupts the eating patterns of the student because they must limit their food intake and the quality of food they eat (Chaparro et al. 2009). Sabi (2018) notes that students who have a low budget purchase cheaper, refined grains and foods richer in vegetable fats instead of quality nutritious food. In so doing, students eat poor nutrition that lacks dietary diversity (Kassier and Veldman, 2013). According to Gwacela (2013) notes that financially secured students can change their food security status by exposing themselves to food insecurity because of misdirecting of their funds. The funds can be from their bursaries, family allowance, and part-time jobs and can be used to purchase nutritious food, however, the funds are misused.

First-year students are most likely to overspend their money because they live independently to use their discretion which is often the reason they mismanagement their funds (Gwacela, 2013). Students fall into the trap of marketing strategies targeted at them and lack budgeting skills. Students are lured into opening credit cards leading to debt. There is a shift from purchasing power with the available resource to being food insecure. This defeats the component of food utilization, where the student would have bought nutritious and sufficient food supplies (Gwacela, 2013).

2.10.4 On-Campus Expensive Food

Gwacela (2013) notes that food prices on campus have affected the quality of food students choose, as nutritious food is expensive to purchase. Kassier and Veldman (2013) note that foods such as fruit and vegetables which have higher energy are more expensive. Dominguez-Whitehead (2015), high food prices on campus have unrealistic high prices, and residential services have shifted away from the catering model to self-catering. Students would purchase food that is cheap elsewhere, and purchase foods with low nutritional value (Van den Berg,2015). The catering model on residences was more convenient for students, food was readily available for students in a variety to choose from. The catering model provided ready-to-go healthy food options and having access to the meals daily (Van den Berg, 2015). This model prepared students to focus more on their studies than having to worry about preparing meals (Dominguez-Whitehead, 2015).

Student accommodation has become inclusive to self-catering and has made it more difficult for disadvantaged students (Drewett, 2018). Van den Berg (2015) adds that the catering services have been abandoned by residential services to make higher education more affordable. Students should be guided by university nutritionists on how to make quick and affordable nutritious meals (Van den Berg, 2015). Students staying on-campus residence are at a higher risk to be food insecure especially if they have financial difficulties. Communal kitchens have been a hotspot of food theft and have exposed students to food insecurity because of the loss of food items. The communal kitchen is open to everyone which makes it easy for students to steal from each other (Gwacela, 2013). Food theft is a major challenge to the component of availability and needs to be addressed because it leaves the student without food until replaced again.

2.11 Correlation between Food Insecurity and Academic Performance

For students to live an active lifestyle and provide good results they should always have access to nutritious food (Barret,2010). Sabi (2018) note that student academic performance is affected because there are students who go for days without having a meal because they cannot afford to buy. According to Kassier and Veldman (2013), hunger can affect concentration and energy levels which often leads to tiredness, this affects the cognitive functioning of the student. Gwacela (2013) notes that food insecurity reduces the student's chances of partaking in academic activities because one's physical ability has been affected. Food is one of the important contributors to student development which makes it an important factor to understand the experiences of students in getting food (Dominguez-Whitehead, 2015). Students who experience food insecurity have often affected their educational outcomes (Dreijmans,1988). In so doing, they lose focus on their academics because they always looking for ways to feed themselves.

Food insecurity forces students to choose between buying study material or food. Students do not attend classes, they get low marks, their behavior changes towards the learning environment, and end up failing (Chaparro et al, 2009). Rule (2018) adds that the mental health of such students is adversely affected because nutritious food enhances the concentration levels of students. Some students have dropped out without persisting further while others have failed the academic year. Rule (2018) notes that food insecurity undermines the academic performance of students, in so doing, undercuts their well-being. Students are more likely to

be food insecure at the time of exams or the end of the term, and the recipients of financial aid are more vulnerable than any other student (Dominguez-Whitehead, 2015).

These are some of the reasons that cost the education sector money when students do not graduate (Dreijmans,1988). Sabi (2018) note that the labor market is also compromised when students do not complete their degrees. This also delays the economic advancement of South Africa. Munro et al (2013) note that universities that respond to food insecurity allow a student to have a fair chance of academic success by ensuring that their basic needs are met. Students struggle with proper accommodation, lack of financial resources to buy books often leads to a failure of the academic year (Dominguez-Whitehead, 2015).

The costs of dropping out affect the students as they have accumulated debt during their studies. It further affects their families, the university, and taxpayers (Schneider,2011). Schalin (2010) notes that government invests in universities through subsidies to public universities and grants. And they expect the returns of their investments back through enhancing human capital, that is, student graduating (Schalin, 2010). Students who experience food insecurity fail the academic year because they are dealing with the issue of uncertainty of food instead of focusing on their academics (Barret,2010). Despite that, a student stays on-campus or off-campus it is not acceptable that a student goes hungry (Dominguez-Whitehead, 2015). The vulnerable group of students experiencing food insecurity is most likely not to ask for help because of feeling embarrassed (Rule, 2018).

Bonti-Ankomah (2001) notes that for students to be food secured they always need to have access to food to lead a productive life. However, poor students are unable to afford to buy food which affects their learning capacity. Hence, the need for resources to have access to nutritious food to lead a healthy lifestyle. Munro et al (2013) note that the enrolment of successfully qualified students from diverse backgrounds has increased, students from rural backgrounds, which makes it more likely for food insecurity to have an impact on educational outcomes. The cognitive ability of the student changes because of the inability to focus which ultimately affects the brain memory structures of the student (Sabi, 2018).

Difficulties in achieving academic excellence have become a major problem as food insecure students are unable to make it to class, concentrate and participate actively by performing better in the assessments (Matsolo et al, 2018). Devereux (2018) adds that hungry students may suffer from anxiety, depression, and impair academic performance. Students who are food insecure are most likely to have parents who are highly dependent on wage income, which has a huge

influence on why students cannot afford to buy food (Bonti-Ankomah, 2001). Sabi (2018) adds that universities need to look at students holistically as food insecurity threatens their chances to succeed academically. Food is an important basic physiological need, if deprived, the academic performance of the student will be put at risk. The student will experience emotional stress which has a huge impact on self-esteem because of food insecurity. Van den Berg (2015) adds that this becomes a challenge because students are not able to adapt to higher education compared to other students who are financially resourced. The financial struggle mainly affects undergraduate students and contributes to the attrition rate in South African universities (Van den Berg, 2015).

2.12 Covid 19 and Food Insecurity

In March 2020 South Africa was faced with coronavirus disease which was a global crisis experienced worldwide. The pandemic showed the importance of being food secured and how South Africa was able to produce food for its citizens. It has affected every facet of students' lives and has been essentially a food security problem. The four components of food security are very useful in establishing food security among students. They include availability and accessibility of food, food utilization or consumption, and stability of supply (Savary et al, 2017). The availability of food was very crucial for South Africans including students. According to Savary et al (2017), the first component of food security status is the availability of food, which refers to having enough quantities of proper food available. This component addresses the supply aspect of food security. It determines whether there is enough food to feed students.

Appropriate structures must be available to stock up empty pantry shelves and suppliers must be able to maintain food production (Savary et al, 2017). This is depending on the ability of the university to store and distribute food (Daff, 2013). This is particularly important in forming partnerships with the agricultural sector to maintain the availability of food. This will supply the demand for sufficient nutritious food on campus. This phenomenon was seen in universities that are not self-sufficient in providing for their students and without strategic food aid programs available. Due to economic hardship, food consumption patterns changed, as it was expected that expenditure will be aimed at basic foodstuff.

Many parents lost their jobs and income which reduced their inability to provide for their families. This had a negative impact on students who were not allowed to campus but had to face the daily realities of food insecurity at household levels. The second component is the

accessibility to food which refers to having adequate income or other resources to access food (Savary et al, 2017). Accessibility is very important in the process of food security because it is about having enough income to spend on the available food. When there is insufficient income to access the available resources then it deprives access to food security. Despite the availability of food to purchase, the determinant of food security is accessibility and affordability of food by students.

The pandemic forced universities to rethink their operations by doing assessments through remote multimodal teaching and learning. This was important in containing the virus as many universities suspended all contact classes and some students were asked to remain on the residence while others were asked to vacate. This brings the third component of utilization. Utilization or consumption entails having enough dietary intake and the ability to absorb and use nutrients in the body. Utilization is best understood as the way the body makes the most of various nutrients in the food (Savary et al, 2017). Students must make the best use of available food resources to ensure their nutritional wellbeing, by diversifying their food. This means that there must be enough energy and nutrient intake by individuals. This includes feeding practices, food preparation, and the diversity of the diet. Universities understood that their students were vulnerable during this time and ensured that students will continue receiving the assistance they needed to minimize food insecurity.

The fourth component is the stability of the food supply. This means that reasons that have the potential to compromise the stability of the food, such as covid 19. Students will be vulnerable if these conditions are not fulfilled. Particularly, when students deplete their funding before time or food prices increase, which changes the food security status. If the challenges of food insecurity are being addressed, it may prevent problems of uncertainty that may arise among students concerning food. Students will be able to enjoy the standard of living of nourishment.

2.13. Theoretical Application

The Basic Needs Approach (BNA) will be used as a theoretical framework that is most appropriate to assess food security and the role of food aid programs to defeat food insecurity among postgraduate students at UWC. The BNA tackles food insecurity as a challenge in the context of tertiary institutions concerning development. Traditionally the concept of basic needs denotes food, housing, and clothing. Broadly it includes sanitation, education, and health have been recently added (Martinez, 2021). The focus of this study will refer to the critical basic need of food. The BNA proposes a better understanding of basic needs to students, it

proposes the provision of adequate food and that all individuals are well fed. Poverty and unemployment were some of the underlying factors that influenced the shift in the BNA (Stewart,1989).

Food as a basic need has become a great concern among students and the BNA argues for individuals to have access to basic social and economic goods and services (Stewart,1989). The BNA approach was endorsed by the International Labour Organization (ILO) in the late 1970s (Burchi,2008). It highlighted a new model concerning the process of integration of non-economic dimensions of development. The economic and social system failed to provide individuals with the bare minimum condition of life during the third world. However, it recognized the need to secure access to important basic social and economic goods universally (Stewart,1989). This goal led to the development of the basic needs approach to development, it was achieved mainly as the result of the failure of economic growth to reduce poverty in developing countries.

The two economists that significantly contributed to the further development of the BNA are Stewart and Streeten (Burchi,2008). The economists' basic needs approach shared the same sentiments with John Rawls' philosophical system. It proposed that all individuals should have access to basic social goods. Access to basic needs was firstly acknowledged by the International Covenant on Economic, Social, and Cultural Rights and later as part of the Declaration on the Right to Development (Stewart,1989). The focus is the satisfaction of all individual's needs, particularly by ensuring that the needs are being met. The condition of a full life is required for the basic needs to be fulfilled.

The BNA embraces both material and non-material basics and how they are encompassed by individuals (Stewart,1989) Non-material aspects include work and participation in decisions. The BNA ensures access to adequate goods and services, this applies to access to food and food aid programs. This guarantees the main objective of this study that maintains basic living for students. The fulfilment of the basic need of food, clearly means that students can enjoy economic and social development. Health and education are basic needs in their own right, they are one of the most significant needs required to live a full life (Stewart, 1985). In this regard, education is a significant need by many students enrolled at UWC.

Attaining education can be understood to fulfill a full life, this means breaking out of the shackles of poverty, and education is indirectly linked to being food secured. For some, student education has been used as a form of escaping poverty. Education presents opportunities to

students through escaping poverty, however, if poverty persists at university, it threatens the investment of the student future. When student food security is not fulfilled, it limits the chances of the students escaping poverty, basically threatens investment in human capital. There will be a shift in academic performance because basic needs are not met. The BNA is an attribute to the fulfillment of the needs of students within the UWC community.

Basic needs strategies may include food aid programs that are used to alleviate poverty and food insecurity. They may be considered as the basic ingredient in fighting the prevalence of food insecurity among students. Many students experience food insecurity; however, tertiary institutions can provide the minimum level of basic needs. Access to food is very influential in enhancing the students potential and living a full life. This is a goal for any student in achieving their full potential. This links the basic needs strategies and food aid programs as both adhere to the nutritional values of the marginalized. In so doing, students can be at ease knowing that they can enjoy a full life with other elements such as education. These elements include educational outcomes that are based on academic achievements, graduating, and entering the labour market. These elements allow students to enjoy student activities, participate in student structures because their basic needs are satisfied.

Education is considered as one of the fundamental elements of development and not just a means to achieve it. It is both a basic need and a means to fulfill other basic needs such as nutrition (Stewart,1985). And it allows access to other bare necessities of the student to be met. The fulfilment of basic needs can be fairly monitored by tertiary institutions to avoid critical implications associated with food insecurity. Effective food aid programs could be enforced to always ensure access to food, thus meeting the basic needs. This can form the basis of a complementary relationship between food aid programs and achieving food security.

An important element in meeting the basic need of food is having the income to acquire resources for the fulfillment of the basic needs (Stewart,1989). Tertiary institutions can invest in support services that enhance student's potential, more resources can be acquired to meeting the basic needs of students. The outcomes of meeting these needs are reflected in the academic performance of students, concerning the achievement of the basic need of food. The fulfillment of basic needs will depend on the available resources, however actual steps taken against food insecurity play an important role in the progress of fulfilling the basic needs. This involves the collective action from the tertiary institutions to ensure positive outcomes. This will lead to

the availability of resources such as the quality of nutritious food and the distribution of food that determines the fulfilment of the basic needs.

Needs are universalisable goals. Individuals have different goals they want to achieve and harm can be found to be a constraint in the achievement of the goal's individuals value (Burchi, 2008). Harm makes it difficult for individuals to participate socially because of external constraints and limitations that are not based on individual choices. If basic needs are not met, then harm may be caused to an individual. Here the universalizable goal of the students is to study without being exposed to food insecurity. However, being exposed to food insecurity at university has caused harm to the students well-being by making them vulnerable. Food insecurity has caused harm to such an extent that students have dropped out and prevented them from achieving their ultimate goal which is to graduate. However, food aid programs that are initiated at universities could help achieve the goals of students, by ensuring students are well fed.

The BNA ensures that all individuals have access to sufficient basic goods. For the BNA this means that individuals are kept at a level that is above a basic minimum of living as the main objective of economic development (Stewart, 1985). It focuses on the extension of certain standards to everyone immediately than growth over time. Essential goods include education, food, water, health, and water. It can be said that needs must be fulfilled whereas rights do not imply a stronger ethical imperative. Some needs can meet universal satisfaction by being prioritized, which means that they do not have to suffer (Burchi,2008). Liberty is considered as part of nonmaterial aspects. The BNA stresses needs than wants as both are prioritized differently, and it gives the priorities the moral legitimacy that is associated with the language of needs (Stewart,1989)

Stewart (1989) notes that the idea behind the BNA is that the food aid programs fulfill the basic needs of the students. The BNA focuses on what it means for the food aid programs to be able to provide the basic needs required by students. However, the establishment of food aid programs to fight food insecurity suggests that the basic needs of the students are to some minimum level being met (Stewart,1989). If the challenges of food insecurity are being addressed, it may prevent problems of uncertainty that may arise among students concerning food. Students will be able to enjoy the standard of living of nourishment. The BNA suggests that the basic needs of the students will not be met if the prevalence of food insecurity persist. According to Stewart (1989) the primary aim of the BNA is that individuals live a full life and

that other elements be fulfilled without harm caused. The BNA advocates for the provision of essential means to the poor (Burchi,2008). Hence acknowledges that education is intrinsic and instrumental to the enjoyment of other needs such as nutritional needs. Stewart (1989), notes that the basic needs are viewed as being instrumental for the achievement of a full life.

2.14 Conclusion

This chapter has examined how universities have acknowledged and taken the necessary steps to alleviate food insecurity among their students. It further explores the correlation between food insecurity and academic performance and which measures should be taken to ensure the sustainability of the students. Most students come from low socio-economic backgrounds which extends to how students become affected and impacts their purchasing power within university campuses. Students mismanage their funds because of a lack of skills. An understanding of the reasons why students become food insecure has been explored and linking it to educational outcomes. Student food insecurity indicates the establishment of various food aid programs to ensure that students are well fed. Less is said about food insecurity among students, however, it has drawn a response from various academic governing bodies. This has created safety-nets for students and ensures greater success in student development. Food aid programs allow students to fully develop their mental skills and be productive in their academic life.

Chapter Three

Research Design and Methodology

3. Introduction

This chapter outlines the research design and research methodology. Social sciences use research approaches such as quantitative and qualitative data to study research problems. Researchers can mix both quantitative and qualitative methods of data to strengthen their research. They provide an important element in the assessment of the quality of data presented in the research. It emphasizes on the use of mixed methods for this study. It comprises the characteristics of the research design, the research process, and the research strategies used in this study. The chapter discusses the types of research approaches, and how each is used to develop research. It will provide the types of data used to answer the research questions. Different research strategies are applied to collect data. It will introduce the data collection methods such as sampling techniques, and which is the most appropriate sampling practice for this research. Furthermore, it will discuss the process of data collection, data analyses and how each data is collected to derive the outcomes of the research. Importantly, it addresses ethical considerations and the limitations of the study.

3.1 Research Methodology

According to Salkind and Rainwater (2006) research is an important process whereby the researcher discovers new knowledge. It is a process of collecting, analyzing, and interpreting data by understanding a phenomenon (Leedy and Ormrod, 2001). The research objectives were achieved through using both inductive and deductive reasoning to achieve the research objectives of this study. Research originates with at least one question about one phenomenon of interest. For example, what is the status of food security at UWC? This helps the researcher to manage efforts and choose a proper approach from which to make sense of the phenomenon (Williams, 2007). Research methodology is a method that can be used by the researcher to

conduct the research study. Quantitative methods were used to classify and count features to answer the research questions. While qualitative methods were used to complete a detailed description of the research questions. This outlines how the research will be carried out which includes describing, explaining, and predicting the phenomenon (Almalki, 2016).

This research study follows some of the procedures used to collect and analyse data for the research study. The rationale for using mixed methods in this study aimed to explore different perspectives from a phenomenon that is being studied. The essence of using mixed methods is to enrich the findings of this research study (Hanson et al, 2005). Methodologies define problems that are worth investigating by using designs and procedures that are appropriate means of collecting data (Creswell, 2003). Quantitative methods were used in this regard to focus on proving relations between students and food aid programs. This brought about a positivist view which is regarded as unbiased to the study. Qualitative methods enabled the researcher to gain a view of the problem of food insecurity in the context of the participant's by drawing meaning from their experiences. This enabled the researcher to value participants input relating to food status and the uniqueness of their experiences of being food insecure. The researcher considers their realities to be valid and formed the basis of obtaining first-hand information through interviews. Mixed methods are appropriate as it addresses issues of nutrition and the relevance of the number of food aid programs that are available to curb food insecurity among students.

3.2 Characteristics of Research Design

Research is undertaken to find out new things in a systematic way, in so doing increasing knowledge (Thornhill, 2003). According to Babbie (2011), a research design is a “plan or the blueprint” on how to conduct research. Leedy and Ormod (2001) note that a research design provides the plan for the overall framework for collecting data. It clarifies the actual strategies to be used for the research problem (Babbie, 2011). It is a framework that is deemed suitable by the researcher to conduct the proposed study (Bhat,2019). It allows researchers to outline their research methods and tools for data collection that will be appropriate for the study. This study used a case study design in which students who are beneficiaries of food aid programs at UWC participated in the research study. Using a case study was to get an understanding of the impact of the roles of food aid programs on the students with regards to the student food

security status. The case study enabled the researcher to use mixed methods to gain the participant's experiences in their natural settings. This allowed the researcher to integrate quantitative and qualitative methods to gather data.

Cresswell et al (2003) note that research designs provide a road map for how to thoroughly undertake research that meets the research objectives. The research design allows the researcher to have an overall strategy on how to undertake their research to answer research questions using a case study. It serves as a bridge between research questions and execution, or implementation of the research strategy (Durrheim, 2006). The researcher was able to ask questions such as how many and how. Research design allows the researcher to collect quantitative surveys or collect qualitative approaches such as case studies (Cresswell et al, 2003).

This allowed participants to critically reflect on food insecurity at UWC even though it cannot be generalized to a larger population. The most vital aspect of a research design is that it must provide credible results for the researcher as it undergoes a process of selecting participants, research area to get answers to the research questions (MacMillan and Schumacher, 2001). The use of UWC as a case study is important as it is one of the universities in South Africa where it has been facing the complexities of student food insecurity. This case study has presented the researcher with consistent answers to the research questions. UWC was selected purposively as it was convenient for both the researcher and the participants. It is a framework that supports all research activities within the study.

3.2.1 Descriptive Study, Explorative Study, and Casual Study

This study will employ descriptive research as the goal is to describe a population, situation, or phenomenon accurately or systematically. It measures and observes variables without any manipulation in their natural settings. It mainly focuses on identifying trends, characteristics, categories, and frequencies. Data may be collected in quantitative and qualitative methods to ensure that the results are valid and reliable (Gall et al, 2007). Descriptive research methods include surveys, observations, and case studies to gather data. The data may be collected qualitatively and then analyzed quantitatively by using percentages, frequencies, or averages to determine relationships. When descriptive data is collected qualitatively, it involves a rich collection of data to gain a deeper understanding of participant's perspectives (Nasaji, 2015). This involves an inductive exploration of the data to identify recurring themes, patterns, or

concepts and describing and interpreting those categories. It allows the researcher to obtain the food security status of participants which reflects on the current situation at UWC.

According to Saunders et al (2002) explorative research explores research questions and does not go deeper into finding the solutions to the problem. It does not offer conclusive solutions rather it focuses on determining the problem. It emphasizes problems that have not been clearly defined and cannot provide conclusive results. The researcher can change the direction of the research at any time during research when new data and new insights emerge (Saunders et al, 2002). Singh (2007) notes that explorative research does not aim to provide answers to the research questions but explores the research topic with varying levels of depth. This allows for further research to be conducted that will lead to future studies. According to Zikmund et al (2012) Casual research aims to identify the level and nature of cause-and-effect in relationships. It assesses the impacts of specific changes on existing norms and various processes. Data is collected through experiments. It focuses on an analysis of a situation or a specific problem to explain patterns of relationships between variables. It offers the advantages of replication and is associated with internal validity due to the systematic selection of participants (Zikmund et al, 2012).

3.3 Research Process

The research process started in 2020 to 2021. The research aimed at using both on-campus and off-campus students as research participants, as they are also affected by food insecurity. The inclusion of off-campus students broadened the research sample and presented many benefits. The research focuses on both on-campus and off-campus students as they face different challenges. The challenges range from food-insecure students staying with their families and food insecurity staying alone on residences. The benefit is using postgraduate students across different faculties, all race groups including international students. This means that a variety of perspectives is possible, with students ranging from Honors to Masters. In total, forty students participated in this research study. In June 2021, an email will be sent out to beneficiaries of food aid programs to participate in a questionnaire. Interviews will be conducted through zoom with research participants during the end of term two.

Students will be expected to express their opinions on their food status and the impact the food aid programs have in enhancing their food statuses. Students will be interviewed individually at their natural settings at different stipulated times chosen by them. The interviews will take

place during the winter holidays for the convenience of the students. The questionnaire will be sent out to students as soon as the administrators of the food aid programs grant permission.

3.4 Choice of Research Methodology

Mixed methods are used in this study as it combines or analyses both quantitative and qualitative data. Mixed methods have been combined as they complement each other by providing a more comprehensive analysis of the research questions. The data of quantitative and qualitative methods are collected simultaneously, prioritized equally, and are integrated with this research study. The mixed approach responds to questions by using both numbers and textual. The breadth and depth of this research study have been enhanced by the combination of both methods (Hanson et al, 2005). The disseminating of knowledge of how many food aid programs students can go to for assistance is improved, when students are asked about how they feel about asking for assistance from the programs.

The way quantitative and qualitative data are implemented in this research study depends on the researcher. The researcher may introduce data concurrently or sequentially (Creswell et al, 2003). The way data is introduced is important. When qualitative data is introduced first, it means that the problem is explored in more detail, followed by gathering quantitative data that will explore the large sample and test the variables. When introducing qualitative data and quantitative data at the same time, the researcher compares the data results (Creswell et al, 2003). Flick (2004) notes that the best of both philosophical roots are drawn into this research study. Quantitative data has been introduced first in this study followed by qualitative data.

According to Almalki (2016), mixed methods research involves the collection of both quantitative and qualitative data. It is about combining the viewpoints, data collection, and analysis of both quantitative and qualitative research. Both numeric and text are applied, in terms of questionnaires and interviews. This extends the range of inquiry into the research study (Plano Clark & Creswell, 2008). According to Sale et al, (2002), once both methods are applied, the research study is strengthened such that the world is viewed with the same understanding (Hanson et al, 2005). Creswell et al (2003) note that both methods are adequate for separate studies to answer research questions. However, mixed method's uncover the best of both methods explanations and results within this research study.

3.4.1 Rationale of Mixed Methods

This study uses mixed methods because using different methods to address the same problem is most appropriate. Hanson et al (2005) note that the mixed method is about the collection and interpretation of qualitative and quantitative in a research study. It is about mixing or integrating the findings of qualitative and quantitative research. An important element in mixed-method is about testing a theory or model (Hanson et al, 2005). Flick (2004) notes that quantitative and qualitative data have their data collections and how information is analyzed, however, when combined the outcomes of the research can be related to each other. This means that the outcomes of using different methods may firstly converge, indicating that they agree. This is associated with triangulation.

According to Flick (2004), the outcome of using both methods may establish a complementary relationship. In so doing different parts of the phenomenon are elaborated and enhanced (Plano Clark & Creswell, 2008). The outcomes may diverge, this means that the outcomes may contradict each other (Flick, 2004). When using mixed methods, the outcomes may explain the discrepancy that has been discovered. Using mixed methods is vital in this study as it seeks to use the results from one method to help develop the other method (Plano Clark & Creswell, 2008).

3.5 Population

The selected study area is the University of the Western Cape located in Bellville, South Africa. The permission to research was granted by the Humanities and Social Sciences Research Ethics Committee. The permission to conduct research with participants was granted by the Deputy Registrar and the administrators of the food aid programs. The Residential Services accommodates about 3,300 students and has thirteen residences. Two of the residences are dedicated to postgraduate students including Hector Petersen Residence. The Residential Services consists of three important departments. The Student Housing department, the Placement and Administration department, and Reslife department that contribute to student development and provide support in achieving academic goals in a diverse community. The Reslife department provides programmes such as psychological programmes, living and learning activities, academic support, and general wellness for students. The residential services have two dining halls that cater a variety of food to the students. Reslife is responsible for programmes relating to student's needs holistically by providing interventions such as food aid programs that assist students who are in need. The participation process involves students

who live alone on the residence and are beneficiaries of food aid programs. And students who stay off-campus with their family or relatives.

The main criteria for their selection are that students should be staying on-campus and off-campus. Students were selected by using a purposeful sampling method. The purposeful sampling method provided the richest information from the research participants. Researchers select their participants with a specific purpose in mind. Forty postgraduate students were selected for this research study. This includes Postgraduate Certificate in Education (PGCE), Honor's and Master's students, who are not on financial aid or any funding. The students represented all faculties, and the food aid programs. An email was sent to the food aid programs administrators for permission to invite students to participate in the research study. Through consulting with the respective food aid programs, interested students responded. Students were selected because of their availability and willingness to participate. The participation of the students was voluntary thus if a student did not want to take part in the research study, they were free to not participate. The consent form was given to the students before they started with the interviews. And no student was compensated for this research.

3.6 Sampling

According to Acharya et al (2013), a sample is used in research as a representative of the larger population. A sample is taken since the larger population cannot be studied. It is used as a subset to represent and learn about the entire UWC food aid programs population. A population is a group of potential students to whom the researcher wants to generalize the outcomes of the research study (Salkind and Rainwater, 2006). The sample must represent the entire food insecure students throughout the food aid programs. Sampling is crucial since it reduces the costs, time and manpower involved in studying the entire population (Acharya et al, 2013). The sample size that is targeted for this study consists of forty students which will provide the most appropriate information needed for this study. The sample size is selected from registered students who are staying in the two postgraduate residences and who are staying off-campus. Participants were selected based on purposive sampling. Sampling techniques consist of probability sampling and non-probability sampling.

3.6.1 Probability Sampling

According to Acharya et al (2013), probability sampling is regarded as “the gold standard” in sampling methodology. Vehovar et al (2006) note that probability sampling involves known probabilities of inclusion of the whole population. The selection of the population is

randomized. Probability sampling refers to the unknown probabilities in the population (Vehovar et al, 2006). Probability sampling is when all individuals have an equal chance of being selected in the research. The probability of the selection is known and can be accurately determined. It is guided by the notion that the sample size will represent the population numerically (Hox and Boeije,2005). The researcher can generalize the results of the sample to the target population. Generalizations can be made from a sampling frame when properly drawn from the population. This is important since random sampling will not be able to address the research problem when done incorrectly (Acharya et al, 2013). Probability sampling can be classified into simple random sampling, systematic random sampling, stratified random sampling, cluster sampling, multiphase sampling, and multistage sampling.

3.6.2 Non-Probability Sampling

According to Acharya et al (2013), non-probability sampling entails that the probability of the participants in the selection process to be unknown. According to Hox and Boeije (2005), non-probability sampling is used when the likelihood of a participant that is selected is unknown. It involves a method where some of the population have no chance of selection or where selection cannot be accurately determined. The selection of participants is non-random and does not allow sampling errors. Non-probability sampling signifies the absence of the mechanisms used in probability sampling. This means that non-probability sampling is a deviation from the principles of probability sampling (Vehovar et al, 2006). Non-probability sampling consists of convenience/purposive sampling, quota sampling, and snowball sampling.

3.7.1 Types of Non-Probability Sampling

3.7.1.1 Quota sampling

According to Acharya et al (2013), the quota sampling method guarantees that a certain characteristic population sample will be represented to the exact extent that the researcher desires. It focuses on a specific number of participants required by the researcher and divides participants into categories. The number of participants desired by the researcher is specified before the selection until the categories of groups are filled. Quota sampling is significant in representing a proportion of the categories of groups such as gender, age, social class, ethnicity.

3.7.1.2 Snow-balling Sampling

According to Acharya et al (2013), snow-balling sampling is when the primary participants are selected by probability or non-probability methods, and then, additional participants are found by information provided by the primary participants. The participants are known to be added to the selection. Participants are selected based on referrals by the main participants. The sample size is usually small and involves low costs.

3.7.1.3 Purposive Sampling

The type of sampling that was used in this study is purposive sampling. It is built on the notion that it constructs a sample size that is meaningful theoretically (Hox and Boeije, 2005). Purposive sampling was adopted as participants are intentionally selected and are of interest to the research. It is a process that involves the identification of postgraduate students that have the knowledge that is required for the research (Etikan, et al, 2016). The research participant is selected based on their qualities that will satisfy the purpose of the research. The participants will provide the necessary information based on their experience with food aid programs. This sampling technique is more time effective as it requires a small sample size and cannot be generalized. (Vehovar et al, 2006) note that it is also known as judgemental sampling where the selection process follows some judgment or arbitrary ideas of the researcher. Hox and Boeije (2005) notes that purposive sampling is vital in getting the needed information as it is guided by what is essential to the researcher. They are selected as they meet the inclusion criteria of the research. They are selected on the basis there is no need for a list of all the population elements.

Postgraduate students were selected for various reasons. One is based on convenience, as selected students are already part of food aid programs. The sampling comprised students from a population of beneficiaries, consisting of four food aid programs at UWC. Consent was obtained from the Reslife Division nutrition program and the Student Nutrition and Wellness Programme. The food aid programs were selected because of the diversity in the provision of assistance to students. The sampling will consist of students regardless of gender, age, and race, however, they must be studying toward their second degree to suit the purpose of the study. The sampling process was not based on showing gender imbalance within the food aid programs. Acharya et al (2013), notes that convenience sampling is the most used sampling method, it is preferred based on the convenience of the researcher. The participants are selected since they already exist and are available at the time of the research. They are selected as they

meet the inclusion criteria of the research. They are selected on the basis there is no need for a list of all the population elements.

3.8 Measuring Instruments

According to Salkind and Rainwater (2006), quantitative research researcher knows in advance what they are looking for. This means that all the aspects of the research are carefully designed before data is collected. While on the other hand, in qualitative research the researcher may only know roughly in advance what they are looking for. This means that the design emerges as the research unfolds (Salkind and Rainwater, 2006). Both research methods are practical in this research as they use tools such as questionnaires and the researcher is the data gathering instrument. The data will be collected in the form of numbers and statistics as well in the form of words, and pictures (Salkind and Rainwater, 2006). Quantitative research is objective in so doing that it seeks precise measurement and analysis of target concepts, that use surveys and questionnaires. While on the other hand, qualitative research is subjective, it focuses on participant's interpretation of events which is important. In so doing, uses participant observation and in-depth interviews (Salkind and Rainwater, 2006).

3.8.1. Quantitative Methods

According to Goertzen (2017), quantitative research methods are founded based on collecting and analyzing data, which is organized and represented numerically. One of the fundamentals goals of quantitative research is to provide accurate and reliable measurements that can be statistically analyzed. According to Van der Merwe (1996), it is about testing theories and facts, in so doing ensuring objectivity and reliability. This places the researcher independently from the research study to maintain objectivity. Steckler (1992) notes that quantitative methods produce a factual and reliable outcome that is generalizable to the larger population. Quantitative methods use statistical methods to test predetermined hypotheses between variables. Quantitative research seeks to respond to research questions through numbers and surveys. It is effective in answering questions such as "How many and what?" (Creswell et al,2003). According Goertzen (2017) quantitative research examines attitudes and behaviours, document and uncovers trends, or explain what is known anecdotally. It is about highlighting trends across data sets or study groups; however, it does not examine the motivation behind observed behaviours. It measures frequencies, percentages, proportions, and relationships that provide means to quantify and provide evidence for variables (Goertzen, 2017).

According to Williams (2007), quantitative research uses deductive reasoning which comprises a numeric or statistical approach to research design. This means that the estimations from a large population can be summarized into statistics. Groups can be compared statistically when using quantitative research. The data is used to objectively measure reality, and the outcomes of the research can be predictive, explanatory, and confirming. The collection of data is used to quantify information to support or disprove it. The data collected uses mathematical models as part of data analysis (Williams, 2007). Quantitative methods are commonly used methods adapted from natural sciences which include psychology, physics, and biology (Steckler, 1992). It is about bringing meaningful numerical change when testing a hypothesis. Observations can be manipulated for the sole purpose of describing the phenomena that are reflected by the observations. Goertzen (2017) notes that one of the main advantages of quantitative research is that documentation regarding the research framework and methods can be shared and replicated. In so doing, standardized approaches allow the study to be replicated over time.

3.8.1.1 Questionnaires

According to Park (2011), the language used in the questionnaire should be appropriate, simple, direct, and familiar to the research participants. Questions should be neutral and not be structured in a leading manner so doing avoid misinterpretation. This research study will provide a questionnaire that has open-ended questions that will allow participants to answer in their own words. This draws a deeper understanding and deeper responses than to selecting an answer from a set of choices. The researcher will distribute forty self-administered questionnaires to the participants. The questionnaire will consist of open-ended questions that provide a more reliable and valid measurement than closed questions (Krosnick and Presser, 2010). Open-ended questions can add richness which has a significant benefit to the outcomes of the survey (Krosnick and Presser, 2010).

The use of open-ended questions will leave the discretion to the participants to respond and not be bounded by alternatives provided in the questionnaire. The covid 19 crisis has prevented people to be physically in contact with each other, thus, electronic questionnaire will allow the researcher to send the questionnaire without seeing the participants physically. The questionnaire aims to get responses from the participants that will answer the research questions. The participants will provide open-ended responses relating to the number of times

they receive food assistance in a month, the number of food aid programs they request food assistance from, and how effective the food programs are in eliminating food insecurity.

3.8.2 Qualitative Methods

According to Van der Merwe (1996), qualitative research comprises an interpretive and natural approach to the world. It is about making sense of the world through the natural approach. Almalki (2016) qualitative research was applied as it seeks to understand the meaning that individuals ascribe to social or human problems. Qualitative research is concerned with inductive reasoning that assumes that reality is a social construct consisting of the participant's perspective. (Almalki, 2016). It is about understanding the meanings of the participant's actual experiences, feelings, and desires. This relates to student's behaviour and how they feel or think about food aid programs (Gounder,2012). The role of the researcher was to be the primary instrument and identifies fully with the phenomenon that is researched and is an active participant in the research process. This means that the researcher gains a better understanding of human behaviour and experience. The qualitative data used in this research is about words and images.

This study will conduct qualitative research by describing student experiences and examine their behaviour towards food security at UWC. Qualitative research is more useful in this study as it is a naturalistic approach to people, and it entails looking at social conditions recognized by their own experiences about the world (Yilmaz, 2013). Qualitative research was used as it is more approachable to its research participants and focuses on the stories told from an in-depth view. Furthermore, qualitative research allows the researcher to establish a flexible relationship with the research participants. The relationship formed placed the research participant in a position that is equal to the processes of research and the researcher.

Qualitative methods comprise participant observation, document analysis, and open-ended unstructured interviewing. They are important in producing the meanings people assign to social phenomena. This is produced by obtaining real, rich, deep data which illuminates the everyday patterns of action of the participants. The relationship that is formed is between the researcher and participants rather than exclusively variables. Qualitative research may be time-consuming and labour intensive which is a disadvantage for the researcher.

Qualitative research is most suitable for this study as the objectives of the study aim to find a deeper understanding of the realities of food insecurity by putting things into context. The reality of food insecurity is socially constructed and shows that food insecurity is a complex

issue affecting students globally. Qualitative research is significant in this research study by looking deeper into the phenomenon that is studied and the reasons students become food insecure and not a prediction. It is not about generalization but the participants interpretation of the role of food aid programs. The researcher plays a vital part in the research as they do not reduce the data collected to numerical indices but is emphatic throughout the process of the research. Qualitative researchers use other research methods such as focus groups and participant observation, documents, photographs, films, and videos.

Qualitative research was used in this research to recognize the behaviour of students facing food insecurity and the factors that contribute to their food insecurity status. It looks deeper into the motivations behind the establishment of various food aid programs by different structures within UWC and how students respond to such aid. Qualitative research allows researchers to establish relationships with the participants by uncovering issues below the surface of food insecurity instead of issues associated with food insecurity. Issues such as students coming from low-economic backgrounds, students sharing their food allowance with family members, and students who skip meals because of food insecurity.

3.8.2.1 Interviews

The qualitative methodological tool is in the form of semi-structured interviews. This will be a useful technique whereby students will be discussing in-depth their food security status and experiences about food aid programs. According to Hox and Boeije (2005), the researcher will be able to learn how the participants structure and make meaning about their daily experiences. The interviews will be semi-structured, allowing for both focused and exploratory sub-themes to obtain the needed information. Questions that will be asked will be in the form of open-ended questions such as why, how not what, which, when, and who. The interview will be transcribed, this will help to obtain accurate information from the participants and avoid losing written documents.

Students that will be interviewed will be post graduate students from the University of the Western Cape and that are studying towards their second degree or third degree. The questions will help discover the lifeworld of the participants. Due to the pandemic, and the ban of face-to-face research, the interviews will be done telephonically and online through zoom meetings. Zoom meetings are a lifeline during the coronavirus pandemic, as it helps to connect people without having to see each other physically. This will help in gaining an understanding of the students by allowing them to share their opinions on food insecurity at UWC. Interviews

through zoom meetings will help uncover other issues that may have not surfaced or come out in surveys.

The advantage of using semi-structured interviews is that students will be able to express themselves in their own words freely. Conducting interviews with students will help examine student feelings and thoughts, what they aspire to become beyond food aid programs. Unlike the focus groups, one student does the most talking and not five or more students. The researcher listens to one student who engages in the topic and has more control of the interview than in the focus group (Babbie,2001). In focus groups, one student may dominate while others will not be able to express themselves freely. In focus groups, some students may be more outspoken more than others which may result in not participating in the interview fully (Babbie,2001). The interviews targeted both males and females that are postgraduate students. These students were selected to capture their experiences on the diversity of food aid programs at UWC. These students were specifically targeted to share their knowledge on student food aid programs and possibly indicate the role they play on their campus. Students were invited because they could provide information about the type of food sustainable for them.

(see Appendix 1).

3.8.2.2 Literature Review

According to Randolph (2009), a literature review is a “legitimate and publishable scholarly document”. It provides existing academic research on a specific study. The literature review undertaken has focused on literature obtained from academic sources on food insecurity among students globally, nationally, and at the university level. The literature that was obtained focused on the research questions of this study. Numerous searching platforms have been used to obtain articles from google scholar, jstor, the world wide web, medley. Other relevant sources include books, articles and journals. Search phrases that were used include ‘food insecurity at universities’, ‘student hunger’, ‘food aid programs’, and ‘student academic performance’.

3.9 Validity and Reliability

According to Babbie (2001), validity and reliability are significant qualities of measurements. Park (2011) notes that reliability assesses whether the question produces a consistent response. During the collection of data, the research objectives were explained to the participants which guaranteed full disclosure during data gathering. This is done through pilot testing. Salkind and

Rainwater (2006) note that reliability occurs when a test measures the same thing more than once and produces the same results all over again. It comprises an observed score and a true score component. Validity assesses whether the question is measuring what was intended to measure. This is done through translating and retranslating the questions (Park, 2011). The researcher ensured validity by ensuring that the research objectives are addressed in the questionnaire.

Babbie (2001) notes qualitative research provides validity as a better measure. This means that the researcher is “being there” and gaining insights into the phenomenon and has greater chances of getting rich information. The study used literature review so that the researcher may have a better understanding of the phenomenon being studied. Reliability and validity should be prioritized as they assist in making incorrect conclusions. Quantitative and qualitative methods and sampling tools are used to measure validity and reliability. The objectives of this study were explained to the research participants, in so doing ensures the validity and reliability of this study. Babbie (2001) notes that “being there” physically as a researcher allows observations and conceptualizations to be drawn by the researcher. This enables the researcher to have a further basis for another research. The validity in the field research is that the researcher can provide comprehensive measurements by giving detailed illustrations of situations (Babbie, 2001).

3.10 Pilot Testing

According to Reynolds (1993) pilot testing is an important aspect when developing a questionnaire, it is important to determine the ability of the questionnaire to be effective. It allows the researcher to refine the questionnaire as it is done before the final distribution of the questionnaire. It helps in finding errors in the questionnaire. This study will conduct the necessary pilot testing through an email survey who will take their time to answer the survey. Pilot testing will be done on ten research participants who will not be representing the sample size. The responses will help detect inconsistencies that can be corrected in the questionnaire. Pilot testing is valuable in improving the wording and sequence of the questions. The ten participants will be able to indicate to the researcher if they find difficulties when answering the questions so that remedies can be done (Reynolds, 1993).

The reason for conducting pilot testing in this study is that it allows the researcher to recognize the weaknesses and strengths of the questionnaire before distributing the final questionnaire. If the researcher finds any weaknesses presented by the pilot testing, they can be identified. Food

insecurity is a topic that must be dealt sensitively, thus questions that are identified to be offensive or invasive to participants must be removed. Pilot testing will further clarify the time needed to fill in the questionnaire. Pilot testing will indicate if there is any cooperation from the participants and if there are still interests to participate.

3.11 Types of Data Sources

Data collection shows the variety of methods used in research (Sapsford, 1996). The methods used to assess student experiences will be collected through primary data and secondary data. Original data collected for the first time and a specific research topic is primary data (Hox and Boeijie, 20025). This data is combined with existing data to create new knowledge. Secondary data is data collected for a different research topic and can be accessed and used for another research problem (Hox and Boeijie, 20025). This data is conducted before primary data to find out what is already collected. It is data that has been already collected by another researcher which can align with the research question. The data that will be generated will focus on UWC students who make use of on-campus food programs. It will focus on factors influencing tertiary food insecurity, impacts of food insecurity, and the measures taken to overcome food insecurity on campus such as food banks. The data is collected using English which is the medium of instruction at UWC.

3.12 Ethical consideration

Food insecurity has the potential of causing stress and stigmatization and must be treated as a sensitive research topic. Ethical considerations must be always upheld to protect the participants involved during interviews. This study has been ethically approved by the Humanities & Social Sciences Research Ethics Committee (HSSREC) of the University of the Western Cape. The HSSREC reference number is HS21/2-24. The University was approached to ask for permission to research with the students. The approval was also requested from Residential Services and the Student Development and Support, Gender Equity Unit, and UWC Fairy Godmother. The programs keep records about students who have applied for food assistance.

The research participant may contact UWC for counseling to help heal the trauma that may be triggered by the question. The counseling clinic deals with student's emotional needs ranging from issues such as stress, coping mechanisms that deal with academics, family, health, and mental well-being. Counselling is recommended to help improve any issues that may affect the overall well-being caused by the interview. For general inquiries or to make an appointment

email cssa@uwc.ac.za or contact (021 959 2299). Please refer to the attached appendix which has the Information Sheet and the Letter of Consent for conducting interviews with founders of the various food aid programs, as well as the beneficiaries of the food aid programs at UWC.

3.13 Informed Consent

Participants will be explained a consent form before the interview is conducted. This helps the participants to understand the purpose of the research before signing the consent form. According to Connelly (2014), informed consent means that consent should be given freely and the research participants must understand what is being asked of them, and the participants must be competent to give consent. When the research is done, participants will be given the outcomes of the work so that they can clarify any inconsistencies that they might not be aware of. Research participants were not offered any rewards, this was explained to them before signing the consent form. The researcher is obligated to honor what has been stipulated in the consent form. Research participants must be provided with enough information regarding the implications of participation since food insecurity is a sensitive matter (Saunders et al, 2012).

3.14 Anonymity and Confidentiality

Anonymity and confidentiality of the research participants will be adhered to. Participants will be guaranteed that their names will not be exposed and would be dealt with in the strictest confidence. Students will not be forced to participate in this study and will be assured that their involvement is voluntary. The researcher has a moral obligation to inform the participants about the necessary information about what the research is about. Anonymity is prioritized during and after the research study and is addressed in the consent form. The research participants will be guaranteed the right to pull out anytime as participation will be based on their free will. Students will not be coerced to return after withdrawing from the research. If research participants find that the questions asked are sensitive, they have a right to not answer.

According to Whelan (2007) anonymity refers to “the degree to which the identity of a message source is unknown and unspecified, thus, the less knowledge one has about the source and the harder it is to specify who is among possible options, the more anonymity exists”. The identities of the research participants will be always protected. To guarantee anonymity, the individual interviews will be coded with the date and time when the interview took place. For instance, 11-06-2021/14:15. This will identify each participant as each student would have chosen their time slots. The data will be safeguarded and stored privately. The researcher will uphold the principles of confidentiality by not disclosing the participant’s identity to others such as signed

consent forms. Researchers must ensure that the data collected cannot be traced back in the forms of dissemination (Wiles et al, 2006).

3.15 Data Analysis Procedure

This research employed mixed methods as part of the research techniques to collect data. The sources of data that were collected include interviews and questionnaires which are referred to as the primary data. The literature review is referred to as secondary data collected by the researcher. Data analysis is used in transforming data to determine useful information. Data analysis is very useful in the research by providing information that will be used in discovering the extent to which food insecurity exists at UWC. The data collected from interviews will be recorded through zoom and carefully transcribed or summarized. The data will be coded using the principles of anonymity. The data is useful in assessing the role of the programs in enhancing food security. The data is useful in the decision-making of the need for the expansion of more food aid programs. Data analyses are influential in the decision-making of stakeholders to continue funding food aid programs because of the severity of the situation. Data analyses will help in the evaluation of policies concerning to food insecurity at tertiary levels. For example, if the current food aid programs can provide sufficient food for its students. Data analysis is also useful in policy design and monitoring the living standards of students (Tukey,1977).

3.16 Limitations of the Research Design

This study was done in the Western Cape and the research was limited to the geographical area of UWC, Bellville. The focus is on students that have been affected by food insecurity and are beneficiaries of the food aid programs. While the assessment is based on the role of campus food aid programs. It does not explore, for example why food-insecure students do not access food aid through the available on-campus food aid programs as these are outside the scope of the study. One of the key limitations is that the research required postgraduate students and did not include undergraduate students.

The assumed potential limitation would have been securing the venues for conducting interviews during university hours. However, due to covid19 conducting interviews through Zoom meetings turned out to be the best viable option. This study uses a non-probability sampling approach, hence cannot make a general statement about the total population of students at UWC. This study was only able to capture a sample size of UWC students which

has limited the nature and coverage of the research. Therefore, future research needs to be done on other universities to address and fight food insecurity among the student populace. The focus was only on food insecurity and not the in-depth measures that are associated with it, such as hunger and poverty.

3.17 Conclusion

This chapter has focused on the research design and methodology that was undertaken in this research. It has provided an outline of the methodological tools that were the best for this study. Detailed information regarding quantitative, qualitative, and mixed methods was discussed. The relevance of choosing qualitative research for this study. The characteristics of the research methods were explored in this chapter. It emphasized the selection process in which sample size was selected from the population. An in-depth discussion was provided on tools such as interviews where the researcher becomes an active participant in acquiring rich information. In this chapter qualitative research has illustrated that researchers can be empowered by getting a richer understanding of the social phenomena within this study. Understanding this phenomenon means that the researcher must be able to listen, question, communicate, work with and relate to the participant's views.

Chapter Four

Data Analysis, Interpretation, Findings, and Discussion

4.1 Introduction

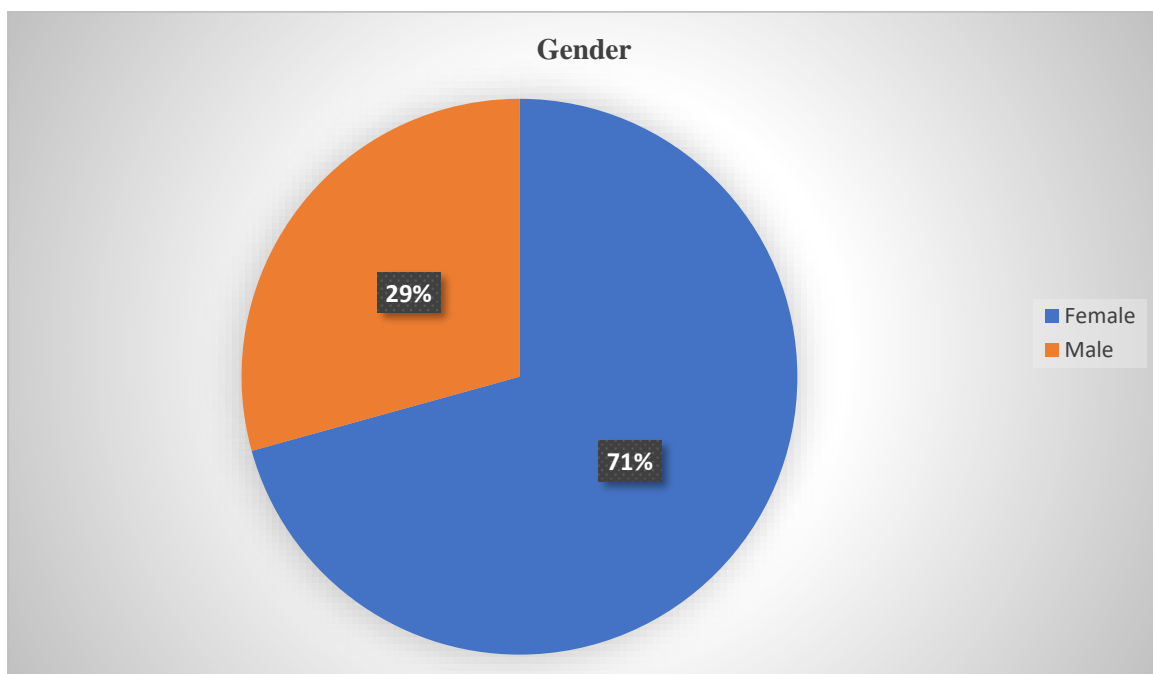
This chapter aims to discuss the research findings conducted by the researcher during the collection of data. The findings are based on the key participants which are the postgraduate students of UWC. The data was obtained by using online questionnaires and interviews to assess the roles of food aid programs and how they enhanced the student food insecurity status. The research findings are linked to the research questions which focused on the association between food insecurity at the postgraduate level and a range of interventions to curb food insecurity among students. The data was collected using quantitative methods and was achieved through obtaining thirty students that completed the questionnaire. The research participants were invited via email to take part in the questionnaire that was distributed online. The qualitative data was obtained from ten participants, through semi-structured interviews with UWC postgraduate students. This will firstly, highlight the research findings presented in tables and pie charts followed by the discussions of this study.

4.2 Demographical Information

4.2.1 Gender

The research participants that took part in the online questionnaire and interviews are beneficiaries of the available food aid programs on campus. The demographical details of students that emerged as the most vulnerable to food insecurity are females (70.7%) as presented in figure 1. Figure 1 indicates that many postgraduate females face significant challenges and are single parents, with no source of income, unemployed, and struggle to make ends meet (Robin Spaid, 2018). Consequently, (29.3%) males are found to be food insecure and are represented in figure 1. The demographical details of the research participants indicated that students reach out for assistance regardless of their gender, race, age, nationality, and residence.

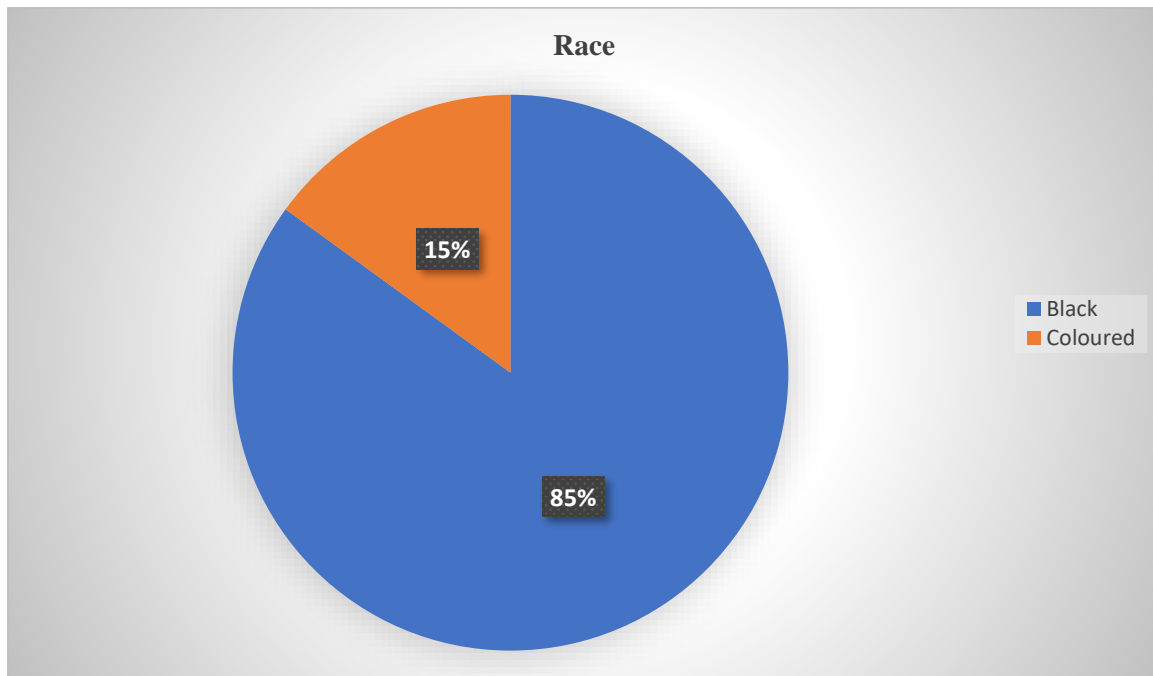
Figure 1.



4.2.2 Race

Figure 2. represents the race of students who are at risk of food insecurity. 15% of the research, participants are identified as coloured students. While the majority are identified as Africa students (85%). Other racial groups did not participate in this study.

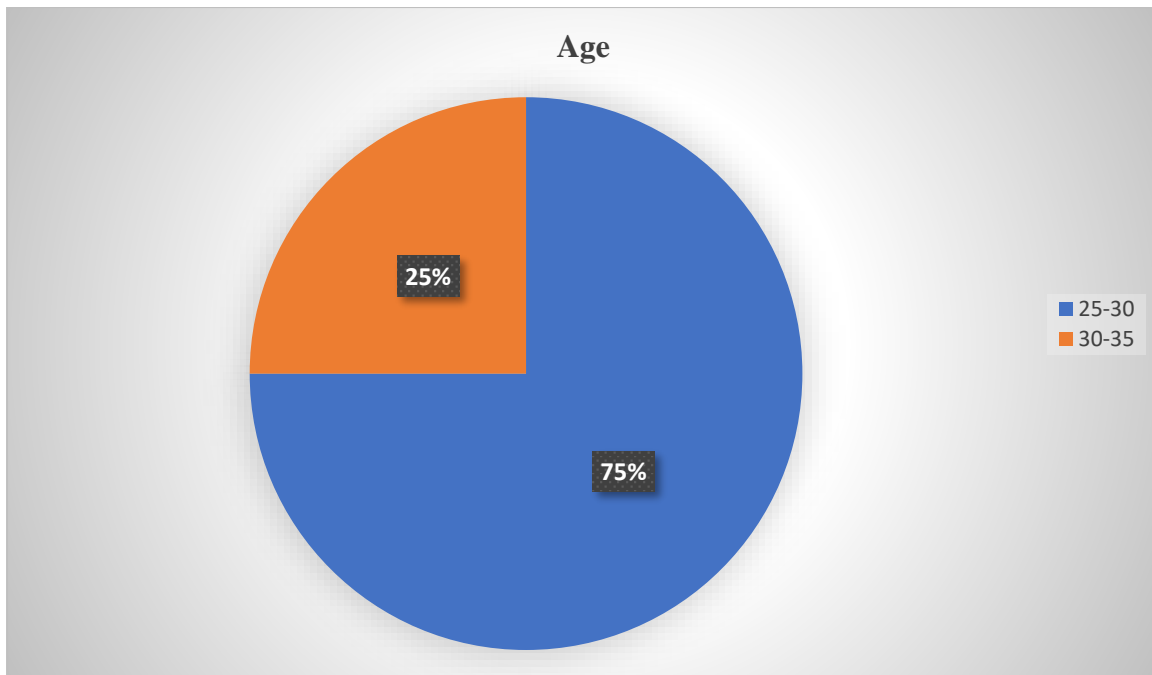
Figure 2.



4.2.3 Age

The age group of the research participants consists of (95%) that is between 25 years to 30 years, while (5%) is over the age of 30 years. This points out that many young graduates continue to pursue their second degrees, despite being food insecure.

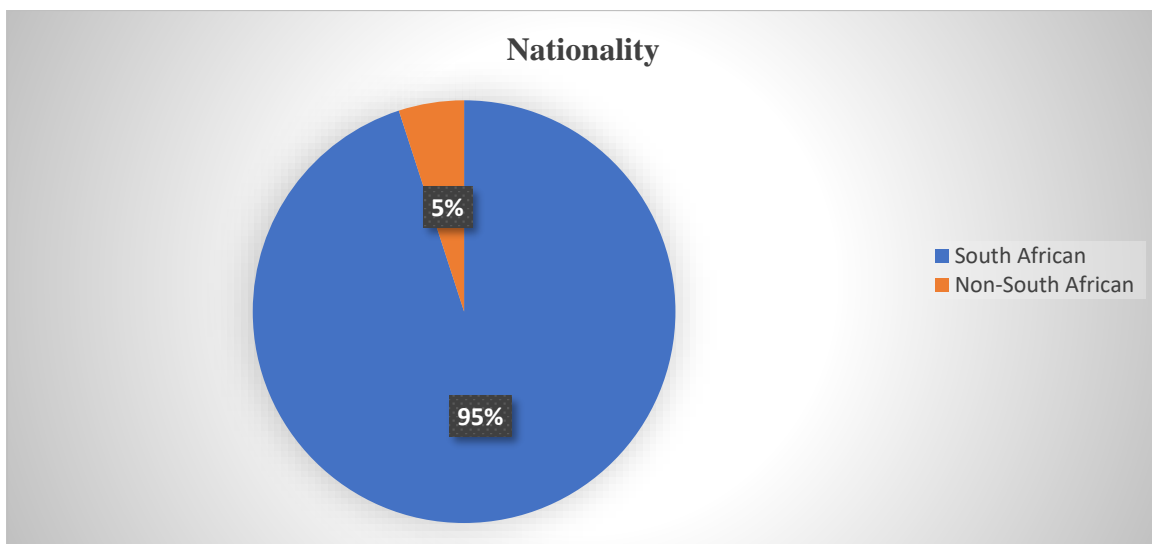
Figure 3.



4.2.4 Nationality

The nationality of students receiving food aid is represented in figure 4 and (5%) are international students coming from African countries such as Zimbabwe, while the rest (95%) are South African students.

Figure 4.



4.2.5 Residence

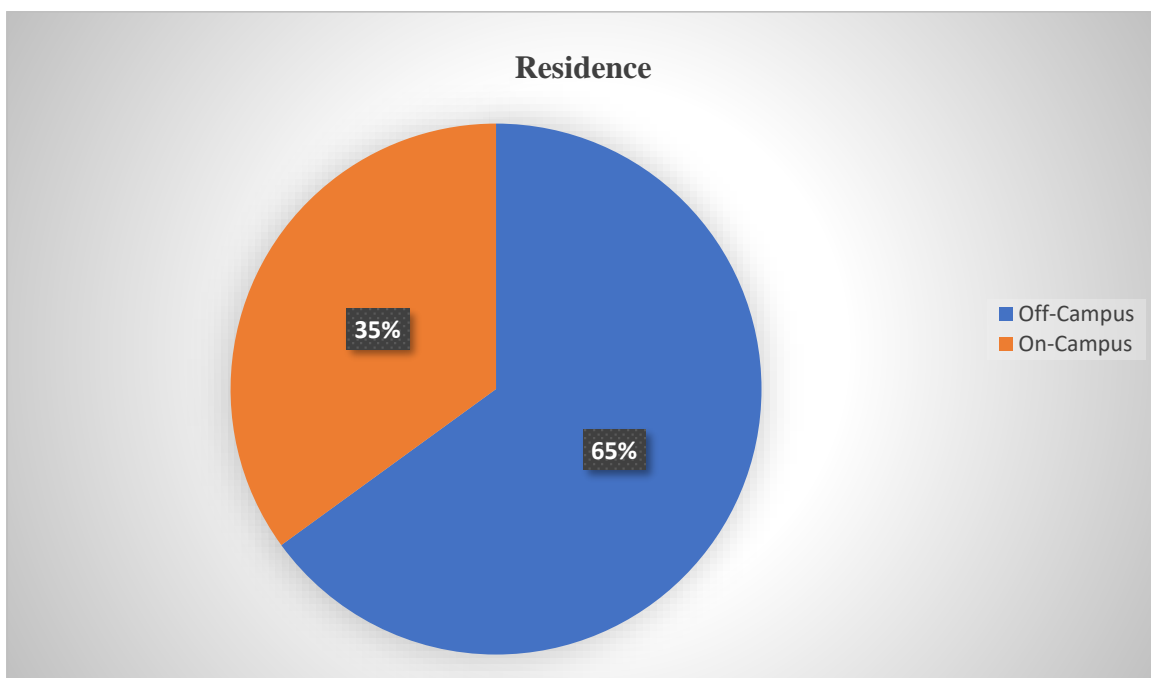
Table 1. represent the residence of students where a significant number of students are staying alone on-campus residence (970). While (530) students are staying off-campus. Table 1 shows that there are (1500) postgraduate students that receive food aid since January 2021.

Table 1.

Total Number	On-Campus	Off-Campus
Total 1500	970	530

Figure 5 represents students identified as coloured students that come from the Western Cape. They stay off-campus with their families in areas such as Bishop Lavis, Belhar, Delft, and Athlone. While the majority are identified as black students (85%) coming from the Eastern Cape and stay on campus. However, some of the black students stay off-campus in the surrounding areas of UWC such as Phillipi, Nyanga, Langa, and Gugulethu. Students who are staying off campus are living with larger families and are dependent on the food aid programs. This graph shows that (65%) of students are staying on campus and are beneficiaries of the food aid programs. Students staying off-campus represent (35%) that receive food assistance. Hence utilization is more than expected. Sarah et al (2016) notes that economic hardships such as unemployment on postgraduate students can be lessened by implementing more work-study programmes.

Figure 5



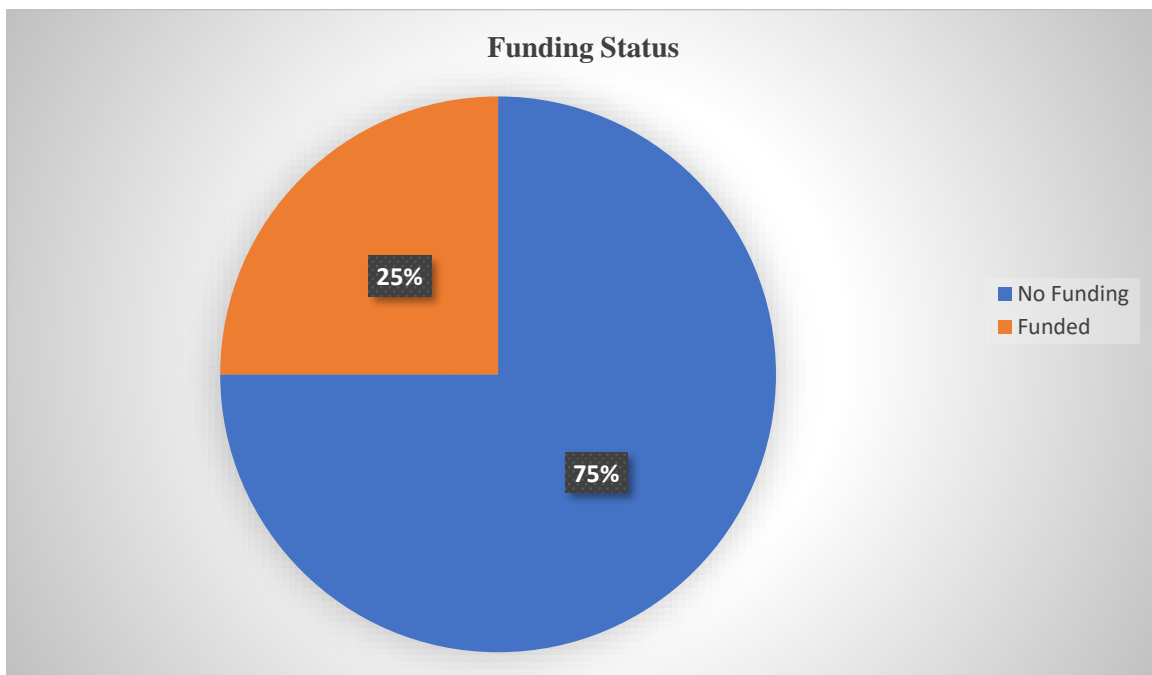
4.3 Funding Status

As shown in figure 6, the high prevalence of food insecurity is (75%) of students who are not funded, while the (25%) that is funded relied indirectly on the food aid program as the funding

takes longer to pay allowances. The main reason that students join food aid programs is that they have no source of funding and financial support. Students face challenges of funding early in the year. The (75%) of students who are not funded show that postgraduate students are greatly affected by food insecurity, particularly first-year postgraduates who need support.

First-year postgraduates are full-time students and are not working while studying and cannot afford to self-fund their studies. Van den Berg (2015) notes that financial aid packages from the government are not enough to fund tuition fees, accommodation and food. The (25%) of students that are fortunate to get funding to get payment in two tranches for the academic year. The payment comes late in the year around the second term and includes tuition, accommodation, books, and food allowance. Hence students choose to join a food aid program then discard it once food allowance is received.

Figure 6.

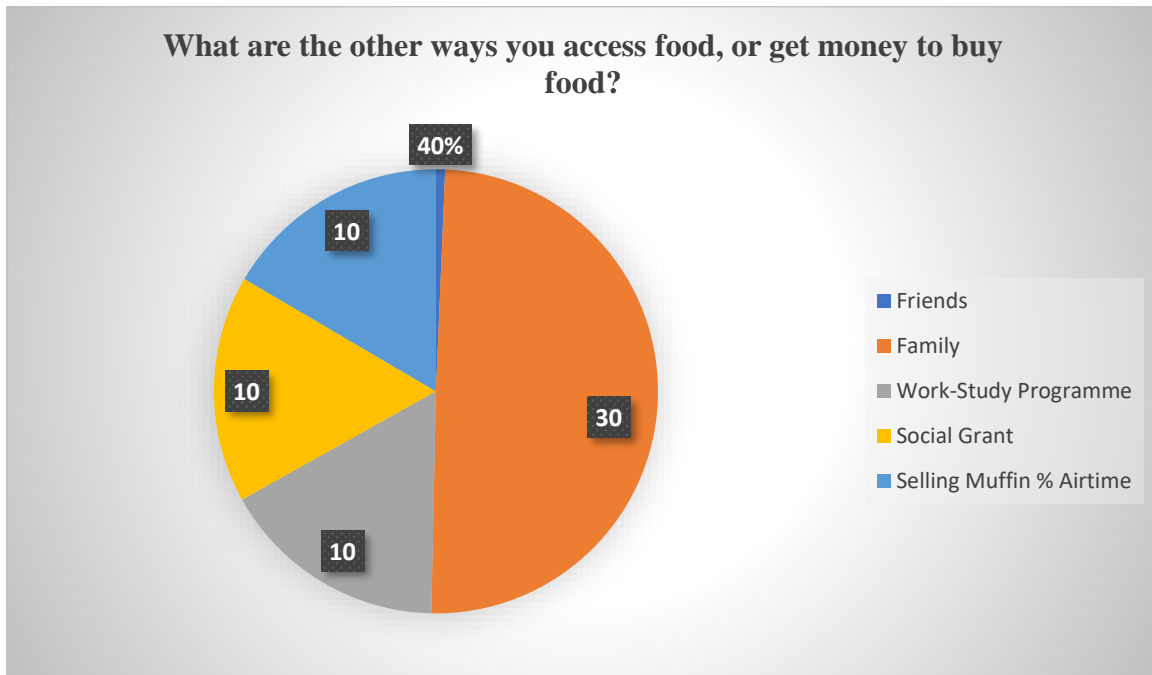


4.4 Other Ways to access food or money?

Figure 7 represents other ways that students indicated they access food from. One of the common food sources includes family (30%) and friends (40%). students rely on the work-study programmes (10%) as a way that the student can have money to buy food. Students

receive food assistance while waiting for bursaries to be disbursed and work-study contracts to be renewed. Other income-generating sources include selling muffins and airtime (10%) within residences. In addition, students access to food included social grants (10%) for those who are single parents.

Figure 7.



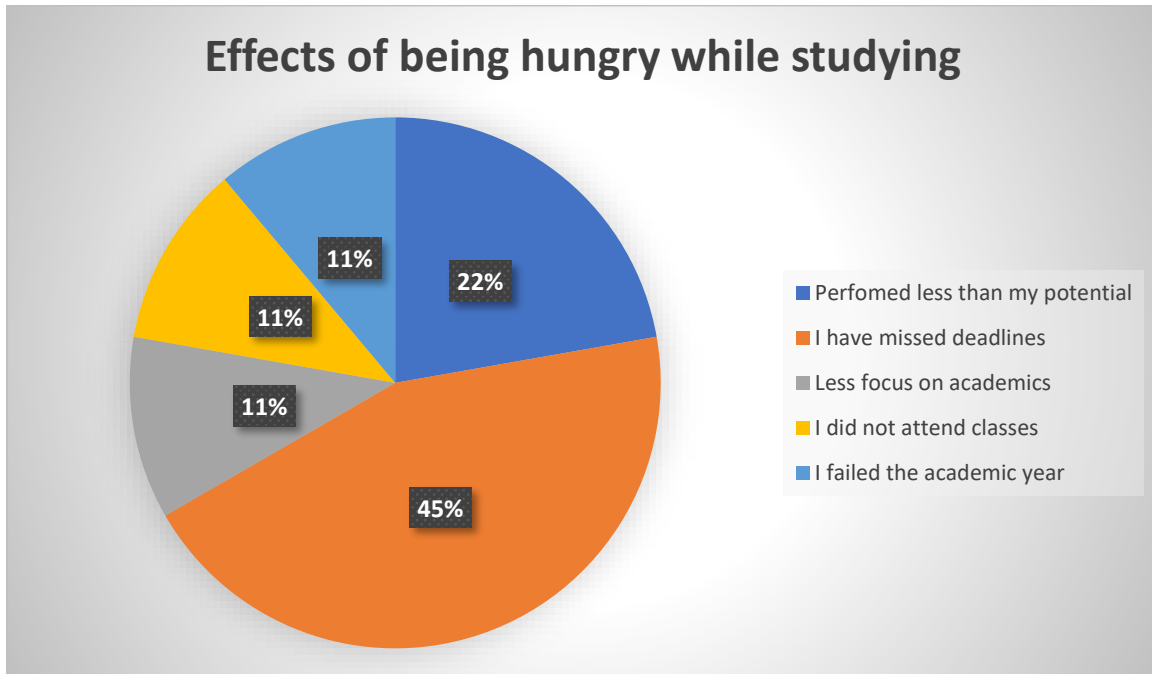
4.5. Educational Status

Figure 8 shows that (22%) of students indicated that have performed less than their potential in academic assessments. The (45%) of students that have missed important deadlines have been negatively affected, they must ask for permission to submit on a later date. This is overwhelming as more assessments need attention from the student. If a student is granted an extension on the assessment it means that the student will have to extra hard as late submissions are strictly scrutinized. The (11%) of students indicated that they lacked focus on their academics due to being hungry.

Students that missed classes represent (11%) because they were too hungry to concentrate in class. Students have missed classes and they have to spend their time accessing food and focused less on their academics. Students felt that not having food for breakfast affected their concentration levels, especially when webinars take up to 3hours which is from ten in the morning to one in the afternoon. While (11%) went to class hungry. Another (11%) failed the

academic year because of the challenges of studying while hungry and their studies being compromised.

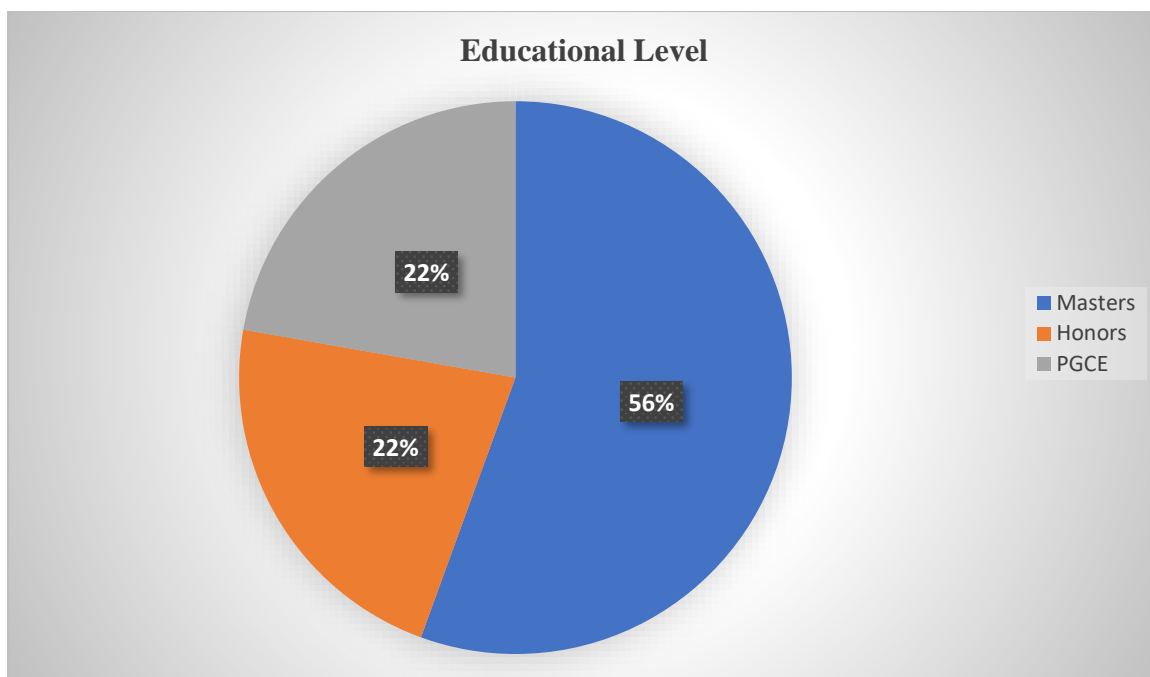
Figure 8.



4.5.1 Educational Level

Figure 9 shows the educational level of the research participants. This includes students studying towards their Master's degree, Honors degree, and Postgraduate Certificate in Education.

Figure 9



4.5.2 Number of students receiving food aid.

The emphasis from the research participants is that all food programs are helpful as they receive food monthly. The SDS nutrition and wellness program is funded by Tiger Brands and is one of the biggest programs on campus as most of the students indicated that they receive food from this program. Table 2 demonstrates the rise in the number of food-insecure students receiving food assistance. In January only (420) postgraduate students were receiving food, this includes students who were part of the catch-up programme at the beginning of the year. February and the proceeding months show that due to covid 19 the numbers of food-insecure students increased drastically. The demand for food aid increased from 420 students to assisting 1500 students. Table 2 shows a dramatic increase for each month when compared to the previous month in students receiving food.

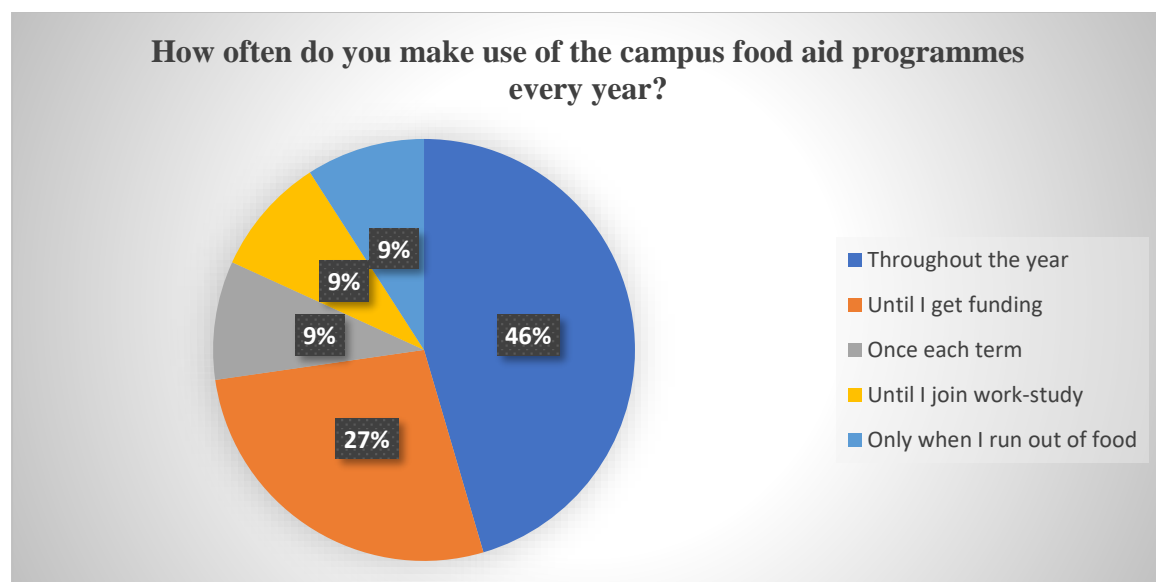
Table 2.

Number of Students	Jan	Feb	March	April	May
1500	420	790	930	1350	1500

4.5.3 How often do students make use of food?

Figure 10 show that (46%) of students make use of the campus food aid programmes throughout the year. Students that make use of the food aid programs until they get funding are (27%). Students usually get funding the next semester, until then they depend on the consistency of the food aid program. Students that collect their food parcel once each term (9%) indicated that they are not entirely dependent on the food aid program as they access food through other sources. Students that are part of the work-study programme (9%) stop receiving food once they sign their contracts. While some students are not frequent users and only access food aid programs when they run out of food (9%).

Figure 10

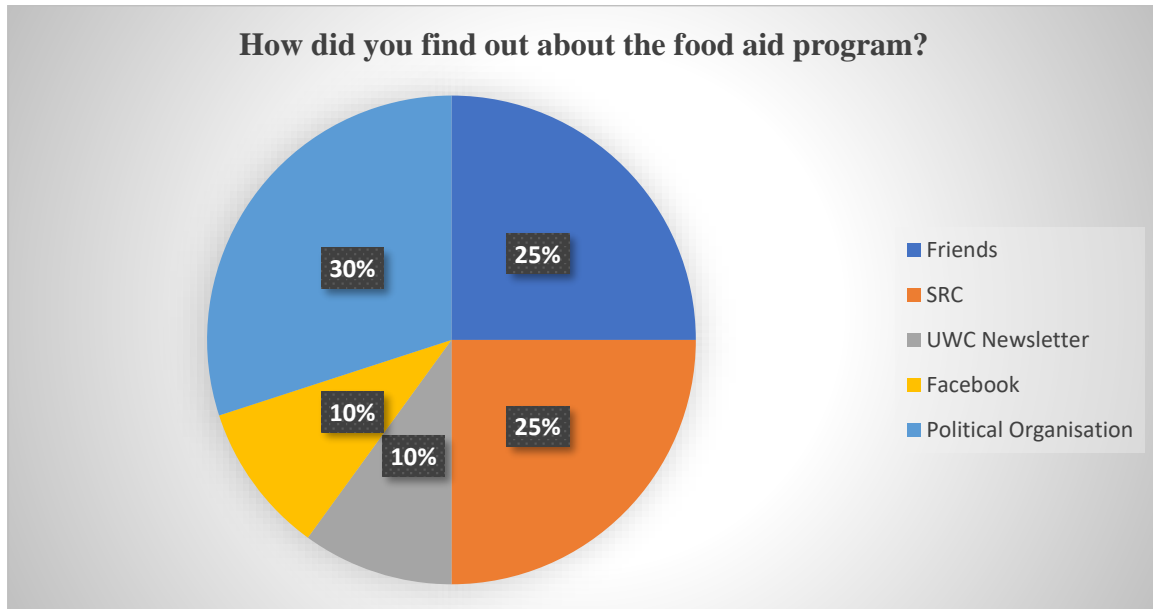


4.6 Information about Food Aid

Figure 11 represents the responses of students about where they found out about the food aid program. The results show that they heard from various sources. The majority got information from friends (25%) and the SRC (25%). Online platforms were also influential for students to

know about the food aid programs, such as the UWC newsletter website (10%), and Facebook (10%) and student political organizations (30%).

Figure 11

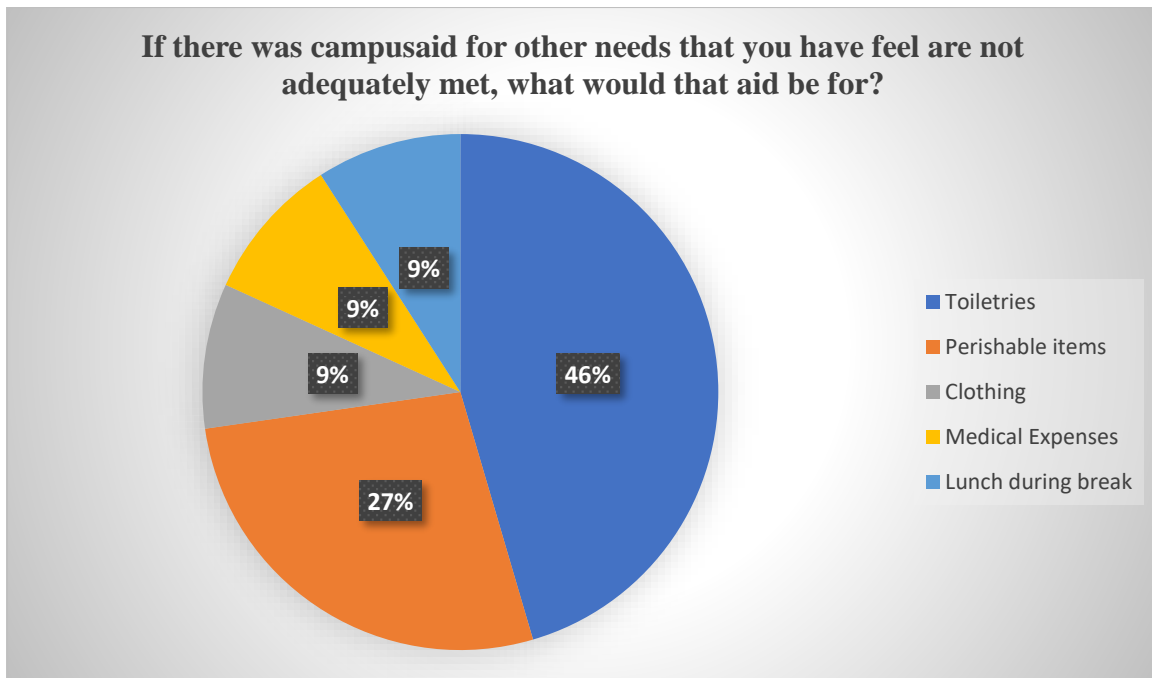


4.7 Other needs

Figure 12 shows that students (46%) felt that all food programs should include sanitary towels. This indicated that there should be one program that deals specifically with this basic need and relates to many female students. Perishable items (27%) included meat and eggs. Clothing (9%) is considered a basic need and students felt that it will form an important part of the food aid program. Medical expenses (9%) form part of one's well-being and health is a basic need. Another need that students felt that can be done is serving lunch for students (9%) during lunch break. This idea came from the temporal feeding schemes that operate during exams. Students felt that this will further boost class attendance as students will have no excuse to attend and actively participate in class.

Other basic needs include clothes, toiletries, and stationery. One of the most satisfying aspects about UWC Fairy Godmother is that a student requests what they need. The UWC Fairy Godmother Facebook page allows students to request anything related to their basic needs anonymously. The need of the student ranges from money, clothes, food vouchers, travel allowances. and study gadgets.

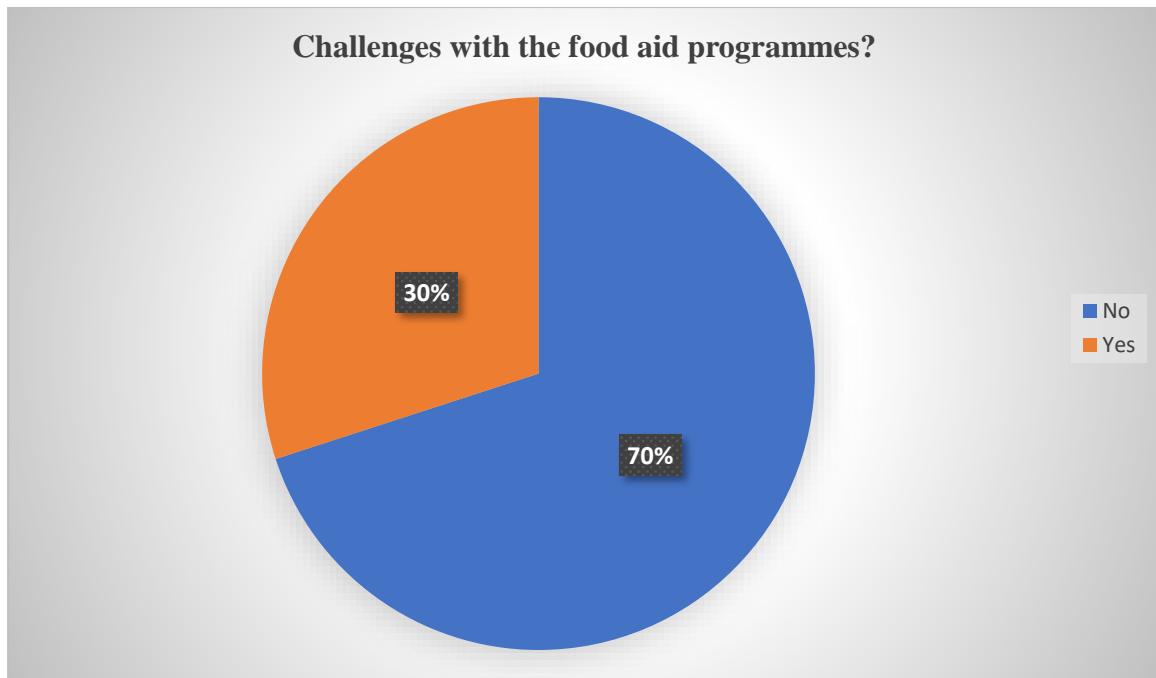
Figure 12.



4.8 General Challenges

Figure 13 show that the majority (70%) of students felt that they did not experience any challenges with the food aid programs as long they benefit from them. While the rest (30%) felt that food aid programs need to improve to do better.

Figure 13.

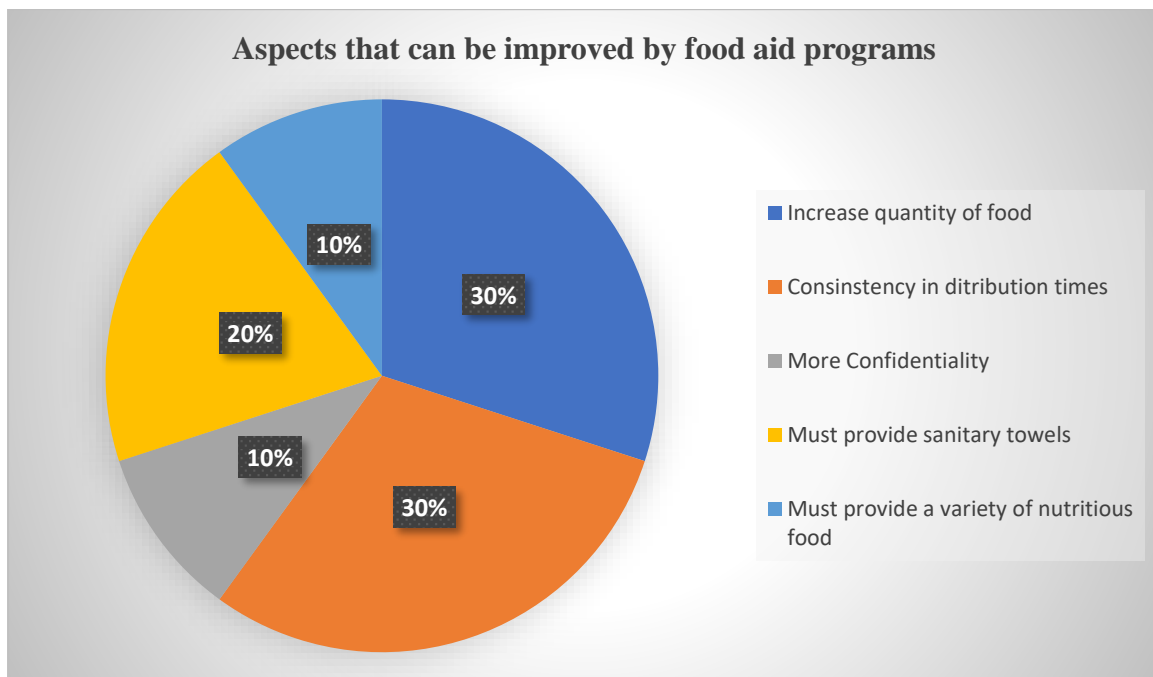


4.9 Aspects that can be improved?

Figure 14 shows other aspects that can be improved by all the available food aid programs and that (30%) of students need consistency in the quantity of food. The quantity of food provided to students changes every month depending on the number of students receiving food for that month. This happens when more students apply for food because of the delay in allowances, then the quantity becomes normal once other students have received their food allowances as they drop out of the food program. Students raised some concerns about the food aid programs, and these issues discourage students from reaching out for assistance. Students (30%) felt that they wait too long for their next collection and when the student has missed the collection time, the consequences are still to wait longer.

The time of the next collection date is longer than before and sometimes extends early to the next month. The waiting process frustrates many students especially if the student is a first-time applicant. Students felt that the food is not enough to last until the next month. The available food aid programs on campus do not provide the same assistance. They cater a variety of food and the quantity differ significantly as some do not offer basic toiletries (20%). Students felt that it will be an advantage to have a food aid program that caters to nutritious food (10%) such as vegetables, eggs, and meat. This also means that the food will sustain them for the whole month. Students felt that food aid programs must be confidential, students must stand in lines to collect parcels and everyone can identify them. Food aid programs prefer students to only access one food aid program, this ensures access to food by all students.

Figure 14.

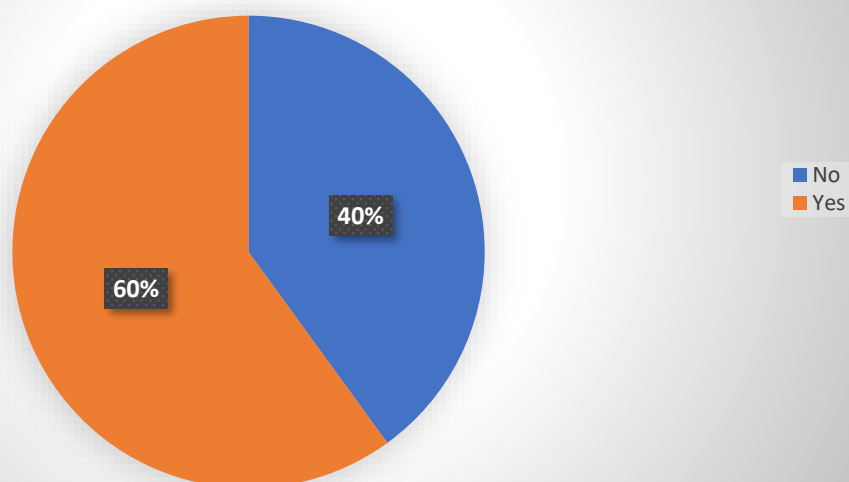


4.10 Stigmatization

Table 15 shows that 40% of the students felt embarrassed when collecting the food parcel because of the stigma attached to food insecurity. Students felt that they are not comfortable with being known to being a beneficiary of a food program, the fear of being pitied and known for struggling. The queue of collecting the food parcel is degrading and appropriate measures of privacy should be practiced. 60% of the students indicated that they have nothing against other students knowing they receive food assistance. This points out that (60%) of students are not held back regardless of stigma and other negative implications associated with food insecurity.

Figure 15

Do you feel fine with other people knowing you receive food aid?



5. Discussion

5.1 Introduction

The research findings were examined and assessed through online questionnaires and semi-structured interviews and will be discussed. The discussion will be about the topic: student food security and the role of on-campus food aid programs. The discussion will include UWC food sources, the approach to food security by postgraduate students, and the impact of food aid in enhancing food insecurity among postgraduate students. In addition, the discussions will provide insights on covid 19 about food aid programs.

5.2 Food Sources

As shown by the research findings, UWC postgraduate main sources of food are from the available food aid programs. The most frequently used food aid programs include the SDS Nutrition and Wellness Project, UWC Fairy Godmother, and the Reslife food aid program. The food aid programs ensure sustainability and consistency in feeding postgraduates regardless of their educational level. These food aid programs play a significant role in reducing food insecurity by eradicating the assumption that post-graduate students can support themselves while studying. Students indicated that their food security status is improving particularly that the food aid programs continue feeding students throughout the year. Food aid programs thrive despite challenges presented by the coronavirus and have become more conscious about the basic needs of the students.

The most valuable aspect of the food aid programs is that they are available to every student, post-graduate students can contact them without hesitation when in need of support. The (75%) of students that have no funding depend on the food distributed monthly by the food aid programs. Students continue to with their studies based on different reasons, some have no family support, and food aid programs are an important source of food. This means service is available whenever a student has no other alternative as students with no funding qualify. It ensures that all students who are in need are assisted without reluctance. However, the appropriate criterion is adhered to ensure accountability. This proves that food aid programs as a source of food eliminate the perception that postgraduate students can sustain themselves without asking for assistance. These food aid programs bring awareness to all students who seek assistance and help is indeed readily available on campus.

Many students felt that they need more support on other needs such as toiletries or rather have more programs that focus on such needs. According to Sarah et al (2016) students who are beneficiaries of food aid programs face economic hardships. This includes being unemployed and staying off-campus. The (50%) of students indicated that they relied on the food aid program and did not use it as a last resort. The other (50%) of students relied mostly on their friends and family, despite being hesitant to approach their families for support, as the same family is also affected by food insecurity. This includes asking for food from corridor mates and neighbours. This is another way that students indicated they access food from and eat the available food.

In addition, students living with their families struggle with necessities such as electricity and having enough food to feed the entire family, when compared to students staying on-campus residence. Students indicated the consistency of the food aid programs goes a long way as the whole family benefits. The food parcel covers the most basic aspects needed by the student as well as the family. The 75% of students who are not funded request assistance until a solution such as a bursary comes up. This does not simply mean that students are only requesting free food, but economic hardships are entrenched. Large families are dependent on one breadwinner which makes it an unsustainable source of support for the entire family.

The work-study programmes are another way that the student can have money to buy food. This is a better way UWC can offer employment opportunities to postgraduates and strengthen relations with a career expo. Economic situations differ for each student, some students indicated they stay with families and this has influenced food insecurity because of the living

situations. The data indicated the food aid programs are one of the ways to address it as students are unemployed. Other income-generating sources include selling muffins and airtime within residences. Getting food from the on-campus food aid program does not guarantee that students have money available to spend on other needs such as buying vegetables and toiletries. It means that they are less exposed to food insecurity. Students felt that if they had money available to spend on other needs, they would spend it on study snacks, medication, data, and other study gadgets. As indicated in figure 7 students did not indicate resorting to stealing food as a measure of accessing food as reported by other studies in chapter two of the literature review. This points out that students rather accessed food from other sources.

5.3 Approach to Food Security

The research participants indicate that they receive food from one program available on campus. However, during the examination they would eat the meals provided by the SRC and student political structures. The meals are provided to all students who are hungry for breakfast and lunch. This correlates with the demand and high numbers of applications for food during examinations, where most students need effective interventions. During the preparation of exams, these temporal feeding schemes are the most appropriate measures that can be taken to help reduce poor examination performance. Students in leadership have drawn attention to all university structures to show interest in their students shows interest by mobilizing for food sources. This approach in addressing food insecurity is imperative to get long-term solutions. Although the students indicate that they would like to benefit from more than one food program.

As indicated by the research findings that students need vegetables and fruit as part of being food secure. Faculties can offer a variety of foods to students as food aid programs offer mainly starch and non-perishable food. This approach will advance more interventions of food aid programs across the university, different departments can engage in temporary feeding schemes anytime without focusing only during the examination. There are potentially more solutions that can result from the involvement of faculties. The findings indicate that students need more food as they are limited to only one food aid program. Students felt that the food is not adequate and there is no consistency in the quantity of food received. The food does not provide the optimum quantity to last for the next collection. However, the food received limits their vulnerability to food insecurity.

Most students receiving food aid are staying on-campus (65%) while (35%) are staying off-campus. Students staying off-campus live in poverty-stricken households where families have become dependent on food aid. However, students on-campus face greater challenges as they live alone on the residence and opt for asking assistance from corridor mates as a way of building social networks. Building social networks at the postgraduate level is very important for each student even though the circumstances surrounding the relationship are unusual. Most students are not funded for various reasons, this includes the lack of funding for postgraduate students being limited to specific courses. 75% of students are not funded while (65%) students are studying towards their Masters in the Economics and Management Sciences Faculty. This points out that postgraduate students are indeed exposed to food insecurity because of the lack of funding.

Students have indicated that they have other sources of accessing food, this means they are less exposed to food insecurity and can keep their food security status secured. However, as indicated in figure 7 that they access food by selling muffins and airtime. Students are not allowed to sell any items on campus without permission, this, therefore, puts the (10%) at risk of being evicted from residence. This points out that accessing food from other food sources is a challenge itself. Students indicate when they sign work-study contracts, they are guaranteed to have money to buy food particularly food of their preference.

In addition, figure 12 students indicated that food aid programs should provide nutritious food. This indicates that the food provided needs to include a variety of foods and not only starch. The results indicated that the food aid programs need to consider including a healthier variety of food in their food parcels. The food provided consists of starch such as rice, mealie meal, pasta, and noodles. Healthier foods such as dairy products, protein such as meat, fruit, and vegetables. This will assist students in maintaining a healthier diet as the quality of food is effective in the concentration levels of the students.

5.3.1 Collection Process

The systems of distribution have been well developed but should not intimidate students from collecting food, and this is a growing concern for some beneficiaries. The food aid program differs as one program may cater for only residential students such as the Reslife food aid

program. While the other offers assistance to both residential and off-campus students, such as the SDS nutrition and wellness program. This shows the relationship between food insecurity and students and whether which programs cater for on-campus students is in itself an indication of the prevalence of food insecurity at UWC. Due to covid 19 and the initial experiences from the previous year. The approach of the food aid program was to expand the distribution posts from one to four, for the collection of food parcels.

One of the main reasons is that the academic year in 2021 started late and has caused a delay for students that are funded. The food aid programs are operating on weekends as more numbers of struggling students are applying for food assistance. Contrary to the steps taken to reduce food insecurity, the numbers of food-insecure postgraduate students have increased, as 7500 food parcels have been distributed since January 2021. However, the efforts made by the food aid programs indicate that many students rely on their assistance for food, especially at the beginning of the academic year. The ability of the food aid programs to deliver food security to postgraduate students depends on the utilization of the food and by extending empathy in the process of distribution.

The distribution posts are made available to accommodate both on-campus and off-campus students for collection, this depends on the residence close to their area. This included the DISA residence, Gorvalla residence, Hector Peterson residence, and Reslife Office parking for those staying on-campus. Students are reminded through emails to collect their food parcels. Students staying off-campus and who do not have a permit to access campus due to covid are encouraged to collect on off-campus collection points. During the collection of food parcels, students must maintain covid 19 regulations. Firstly, students must always wear their masks and must not be accompanied by friends to limit the number of students that are allowed for collection. Students collect non-perishable items such as rice, pasta, meali meal, oats, noodles, chacakalaka, beans, mixed vegetables in brine, jam, peanut, and butter.

In most cases, stigmatization is one of the contributing factors that contribute to food insecurity by discouraging students from reaching out for assistance when experiencing hunger. Importantly, the solutions to stigmatizations are uncertain and can be influenced by the roles of food aid programs in ensuring that students feel not only food secured but also feel comfortable in coming forward. Despite the complexities of stigmatization, collective actions from administrators, the UWC community, and students are needed in ensuring that there are no conflicting interests in accessing food. Distributional problems need collective action as

some students felt the need for female administrators to take part in the distribution process. This is possible by showing an effort to change as feedback about distribution is always presented when required by the food aid programs.

5.4 The Impact of Food Aid at UWC

The most satisfying aspect of the food program is the elimination of the uncertainty of not having food being distributed the next month. Throughout the 2020 academic year when the pandemic started all students received food, until the end of the academic year. Students had to vacate their rooms and go back home but for those who stayed behind, they were still catered for throughout the year. Particularly off-campus students. Students felt that food aid programs eliminated doubt about where they will get food. The other aspect that are satisfying about the food aid programs are that they cater to different needs.

The food aid programs ensure that all students that have applied for the food program receive the food requested by reducing the quantity of food. For instance, students normally get non-perishable food like rice in 2kg's. However, when numbers have drastically increased students get food in 1kg's to cater for everyone. Students indicated from the type of assistance the food aid programs can assist with food was the best option to fight food insecurity. Students felt that if they were given other options to choose between cash and food, they would still choose food over any assistance as it is the most sustainable need viable. The assistance with food helps reduce the risk of food insecurity among students, as some indicated mismanagement of money and not buying adequate food. However, students felt that aid should not have options as there is a need for cash and need for food. Food aid programs provide all students with access to resources such as food and referrals to counselling and academic support. This allows students to have an equal chance of succeeding even though students come from deprived socio-economic environments.

Figure 8 indicates that students are negatively affected by being food secured while studying. The academic results has become relatively low which have resulted in failing the academic year. Many students decide not to attend classes because of the lack of interest in academic activities while in class. In figure 12 students indicated that lunch should be served during lunch break. This will have a significant impact particularly on students who are commuting to campus and do not carry lunch boxes. This does not disregard on-campus students; however, commuting students cannot go to their rooms for something to eat during lunch break. In

addition, serving meals to students should be throughout the year and not only during the examination.

5.4.1 Student Support

This is one of the most key issues concerning food aid programs. Beneficiaries need kindness during this time, this usually draws other students who are suffering in silence. This also shows students that there is help available and there are students affected by food insecurity. This means that fewer postgraduates go to bed hungry, and more students can seek assistance because they have been seen and referred by a beneficiary. Food aid programs are associated with poverty and the stigmatization of students is one aspect that cannot be ignored as struggling students continue to suffer. Students that are food insecure must be able to access food, however, it has been difficult for some students who cannot come forward. This cannot be overlooked as it affects the students psychologically. This needs the attention of administrators of food aid programs to deal with stigmatization with sensitivity as some students feel ashamed to come forward and ask for help.

The approach of the food aid programs in addressing the issues of stigmatization should include referrals to counselling sessions that will help in stimulating self-confidence. Counselling sessions are one of the strategies that can be pursued in every aspect of student life. The student is guaranteed emotional support, academic support, and the overall well-being is nurtured. This would have been a different case if they were still undergraduates however at the postgraduate level, the struggle is real, and any assistance is most welcomed. Some students indicate they serve in student structures and being seen with a food parcel means helping other students who felt embarrassed of getting assistance. This will show other students that there is nothing wrong with getting food aid even if the student is a student leader. It draws the students who feel isolated from social relationships with other students.

5.5 Covid Restrictions

Some of the well-known food aid programs were discontinued due to covid 19, it was mostly dependent on donations for food items from staff members and students. Due to lockdown levels, most staff members and students did not go back on campus following strict restrictions and donations stopped. The food aid programs operated without financial stability and relied on sponsors for supplying food. Some sponsors are once-off and are not long-term, this creates more challenges as food insecurity remains a critical challenge. Other food aid programs continue feeding students with lockdown restrictions which are very valuable to students

receiving aid. There is a continuously integrated plan for all adjusted levels to accommodate students who are in need. Food aid program administrators work tirelessly to follow the necessary covid protocols for the collection of food parcels. Students are aware of all the changes and alternatives of distribution points made available to students.

The food aid program administrators adjust each process of distribution following each level of lockdown and whether lockdown has been extended. This means that food aid programs have put strict measures in place that they adhere to and considers the importance of the well-being of everyone involved. Food aid programs recognize the conditions of students staying off-campus in marginalized communities and are supported throughout the lockdown period. The efforts of acquiring transport and ensuring that food parcels are delivered to students staying off-campus are commendable. This reassures off-campus students that food aid is available for collection during dire times. Students staying off-campus are not left behind and this is extraordinary as many vulnerable students are catered for.

The role of food aid programs is to maintain the control of the spread of the virus, particularly in situations of collection. Students are asked to wear masks and not bring friends when collecting food parcels. Lockdown has made things worse particularly for poor households and students had to struggle as the family could not afford to buy food. Breadwinners lost their jobs and could not buy food; this threatens the livelihoods of the households. In addition, lockdown threatens the availability and affordability of food for many food aid programs. Food aid programs that were discontinued include the SRC exam program that catered sandwiches and fruit during exams. Due to lockdown, students write online exams at home or on the residence. Students are left to fend for themselves during this period especially those staying on-campus with no alternative programs available to them. Food insecurity is a serious concern on the residence and the scarcity of temporal food aid programs put student's educational outcomes at risk.

There are many reasons that students stay on residence during lockdown instead of going home. This includes challenges of internet connections as all teaching and learning are done online. This reason allows students to stay on campus for a better studying environment. Students staying on the residence are required to apply and furnish reasons why they should be allowed to stay on residence. If the reasons are accepted the student follows strict covid 19 protocols including health check-ups. For whatever reasons students choose to stay on campus during

the lockdown, the vulnerable are still affected by the discontinuation of temporal food aid programs.

Many students looked forward to the feeding schemes during exams, be it from the SRC or student structures, these food programs directly addressed their basic needs. Needy students staying off-campus were also catered for during exams, the sandwiches helped as they commuted daily between campus and home. The plight of students staying off-campus is worse as they are faced with situations that may not be conducive to learning at home. In addition, students that were anxious about the distribution of food parcels as a result of lockdown are now positive about the resilience shown by the food aid programs. Even though some food aid programs were discontinued, the available food aid programs have adapted to changing times.

Lockdown has exacerbated food insecurity whether the student is staying off-campus or on campus. However, food aid programs have proven to mitigate the challenges of covid 19 by ensuring students are well fed throughout lockdown. Despite the current the lockdown disruption, the most important aspect is the provision of basic needs. Food aid programs have overcome many challenges during lockdown and continue to be an agent of change in students live, households, and communities. This lays a path to other food aid programs that have yet to be established that transformation is possible and have adapted to changing times.

5.6 Conclusion

This chapter has focused on the findings of the student's responses on food insecurity and the available food aid programs. It addressed the main outcome of the online questionnaires and the semi-structured interviews. The food aid programs are linked to the sustainability of students. Students have highlighted the challenges that they face with food aid programs but have suggested solutions in how they should be improved. Covid 19 has introduced new distribution ways to collect food and deemed it convenient for both on-campus and off-campus students. Food insecurity faces affected students differently to such an extent an that some students have become regular beneficiaries while others can escape food insecurity after receiving funding.

Chapter Five

Conclusion and Recommendations

5.Introduction

This chapter will briefly provide an overview of the previous chapters. Each overview providing a brief detail of what each chapter has entailed. This will provide an analysis of how each research objective was achieved throughout the study. Followed by the concluding remarks of how the study was explored. In addition, this will highlight the responses of how the research questions were achieved. The recommendations will be provided and how they have helped achieve the research objectives. Future research has been identified to enhance the knowledge that has been acquired in this research.

5.1 Overview of Chapters

5.1.1 Chapter One

Chapter one has provided the background and contextualization of this study. It constitutes the significance and rationale of the study and the problem statement. The problem is that food insecurity has hit tertiary institutions and the failure to address this issue leads to students dropping out. The significance and rationale have been adopted from the problem statement which has led to the research hypothesis. The research aim was to bring a holistic view and understanding of food insecurity among postgraduate students and its context. Moreover, it has pointed out the primary objectives and secondary objectives and includes the research hypothesis.

5.1.1.1 Research Objectives

The primary objective of this study is to investigate the state of food security at UWC. This was achieved through accessing food aid programs by postgraduate students, indicating that they are food insecure. The secondary objective was to determine how UWC postgraduate students access food aid programs as part of being food secured. The outcome was determined through the increase in the number of students applying and receiving food aid through the available food aid programs on campus. The third objective was to determine how postgraduate students experience the benefits of food aid programs. The benefits of food aid programs are that students focused more on their academics than spending time on accessing food, students

have assured food assistance monthly, and students could spend money on other needs not provided by the food aid program.

The fourth objective was to assess the role of food aid programs in enhancing food security at UWC. The roles of food aid programs proved to be actively involved in the well-being of the students beyond the distribution of food parcels. Food aid programs referred students for counselling sessions, introduced temporal feeding schemes, and were able to distribute food parcels amid the covid 19 pandemics. Lastly, the fifth objective was to establish a relationship between food aid programs and postgraduate students. This was achieved through addressing postgraduate needs directly by changing how issues of food insecurity among postgraduate students are dealt with and introduce the capacity to reduce it.

The overall objectives were achieved through a mixed-method approach to determine the findings of this research. A review of literature on student food insecurity was conducted. This further used online questionnaires and semi-structured interviews to assess the status of food security at UWC. The main themes that were explored in this study include general challenges with food aid programs, some aspects that need to be improved by food aid programs, the lack of funding for postgraduate students, reasons for the increase in the number of students receiving food assistance, stigmatization and the impact of covid 19 on food aid programs. It was found that there is a correlation between student food security status and the role of food aid programs at UWC.

The qualitative part of this study allowed the narratives of students to be recognized by presenting their experiences about their food status. Ten postgraduate students that are beneficiaries of the food aid programs shared their views on food status through semi-structured interviews. This revealed the issues faced by many students irrespective of their level of study concerning food and how postgraduate student's food security is not addressed by tertiary institutions. Thirty postgraduate students participated in the online questionnaire that revealed the significance of the food aid programs particularly that less is said about the existence of food insecurity among postgraduates. The mixed-methods approach highlighted the importance to conduct further research concerning the issues of food insecurity among students.

5.1.2 Overview of Chapter Two

Chapter two identified literature on student food insecurity internationally and nationally. This constitutes the definition of food insecurity and what it means to be deemed food secure. The literature has presented an overview of food security in South Africa. This was followed by a comprehensive review of literature on student food insecurity and how it has emerged to compromise student studies. Chapter two revealed intervention strategies that were implemented by tertiary institutions as part of food initiatives for students. The discussion included food UWC food aid programs that were adapted to curb food insecurity among students. The focus was on the role of the food aid programs in enhancing the status of food security at UWC. This included how food was distributed to students as part of being food secured.

This chapter highlighted the importance of food aid programs and the impact it has on at tertiary institutions. It provided food aid programs that are available at UWC and how students can go about being a beneficiary. It revealed an exhaustive but not limited list of reasons for student food insecurity and why students are susceptible to food insecurity. The discussion for the reasons of student food insecurity includes students from a low socio-economic background without adequate resources to support them. Financial aid has been presented as one that is unable to provide a sustainable system to cover all student tuition fees, accommodation, books, and food. The funding may fall short which creates a gap between the money received and what is needed by the student to survive.

Subsequently, expenditure on other items increased the chances of the students being food insecure. Students misdirected their funding on other items that are not food related. This includes buying alcohol, luxury items, and clothing than buying nutritious food. In addition, on-campus food is too expensive making it difficult for a student to purchase nutritious food. Students were faced with unrealistic high prices and student accommodation has become inclusive to self-catering. This presented a higher risk to be food insecure particularly students that face financial difficulties. The literature revealed the correlation between student food insecurity and academic performance.

The discussion highlighted that hunger can affect concentration which often leads to tiredness, thus affects the cognitive functioning of the student. Students lose focus on their academics because they always looking for ways to feed themselves. Students need to have access to food to lead a productive life otherwise their learning capacity is compromised. Student food

security can also be associated with covid 19. It challenged the availability of food and whether tertiary institutions will be able to feed their students. Covid 19 proved that effective food aid programs were indeed important to ensure sustainability during any pandemic. Lastly, chapter two presented a theoretical framework that was used in this study. The BNA as a theoretical framework proposes a better understanding of basic needs to students, it proposes the provision of adequate food and that all individuals are well fed. The fulfilment of the basic need of food, clearly means that students can enjoy economic and social development.

5.1.3 Overview of Chapter Three

Chapter three has presented the research design and methodology that was applied in this study. The focus was on mixing both quantitative and qualitative methods of data. Both methods provide an important element in the assessment of the quality of data presented in this research. Using mixed methods is vital in this study as it seeks to use the results from one method to help develop each other. The population was identified at UWC, and the selection of the sample size commenced. The sampling method that was used is a purposeful sampling method. The sample size is selected from registered students who are staying in the two postgraduate residences and who are staying off-campus. Forty postgraduate students were selected for this research study. Thirty students answered the online questionnaire while ten students were interviewed through a semi-structured interview. Students represented all faculties including and food aid programs. Data was collected through primary data and secondary data. Ethical considerations were adopted where the research participants remain anonymous. The anonymity and confidentiality of the research participants were adhered to.

5.1.4 Overview of Chapter Four

Chapter four presents the research findings and discussion based on the empirical study that was conducted. This highlighted the demographical information acquired from the research participants which included gender, race, and their financial status with regards to funding, economic background, and educational status. Female participants who dominated the study were between the ages of 25-30 years. Most students are staying on-campus residences while the rest of the participants stay in surrounding areas such as Nyanga, Delft, and Belhar. Concerning the effects of being hungry, students skipped classes to look for food, students performed less than their potential and some focused less on their academics which led to failing the academic year. This indicated the increase in the number of beneficiaries within three months. Most students receive food throughout the year as there are no other sustainable

options available. The news about the availability of food aid programs came from the UWC newsletter, SRC and most importantly friends were the most reliable source of the information. Particularly because they were also beneficiaries of the food aid programs.

Concerning other needs that may not be adequately met by the food aid programs, toiletries were the number one item that was students hoped could be provided. Followed by perishable items, clothing, and medical expenses. Most students did not find any challenges with the food aid programs; however, some aspects can be improved. This includes the increase in the quantity of food, consistency in distribution times, and the provision of nutritious food such as vegetables. Stigmatization is one of the factors that contributed to student vulnerability. This calls for more support services that will be able to deal with such situations. However, some students are not held back regardless of the stigma and other negative implications associated with food insecurity.

The discussion revealed the main food sources were the SDS Nutrition and Wellness Project, UWC Fairy Godmother, and the Reslife food aid program. Other food aid programs were discontinued because of the lack of financial support and other contributing factors such as covid 19. Other food sources include family, friends, corridor mates and selling muffins, and airtime to buy food. The approaches to food at UWC revealed that different structures are actively involved in feeding students through their events, temporal feeding schemes, and food drives. This helps reduce the demand and high numbers of students applying for food and these interventions are only short-term solutions. The collection needed a new system that will align with covid 19 regulations. This expanded collection posts where anonymity was adhered to. The impact of food aid meant that students were provided with food every month. Students did not have an excuse to skip classes and not focus on their academics. Students were fed despite the challenges presented by covid 19 nationally with restrictions. Students benefited from food aid programs throughout the year. Students are guaranteed that food insecurity could be curbed.

5.2. Concluding Remarks

This study found that postgraduate students do experience food insecurity and the available food aid programs should be expanded. The number of students accessing food aid programs is significantly increasing and cannot be ignored. This suggests that more food aid programs should be endorsed specifically to accommodate other basic needs. The university should invest in food aid programs by contributing financial support. New approaches should be used to address the complex problem of food insecurity so that students are not deprived of the right

to perform better in their studies. In addition, this research suggests the need for more research to be conducted to understand the struggle of food among postgraduate students. The university needs to revisit policies to ensure that student needs are addressed. In so doing, policymakers can help make meaningful contributions towards creating measures that will produce successful food aid programs. Sustainable solutions to the University will strengthen support services that assist students with access to food. The establishment of food aid programs at the University level sets precedent for the next generation of students that also come from low-socio-economic backgrounds.

This study has explored the connection between food insecurity among postgraduate students and the role of food aid programs at the University of the Western Cape. In so doing, it has highlighted the current food status of postgraduate students and the different interventions to curb food insecurity. In addition, the study has reviewed the literature on food insecurity and food aid programs among students globally and nationally. The outcome is that food insecurity has emerged at tertiary institutions and there is growing literature in South Africa that indicates that students are vulnerable to food insecurity. More research is being conducted particularly by introducing strategies that help alleviate food insecurity among students.

5.3 Response to Research Questions

In response to achieving the research questions, the following data was acquired.

1) How do UWC students living on campus access food?

Postgraduate students were able to access food through the Reslife food aid program. This food aid program is specifically established for students staying on the residence. However, students could choose which food aid program they want to access food as the food items provided is not the same. Students are not allowed to access food from different food aid programs.

2) How, why, and when do students at UWC make use of on-campus food aid programs?

Postgraduate students apply to a food aid program of their choice. Students must apply online if they want to be beneficiaries of the SDS Nutrition and Wellness Project. Students must send an inbox on Facebook to be a beneficiary of UWC Fairy Godmother. Students must send an email to the Reslife food aid program coordinator to be part of this project. S

tudent make use of food aid programs because of various reasons which include not having funding. Students access food aid programs early in the academic year and are frequent users throughout the year. Students access food aid programs until they found a solution such as being part of the work-study programme.

- 3) How is food accessed through food aid programs part of their overall food access strategy?

Once students become beneficiaries, they can access food until they have become food secured. This includes being funded and having a food allowance. Food aid programs do not limit students to receive food for a specific period. Hence others stop accessing food once they receive funding.

- 4) Do UWC students who make use of campus food aid judge the food aid as sufficient in quantity, quality, diversity, and health?

The findings indicate that students are not satisfied with the quantity of food provided to them as there is no consistency. The food parcel changes according to the number of students receiving food each month. The food can either be more or less compared to the previous month to cater to every student that has applied for food. The quality of food is considered to be sufficient as the food is provided by Tiger Brands which is one of the biggest distribution companies in South Africa. Students felt that there lacks diversity in the food provided and suggested that nutritious food be added such as dairy and vegetables to improve their health. This question considers the food security status of UWC and why there is a need for more food aid programs to sustain students.

- 5) What factors determine whether students are assisted through the food aid program?
Students must not have funding.

- 6) Are there any complementarities or redundancies between the programs?

Food aid programs complement each other, students choose which food aid they want to access because they provide different items. Food aid programs cater to the different needs of students. UWC Fairy Godmother provides students with food vouchers and money so that students can buy their preferred food. While the Reslife food aid program provides only for residential students.

5.4 Recommendations

This study recommends that policymakers and researchers provide sustainable solutions to the University that assist students with access to food. Different stakeholders are needed to accomplish food security particularly in establishing more programs that meet other basic needs recognized by students. The emphasis is not only on food but support services that provide psychological and academic support. The role of these food aid programs is to feed students to prepare them to learn rather than worrying about their next meal. The investment into such initiatives will improve academic success and graduation retentions.

5.4.1 Recommendation One

To increase access to food include providing students with information about work-study programmes and career expo. Students can benefit from this information and use it to limit their vulnerability to food insecurity. Reasons for student food insecurity affect students differently, this should be explored through counselling sessions and support services. However, counselling sessions and support services should be referred to students, students should choose to use the information provided to them so that they can become aware of the different services available to them. Food aid programs have become safety nets for students by providing them with opportunities to be food secured.

5.4.2 Recommendation Two

Temporal feeding schemes should be expanded to improve access to food. Temporal interventions should be permanent as food insecurity affects some students throughout the year. They may be convenient for the short-term solution, however, students need long-term sustainable solutions. Students face the possibility of failing the academic year, reasons include not attending classes, not performing according to their potential in their academic assessments and failing to submit assessments. Instead of focusing on their academic's students sell muffins and airtime to access food. The standards of being a postgraduate student at university have been defeated by the realities of food insecurity and the struggles of being a postgraduate without support.

5.4.3 Recommendation Three

Some food aid programs have been discontinued as a result of covid 19. They need financial support to sustain students and to reduce challenges associated with food insecurity. The depth of food insecurity threatens both on-campus and off-campus students. However, food aid programs cater to all students irrespective of their residential status. Beneficiaries that stay off-

campus provide for their families with the food parcels from food aid programs. This happens despite South Africa deemed food secured nationally. The discontinuation of other food aid programs suggests that the available food aid programs need more support and may not meet the needs of more students. Amidst the challenges of covid 19, there is sheer determination from food aid programs to sustain students. They show effective change and hold the capacity for development.

5.4.4 Recommendation Four

Food aid programs can introduce sustainable projects such as food gardens, soup kitchens, affordable catering services, and offer workshops on how to be responsible with money. Food aid programs could start a partnership with student support services to create awareness around the implications of food insecurity on campus. This could draw the attention of different stakeholders to support the initiative and avoid the discontinuation of food aid programs. The key role of food aid programs is the investment in enhancing food insecurity, hence the need for resources to continue sustaining students.

5.4.5 Recommendation Five

More food aid programs should be implemented particularly focusing on postgraduate students. Students must adapt from undergraduate studies to postgraduate studies and the potential to excel academically may be impaired by food insecurity. This expands the accessibility of food by different organizations within the university. It assures productivity for all student's and eliminates the possibility of students experiencing food insecurity. However, it requires engagement from students to partake in activities that support sustainable solutions. Students understand the extent that food insecurity threatens their future success and being actively involved in sustainable projects provides adequate insights for tertiary institutions.

5.4.6 Recommendation Six

The administrators of food aid programs should be trained to deal with students. They should be empathetic and supportive towards students enduring hardships. Students struggle with issues of stigmatization and support should be given in a sensitive manner. Students must be encouraged to ask for help when in need and support services must be available to give solutions.

5.4.7 Recommendation Seven

Lack of funding is one of the main reasons that students access food aid programs. This should be examined to include courses not previously included. Access to food can be introduced by having greater funding opportunities for students irrespective of their field of study. Funding opportunities should prioritize food allowance and not only focus on tuition fee, accommodation, and book allowance. Other underlying issues that may have caused food insecurity needs to be addressed such as late payments of bursaries. General challenges include the quantity of food and the lack of nutritious food provided by food aid programs. The quantity of food compromises the student's food intake, there is a need for consistency in the quantity as it changes each month.

5.5 Future Research

Food aid programs have a significant role in student food security status. Food is an important basic need that has an impact on student well-being and student success. The growing literature on student food insecurity has recognized that food insecurity has become a student issue that needs to be addressed by tertiary institutions. New approaches should be considered by tertiary institutions, this includes looking into detail why students access food throughout the year, while other students only access food aid programs four times a year. The responses from food aid programs have brought some sense of relief for student needs and preserve the student's dignity. The interventions have drawn interest of students, staff members, university management, stakeholders, policymakers, and local government to be involved. This have presented that there is an emergence of food insecurity among tertiary students by various academic papers in the field of food insecurity.

This gives the university management an insight into food insecurity experienced by students and the contribution of food aid programs in enhancing food security. It provides an understanding of other basic needs such as clothes and health that need to be addressed. The challenges presented by covid 19 and how the distribution of food have changed to include both on-campus and off-campus students. University management can be able to identify interventions that work towards achieving food security by providing access and affordability to campus. Faculties, deans, student structures, staff and students can be empowered to prioritize food insecurity initiatives on campus. And the commitment from the University shows that alleviating food insecurity is both beneficial to the students and University by

providing positive outcomes of academic achievements from students. In so doing the risk of food insecure students is minimized in terms of academic exclusions and dropouts.

University management is encouraged to understand the extent of food insecurity on campus to broaden institutional policies around food security. Food insecurity should be included in research and innovation as part of underlying issues facing students. The real impact of food insecurity should be in the agendas and goals of Institutional Planning. This will greatly contribute to the student's lives by transforming sustainable projects. Increasing participation from various stakeholders should be the key focus. This determines the balance between food aid programs and donors to avoid discontinuation. Evaluation processes are one of the ways that can assist in identifying the effectiveness of food aid programs. Tertiary institutions can reflect on the status of food security and properly address the underlying issues as part of institutional development. This is instrumental to the success of students and to tertiary institutions, particularly in producing graduation outputs.

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Appendix 1

Semi-structured interview Questions

1. How old are you?
2. What race are you?
3. How often do you make use of the campus food aid programmes every year?
4. What are the other ways you access food, or get money to buy food?
5. Does getting food from the on campus food aid programmes mean that you have money available to spend on other needs? What are these needs?
6. If there was campus aid for other needs that you have that you feel are not adequately met, what would that aid be for?
7. Have you experienced any frustrations or challenges with the food aid programmes? Please describe them.
8. Do you feel that you have experienced any negative knock on effects from being hungry? For example, missed an assignment deadline, missed class, performed less than your potential on a test?
9. Do you only approach the food aid programme as a last resort?
10. Which campus food aid programme do you access food from?

