

STUDENTS, FOOD, HUNGER AND FOOD SECURITY: A CASE STUDY OF HOWARD
COLLEGE, UNIVERSITY OF KWAZULU-NATAL, DURBAN

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A THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE
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DATE: 21 NOVEMBER 2016

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DECLARATION

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I, Abongile Mbangatha (Student number 210503644), declare that the thesis titled: **Students, Food, Hunger and Food Security: A Case Study of Howard College, University of KwaZulu-Natal, Durban** is my original research.

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Date

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DEDICATION

I dedicate this thesis to my parents,

My late father, Samkelo Mbangatha – uFaku, uNyawuza ka Dakhile

And

My mother, Tembela Mbangatha – uMsuthukazi uManzaba

Acknowledgements

- I would like to thank God of Mount Zion, without Him I would not have made it this far.
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Abstract

Food (in) security is a global dilemma that requires multifaceted and sustainable solutions. This is because hunger is unique in every context and it requires an approach that will address the unique challenges of specific contexts – such as the students’ one. Food (in) security is often looked at on a macro scale (such as at a country scale), which leads to negligence of food (in) security issues that take place on a micro scale. The purpose of this study was to investigate issues of hunger and food security on a micro scale, particularly, at the University of KwaZulu–Natal, Howard College campus (UKZN-HC). There is very limited research on student hunger and food security among students. The food sovereignty framework is adopted as a theoretical foundation for this study, for its appropriateness. The aim of this study was to evaluate the manner in which university students access food, and the impact of various food security strategies that have been implemented at the university between 2006 -2015. This aim was achieved by employing in-depth interviews as a qualitative data collection method, which was appropriate to unpack the perceptions and insights of students about hunger and food security in their context, through their lived experiences. The findings suggest that a household’s economic status does matter because students from well-off families endure less hunger than students from poor households. Money is important as a game changer in access to food because those with money have a choice in terms of the quality and quantity of food they eat. National Student Financial Aid Scheme- NSFAS (which is a source of funding provided by the government) is an important player in ensuring food security among students, whose role cannot be ignored. Although feeding schemes do have an impact on hunger reduction amongst students, they are often stigmatising and generally not sustainable. The study also found power differentials in the determination of policy with the university authorities having more power in determining food policies at the University. The study also found out that addressing food security among students is very imperative, because food is a very critical element in enhancing the academic performance of students. As such, the university needs to direct its priorities towards ensuring food security among students, as this can help to enhance their performance; and when students perform well, the ranking of the university improves.

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Table 1: Percentage of Individuals Experiencing Hunger between 2002 and 2011 (using the FPL)

ACCRONYMS

| | |
|--------------|---|
| NSFAS..... | National Student financial aid Scheme |
| UKZN-HC..... | University of KwaZulu-Natal, Howard College |
| IDP..... | Integrated Development Plan |
| FAO..... | Food Agriculture Organisation of the United Nations |
| NDP..... | National Development Plan |
| NPC..... | National Planning Commission |
| SDG..... | Sustainable Development Goals |
| ICSU..... | International Council for Science |

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CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1.Introduction and General Overview

Food security and hunger are global priorities that require a sustainable solution, in both the developing and developed countries. Although there are numerous studies that have been conducted about hunger and food security in various contexts throughout the world (macro scale), there is a very critical need to focus on issues of hunger and food security that exist on a micro scale. Food security is a state where there is an economic and physical access and availability to safe and nutritious food for people (World Food Summit, 1996 cited in FAO, 2006), while hunger refers to a lack of food to meet energy requirements (WFP, 2016). The correlation between food security and hunger is that strategies for food security often seek to eradicate hunger.

Over the years, food security and hunger have been global priorities that have widely been investigated. There is a great need to investigate these issues as they may create other social ills in the society. According to the World Bank (2016), the world is experiencing a shortage of approximately 50 per cent of food. An exacerbating factor is that while there are shortages of food, climate change is decreasing the agriculture produce by more than 25 per cent. It is further stated that the marginalised groups, particularly from the developing countries, are greatly affected by food security challenges. Most scholars (Shetty, 2006; Altman, Hart and Jacobs, 2009) associate hunger and food insecurity with the peripheral nations. It is indisputable that the developing countries experience greater levels of hunger, however, Shetty (2006) argues that addressing hunger should be considered a priority in both the developing and developed countries.

Challenges that are related to food security can be perceived in two strands. First there are societies that are facing food shortages, and as a result they are often vulnerable to hunger; and then there are those that are food secured, which are vulnerable to obesity. Most scholars often associate hunger with the developing countries and obesity with the developed countries (Prentice, 2015). According to Chopra, Galbraith and Dartho-Hill (2002), obesity is the most common disease associated with diets in developed countries, and a recent study shows that in the United States of America obesity levels are approximately 55 per cent.

Based on the prediction made by the WHO, diseases associated with diets are slowly becoming the main cause of mortality (Chopra, Galbraith and Dartho-Hill, 2002). These diseases do not only impact on the mortality rate of the country, however, they also affect the countries' social expenditure. To elucidate further, more government expenditure is directed towards health care than towards more important issues. According to Shetty (2006), in the USA, an individual spends approximately \$ 10 000 per year for medical therapy to reduce cholesterol, while treating obesity costs approximately \$40 billion per year.

According to the report of the International Food Conference (2006), the majority of the impoverished population is found in Africa. This has changed as obesity is an emerging health problem in African countries as well. According to Chopra, Galbraith and Dartho-Hill (2002), the greater levels of obesity in the developed world can be perceived as an indicator that obesity is a maker of high socio-economic status. To concur with this, the FAO (2012) notes that there has been strong growth in the economy of most African countries. In the economic growth ranking in 2010, it was discovered that seven of the world's ten fastest growing economies are African countries (FAO, 2012: 8). As a result of this, there is a growing population that can afford food, therefore there is a coloration between the economic growth and nutrition (problems associated with nutrition will increase as there is growth in the economy).

Obesity cannot be solely associated with the growth of the economy, however; diet transitions can also be perceived as a perpetrating factor. Various studies revealed that developing countries (such as Brazil and Mexico) are also encountering high levels of obesity (Chopra, Galbraith and Dartho-Hill, 2002). This is because of the dietary transitions that are occurring in the developing countries; people are shifting from their traditional healthy diets to western diets, which often consist of deep fried foods. Chopra, Galbraith and Dartho-Hill (2002) further note that by 2020, approximately two thirds of the global population will have chronic diseases that are associated with poor diets, particularly because of high consumption of foods containing saturated fats.

In South Africa, shifting to democracy led to a broader focus on issues associated with food security. This is because other racial groups that were previously marginalised in studies about food security were now integrated in the various studies conducted. As issues of food security and hunger are now more widely being discussed and addressed, the country has obtained a status of being food secured, however, some researchers note that approximately 35 per cent of the population is vulnerable to hunger (Demetre et al., 2004).

Although food security and hunger have been widely addressed in literature, there are still challenges with locating where the difficulties with food security and hunger are prevalent in South Africa. Numerous scholars associate hunger with rural regions, yet it is becoming more widespread in urban regions as a result of urbanisation, assert Rogerson (1998) and Terreblanche (2002). Rogerson (1998) notes that in the pre-democratic era, more than 73 per cent of hunger in South Africa was rural-based. This has subsequently changed; the shift to the democratic era has triggered significant urbanisation which has contributed to the escalating rates of hunger in the urban regions (Sithole, 2006). According to the South African National Development Plan (NDP), in 2008 the levels of urbanisation were approximately 60 per cent of the total population, and by 2030 these levels are estimated to exceed 70 per cent (National Planning Commission- NPC, 2011). Urbanisation places a burden on the economy, as it should correlate with the generation of job opportunities (or economic growth). Instead, what has happened in South Africa is that the required economic growth has not materialised.

Unemployment can be seen as a greater threat to food security as money is a determining factor of obtaining food in the urban regions, attests Bonti-Ankomah (2001). The unemployment statistics of South Africa show that between 2006 and 2015, the rate of unemployment in the country increased by 2 per cent (Mundi Index, 2015). This implies that there have been great challenges associated with food security during this period - this will be discussed further in the literature review section, and even as unemployment levels increased, various government reports claimed that there had been a reduction in hunger (Standing, 2008). The progress with regards to food security can be measured using the food poverty line, and this will be discussed further in the sections below.

1.2. Problem Statement

The rationale for this study is that most scholars have directed too much focus on hunger and food security issues that occur on a global and country scale, and neglected hunger and food security issues that are encountered on a micro scale (in households and institutions). Therefore, this study focuses on issues of hunger and food security that occur in a tertiary institution, UKZN-HC, and this distinguishes this research from other studies. In addition, it will also contribute to the body of knowledge about food security on the micro scale, as researchers have ignored the pervasiveness of hunger in tertiary institutions and the fact that many students go hungry.

Though unemployment is perceived as an external factor to hunger that exists in tertiary institutions, to an extent it does have an impact on student hunger. This can be elaborated on in two ways; firstly, students are among the population that is unemployed, therefore they do not receive income to purchase food. Secondly, if students are from households where parents or most of the household members are unemployed, they may experience food security challenges. As indicated earlier, the focus of this study will not be solely on unemployment as a contributing factor to student hunger; it will also focus on the other issues that contribute to student hunger.

Students at UKZN-HC have limited power to influence their food security approaches. There have been top-down decision making processes in the food security strategies that have been identified and implemented at the university. These approaches include food hand-outs, food sold in cafeterias, financial assistance/stipends from Financial Aid and bursaries (which students use to purchase food), while others receive money from their families to purchase food. Students utilise their stipends for various purposes - for example to purchase clothes and other necessities, and as a result they end up not having enough money to purchase food. Others obtain food through food hand-outs, as there are religious groups that hand out food (cooked breyani - a mixture of rice, vegetables, meat and spices) every Friday at the university. This is not a sustainable approach, however, as the students here only receive food on Fridays.

Mooreville (2006) previously conducted a study about food security strategies at the University of KwaZulu-Natal. This research focused on the period between 1990 and 2006, and the dominant food security approach during this period was the dining hall method (where students ate the cooked meals in the designated dining halls). This study seeks to expand the knowledge about food security approaches at UKZN-HC, as there has since been a shift to the cash transfer method of payment and the focus will be from 2006 to 2015. The purpose of this study is therefore to evaluate the ways in which the students at HC access food and the impact of various food security strategies that have been implemented at the university between the years of 2006 to 2015.

1.3. Rationale of the Study

In numerous policies, for example in the National Development Plan and the UKZN Strategic Plan, development issues such as education have been addressed in silos. Education is often perceived to be extricable from food security, while food security is a critical element in achieving a quality education. This is because there is a correlation between the functioning of the brain and the food that people consume. There is therefore a great need for this study as it addresses student food security, which is something that is often neglected in working towards achieving a quality education. In addition to this, the university policy often fails to prioritise food security issues, as achieving academic excellence has always been the central concern. Furthermore, there is very limited data on food security strategies that have been implemented at UKZN-HC. It is believed that this study will also inform the university policy about certain issues pertaining to the balance between food security and the academic performance of the students.

1.4. Aim and Objectives

As noted above, the overall aim of this research is to evaluate the manner in which university students access food, and the impact of various food security strategies that have been implemented at the university between 2006 and 2015.

The aim will be achieved by focusing on the following objectives:

- Explore the subjective meanings of hunger and food security among the students.
- Identify and evaluate the various food security strategies that were implemented at the university between 2006 and 2015.
- Evaluate the impact of the internal policies on food security approaches that have been implemented at the university between 2006 and 2015.
- To explore - through the perceptions of the students and the university staff - the impact of hunger on health and academic performance .
- To explore the challenges associated with achieving self-sufficiency in food security at University.

1.5. Main Research Question

How do university students access food and what are the impacts of the various food security strategies that have been implemented at the university between 2006 and 2015?

1.5.1. Subsidiary Research Questions

The above objectives will be achieved through answering the following subsidiary questions:

- 1.5.1.1. What are the subjective meanings attached to food security and hunger at the university?
- 1.5.1.2. What are the different food security strategies that have been implemented at UKZN-HC between 2006 and 2015, and what impact have they had in addressing hunger?
- 1.5.1.3. What has been the impact of internal policies on food security approaches that have been implemented at the university between 2006 and 2015?
- 1.5.1.4. What perceptions do students have about the impact of hunger on health and academic performance?
- 1.5.1.5. What are the challenges associated with achieving self-sufficiency in food security at HC?

1.6. Summary of Research Procedures

As this research seeks to generate broad perceptions of people, a qualitative research method was employed as a research method. This, according to Bless, Higson-Smith and Sithole (2013), is ideal when a researcher seeks to generate knowledge using individuals' experiences. As data was generated from both people who were students at HC between 2006 and 2015 (those who now work at the university), and those who are still students but started studying in 2006 or in the years prior to that, snowball sampling was used to select the participants of this study. Data was gathered using in-depth interviews.

Ethical measures such as abiding by ethical principles (which include non-maleficence, autonomy, justice, fidelity, respect for participants' rights and dignity, beneficence and the consent of the participants) were adopted. These principles are explained further in the methodology section of this study. In addition to this, participants were asked to sign the consent form which detailed the information about this study and the rules that the researcher abided by when conducting this study. The University KwaZulu-Natal, Howard College campus was used as the primary research site as there were numerous food security challenges encountered there in the past years. The gate keeper's approval to conduct this study was acquired.

1.7. Organisation of the Study

This research paper is organised into various chapters and they are structured as follows:

Chapter one is the introduction chapter which presents the research problem, rationale, background, clarification of concepts, aims, objectives and the research questions. Chapter two is divided into two sub-sections, the first subsection contains the theoretical framework which was used to guide the discussions, and the second subsection is the literature review which consists of discussions drawn from secondary data. Chapter three consists of the methodology. It details information about the research design, sampling procedure and the data collection methods that were utilised. Chapter four presents and discusses the results. There is an analysis of the primary data and incorporation of the secondary sources. Finally, chapter five presents the summary of the research findings and recommendations.

1.8. Conclusion

The aim of this section was to outline and to give a brief understanding of what this study is about. This was achieved through outlining the following aspects: the rationale of the study, problem statement, research questions, overall aim and objectives of the study. This section also entails a summary of various procedures that have been utilised in conducting this study. Moreover, scenarios of food (in) security from other countries have been used to introduce various challenges associated with food security. The in-depth discussions will be done in the next section which contains the theoretical framework and the literature review.

CHAPTER 2: THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2. Introduction

Hunger and nutrition, particularly student nutrition, link in many complex ways. This section unveils the various links and it is organised into two sections. The first section contains the conceptual framework. The second section entails the background, interpretations and perceptions of the key concepts of food security and hunger that are reflected in the research topic. The second section will be further divided into various subsections. The first subsection entails information about the background and conceptual clarification; the second subsection will contain the evaluation of the food security strategies that have been implemented at UKZN-HC between 2006 and 2015 using studies from other universities as a benchmark. The third sub-section will entail discussions about the impact of the external and internal policies on the UKZN-HC food security strategies. The fourth subsection will entail discussions about the food security challenges (such as hunger) on the health and performance of students. The final subsection will have the discussions about factors that hinder self-sufficiency in food security.

2.1. Theoretical Framework

According to Welman, Krauger and Mitchell (2005:21), a theory is crucial for research as it assists in guiding discussions. They further note that a theory refers to a statement which specifies the relationship between variables, with the view of explaining the subject that is being investigated. The discussions in this research will be governed by the food sovereignty framework.

This framework was often used to analyse peasants and small-scale farmer struggles, however this study diverts from this. Food sovereignty framework has become very complex. This framework is linked with the Human Rights approach. It “*advocates for people, communities, and countries to define their own food, agricultural, labour, fishing and land policies which are ecologically, socially, economically and culturally appropriate to their unique to their circumstances*” (Glipo and Francisca, 2005:1). The recent interpretations of the food sovereignty framework incorporate numerous aspects such as the ability of people or communities to influence their food security decisions.

One of the focuses of this study is to assess the manner in which students access food and the extent in which they influence their food security decisions therefore, this framework will be effective in addressing these issues.

The food sovereignty framework addresses the root challenges pertaining to food security. In various countries, citizens (particularly communities at grass roots level) have been excluded from influencing food security policies that affect them. The perceptions of the marginalised people are often represented by experts who do not consult people (Willis, 2009). Tesoriero (2010) argues that in order to reach sustainability in development, people should be the key players in the situations that affect them. Dillon (2010) concurs with this, stating that people are experts of their own situations, therefore they should be granted the power to influence their decisions. The food sovereignty framework incorporates the bottom-up principle as it encourages the inclusiveness of the marginalised groups in decision-making. ‘Power’ is also central to the food sovereignty framework as it grants people the power to influence their food security approaches. The power to influence the food security approaches is one of the fundamental aspects that is explored in this study.

The food sovereignty framework can be perceived as very complex, as Nyeleni (2007) notes that it incorporates six principles. They include food for the people, valuing food providers, localised food systems, local decisions, building knowledge and skills, and working with nature. These principles will assist in exploring the different perceptions about food security; however, only those that are critical in examining the subject that is being investigated will be explained.

Firstly, the ‘food for people principle’ focuses on the constitutional claim that people have a right to healthy and nutritious food. Mechlem (2004: 637) notes that the right to food refers to the *“availability of food in a quantity and quality sufficient to satisfy the dietary needs of individuals, free from adverse substances, and acceptable within a given culture; accessibility of such food in ways that are sustainable and do not interfere with the enjoyment of other human rights”*. In the researcher’s view, the right to food may be perceived as very complex, as there are multiple factors that affect an individual’s capacity to obtain food. In the urban regions, the right to food is greatly determined by the livelihood of an individual as money has become the determining factor for obtaining food (Frayne et al., 2009).

According to the South African Constitution (1996), the aim of exercising rights is to achieve equality among citizens. Furthermore, a right is something that grants an individual the power to influence certain decisions affecting them. People are entitled to rights regardless of their economic status, and although citizens are equally entitled to rights, the right to food is very much determined by the market. This is something that marginalises the poor from accessing food, as food has to be paid for.

The ‘food for people principle’ further addresses the cultural appropriateness of food. Cultural uniqueness is a very critical element to integrate into food security strategies at the university as students come from a diversity of cultures. Lambden, Receveur and Kuhnlem (2007) argue that food security can be said to be achieved when people are able to access culturally appropriate food. Integrating a cultural element to food security strategies at UKZN-HC is a very difficult element to achieve, as there are multicultural groups consisting of Whites, Blacks (Zulus and Xhosas), Indians and other foreign ethnic groups, and each of these groups may have unique food preferences. The need for this may, however, be negated to a certain extent as societies have shifted to a modern era and people tend to conform to western diets (Ake, 1996), but Mooreville (2009) disagreed with this, having noted that cultural preferences were one of the obstacles in the dining hall methods.

As noted above, Mechlem’s (2004) interpretation of the ‘right to food’ is that food should be free from adverse substances. Based on empirical evidence, supermarkets are not transparent enough about the food they sell and the ingredients used to make a certain products. This is evident, as in 2003 a laboratory analyst discovered traces of pork in beef ‘wors’ in a certain supermarket (De Waal, 2013). Moreover, as there are high rates of unemployment in SA, most people purchase cheap food which is often made using cheap substances that may pose risks to their health (Bonti-Ankomah, 2001).

There are people who cannot afford to purchase food because they lack an income. Food as a basic right may therefore also include the needs based approach. The needs based approach is where people are provided with the resources they need, explain Swanepoel and De Beer (2007).

The government and various civil society organisations have engaged in achieving food security through the needs based approach. Willis (2009) argues that food security strategies should be designed to address the root causes of food insecurity, and further proposes that people should be empowered and equipped with skills to achieve self-sufficiency in food security, rather than just being given food parcels (Willis, 2009). On the other hand, with the high rates of unemployment in South Africa, equipping people with skills while they cannot be integrated into the market may be challenging. Thus, Bonti-Ankomah (2001) suggests that the needs based approach may be more appropriate for people who do not have money to purchase food.

Secondly, the principle of ‘valuing food providers’ acknowledges the right of the marginalised groups to produce their own food. This principle also rejects the policies and programs that disempower the marginalised groups to obtain self-sufficiency in food security. In the urban regions, different policies such as the Integrated Development Plan (IDP) and the Urban Management Policies determine the appropriate food security approaches that should be implemented within an urban setting. In many instances, these policies often restrict the methods of food security that can reinforce self-sufficiency. This can be traced back to the colonial state. According to Ake (1996:2), the colonial state redistributed land and dictated how people should utilise land. It is noted in the National Development Plan (NDP) that the colonial state perceived agriculture as a rural activity, however, the NDP does not contain strategies to rectify this (NPC, 2011). Glipo and Francisco (2005) proposed that people in urban regions should utilise the resources available to them (such as land) to produce their own food. It can be said that there is a visible influence of the external policies in the UKZN strategic plan, as students are not empowered to use the university resources for their production of subsistence food.

Thirdly, the principle of ‘localising food systems’ prioritises the inclusiveness of both producers and consumers into decision-making processes about food security issues (Glipo and Francisca, 2005). Influencing the decisions may enhance the quality of the food that is supplied for consumers. It is critical to assess the quality of the food that students consume as it impacts directly to their academic performance. Localising food systems may benefit the students, as it can lead to reduced food prices.

In other countries, university authorities have played a liaising role between students and local food producers, in order to supply food for students at affordable prices (Mooreville, 2006). In South Africa, local food production can be hindered by policies that constrain food production in the urban regions. This will be elaborated upon more in the sections below.

Fourth, the principle of ‘local decisions’ is linked to the principle of localising the food systems, however, it further encourages local food production. It focuses on the rights of communities to utilise their resources (such as land) to produce food (Glipo and Francisca, 2005). Just as for the principle of ‘localising food systems’, the principle of ‘local decisions’ can also benefit the students as it is associated with reduced food prices.

As an institution that is in a developing country where there are complex food security challenges, it is critical to look at the impact of food prices and how they affect students. Numerous factors contribute to an increase in food prices. According to McCilntock (2009), the transportation of food from one region to another can impact directly on food prices, a process which that author referred to as ‘food miles’. Food miles cause the inflation of food prices, as the price of transportation has to be incorporated into the food prices to generate profit. There are policy constraints in implementing this principle on the HC campus, as self-sufficient food production methods such as practicing agriculture are restricted on the university premises. In addition to this, the geographical layout of the campus may be a barrier to implementing the ‘local decisions’ principle, as there may be a lack of land to practice agriculture.

Lastly, the principle of ‘working with nature’ is about producing food while avoiding the activities that are detrimental to the environment (Glipo and Francisca, 2005). A large proportion of food is often transported from rural agriculture farms to tertiary organisations, and this impacts negatively to the environment as vehicles have been identified as one of the major contributing factors to the environmental footprint (McCilntock, 2009).

2.2. Review of Literature

2.2.1. Background and Unpacking the Topic/ Conceptual Clarification

Since the era of industrialisation, the issue of food (in) security has become a growing concern in literature, particularly in development studies. Numerous reports posit that there has been a reduction of food insecurity challenges since the shift to democracy (Public Service Commission, 2007), however some scholars (Terreblanche, 2002; Seekings, 2007; Sithole, 2007; Sutherland et al., in press; and Standing, 2008) still perceive food insecurity as a major problem facing the developing state.

As the government has executed cash transfer strategies (social grants and students' grants) to eradicate hunger, Terreblanche (2002), Seekings (2007) and Standing (2008) argue that such strategies create dependency, therefore there has to be an holistic strategy that will address the root causes of hunger.

Numerous scholars from various parts of the world have shared perceptions about food security and hunger, and as the core concepts that are being investigated in this study, it critical to have an interpretation of these concepts. Historically, the concept of food security concentrated solely on food production while neglecting the complexity of other issues such as the quality and nutritional value of food (Committee on World Food Security, 2012). The recent interpretations have assisted in unveiling the complexity of issues that influence food security. At the World Food Summit that was held in 1996, food security was defined as a state where *“people at all times have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life”* (World Food Summit, 1996, cited in FAO, 2006). This interpretation entails a critical element of which is the economic access. The ‘economic access to food’ is critical as money is the fundamental determining factor to access food (Frayne et al., 2009).

Over the years the concept has evolved and there have been new interpretations which incorporate the wide issues of food security. These aspects include food access, availability, utilisation and stability (FAO, 2006).

In each context, there are different methods as to how people access food, how it becomes available, the stability of the food, and how it is utilised. In the developing countries, people may have more access to food if there are relatively high levels of employment (Saith, 2001). While households in the developing countries may experience challenges in accessing food, making food available and accessing stable food as there is high unemployment. According to the research conducted by Bonti-Ankomah (2001), in South Africa 17 per cent of the total household expenditure is spent on food.

There seem to be multifaceted views about how a food secured society should be, as food security may be measured subjectively. According to Bonti-Ankomah (2001:3) people can be said to be food secured when they have the ability to be self-sufficient in food production and when they have access to markets and the ability to purchase food items. According to dieticians in Canada, food security is said to be achieved when a community has access to safe, personally acceptable nutritious food; and a food system that maximises healthy choices, community self-reliance and equal access for everyone (Lambden, Receveur and Kuhnlem, 2007: 309). Personal acceptability may not be viewed as an important element when looking at food security; however, it should be considered as a priority in a multi-cultural country like South Africa. People from different cultural groups may have unique food preferences, for example, Indian people may prefer *breyani* (a mixture of rice, vegetable and spices) as was the case during the dining hall system at UKZN-HC.

According to the WFP (2016), hunger refers to a state of not having enough food to eat to meet energy requirements and it can cause malnutrition or obesity. Hunger is widely associated with struggle, poverty and the chronically poor. Moreover, it is often perceived with one lens, which is that a lack of food often leads to under-nutrition. The recent interpretations of the concept have unveiled more complexities. Hunger is now understood in two streams; there is under-nutrition (which includes nutrition deficiency) and over-nutrition (which is often caused by the consumption of unhealthy food).

Under-nutrition is associated with malnutrition, which refers to a state where an individual's diet does not provide nutrients to support their wellbeing and growth, or when a person is not able to adequately utilise the food consumed due to illness (WFP, 2016).

The WHO (Prentice, 2006) identified obesity as a new pandemic that largely affects the developed countries, particularly the US and most European countries. Obesity occurs "*when the Body Mass Index (BMI) is at or above the 95th percentile for children/adults of the same weight and sex*" (CDC, 2000, cited in Ross, 2010). There are greater levels of obesity in the developed nations because there are greater levels of employment, therefore, people can afford to purchase food. Furthermore, there is a multinational supply of cheap, highly refined fats, oils, and carbohydrates at affordable prices, which is something that may put people at risk for obesity (Prentice, 2006).

Hunger is also widely associated with rural regions, but it is increasingly becoming an urban problem. This is because of the increasing urbanisation, or escalating rural-urban migration, which contributes to shifting the hunger from rural to urban regions (Rogerson, 1998; Terreblanche, 2002). Secondly, there is a high rate of unemployment while money is the main resource to access food in the urban regions. In this researcher's view, most perceptions about the prevalence of hunger in the developing countries appear to be misleading. This may be caused by the fact that most discourses about hunger are dominated by the perceptions of the western scholars who often describe hunger as something that exists in the African countries. African scholars often focused on human rights, as most African countries are characterised by violence, such as apartheid and civil wars (Mooreville, 2006). Although hunger is now becoming a subject of frequent debate in the developing countries, most African scholars (Saith, 2001; Ake, 1996) still conform to the perceptions of the western scholars (Ross, 2010), who perceive hunger as a social ill that persists in the rural areas.

Mooreville (2006) argues that in South Africa (SA), the transition from apartheid to the democratic era was perceived as an escape from many social ills, including food insecurity (particularly hunger). This is because democracy was portrayed as an optimistic strategy that would serve citizens equally.

To elaborate, it meant equal employment opportunities and more focus to address social ills (such as food insecurity/hunger) that were left negligible during the apartheid struggle (Mooreville, 2006). It can, however, be argued that policies that exist in the democratic regime that are meant to curb hunger lack an element of lucidity. Employment creation is one of the goals of democracy; however, it has been illustrated that people need to acquire education and skills in order to be incorporated as labour in the market (Seekings, 2007). This has created another form of inequality, therefore, democracy can be seen as oppression in disguise as the previously marginalised groups are still encountering similar challenges to those of before democracy.

Terreblanche (2002) argues that democracy exacerbated hunger and inequality by shifting to a capital intense system, which hinders the previously marginalised groups from escaping the vicious cycle of hunger. The capital intense system contributes to increased rates of unemployment, and this makes it difficult for the children of the previously marginalised groups to escape hunger as their parents cannot afford to pay their school fees, and some students are compelled to leave school (Ministerial Committee Report, 2009). Kim (2003) states that the socio-economic conditions, such as the livelihood status of the parents, influences the academic performance of students.

Although unemployment remains a challenge in achieving food security in the democratic state, numerous reports claim that there has been a reduction in food insecurity challenges (Public Service Commission, 2007). According to the World Bank (cited in Seekings, 2007) it is difficult to compare and evaluate the progress that has been achieved in food security between the pre-democratic and the post-democratic era in South Africa, as the data about food security was not collected in Black households in the pre-democratic era.

Statistics South Africa (StatsSA, 2014) states that in 2012, South Africa officially published a set of three poverty lines which help to assess the levels of poverty and hunger. They include the food poverty line (FPL), the lower bound poverty line (LBPL) and the upper bound poverty line (UBPL). For the purpose of this study, the focus will be on the food poverty line (FPL), which reflects people who cannot purchase enough food to meet the requirements for adequate nutrition (Nicolson, 2015). The figures portrayed in Table 1 will be discussed further in the sections below.

Table 1: Percentage of Individuals Experiencing Hunger between 2002 and 2011 (using the FPL)

| Year | Population in percentage measure |
|------|----------------------------------|
| 2002 | 30 |
| 2003 | 26 |
| 2004 | 22 |
| 2005 | 19 |
| 2006 | 14 |
| 2007 | 12 |
| 2008 | 17 |
| 2010 | 17 |
| 2011 | 11 |

Source: StatsSA (2014)

There is limited research about the food insecurity and hunger that persists in many tertiary institutions, particularly at UKZN-HC. This study will contribute to the body of knowledge about the hunger and food security challenges that persist in tertiary institutions, particularly at Howard College, as it is based on investigating the subjective meanings of hunger and food security from the students' point of view. This will also help to establish the extent and nature of the hunger at UKZN-HC.

2.2.2. The Impact of Food Security Strategies Implemented at Tertiary Institutions in Eradicating Hunger

In goal four of the Sustainable Development Goals (SDGs), education has been defined as a critical element for lifting people out of poverty (ICSU, 2015). Tertiary institutions from various parts of the world have placed very little effort towards achieving this as they focus solely on achieving academic excellence, rather than approaching issues that impact on education holistically. It is undeniable that education and food security (particularly food nutrition) are two inextricable factors.

In concurring with this, Ross (2010) argues that the daily intake of food, particularly healthy food, provides for the optimal function of the brain. Hence, in order to achieve the desired level of education within a country, the element of food security has to be perceived as a priority.

Student hunger is a challenge in both the developed and developing countries. Therefore, various universities in the developing and developed countries have adopted various strategies of food security to curb student hunger. Numerous reports state that developed countries such as the United States of America (USA) are experiencing greater levels of student hunger. Some universities have adopted holistic approaches to achieve their academic excellence. Yale University in the USA initiated a Sustainable Food Project that was aimed at providing food for students. As part of this project, the university authorities liaised between students and local farmers to provide the university with fresh and locally produced food (Mooreville, 2006). Brown University in the USA also adopted a similar strategy by supplying the cafeterias with fresh produce from the local farms. Students reaped numerous benefits from this strategy, including the fact that purchasing locally produced food helped to reduce the food costs associated with food miles.

The above strategies link very well with the principle of localising food systems from the food sovereignty framework. Purchasing locally produced food may help to reduce food costs associated with food miles. Food miles, according to McCilntock (2009), is the transportation of food from one region to other. The increase of food prices that are associated with food miles may impact negatively on students' lives as they are among the population that is unemployed. There can be both limitations and benefits to the above mentioned strategies. Supplying food at cheaper prices in a developed country where people can afford food can be problematic, as it may trigger overconsumption which may later result in negative health conditions for the students. Mooreville (2006) perceived this to be an effective approach however, in this researcher's opinion, the strategies implemented at Yale and Brown Universities would have been more effective in a developing country where most students do not have much money to purchase food.

Having mentioned the examples above, it does not imply that the developing countries do not experience challenges associated with food (in) security; it is merely the case that very limited research has been done in these settings.

According to Veldman and Kassier (2013, cited in Sabi, undated), approximately 53 per cent of the students in UKZN come from economically disadvantaged backgrounds and this often results in negative outcomes as the students end up dropping out of the university. In 2002, the South African state introduced school feeding schemes as a response to student hunger; however, the strategies were developed to cater for primary school and high school learners. In recent years, the feeding scheme program has been extended to institutions of higher learning (Van de Berg, 2015). It has been implemented in the form of aid referred to as the National Financial Aid Scheme (NSFAS).

Although the NSFAS is a National Department strategy, there is no consistent implementation; at UKZN there are cash transfers to the students, while at the Durban University of Technology and the University of Zululand, students are able to use their student cards to purchase food and they swipe these cards in the dining halls (Sabi, undated). There seems to be contrasting perceptions of both methods. The sustainability of cash transfers to eradicate hunger has been at the heart of numerous debates. Seekings (2007) and Terreblance (2002) argue that supplying cash may strengthen dependency among the poor, and Van de Berg (2015) concluded that a great challenge with cash transfers is that students do not have the shopping and financial management skills required to deal with the cash. Standing (2008) argues that the transfer of cash does not necessarily mean that the poor students will use all of the money to buy food, as they may instead use the cash for other day-to-day expenses.

The dining hall system is often portrayed as a strategy with fewer limitations. Sabe (undated) perceives the dining hall method as the best approach to curb the misuse of financial aid provided for food as with this system, the funds are spent solely on food. Moreville (2006), on the other hand, argues that the dining hall system fails to cater for the unique food preferences of the students, particularly preferences associated with culture.

As noted above, at UKZN achieving academic excellence has always been at the heart of the university's policy, and this is evidenced in the UKZN Strategic Plan (2012). Food security directly impacts on the academic performance of students, hence UKZN has shifted from one food security strategy to another between 2006 and 2015.

In the previous years, dining halls were a major food security approach at the university and the passing rate was relatively high (Mooreville, 2006). This was because students focused mainly on their studies, rather than including other activities such as cooking in their schedules. More recently, the university has shifted to the cash transfer method, in the form of financial assistance from the NSFAS and bursaries, as the main food security approach. According to the Ministerial Committee Report (2009), the aim of interventions such as the NSFAS is to produce graduates with qualifications and skills to enhance their developmental state.

Is the NSFAS strategy holistic enough to achieve food security for the students? It has been noted in various parts of this section that food security and nutrition are a vital element in equipping students to succeed, however in the NSFAS policy, food security has not been presented as a priority (Ministerial Committee Report, 2009). Although students receive a stipend from the NSFAS to obtain food, there are no strategies to help the students to cope with economic factors such as inflation in food prices. Table 1 above reflects that the Food Poverty Line (FPL) increased drastically from 2008 to 2010. This was because of the economic crises that occurred in 2008/9; this led to the inflation of food prices, which in turn contributed to hunger in many developing countries (Baxter, 2012). During this period the financial allowance from the NSFAS remained fixed, therefore students were among the population that encountered hunger.

Table 1 above reflects that from 2002-2006, the FPL rate slowly decreased. This means there were partially deteriorating rates of hunger, however, between 2004 and 2005 there was an enormous reduction of hunger. This is because the real incomes of the poor increased by 30 per cent between 2002 and 2004 (Mbeki, 2006 cited in Seekings, 2007:3). This implies that the NFAS and bursary meal allowances have to be increased in order to eradicate student hunger. The reduced hunger between 2002 and 2004 may also be linked to the hunger cash transfer methods that were being implemented (Leibbrandt, 2010).

This concurs with Frayne et al. (2009) whose perception is that money is the fundamental determining factor for accessing food. Moreover, the results in Table 1 contrast with Terreblance's (2002) and Seeking's (2007) perceptions, as they argued that cash transfers reinforce dependency.

Looking at the FPL figures in Table 1, it can be said that in a developing country like South Africa, cash transfers have a positive effect in eradicating hunger.

The sustainability of cash transfers to eradicate hunger has been at the heart of numerous debates. The capacity of cash transfers to eradicate hunger is often questioned; it is often seen as embedding dependency (Terreblance, 2002 and Seekings, 2007). In contrast with this view, students are tailored to depend on the University for food as they are not given other options to obtain food. Moreover, Standing (2008) argues that cash transfers widen the agency of the poor as they may utilise their income/stipends to build their livelihoods rather than spending the money solely on food.

Although the NSFAS is often identified as an effective approach to curb student hunger, this has been challenged in various spheres. According to the Ministerial Committee Report (2009), the NSFAS policy excludes other people who are in need; it does not take into account the fact that as South Africa is a developing country, there are various groups of people and there are various types of poor people. Lanjouw (2001: 398) reveals that the state of being poor can be understood in various categories. Firstly, there are people who are always poor - those whose poverty score is below the poverty line in every period. Secondly, there are also those who are usually poor, i.e. those whose poverty mean score is below the poverty line, but whose score has been above at least once in a period. Lastly, there are those who are only occasionally poor (Hulme and Sheperd, 2003: 145). The NSFAS selection criteria does not take all the categories of poor people in to consideration.

The South African Ministerial Committee (2009) further notes that the NSFAS selection criteria excludes the disadvantaged groups from accessing the funding. Challenges that are associated with the NSFAS selection criteria include underfunding, high university dropout rates, the means test, the allocation formula and top licing (SAMC, 2009). Each of these challenges are linked and contribute to student hunger: Underfunding occurs when the university is given less funds to support the number of students who are in need of funding. University dropouts occur as a result of underfunding, and some students may also end up not accessing funding, having dropped out of university.

The means test excludes those students from households where the parents earn above R122 000 per annum but still cannot afford tertiary fees. Lastly, tops licing is when students receive insufficient funding from the NSFAS (SAMC, 2009). Each of these challenges may lead to student hunger as students may end up not having enough money to purchase food.

Although there have been numerous changes to the UKZN-HC food security policy, there has been no proper evaluation done to determine whether the implemented approaches meet the needs of the students. Standing (2008) proposed five principles to evaluate a policy. These principles include security deference, the paternalism test, rights-not-charity, ecological constraints and the dignified work principle (Standing, 2008: 5-7). The security deference principle states that a policy can be considered as fair if it improves the security and the work of the marginalised groups, and the paternalism test principle states that a policy can be considered as fair if it does not control the freedom of the disadvantaged groups. In this researcher's view, the cash transfer method of food security does not really control the freedom of the students as they are the ones who decide on how to utilise the money. The rights-not-charity principle states that a policy can be considered as fair if it enhances the rights of the beneficiaries and limits the discriminatory power of the providers. It can be argued that the university food security policy does not enhance the rights of the beneficiaries as the students' perceptions are not incorporated into the decision-making process.

This seems to be a common trend in food security strategies that have been implemented in the developing and the developed world as the students are not being included in the decision making process. Tesoriaro (2010) argues that it is crucial to promote inclusiveness in the development of these processes to achieve sustainability. The ecological constraint principle states that a policy can be considered as fair if it does not involve ecological exploitation by the community or by those directly affected. As food is brought to the university through food miles, it can be argued that it is brought in with a negative impact on the environment. Finally, the dignified work principle states that *"a policy can be considered as fair if it does not impede people from pursuing work in a dignified way and does not disadvantage the insecure groups"* (Standing, 2008: 5-7).

Mooreville (2006) notes that with the dining hall system, the menu contained cooked meals containing vegetables. In recent years, cafeterias at the university often sell deeply fried food that is fried using saturated fats. Saturated fat, according to the Hunger Education Service (2015), can lower the proper functioning of the brain. Kearney (2010) argues that there should be a coherency in food security policies and the health of individuals. This means that food security policies should also incorporate an element of food nutrition.

2.2.3. The Impact of Internal and External Policies in the Decision Making of Food Security Strategies at the University

According to the South African National Development Plan (NDP), skills and education are critical components that will eradicate inequality and hunger in our country (NPC, 2011). This has trickled-down to influence micro-policies as all of the seven goals contained in the UKZN Strategic Policy strive towards achieving quality education (UKZN, 2012). As an entity that operates in the developing world, where unemployment and food insecurity are seen as major challenges, it is highly critical for the university policy to include hunger eradication approaches. Tesoriero (2010) argues that short term or immediate needs have to be met in order to achieve the long-term needs, therefore, before implementing education as a drive that will eradicate the root causes of hunger, it is critical to consider the immediate needs - such as food security. The NDP and the UKZN Strategic Policy have failed to establish a relationship between food security (which is an immediate need) and education (which can be seen as a long term need).

The university policy with regard to food security seems to be a reflection of the external policies. For example in the NDP, people's perceptions have not been incorporated in the decision making, likewise, in the UKZN Strategic Policy the perceptions of the students have been marginalised in the decision making process. In both policies, the experts play a key role in decision-making. This is evident at UKZN-HC as Mooreville (2006:8) notes that the university authorities decided to dismantle the dining hall system as there were food strikes occurring year after year. This was done without consulting the students. According to Tessoriero (2010), people should be entitled to influence decisions that affect them as they are the experts of their situations.

The university administrators assumed the expert role and denied the students a platform to influence issues that affected them. As alluded above, according to the food sovereignty framework, the power to influence decisions is a very critical aspect in achieving the sustainability of a food security approach. It can therefore be said that there can be challenges associated with the new approaches to food security at the university, as the power of the students to influence decisions was not taken into consideration.

In Moorville's analysis, the core reason for dismantling the dining hall system was that food was becoming a political issue, and that led to social unrest that occurred year after year (Mooreville, 2006). Based on the empirical proof, accessing NSFAS at UKZN-HC is at the heart of political conflicts that emerge at the university, indeed obtaining NSFAS in the first place is also one of the causes of the many strikes that take place at the university. This indicates that the goal of eradicating social cohesion associated with food security has not yet been achieved as there are still strikes emerging as a result of students who have not obtained NSFAS.

There seems to be a lack of lucidity as to which policy should dominate the decisions about food security in the university. Barraclough (cited in Molnar, 2016) argues that food insecurity challenges can be caused by faulty policies. Although the policies of NSFAS are implemented in the university, they are developed externally by the state to affect students at a micro scale. Therefore, there is a great need for external policies and development initiatives to entail explicit plans as they influence the development of micro policies.

The extent in which food security is considered as a priority in achieving quality education in the macro policies (such as the SDGs) affects the micro policies (such as the NFAS policy). To elucidate, macro policies do not provide a clear link between food security and education hence in the NSFAS policy tackling food insecurity is not prioritised. As a developing country where the majority of students come from the low and medium-earning households, there should be holistic policies for NSFAS particularly the ones that provide link between food security and education.

2.2.4. The Impact of Hunger on the Health and Academic Performance of the Students

Ross (2010) notes that the relationship between nutrition and the functioning of the brain has been at the heart of many debates. According to Corlby-Morley (1981, cited in Ross, 2010), what individuals consume directly affects their cognitive capacity. This is because the metabolic process enhances the cognitive capacity (Growden and Wurtman, 1980, cited in Ross, 2010). Ross (2010: 9) further argues that food consumption, particularly of healthy food, is vital for a human brain. The proper functioning of the brain is a critical component to every student as the brain plays a role in the storing and processing of information. According to Erickson (2006:10, cited in Ross, 2010) there are five key essential components to ensure the proper functioning of the brain. They include proteins, carbohydrates, fats (healthy fat), vitamins and minerals (Ross, 2010).

Protein is found in foods like meat, fish and cheese. It helps to develop body tissues such as neurotransmitters - cells that are responsible for sending messages from one brain cell to another (Ross, 2010). Based on this researcher's observation, the students at UKZN-HC consume a larger portion of proteins as the food that is sold at the cafeteria contains meat, cheese etc. Carbohydrates (which produce energy for the brain) can be found in fruits, grains and vegetables. Most food that is sold in the cafeterias often lacks carbohydrates. It includes deep fried foods such as 'vetkoeks', fried chips, burgers and so on. It is further noted that fatty acids (particularly omega 3 fatty acids) help to control attitude.

Lack of fat in the diet can lead to depression, poor memory and learning disabilities, however, it is only healthy fat that is vital for brain enhancement. In addition to this, Gomez- Pinilla (2008:2) argues that diets that are high in trans and saturated fats can have a negative impact on the brain and can result in obesity. Lastly, vitamins and minerals act to enhance the functioning of the brain (Ross, 2010). The eradication of hunger and improved nutrition is thus a vital part of the students' academic performance; here this research will contribute to the body of knowledge about the relationship between nutrition and cognitive capacity.

2.2.5. Challenges Associated with Food Security in Tertiary Institutions

It has been noted above that food security can be achieved when people are able to access culturally appropriate food (Lambden, Receveur and Kuhnlem, 2007). According to the food sovereignty framework, the cultural appropriateness of food can be perceived as a basic right, however, there are multi-cultural groups at UKZN-HC that can have unique food preferences and this can be perceived as a challenge when achieving food security. Mooreville (2006) also noted that achieving cultural appropriateness of food was one of the main challenges that resulted in the shift from the dining hall method to the cash transfer method of feeding the students. It seems, though, that there are still challenges associated with the cultural appropriateness of food, as the university cafeterias and the food sold in the various food outlets near the university sell western food. Ake (1996) attests that the developing countries are 'keeping up with the west'. This implies that the developing countries have adopted the diets of the western countries, which often contain fried foods, and that developing countries are increasingly depending on supermarkets to access food. Rogerson (1998) concurs that developing countries have shifted from the traditional agricultural methods of food production and consumption. The media can be said to have a great influence on the consumption patterns of people as unhealthy food (which often includes deep fried foods) is often advertised on various platforms.

As noted above, Yale University obtained food from the local farms and this impacted positively on the expenditure of the students, as buying locally produced food led to reduced food prices as a result of the reduced food miles. Drawing from the case of Yale University, it can be said that the spatial location of the university can hinder or permit other food security methods. Yale University did not directly practise agriculture due to their spatial location, but as the campus was located near the farms, food could be purchased from the nearest farms.

In South Africa, most universities are located in the urban regions, far away from farms, and students are affected by food costs as a result of food miles. This can be attributed to colonialism as according to Ake (2009: 2), the colonial powers distributed land in the African countries and determined who should produce what, where and how. It is now decades since Africa escaped the oppression of the colonial regimes, however the colonial influence is still prevalent in the current constitution as certain activities which were categorised as rural in the colonial state are still seen as rural. An example of this is agriculture.

There are a number of factors that constrain students from reaching self-sufficiency in food security. According to Massey (1994), spatial utilisation associated with social construction and urban spatial bureaucratic policies can be perceived as challenges in achieving food security. Greenstone (2009) argues that through innovativeness, constraints in achieving food security can be eradicated. Greenstone further argues that as there is a lack of land to plant food at the university, abandoned spaces (such as building tops) can be used as resources to plant crops (Greenstone, 2009).

Policy constraints can be perceived as another challenge to achieving self-sufficiency in food security. Bauman (2003, cited in Chalton, 2009) argues that a country's policy can exacerbate hunger and vulnerability. Some urban policies in South Africa restrict strategies that will reinforce self-sufficiency in food security, such as the cultivation of crops in the urban areas. This is evident as crop cultivation has been identified as a rural activity in the National Development Plan (NPC, 2011). As students are not empowered to exercise self-sufficient ways of producing food, it can be said that the university policy conforms to the external policies that restrict agriculture. According to the food sovereignty framework, food security is perceived as a basic right. In this researcher's view, although food security may be seen as something that individuals of the society have control over, the state actually has more influence.

Godfray (2010) argues that the critical issue in addressing challenges associated with food is sustainability. In addition to this, Ross (2010) argues that one cannot focus only on one challenge when addressing food security, as there are complex issues that need to be looked at. These include different race groups (which leads to cultural uniqueness), stigma towards certain ways of obtaining food, financial constraints, and so on (Ross, 2010). There therefore has to be an holistic approach to address all of the challenges associated with food security.

Sabi (undated) notes that there may be a stigma associated with food handouts and the NSFAS food stipends that students receive. It is further noted that students may not apply for NSFAS nor collect food handouts because they do not want to be labelled as hungry (Sabi, undated). This, according to Fekisi and Jaffer (2015, cited in Sabi, undated) is referred to as a marginalised stigma.

Godfray (2010) argues that the critical issue in addressing challenges associated with food is sustainability. In addition to this, Ross (2010) argues that one cannot focus only on one challenge when addressing food security as there is a complexity of issues that one needs to look at. These include different race groups (which leads to cultural uniqueness), stigma towards certain ways of obtaining food, financial constraints and so on (Ross, 2010). Therefore, there has to be a holistic approach to address all the challenges associated with food security.

Students may also face financial constraints in attaining food, particularly because of inflation. A common cause of inflation in food prices is climate change associated with heavy rains and drought. StatsSA (cited in Viljoen, 2016) alludes that in 2015 the food prices increased by 5 per cent because of drought that interfered with agriculture production. According to the South African Crop Estimates Committee (cited in Viljoen, 2016), in 2015 the country's grain harvest decreased by approximately 25 per cent. As a result, food grain had to be imported from various countries and food miles costs had to be incorporated, resulting in increased food prices. Although there was an increase in food prices, the financial assistance received by the students remained constant and the effects of inflation were even more severe for students who did not receive financial aid or bursary stipends.

2.3 Conclusion

This section consisted of two subsections; the first section entailed the theoretical framework which guided the discussions and the second subsection comprised the literature review which reflected various debates about food (in) security. The second subsection also unveiled numerous perceptions that have to be considered when addressing food security amongst students. Firstly, there are complex ways in which food security and hunger are interpreted. Secondly, although the food security approaches that exist in the university do contribute to hunger reduction, there are limitations associated with each strategy. Thirdly, some of the universities in the developed countries have clear policies with regards to food security, but in a developing country like South Africa, there seems to be a vague policy with regards to the food security of the students. Fourth, hunger remains a threat to the cognitive function of the students, which in turn affects their academic performance negatively. Finally, there can be stigma involved and certain land policies can hinder food self-reliance amongst students.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. Approach to the Study

This section contains the descriptions of methods that have been used to collect primary data. The purpose of this paper is to explore the perceptions of students about food security; therefore, qualitative research has been used as a research methodology. It is arranged into various sections, first is the study design which contains information about research methods. Second, the sampling procedure that entails the process of selecting the participants is presented. Third, data collection details information about the instruments which were used to collect data. Fourth, the data analysis and interpretation of the collected data is presented. The fifth section is about issues of dependability, credibility, transferability and validity to ensure the quality of the data. The sixth section contains the ethical principles which were adopted when conducting the study. The final section consists of a variety of challenges which were encountered in collecting the data, including the response mechanisms which were herein applied.

3.2. Design of the Study

The aim in this study is to generate in-depth perceptions about the research phenomenon, therefore the qualitative research method has been used as a study design. The qualitative research method, according to Bless, Higson-Smith and Sithole (2013:58), refers to the recording of human experiences using words and sentences; it seeks to generate broad and in-depth understandings of the subject that is being investigated. There are numerous research instruments that can be used to compile qualitative data; they are participant observation, in-depth interviews and focus groups. For the purpose of this study, in-depth interviews were used to collect data and this is discussed further below. According to Welman, Krauger and Mitchell (2005), qualitative research can be considered as an effective technique if the researcher seeks to unveil and understand the complexities of the phenomenon being studied.

3.3. Sampling Procedure

Sampling involves the subsets of the targeted population (Wei, 2004:57). The sample size for this study consisted of fifteen sample units. The target population included students from UKZN-HC, particularly those who studied at the university between 2006 and 2015. It was difficult to identify

15 students who studied at the university between 2006 and 2015, therefore snowball sampling was used to select the sample group. This form of sampling is also known as the chain referral sampling, where the researcher approaches a few individuals from the targeted population, and the selected sample units then act as informants to identify other relevant individuals (Welman, Krauger and Mitchell, 2005).

In selecting the sample for this study, the researcher identified a few individuals who studied at UKZN-HC between 2006 and 2015, and they were used as informants to identify other relevant people. This was an effective sampling approach for this study as the researcher was able to access students from different backgrounds. This made the collected data very informative as the perceptions of the participants were generated by people who were from different backgrounds. Proper procedure about obtaining permission to work with the students was followed and the gatekeeper's permission to interview students was granted.

The challenge associated with working with the targeted sample population (students) was that the students had busy schedules; some were attending classes, some were working on their assignments, while others were studying for tests and exams. In order to accommodate the lifestyle of the students, the researcher made appointments prior to each interview that was conducted. Most interviews were conducted at the university during the forum period.

3.4. Data Collection Methods

The data was gathered using in-depth interviews, with closed-ended and open-ended questions. According to Boyce and Neale (2006:3), in-depth interviews involve intense individual interviews, and they often focus on a small number of people. Boyce and Neale (2006) further state that there can be both limitations and benefits in using in-depth-interviews. The limitations are that they can be time consuming and if the researcher is inexperienced, the generated data may not be fruitful enough. In order to minimise these limitations, a time management technique was applied when collecting the data. A certain amount of time was allocated for each task during the data collection, interviews were conducted during the day and transcribing of data was done in the afternoons. The appointments with the participants were arranged a week prior to the interview to avoid

inconveniencing the participants, and the richness of the data was ensured by constructing the questionnaire with both closed-ended and open-ended questions.

Closed-ended questions are often critiqued for limiting the respondents; they restrict the participants from giving a detailed analysis of the subject being investigated. Open-ended questions are an effective means to generate the perceptions of the individuals. The closed-ended questions were used to avoid leading questions, and were used in conjunction with the open-ended questions. Boyce and Neale (2006:3) state that there are five steps that have to be followed in the data collection process. They include planning, developing the instrument, collecting the data, analysing the data and disseminating the findings.

Planning involves identifying the key participants prior to the interviews. As this study focuses on UKZN-HC, the participants selected for the study were students from HC, particularly those who studied at the campus between 2006 and 2015. Once identified, appointments were scheduled with the participants. Developing the instrument is about developing all the necessary documentation. The interview guide that was used during the interviews was developed months prior to the interviews. The interview schedule, according to Welman, Kauger and Mitchell (2005), refers to a list of compiled questions that may include various types of questions, depending on what the researcher seeks to achieve. As the interview guide was developed months before conducting the interviews, this gave time to conduct pilot interviews to assess if the questions would help achieve the aim of the research. Some of the questions were altered as they appeared to be leading, and simple concepts that participants would understand were used.

Another critical element in developing instruments is developing a consent form. According to Bless, Higson-Smith and Sithole (2013), a consent document grants permission to proceed with the research and entails information about the research. It is given by a researcher and it can be done verbally or it can be in the form of a document. The consent form for this study was developed in line with the ethical principles that are noted below. Prior to each interview, the participants were asked to sign a consent form that entailed the ethical principles that were observed during the research. In addition to the consent form, each participant was issued with an information sheet (attached as Appendix C) which provided information and clarity about the research.

This document was very helpful as it enlightened the participants about the rationale, the purpose of the study, the procedure that would be followed during the interview, the duration of the interviews and the various support mechanisms available to the participants if they experienced an emotional breakdown.

Data collection included the conducting of interviews. The eight stages of data collection proposed by McNamara were used as a guideline during data collection. According to these stages, it is important to consider the following during interviews: choose a setting with little disruption, explain the purpose of the interview to the participant, address the terms of confidentiality and explain the format of the interview, indicate how long the interview will take, tell the participant how to get in touch with the researcher later if they want to, ask if the participant has any questions prior to commencing with the interview, and finally, conduct the interview and record the proceedings (McNamara, 2009).

With respect to choosing a setting with little disruption, unoccupied lecture and tutorial venues were used to conduct the interviews. When explaining the purpose of the interview to the participants, the nature and purpose of the research was explained and the participants signed consent forms and were given a document which provided them with information about the research. When addressing the matter of confidentiality, the participants were informed that their identity would not be disclosed. The format of the interview was explained, participants were informed that the interview would be conducted verbally and they were provided with an information document which assisted in enlightening them further about the procedures of the research. The

The participants were informed that the interviews would take approximately 20-30 minutes, and were given the contact details of the researcher and the researcher's supervisor, in the event that they wanted to make further contact with them at any stage. Each participant was then asked if they had any questions pertaining to the research prior to the interview, and then the interview commenced. A recording device was used to record the interviews, to reduce problems associated with memory issues, once each participant had consented to being recorded (Turner, 2010:757).

3.5. Data Analysis

After conducting each interview, the data was transcribed in order for it to be analysed. The analysis of data is where the researcher interprets the information in a way that is logical (Pope, Ziebland and May, 2000). According to Bless, Higson-Smith, and Sithole (2013), transcribing and coding information are crucial elements in data analysis to avoid the misinterpretation of information. There are numerous methods that can be used to interpret data, and in this study thematic analysis was employed for this purpose. In thematic analysis, the data is grouped into themes or codes.

According to Braun and Clarke (2006:82), themes help to capture important points that relate to the subject that is being investigated. Themes also help to arrange information in a way that will have logic. Braun and Clarke (2006) further note that there are six steps in thematic analysis. These include becoming familiar with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and finally producing the report. When analysing the data, the researcher used NVivo software. This is computer software used to analyse qualitative or mixed methods research (SQR, undated). Most researchers recommend NVivo as it consumes less time and it organises information faster than manual coding (SQR, undated). Although this software was used to code the data, the researcher still followed the six steps of thematic analysis proposed by Braun and Clarke (2006).

3.6. Validity, Reliability and Rigour

As this was a qualitative study, it included information drawn from secondary sources, such as published books, journal articles and other sources of information; and primary data composed of the perceptions of the participants, which were generated through in-depth interviews. There were various procedures which were adopted to ensure the accuracy and consistency of the generated data. Validity helps to access the certainty or the inaccuracy of the data obtained, through a certain research instrument attest Bless, Higson-Smith, and Sithole (2013). Pitney (2004), however, notes that it is not ideal for a researcher to check for validity and reliability in a qualitative study and states that qualitative researchers should check for credibility and transferability instead.

Credibility ensures the trustworthiness of data and it can be done to check whether the research findings captured what was occurring in the context of the study, or whether the researcher produced what they intended to investigate (Pitney, 2004: 26). Credibility can be established by employing various strategies such as triangulation, member checks and peer reviews. Triangulation can be achieved by using more than one method of data collection and for the purposes of this study, it was achieved using in-depth interviews and observations.

Pitney (2004) describes peer review as having a perception of a professional based upon the research processes utilised. A peer review of the research processes utilised in this study was conducted by the supervisor and other internal research experts, and confidentiality was maintained throughout the process. A member check refers to providing the participants of the study with the results or the interpreted data so that they can verify their input, adds Pitney (2004:27). After all the data was collected and interpreted, the participants of the study were given an opportunity to read the information and this assisted in the generation of accurate information.

It is also argued that ensuring transferability is also one of the critical aspects in qualitative research. This involves assessing whether the findings are relevant to a similar context. Pitney (2004:28) states that to achieve transferability, most qualitative researchers provide readers with in-depth information about the context or the participants of the study, so that they can determine for themselves whether the results speak to their situation or experience. In this study, transferability was ensured by providing a description of the primary research site and only limited information about the participants, as the aim was to also ensure their confidentiality.

Welman, Krauger and Mitchell (2005) further argue that it is vital to ensure conformability and dependability in a qualitative study. Conformability helps to eradicate the researcher's influence on their perceptions of the data, thus generating rich data that cannot be manipulated by outside factors. To ensure that the participants did not conform to the researcher's expectations, they were briefed that any given response would be important in terms of the research and that they had to give their own subjective interpretations, instead of trying to impress the researcher. Further to this, during the data interpretation the input of the respondents was acknowledged.

To ensure reliability, qualitative researchers often use dependability. Dependability is based on the notion that similar results can be attained in another study if the same methods and participants are utilised. Pitney (2004) alludes that dependability can be achieved by using member checks. As noted above, a member check refers to the verification of the information by the participant. It also enables the participants to clarify to the researcher that the researcher's descriptions and interpretations are accurate (Pitney, 2004:27). In this researcher's view, member checks can be facilitated by the storage of the data. Dependability has therefore been achieved in this study by storing the information in a safe place, for subsequent presentation to the participants for verification.

3.7. Application of Ethical Principles

In collecting data for the proposed research, the researcher abided by the principles of ethical research. These principles serve to protect the participants and the researcher during the research, according to Bless, Higson-Smith and Sithole (2013). These principles included non-maleficence, autonomy, justice, beneficence, fidelity, and respecting the participant's rights and dignity.

3.7.1. Non-maleficence

This principle involves not harming the participants during the research (Bless, Higson-Smith and Sithole, 2013), by ensuring that the feelings of participants do not get hurt. The interview schedule contained no sensitive questions that could impact negatively on the participants' feelings.

3.7.2. Autonomy

This involves the participant's voluntary choices and actions to be part of the research (Bless, Higson-Smith and Sithole, 2013). Participants were briefed about the nature of the research and were not threatened in any way, thus they were able to make the decision to participate in the study autonomously. In addition to this, the informed consent form clearly stated that the participants could withdraw from the study at any time if they did not feel comfortable, and the information document that they were given clearly stated all of the relevant information about engaging in the study (Bless, Higson-Smith and Sithole, 2013).

3.7.3. Justice

This is about treating the participants equally regardless of race, disability or literacy levels (Bless, Higson-Smith and Sithole, 2013). The sample comprised of heterogeneous groups of both employed and unemployed UKZN-HC students, and they all received the same treatment.

3.7.4. Fidelity

This includes trustworthiness, loyalty and agreements between the researcher and the respondent (Bless, Higson-Smith and Sithole, 2013). This researcher ensured that there was transparency and honesty in the shared information. These two elements helped to build trustworthiness and loyalty with the participants, and by focusing on these principles, the participants gained an interest in participating in this study. Although there was transparency of the information, privacy was maintained. To elaborate on this, the interviews were conducted in a quiet and private space and the data generated was handled in a confidential manner. A copy of the transcribed data will be submitted to the supervisor and the real identity of the participants kept anonymous. Anonymity was achieved by assigning fictitious names to the participants.

3.7.5. Respect for the Participants' Rights and Dignity

This principle interlinks with the justice principle in that it includes treating people in a fair and a respectful manner. It does not only include respecting individuals, rather, it incorporates respecting the individuals' culture and their places or communities (Bless, Higson-Smith and Sithole, 2013). In achieving this principle, the researcher provided a platform where the participants could comfortably express their views, whether pessimistic or positive, about the research. The researcher also used appropriate and respectful language during the interviews.

3.7.6. Beneficence

Beneficence refers to a state where the research is expected to contribute to change or the wellbeing of others (Bless, Higson-Smith and Sithole, 2013). This study may empower the current students to challenge the university bureaucrats that hinder them from influencing their food security approaches. The possibility of this happening was explicitly stated to avoid false expectations in the participants.

3.7.7. Consent of the Participants

In addition to these principles, the participants were also requested to sign a consent form which contained the rules, benefits, limitations and informing the participants about the purpose and the nature of the research (Bless, Higson-Smith and Sithole, 2013). This document served to protect the researcher and the participants of the research. According to Haggerty (2004), it is important to develop a written consent form (to be signed by the participant), to serve as proof that the participants voluntarily participated in the research without being forced. This may also protect the researcher from being accused of misconduct by the participants (Haggerty, 2004).

3.7.8. Challenges Encountered

There were no challenges during the data collection because the researcher developed proactive strategies to curb them before they could emerge. Techniques such as abiding by the ethical principles, the information document and the consent document were used to reduce the possible limitations. The ethical principles served to reduce harm and violation of the participants' rights, the information document helped to provide information and clarity about the purpose and nature of the research for the participants, and the consent document had to be signed by each participant as an indicator that they voluntarily participated in the study. In addition to this, a plan was made to cater for any students who became overcome by emotion during the interviews. This was achieved by arranging for support with the UKZN Student Support Office. Appointments were scheduled beforehand and all respondents reported for their interviews.

3.8. Conclusion

Numerous research procedures were adopted in conducting this study. The use of a qualitative research method helped to generate in-depth perceptions of the students and how they interpreted food security. The snow-ball sampling method helped to eliminate bias with regards to the selection of the sample. As data was collected through in-depth interviews, careful procedures for handling the data were followed. They included transcribing, coding and analysis of the data. The researcher did all of this alone to avoid mistakes associated with data handling. The findings and interpretation of the data is presented in the section below.

CHAPTER 4: FINDINGS AND INTERPRETATION

4.1. Introduction

This section presents the findings. The preliminary themes that were in line with the objectives of this study have been used as subtopics to arrange the data accordingly. These themes included the subjective meanings of food security and hunger, the impact of food security approaches in hunger reduction, the impact of policies on food security, the power to influence food security decisions at the university, the influence of hunger on the academic performance and challenges with achieving self-sufficiency. The findings are presented by integrating the various perceptions drawn from the participants with the theoretical framework and the relevant literature. The participants of this study comprised of people from different economic backgrounds (some were from the middle income households while others were from the low income households), and this helped to generate fruitful insights from people who have been exposed to different situations with regards to food security.

4.2. Subjective Meanings of Food Security and Hunger

There seemed to be a complexity of subjective meanings that students attached to hunger and food security. These meanings were influenced by their exposure or experiences. Many of the participants associated food security with having money. The excerpts below encapsulated their sentiments:

...food security is having food and money simultaneously. Being able to afford what you like or love to eat. (Tshepo, male student.)

[Looking puzzled and smiling] ok food security is when people have enough food and where we can get breakfast, lunch and supper. It is a state where (we) can eat whenever we want to eat. In other words, we can say that food security is having enough money because in order for (a person) to have food, he/she has to have money to buy food. (Vuyo, male student).

The above perceptions concurred with the view, which stated that money was the fundamental determining factor for food, particularly in the urban regions (Frayne et al., 2009). The spatial location of the university may have contributed to the above quoted interpretation of food security

as the university is located in an urban region, it is surrounded by shops. Therefore, students understand food security as access to food and as something that needs to be purchased not subsistence produced. The food sovereignty framework acknowledges that people access food in ways that are unique to their context. This also concurs with the above perception that, in urban areas food security is often determined by the income or money, while in rural areas having money is seen as something that would supplement their approaches to food security (Frayne et al.2009).

4.2.1 Health and Nutrition

Food security was often measured using a measurement such as money, for example, how much money people had to access foods. Some scholars argued that having money should not be the only focus for accessing food. Based on the food sovereignty framework, the accessibility and availability of food should not be solely about the quantity of food but rather that the priority should be placed on accessing healthy and nutritious food (Mechlem, 2004). Aspects of health and the nutrition of the food was a concern for many respondents, according to the insights they provided below. For instance, one of the students said:

To elaborate it can be measured in terms of ensuring that people are getting nutritious food, food that will enhance their wellbeing or, for example, accessing nutritious food that contains vitamins (Wanele, male student).

Another student explained aspects of nutrition thus:

I'd say in terms of food... food security is when there is a lot of food. What I have seen is that there are less people who are careful about nutrition, people are experimenting with different types of food which are not nutritious. Uhhh, so the thing I see is that as the country develops, people are worrying less about nutrition. Most people do not eat vegetables and fruits. If a student goes to a grocery shop, it is rare to find a student buying vegetables like cabbages, spinach or apples; they usually buy burgers, wors and all those things, all the nice things. Even when they have extra money to spend, they spend it on pizza and on burgers. Even at res, I've never seen a student cooking cabbage. So in terms of the availability of food, there are many different types of foods but there are less people worrying about their nutrition (Zola, Male student).

Food security was understood differently. A female student responded:

What is your understanding of food security? ... Yah I think it is when people are able to achieve; when people (have) enough food to eat and can avoid malnutrition. So food security... In other words, it is where people have enough food that is sufficient and healthy food. An example would be that you can have food

security, but if you consume unhealthy food, that would result in food and health insecurity (Nonku, female student).

4.2.2 Food Self-sufficiency

Resources such as land may be required to achieve self-sufficiency in food security. Utilising land in an urban space was, however, regulated by bureaucratic laws that restricted activities such as agriculture from being practised within an urban setting (Greenstone, 2009). The restriction of agriculture in urban areas could also be traced back to colonial rule that redistributed land and dictated how it should be utilised. This changed the perceptions of the majority as most still perceived agriculture as a rural activity. It was unusual for students to mention agriculture as a strategy that would bring self-sufficiency in food security, particularly in their setting. According to their perceptions:

I think we understand it in terms of that food is being provided, ummh... especially organic food like food that is found in gardens - like having a small garden in your backyard. I also think students understand it as a means (for) families to provide their own foods. (Wanda, male student)

The impact of bureaucratic laws in urban spaces altered how people perceived spaces around them. This participant considered agriculture as one of the food security approaches that should be adopted as a food security method. This implied that not all people's perceptions could be tailored by the bureaucratic spatial laws. The provision of food in UKZN-HC was mainly dependent on the university, but this participant seemed to divert from methods that perpetrated dependency to those methods that promoted more food self-sufficiency.

4.2.3 Background of the Individuals

The definition of food security that was provided in a previous chapter did not acknowledge the backgrounds of the individuals in food security. According to Kim (2003), the household background of students affected the ways in which these students accessed food. It was further noted that students from poor households were vulnerable to hunger. Based on these insights, it could therefore be said that the background of the students affected how they accessed food. A student had this to say on the issue:

It depends on the status of each student. It depends on whether the students have funding – this may make them to be food secure. (Phelo, female student)

The issue of food security was understood differently. Opinions differed from student to student. For instance, one of the students said:

I think it depends. For those who are from households that are well off, food security may be more about food preferences. It may be more about having junk food. While those who are from (middle) earning households, food security may be more about having access to food each day. Therefore, their food security approaches may be affected by the fact that some students do not get money from their homes. (Nomali, female student)

The background of the individuals therefore did matter when it came to food security among the students. The above perception also unveils that food preferences are also influenced by the economic status of people for instance if an individual is from an economically stable household, his/her interpretation of the concept food security would be more based on food preferences rather than food sufficiency.

4.2.4. Food Preference

Lambden, Receveur and Kuhnlem (2007) argued that food security was achieved when there was personally acceptable food. Very few people focussed on their food preferences. Food preferences may be motivated by culture. The needs and wants dichotomy found expression when one of the students said:

uuhhh... but generally people usually understand it as having what they want – but not as something that they need. I think when it comes to food, people usually do not differentiate between needs and wants. (Ntombi, female student)

Through the food sovereignty framework, students could meet their food preferences. When students took a lead role in decision making, different types of foods that were preferred by various cultural groups could be made available to accommodate all the students in the university.

4.2.5. The Government's Role

Some students perceived achieving food security as the responsibility of the government. According to some of the students, their perceptions were as follows:

Food security is when the government or the (municipality) at large is taking care of citizens, especially in rural communities where people are economically challenged. (Philile, female student).

Another student was also of the view that food had to be provided by someone else, but did not stipulate who the provider was. This was reflected in the following quote:

I think other students in the university understand food security in a way that food is being provided... (Nandi, female student).

The issue of food security could be viewed from the perspective of the nation. A female student had this to say:

I understand food security as the ability of the country to use its resources in ensuring that its population is well fed (Margaret, female student).

Students were among the population that was unemployed, therefore they depended either on the government (through the NSFAS), on private companies that offered bursaries or on money they got from their parents to purchase food. According to Swanepoel and De beer (2007), this form of food supply was known as the needs-based approach. Although numerous scholars, for instance, Seekings (2007) and Terreblance (2002), criticised this approach, it could be seen as necessary for populations of students as they were not earning an income to purchase their own food, making this form of subversion imperative. The food sovereignty framework promoted self-reliance in food security but it did not acknowledge that there were people who could not provide for themselves; therefore, there were cases where food had to be supplied, inevitably through the needs-based approach.

4.2.6 Being Hungry

Historically hunger was perceived from one point of view, which was the lack of food. The recent interpretations of hunger incorporated both under-nutrition, which often caused malnutrition, and over-nutrition, which often caused obesity (Chopra, Galbraith and Dartho-Hill, 2002). Most respondents seemed to share the historical view, according to their understanding and interpretation of the issue. One student said:

When I am hungry, I think I am experiencing hunger. Hunger can also be caused by poverty. It can also be understood as famine (Peter, male student).

Another male student was of the opinion that:

Yoh... I think the students understand hunger the same way as I understand it. When we are talking about hunger, it is when you have nothing on your stomach causing laziness and all that stuff (Sifiso, male student).

Feelings of anxiety were also expressed as reflecting a state of hunger. A student had this to say:

Hunger its uuh... I can say its having an empty stomach. The body will not be able to digest anything when you are hungry. You feel a lot of things. You feel anxious. The brain will not be able to function. If there is nothing in your stomach then that is hunger (Nomali, female student).

The above quoted participants understood hunger as an immediately occurring situation. They did not mention the long term effects of hunger such as malnutrition. It could be said that although there was a new interpretation of the concept of hunger, the above respondents still perceived hunger as something that was associated with the state of being poor. In literature, unhealthy eating, such as consuming deep fried food, was considered as hunger (Chopra, Galbraith and Dartho-Hill, 2002). Although students usually consumed unhealthy and deep fried food that was sold at the university, they did not consider that as unhealthy eating.

4.2.7. Lack of Money

Money facilitated the acquisition of goods and services to satisfy both wants and needs. A lack of it could result in those needs or wants not being realized. According to Frayne et al, (2009), accessing money was a critical component in accessing food.

Its just an empty stomach. And what causes hunger perhaps is that people may have financial problems. This means they tend not to have money to satisfy their needs. Satisfying hunger is a need, basically feeding yourself is a need, food is a need. Uh, when we are experiencing hunger, that is when your needs are being challenged as human beings. That is when you are unable to take care of your physical wellbeing – that is a tragedy (Nolwazi, female student).

These sentiments were in line with the interpretation by Frayne et al. (2009). This resonated with the interpretation of most respondents. One student hinted at the fact that the experience of hunger did not discriminate – it affected all human beings, irrespective of their station in life. The excerpt below reflected this sentiment:

I don't think they understand it differently from me. I think they think only a person who is financially incapable can go through hunger but that is not the case. There (are) a number of people who come from good backgrounds and yet they are experiencing hunger. A number of people think that students who experience hunger in the university are those that come from disadvantaged backgrounds, I think they misunderstand it. I am saying this because I have observed that some students who come from the (middle) income families are also enduring episodes of hunger. I feel I understand hunger by thinking that people who experience hunger are those who live under extreme poverty. That is my personal view (Nandi, female student).

4.2.8. Students Behaviour

Hunger was often associated with malnutrition, however it was unveiled in this study that hunger perpetrated inappropriate behaviour among students. This was unveiled in the following response:

I think that what students understand most, they will tell you in detail because most students have gone through it [laughs]. You can get thousands of responses and explanations in detail because everybody knows hunger. It causes students to do wrong things that they do not want to do under normal circumstances. If a person does not have food, you find out that they have numerous dates, young ladies would go out with different men because they know that those men would buy them food. As (a) result of hunger, young ladies end up getting blessers. Others tend to be alcoholics because they know that men

will buy them alcohol. As students, we experience more hunger in the university than at home (Ntombi, female student).

Hunger in this instance could create other social ills in the university such as students engaging in relationships with men for money and food. They could end up being affected by diseases as a result of these associations. In other words, hunger could induce risky behaviour among students.

4.3. The Impact of Food Security Approaches in Hunger Reduction

The food security approaches that were identified by students as existing in the university could be divided into two categories; there were legitimate approaches and inappropriate approaches. Under the appropriate approaches were NSFAS (which is formally known as National Student Financial Aid Scheme), food schemes, purchasing food, and receiving money from parents.

4.3.1 National Student Financial Aid Scheme

Accessing food through the NSFAS seemed to be the dominant method of obtaining food among the participants. This was understood as a form of cash transfer method in literature. Since cash transfers have been executed in South Africa, there has been a reduction in student hunger. The majority of the participants stated that cash transfers such as those by the NSFAS did contribute to hunger reduction. One student stated the following:

...I think NSFAS is the biggest contributor to fighting the issue of hunger because after getting the NSFAS money, students are able to purchase food (Vuyo, male student).

The student was evidently praising the NSFAS. Another student echoed the same sentiments:

Yoh! NSFAS first of all... so when the meal allowance was deposited (into) our bank account we would be so happy; it means we will be able to buy groceries. Yah... because by the time money is deposited into our bank accounts, our groceries would be finished, so the NSFAS meal allowance resolved food problems for us (Wanda, male student).

The importance of the NSFAS could not be underestimated. The NSFAS remained a key stakeholder in fighting hunger among students.

4.3.2. Challenges of the NSFAS

Although the NSFAS was identified as an effective approach, some respondents stated that there could be challenges associated with the scheme.

But the problem with student hunger is that the university does not follow-up to assess if students really buy food with the NSFAS money (Zola, male student)

Assessing the university food security approaches was identified as a challenge in the above section. There were shifts from one food security approach to another, but no evaluation was carried out to determine their effectiveness. The above participants perceived this as a challenge that was associated with the current strategy. The evaluation of food security approaches could be seen as a gap in the food sovereignty framework as it did not provide ways in which existing food security approaches could be evaluated.

As no follow-ups had been made concerning the utilisation of the NSFAS meals allowances, some participants stated that students ended up misspending the NSFAS money that they received. According to their insights, a student observed the following:

From what I have observed in the university, students receive money deposited into their bank accounts, so it is upon them to know how they spend their money and we are speaking about university students. Some of them spend their money on liquor, so that means that they will run out of funds before the end of the month (John, male student).

Similar sentiments were expressed as follows:

I think they do... Eeehehehe! They are good, eh... to a certain extent and bad to a certain extent. Giving students money, who are not financially trained to manage money... Its ... it's not a good strategy. Ehh...Some of the students in their lives have never handled money that is more than R 500. So when you give them money, they may get an opportunity to do other things. Therefore giving them money may be good or bad. It's good because they can buy the things they do not have – their needs. But in terms of food security, it might pose (a) negative thing because some of them cannot manage money. So it might be good because some of them may buy food. But yah, in terms of financial management, it is also important to be able to manage one's finances (Inga, female student).

Based on Standing's (2008) principles of policy evaluation, granting students money could be seen as a good approach as students also obtained financial freedom to utilise their money as they wished. Granting financial freedom to individuals who had never been financially trained to handle money, however, could be problematic due to their inexperience in the matter.

4.3.3. No University Owned Approaches

According to the food sovereignty framework, people should be the key decision makers in their food security approaches. This research revealed that the NSFAS was not a university owned approach. One of the respondents said:...

There are no university food security approaches. (The) NSFAS was brought by the government. It is a government institution and accounts to government (Nonku, female student).

Drawing from the food sovereignty framework, it could be said that students had been deprived of their rights to influence the food security decisions that affected them.

4.3.4. Inappropriate Ways of Accessing Food

The inappropriate ways of accessing food have not been discussed widely in literature. Participants in this study revealed that vice was borne from hunger, as one student revealed:

Others get food from either blessers, relatives or from their boyfriends. Others engage in prostitution, that is where a person can have maybe five boyfriends in which they would exchange money (for) sex (Ntombi, female student).

It was revealed earlier that mischief could result from a state of hunger. This was amplified by the next revelation:

There is another way that is illegal, for instance there are students who actually steal other students' belongings. They do this so that they can get money and buy food (Bonga, male student).

The food sovereignty framework did not incorporate discussions that sought to eradicate the illegal ways of accessing food. It was argued in the above sections that there was a direct link between food security and education. This study revealed that education was not the only factor that linked with food security, as inappropriate behaviour could also be triggered by food insecurity.

4.3.5. Feeding Schemes as an Approach

Feeding schemes could be understood as a needs-based approach. Numerous experts argued that in terms of food security, the needs-based approach did not promote sustainability. Various participants were of the same opinion, as they did not perceive feeding schemes as a sustainable approach to ensuring food security. A student boldly stated the following in corroboration:

Maybe the feeding schemes that come on Fridays do contribute to hunger reduction but then they come only on Fridays - you cannot say they really reduce student hunger (Lihle, female student).

4.3.6. Challenges of Feeding Schemes

Even though there were many food security approaches in place, students could still continue to experience hunger. A participant stated that:

Instead of reducing hunger, I think they create a sort of a stigma because if your friends see you in that queue receiving food, they would think that you are poor or something (Wonda, male student).

There was stigmatisation associated with feeding schemes. Another student had the following solution to the stigmatisation:

Sometimes this has to be done secretly because students do (not) want to be seen as needy (Anele, male student).

Sabi (undated) noted that there could be a stigma associated with food handouts, as well as with the NSFAS food stipends which students received. Although achieving sustainability in food security was defined as a critical issue, there seemed to be a number of diverse issues that needed to be addressed in achieving food security.

4.4. Impact of Policies on Food Security

4.4.1 The Power to Influence Food Security Decisions at the University

The majority of the participants claimed that food security policies did not exist at the university, while others stated that they had never heard about them. According to the food sovereignty framework, the power to influence decisions was very critical in achieving sustainable food security approaches (Mechlem, 2004). Influencing food security approaches was also an indicator that people had rights, and it reinforced the constitutional claim that people were entitled to rights. An explicit policy on the issue could facilitate the process in which people were able to exercise their rights. Very few participants indicated that students had the power to influence their food security decisions at UKZN-HC. The following quote was illuminating:

I think students did have power and I think they still do have power. Like for everything, not only for food security but also for 'fees must fall' as well. If students unite, their voices can be recognised more. Like for instance, I think even if students can unite by striking and state the kind of food they want in the university, I think even the cafeterias can change the type of food they sell because students are not consulted about the type of food that is sold at the university (Sithe, male student).

In the section above, it was noted that the university authorities dismantled the dining hall system because of the social unrest that emerged each year as a result of food security approaches that were implemented in the university (Mooreville, 2006). The core reason for dismantling the old system of food security was to eradicate the social unrest that occurred in the university and to give the students the choice of the type of food they wanted to eat. The student quoted above, who was given the code name of 'Sithe', however perceived the violence as a form of communication to get the message across to the university authorities.

The view expressed by 'Sithe' was contrary to the one expressed by the student code named 'Ayanda'. Ayanda indicated that the lack of power that students experienced often lead to misinformed policy:

Not at all. I have one reason why I am saying this. Eeh, decisions that are taken at the university are taken at the council level, but the council is dominated by academics, even people drawn from ministerial (positions), and you only find out that there are only two or three SRC members.

There are very few that are there to represent students and for those people, even if they want to represent students, there is a huge gap between knowing what students want and the decisions that they take. I'm saying this because a person that is a council member was(a) student 25 years ago. So that person has no communication with students; what he understands are the needs of students that existed 25 years ago. The council members do not understand the current needs of current students. And the SRC members who are representing students in the council cannot debate against Professors and Doctors who are a majority – who are their lecturers. There are power differences, you understand (Ayanda, male student).

The above perception concurred with the view noted above that experts played a dominant role in policy formulation. The limitation of this, according to Tesoriero's analysis, is that it did not provide sustainable results (Tesoriero, 2010). A perplexing finding in the responses illicited was that while many of the respondents stated that food security policies did not exist in the university because they had never heard of them, they still said that they were able to influence the decisions about food security through their Student Representative Council.

4.4.2 Food Security as a Priority

Others stated that food security was seen as a priority in the university. It was essential to have food security as one of the prioritised matters in the university as food, particularly healthy food, was vital for the proper performance of the brain and therefore learning. With scepticism, one of the students retorted:

Eemmh... probably it was prioritised initially but eventually driven by profit making intentions. (Jones, male student)

Moreville (2006) stated that one of the factors that led to shift in the food security approach in the university is the unique food preferences that students have. The cash transfer method (NSFAS stipend) was seen as an approach that would eradicate the challenges associated with the unique food preferences in the university, however, there seems to be another challenge as Jones (male participant) state that accessing food is now driven by profit making intensions. This may be more problematic as students are among the population that is unemployed they may not have money as a resource that is necessary to access food.

Yeah... I do feel that it was prioritised because in the past, students were given a meal cheque that would be given once in three months; but now they are given money every month. Students are given money regularly (Ayanda, male student).

It could be said that during the old system (where students received money once every three months), students experienced more hunger, particularly those who had a problem with managing their finances. The current improved system of giving students a meal allowance every month had more benefits as students were able to purchase food monthly.

A student had advice to give to the authorities by saying:

I think food security is prioritised, but the university does not have the right strategy to distribute the money correctly. Because giving students money does not eradicate hunger, so I do not think students should be given money because they do not spend it all on food. I think they should (have money loaded onto a card, and use the card to) swipe (for) food from the cafeterias (Nandi, female student).

Based on Standing's (2008) principles of policy evaluation, cash transfers were seen as an effective approach to eradicating hunger, however, there were no control mechanisms in place on the HC campus and students were at liberty to spend their money in any way that they wanted to. This meant that student hunger was not eradicated. Contrary to Standing's (2008) principles, the female student coded as 'Nandi' felt that the NSFAS form of cash transfer for meal allowances did not eradicate student hunger. Although 'Nandi's' suggestion of a card system to purchase food from the cafeterias had merit, this method would limit the students' financial freedom. Instead of the university managing the students' finances, the students could be trained to manage their finances.

As Ross (2010) noted, there was an interdependency between food and the academic performance of students. In other words, food was essential to ensure that students performed well in their studies. It was noted in the above section that the UKZN policy prioritised the quality of the education over that of food provision. There has been no link established between food security and the academic performance of students. As the participant below noted:

I think the priority of the university is to strengthen the quality of education. This is done so that the university can be rated (as) good in university rankings. This is done in almost all the universities. I think the university authorities see the cafeterias around and inside the university and they think that students will buy food. If the university cared about the food security of students, there would be food schemes that give food to students who do not have money (Nomali, female student).

4.5. Influence of Hunger on the Academic Performance

4.5.1 Food and Academic Performance

Many of the participants claimed that there was a dependency between food security and the academic performance of the students. Ross (2010) also emphasised that consumption of food was vital for the functioning of the brain, which facilitated the performance of the students. The respondents had this to say:

So if you have not eaten, your brain would not be able to stimulate ideas. It does not do anything, just... would not function in a normal way. Your brain would then become less productive and you will produce bad results (Jones, male student).

Another student echoed the same sentiment:

(You) cannot study on an empty stomach, especially when you are eating abnormally. By eating abnormal, I mean you eat too much. Besides just your brain, (your) body cannot function well when hungry. You need food that will give you energy; that would be food with vitamins and minerals (Sibongile, female student).

Erickson (2006) noted that there were certain elements of nutrition (which included proteins, carbohydrates, fats (healthy fats), vitamins and minerals) that were required to ensure an individual's wellbeing and enhance proper cognitive capacity. 'Sibongile' concurred this by indicating that vitamins and minerals were essential.

4.5.2. Underperforming

As indicated in the above section, there was a correlation between food security and the performance of the students. Failure to achieve food security at the university could result in poor performance by the students, and this was revealed by these responses:

In most cases you would find that some students are under performing because he/she does not have food. And you cannot come to campus when you are hungry, other students would laugh at you. It's better to just stay at res and sleep when you are hungry (Vuyo, male student).

Another respondent added:

The food we eat develops the brain. When you are hungry and when you do not eat healthy food, that can affect your brain negatively. As a result, you obviously cannot perform well in school (Zah, female student).

4.6. Challenges with Achieving Self-Sufficiency

4.6.1 Managing Own Finances

The framework utilised in this study empowered people to take ownership of their food security approaches. There were a number of challenges that respondents mentioned, pertaining to food security approaches that had been implemented at UKZN-HC. Some the challenges were associated with money, a lack of time, stigma and pressure from peers.

According to Van de Berg (2015), one of the major challenges that students encountered in their food security approaches was managing their finances properly. The food sovereignty framework dwelled solely on human rights and how people should influence their decisions about food security, and ignored the fact that people should have money to access food (particularly in the urban areas). According to this respondent, some circumspection was necessary for students:

Some of the challenges that students face are that they do not manage their money correctly and in most cases they get money once a month. Some end up borrowing when going hungry, eating once a day or having sugar daddy's that will give them money (Wanele, male student).

According to the stated perceptions, students could face financial constraints to purchase food, but these constraints could be even severe because of inflation. The respondent quoted above revealed that even though a person could have money as a resource to purchase food, the money had to be properly managed. This respondent went on to add that an inability to manage money could even trigger inappropriate behaviour.

4.6.2 Peer Pressure and Stigma

Stigma and the pressure exerted by peers were also identified as some of the constraining factors in achieving self-sufficiency in food security among students. As discussed, Sabi (undated) noted that there could be stigma associated with certain food security approaches, and students did not want to be to be labelled as poor or hungry. One student had this to say:

If you are in university, you get a circle (of friends) that you hang around with. So you may be under pressure or you may be isolated, if you want to access food in a different method than the rest of the group (Zah, female student).

Another was of the view that:

I think peer pressure and wanting to fit in are some of the factors that end up indirectly affecting the individual's food security status, and by this, I mean students would not want to get their hands dirty in just planting a small plot.... I mean who practices agriculture in an urban setting, especially in the university. You would definitely be an outcast. Another thing is that self-sufficiency is dependent on the self-discipline and willingness of the student(s) (John, male student).

There was therefore a need for self-reflection and circumspection on the part of the students.

4.6.3 Influence of Time on Food Security

Another issue that was identified as a challenge in achieving self-sufficiency in food security in the university was time. Students had busy schedules and it would be difficult for them to multi-task by growing their own food. Below are some of the poignant perceptions of the respondents:

There may be (a) lack of time in engaging in other food security approaches because students have to study. Like there would be just no time for students to plant crops (Peter, male student).

Another student was of the following view:

Time is a challenge. As a student, you focus too much on the academic life, you would not have the time to work part-time. The only way that students may supplant their food security approaches is through getting piece jobs like being a waitress or promotion jobs.

But then again the problem is that would be time. Students would not do well in their studies if they work and study. Again, this would depend on the workload that (the student has) (Nolwazi, female student).

Difficult choices, such as how to create time to engage in other methods of producing food would have to be made. This could even be introduced as a fun activity, for example students could meet to socialise in the university food gardens.

4.7. Conclusion

This section presented the findings of the research, using the preliminary theme as subheadings in order to arrange the data in a logical way. Very rich information was obtained under each theme and this helped to address the research question. The first subtopic focused on exploring the subjective meanings of hunger and food security. Various participants associated food security with health and nutrition. The second subtopic contained results about the impact of food security approaches in hunger reduction, and the third, the impact of policies on food security. The fourth subtopic focused on the influence of hunger on the academic performance of the students. The final subtopic addressed the challenges in achieving self-sufficiency. Each subtopic contained complex information and an analysis of the findings. Recommendations will be made from the presented findings and these will be discussed in detail in the next section of this study.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

The purpose of this chapter is to evaluate whether the research questions have been addressed and conclude the study. It will represent an overall summary and reflection on the various sections.

5.2. Discussion

There was a great need to conduct this study at the Howard College campus of UKZN, for a number of reasons. Firstly, the food security approaches that exist in the university have never been evaluated. Secondly, limited research exists about the impact of the food security approaches that exist at the university. Thirdly, the perceptions of the students about the food security approaches that exist at the university have never been discussed openly, therefore, this study can be seen as a platform for students to voice their concerns about the university's food security approaches. Lastly, it may be an informative tool for the university policy makers.

There is diverse literature about food security, but there seems to be a gap in knowledge as limited researchers have addressed food (in) security in tertiary institutions. This study has therefore contributed to the existing body of research as it addresses an issue that has only been partially addressed in literature to date. Although food (in) security has been widely addressed in literature, there are unique perceptions in every region, and diverse approaches in every context: What works in a developed country cannot be directly implemented in a developing country.

Part of the rationale of this study was that students do not have the power to influence decisions about food security at the university. The food sovereignty framework was an appropriate framework for this study as it encourages people to be the key players in the food security decisions that affect them. The population of the university comprises of people from diverse cultural groups, and this implies that the groups will have unique food preferences. Integrating the perceptions of all the people in the food security decisions can help to ensure that the interests of every ethnic group are catered for.

The research about food (in) security can be addressed either qualitatively or quantitatively. There are benefits in using each of these methods, however using qualitative research helped to generate broader perceptions of the issue that was being investigated. People have different experiences of food security, and the recollection of some experiences had the potential to trigger the emotions of the participants. The questions included in the interview schedule were therefore developed in a way that would not harm the emotional state of the participants. Although none of the participants suffered any emotional distress as a result of the interviews, arrangements were made prior to the interviews with the UKZN-HC Student Support Services for assistance for any participants if they became distressed. The participants were each given an information sheet that informed them about the nature of the research, before signing the consent document. This helped to develop interest and trust in the participants.

It can be said that there are certain ways in which people interpret the concept of food security and hunger, and it is a diverse concept in any setting. To elucidate, the way in which food security is understood on a macro, country scale will differ from how it is understood in a smaller setting, such as in a tertiary institution. There are complex ways in which students understand food security and these ways need to be incorporated in the food security approaches that are designed for students.

Although the NSFAS was identified as a major approach contributing to the reduction of student hunger, there were also some limitations to it. In this researcher's view, the university has to develop an assessment technique for the food security approaches that have been implemented on campus, to assess whether they contributed to the reduction of hunger. The reckless spending of financial aid money by the students was one of the hindrances to the success of the NSFAS that was identified at the university. To curb this, the university needs to design a workshop to educate the students about handling their finances correctly.

Food security policies are an isolated matter. If the university adopts a holistic approach (that incorporate food security of students) towards achieving quality education, there would be balance

that would contribute to the enhancement of the quality of education that is offered by the university. Developing an explicit food security policy can facilitate proper implementation which may contribute to the good performance of students. Moreover, there have to be other food security approaches that will supplement to the existing food security approaches, and students should also be given a platform where they can influence decisions about food security approaches that affect them.

5.3. Realisation of Objectives

Based on the findings, the objectives of the study have been achieved as follows:

Objective One: Explore the subjective meanings of hunger and food security among the students.

There are a number of complex, subjective meanings that students associate with hunger and food security, that have not been addressed by many scholars. In the definition entailed above, money has been described as a determinant of accessing food. The findings also reveal that food preferences and the nutritional value of the food are also determined by the economic status of the student. Some respondents seemed to have a common understanding as they have also associated food security with aspects of food preferences, health and nutrition. The perceptions produced by others were of the view that food security could be determined by many other factors that are often ignored when addressing food security. These include food self-sufficiency, the household economic status of the students and government's role.

Most students stated that the hunger state is one of being hungry. This is the traditional view of hunger and it is often discussed in literature. The more recent interpretations of hunger reveal that there is hidden hunger (which often leads to malnutrition) and visible hunger, which often leads to malnutrition (WFP, 2016). The respondents in this study further elaborated on this, asserting that hunger is associated with a lack of money and that it triggers misbehaviour among students.

Objective 2: Identify and evaluate the various food security strategies that were implemented at the university between 2006 and 2015.

The dominant food security approaches that were identified by students were meal allowances granted by the NSFAS and feeding schemes, but there were problems associated with each approach. A lack of funding may cause students to engage in inappropriate ways of accessing food, such as embarking on relationships with older working men, termed as blessers. Some students engage in appropriate behaviour in an effort to fit in with a group of peers. Other respondents revealed that the university does not have any food security approaches of its own.

Objective 3: Evaluate the impact of the internal policies on food security approaches that have been implemented at the university between 2006 and 2015.

A policy can be seen as a very powerful tool to shape food security approaches, however, UKZN-HC seems to lack an explicit policy about food security as many participants stated that they are not familiar with any such policy on campus. Others have alluded that they have the power to influence the food security approaches through structures such as the SRC in the university. While many stated they felt that food security was prioritised in the university, others felt that it was not prioritised.

Objective 4: To explore - through the perceptions of the students and university staff - the impact of hunger on health and academic performance.

Many respondents revealed that food security is a necessity to achieve good academic performance of the students. The lack of food seemed to be one of the contributing factors to underperformance of students.

Objective 5: To explore the challenges associated with achieving self-sufficiency in food security at university.

There are diverse food security approaches in the university. Other food security approaches are stigmatised, and some of the students experience a certain form of marginalisation by their peers. Another matter that hindered food self-sufficiency among students was the inability to manage their finances.

5.4 Conclusions

Based on the findings of this study, it can be said that there are multifaceted subjective ways that students use to interpret the concept of hunger and food security. It can also be said that hunger and food security are different in every setting, as each environment has its own set of challenges. The economic status of the individual's household does matter when it comes to food security, because it impacts on how the individuals experience and understand hunger and food security. For instance, students from more affluent homes endure less hunger than students from poorer households. The amount of money available and the way in which it is managed also impacts on the individual's ability to manage money effectively, especially if they are not taught how to do it by their parents. There is also reckless spending on the part of some students, as they want to fit in with a certain group of peers, usually associated with class. It is also imperative to address food security as in tertiary institutions as the findings of this study show that food insecurity can lead to vice and debauchery.

Money is important as a game changer in access to food. Those with money have choice in terms of the quality of the food they eat and the frequency with which they eat. The NSFAS is an important player in ensuring food security among students, whose role cannot be ignored as it is a feeding scheme that was introduced to address these very needs of the students. Unfortunately, although feeding schemes do have an impact on hunger reduction amongst students, they are often stigmatised and they lack sustainability. Hungry students find it difficult to perform well academically as food (in)security has a profound impact on academic performance.

There are power differentials in the determination of policy at the university, as the university authorities have more power than the students in determining the how policies should be implemented. In addition to this, the university itself has neglected the food security, as there are no university owned approaches.

5.5. Recommendations

Drawing from the above conclusions, it can be said that there has to be an in-depth understanding of hunger and food security before formulating approaches that will curb hunger. This is because each approach to food security should cater for the unique challenges that are being experienced at the Howard College campus; and the same process should be applied at other institutions in the country. This will assist policy makers to develop policies that seek to address the core challenges of food security.

Some of the challenges of accessing food in the university are that there is reckless spending on the part of students and that food insecurity can lead to vice and debauchery. To curb this activity and help the students, the university should hold workshops where the students can be taught financial management skills and about moral behaviour. These sessions can be used as a platform to raise awareness about the dangers and risks inherent in flirting and engaging with bladders. They can be made compulsory for every student in the university, regardless of gender.

It has been stated that the household status or the economic background of the individuals does matter when it comes to food security. For instance, students from well off circumstances, endure less hunger than students from poor households. This can be resolved by implementing additional food security approaches, such as the planting of food crops to supplement the food intake of those students who come from poor households. Students can be the key drivers of these strategies. Money has also been seen as an important game changer in access to food. Those with money have more choice in terms of the quality of the food they eat and how often they eat. Adopting agriculture as a strategy to supplement to the food security approaches can change this, so that those students who are from poor households can also have a choice in terms of food preferences.

One of the findings was that NSFAS is an important player in ensuring food security among students and that role cannot be ignored. The application process to accommodate those who are needy can be improved upon. This can be done by developing new application criteria where there would be a new definition of needy students. The needy students should include those who are

from middle income households but cannot afford to pay their fees. The NSFAS meal allowance should also be increased to cater for the increased food prices. This will, in turn, increase the capacity of the NSFAS to eradicate student hunger. There university should also develop an assessment technique for the food security approaches that have been implemented in the university, to assess how effectively they contribute to the reduction of hunger. Food (in)security has a profound impact on academic performance. There can be an improvement to the UKZN policy by prioritising food security, and viewing it as an interlinking issue with academic performance, rather than focussing solely on the academic performance. This will, in turn, help to develop improved food security approaches.

There is concern about feeding schemes leading to stigmatisation. A stigma can emerge because of a lack of information, and the stigma associated with the feeding schemes can be eradicated by educating students about the various feeding schemes that exist in the university. An alternative is that the university can shift these approaches to more sustainable approaches.

With regards to the power differentials in the determination of policy at the university, there should be bottom-up decision making. This can be achieved by creating a platform where students can voice their concerns about food security.

5.6 Conclusion

This chapter presented the discussion of the findings and how the objectives of the study were realised. It also articulated the conclusions arising from this study and made recommendations for improvements. It is imperative to conduct studies about food security in every institution in the country, as food (in) security has a direct link with the academic performance of the students. It is also important to assess the food security approaches that exist within a university to measure their impact in addressing student hunger.

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APPENDICES

Appendix A: Interview Guide

A. Subjective meanings of food security and hunger

1. What is your own understanding of food security?
2. In your own understanding, how would you define hunger?
3. How do you think other people understand hunger in the university?
4. How do you think they understand food security?

B. Food security approaches at Howard College between 2006 - 2015, and their impact to reduce hunger

5. From the time you have arrived at the university till 2015, can you identify the main ways that students obtained food?
6. Do you think each of these food security strategies contributed to hunger reduction?
7. In what ways do you think they contributed to the reduction of hunger?
8. Do you think there should be changes in the university food security approaches?
9. If yes, how do you think these changes should be implemented?

C. Impact of internal policies on food security approaches that have been implemented at the university between 2006 - 2015.

10. Are you aware of the food security policies at UKZN?
11. If yes, what has been the impact of these policies in the reduction of hunger at the university?
12. From the time you arrived at UKZN-HC to 2015, do you think students had the power to influence decisions about food security?
13. Do you think food security was prioritised?
14. If yes, how was it considered a priority?

D. What perceptions do students have about the impact of hunger on health, academic performance and so on?

15. Do you think there is a link between the academic performance and food security?
16. If yes, how do you think the academic performance and food security link?

E. What are the challenges associated with achieving self-sufficiency in food security at Howard College?

17. What were the challenges that students encountered in the ways they obtained food from the time you arrived at UKZN-HC to 2015?
18. From the time you arrived at the university until 2015, do you think there were changes in food security approaches at UKZN-HC?
19. If yes, why do you think these changes occurred?
20. What were the challenges that students encountered in achieving self-sufficiency in food security at UKZN-HC, from the time you arrived at the university till 2015?

Appendix B: Gate Keeper's Letter



11 August 2016

Ms Abongile Mbangatha
School of Built Environment & Development Studies
College of Humanities
Howard College Campus
UKZN
Email: ambangatha1904@gmail.com

Dear Ms Mbangatha

RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper's permission is hereby granted for you to conduct research at the University of KwaZulu-Natal (UKZN), towards your postgraduate students, provided Ethical clearance has been obtained. We note the title of your research project is:

"Students, Food, Hunger and Food Security: A case student of Howard College, University of KwaZulu-Natal, Durban".

It is noted that you will be constituting your sample by performing interviews and/or focus group discussions with staff and students on the Howard College Campus.

Please ensure that the following appears on your notice/questionnaire:

- Ethical clearance number;
- Research title and details of the research, the researcher and the supervisor;
- Consent form is attached to the notice/questionnaire and to be signed by user before he/she fills in questionnaire;
- gatekeepers approval by the Registrar.

You are not authorized to contact staff and students using 'Microsoft Outlook' address book.

Data collected must be treated with due confidentiality and anonymity.

Yours sincerely,

MR SS MOKOENA
REGISTRAR

Office of the Registrar

Postal Address: Private Bag X54001, Durban, South Africa

Telephone: +27 (0) 31 260 8005/2206 Facsimile: +27 (0) 31 260 7824/2204 Email: registrar@ukzn.ac.za

Website: www.ukzn.ac.za



Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

Appendix C: Information Sheet for Participants

I Abongile Mbangatha, a Development Studies Masters student from the School of Built Environment and Development Studies, will be conducting a study that has been approved by the University Research Office. The title of the study is **Students, Food, Hunger and Food Security: A Case Study of Howard College, University of KwaZulu-Natal, Durban.**

Rationale, Aim and Questions Addressed

The rationale for conducting this study is that there is limited research that acknowledges the pervasiveness of food insecurity in tertiary institutions, and the fact that there has to be pro-longed food security strategies for students. The main aim of this study is to evaluate the manner in which university students access food and the impact of various food security strategies that have been implemented at the university between 2006 - 2015.

The aim will be achieved through addressing the following questions:

1. What are the subjective meanings attached to food security and hunger at the university?
2. What are the different food security strategies that have been implemented at UKZN-HC between 2006 – 2015, and what impact have they made in addressing hunger?
3. What has been the impact of external and internal policies on food security approaches that have been implemented at the university between 2006 – 2015?
4. What perceptions do students have about the impact of hunger on health and academic performance?
5. What are the challenges associated with achieving self-sufficiency in food security at UKZN-HC?

Process of the Interview

I (Abongile Mbangatha) will be interviewing each participant myself to avoid challenges. Quiet areas such as the vacant lecture and tutorial venues will be used to conduct the interviews. Each interview will take 20-30 minutes. The interview guide that will be used will not entail sensitive questions and a participant will be allowed to view the interview guide prior to the interview, if she/he wants to. If it happens that the interview impacts negatively on the psychological state of a participant, I will stop the interview immediately and the participant will be referred to Student Support Services (for counselling). The services of this unit are offered by professionals and they are open to assist every UKZN registered student.

I will also abide by the ethical principles (they are listed and explained in the consent form), and should a participant wish to view the completed theses, it will be accessible from the university library, or you can contact the researcher. For transparency purposes, I have attached the details of the Research Office, my supervisor who is overseeing this research and my details. I am open to answer any questions that relate to the study.

.....

Date

.....

.....

Signature of the participant

.....

Date

Signature of the researcher

Research Office Details

University of KwaZulu-Natal

Research Office: Ethics -Westville Campus

Telephone: 031 260 4557

e-mail: mohunp@ukzn.ac.za

Supervisor's contact details

Prof. Oliver Mtapuri

School of Built Environment and Development Studies

mtapurio@ukzn.ac.za

031 260 1031

Researcher's details

Ms. Abongile Mbangatha

Development Studies Masters Student

210503644@ukzn.ac.za or ambangatha1904@gmail.com

076 677 7456

Appendix D: Consent Form

Consent Form

I (Full name and Surname) hereby give consent to voluntarily participate in the study titled: **Students, Food, Hunger and Food Security: A Case Study of Howard College, University of KwaZulu-Natal, Durban.** This study aims to evaluate the manner in which university students access food and the impact of various food security strategies that have been implemented at the university between 2006 - 2015.

The researcher (Full name and Surname of the researcher) also explained the principles that she will abide by in conducting her research. These principles include *non-maleficence* (which involves not harming the participants during the research), *Autonomy* (which involves participant's voluntary choice to be part of the research), *Justice* (which is about treating the participants equally regardless of race, disability or literacy levels), *Fidelity* (which involves trustworthiness, loyalty and agreements between the researcher and the respondent), *Respect for participants rights and dignity* (which links to the principle of justice and involves treating people in a fair and a respectful manner), and *beneficence* (which refers to a state where the research is expected to contribute to people's lives) (Bless, Higson-Smith and Sithole, 2013). I am also fully aware that the interview may be audio recoded and that I can withdraw anytime if the above-mentioned principles are violated.

Psychological State of Participants

If it happens that participating in this study impacts negatively on your psychological state, you can attend counselling with professionally trained counsellors at the UKZN Student Support Office. This unit is open to assist every UKZN registered student.

I acknowledge that I have been informed about the nature of the study (the aim and purpose of the study) and I have been fully informed about the ethical precautions that both the researcher and I will adhere to. For transparency purposes, the details of the Research Office, the supervisor who is overseeing this research and the researcher's details are included. The researcher is open to answer any questions that relate to the study to be conducted.

.....

Date

.....

Date

.....

Signature of the participant

.....

Signature of the researcher

Research Office Details

University of KwaZulu-Natal

Research Office: Ethics -Westville Campus

Telephone: 031 260 4557

e-mail: mohunp@ukzn.ac.za

Supervisors contact details

Prof. Oliver Mtapuri

School of Built Environment and Development Studies

mtapurio@ukzn.ac.za

031 260 1031

Researcher's details

Ms. Abongile Mbangatha

Development Studies Masters Student

210503644@ukzn.ac.za or ambangatha1904@gmail.com

076 677 7456



11 November 2016

Ms Abongile Mbangatha 210503644
School of Built Environment and Development Studies
Howard College Campus

Dear Ms Mbangatha

Protocol reference number: HSS/1904/016M

Project Title: Students, food, hunger and food security: A case study of Howard College, University of KwaZulu-Natal, Durban

Full Approval – Expedited Application

In response to your application received 3 November 2016, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Y

.....
Dr Shenuka Singh (Chair)

Humanities & Social Sciences Research Ethics Committee

/pm

Cc Supervisor: Prof Oliver Mtapuri
Cc Academic Leader Research: Professor P Maharaj
Cc School Administrator: Ms Nolundi Mzolo

Humanities & Social Sciences Research Ethics Committee

Dr Shenuka Singh (Chair)

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11 December

2016

Reg. No. 2006/156780/23

Abongile Mbangatha

EDITING OF RESEARCH DISSERTATION OF ABONGILE ABANGATHA

I have an MA in English from University of Natal (now UKZN) and have been performing editing services through my company for eleven years. My company regularly edits the research dissertations, articles and theses of the School of Nursing, Environmental Studies and various other schools and disciplines at the University of KwaZulu-Natal and other institutions, as well as editing for publishing firms and private individuals on contract.

I hereby confirm that Pauline Fogg edited the research dissertation of **Abongile Mbangatha** titled "**Students, Food, Hunger and Food Security: A Case Study of Howard College, University of KwaZulu-Natal, Durban**" on behalf of WordWeavers cc and commented on the anomalies she was unable to rectify in the MS Word Track Changes and review mode by insertion of comment balloons prior to returning the document to the author. Corrections were made in respect of grammar, punctuation, spelling, syntax, tense and language usage as well as to sense and flow. A guideline to assist in making corrections was also supplied.

I trust that the document will prove acceptable in terms of editing criteria.

Yours faithfully

berle (MA: Univ

