

**An exploration of factors that influence food choices among  
students of the University of KwaZulu-Natal, Howard College  
Campus, Durban, South Africa**

**By**

**Lindokuhle Sizolwethu Malambe**

**214542262**

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Psychology University of KwaZulu-Natal**

**Supervisor: Professor Anna Meyer-Weitz**

**Co-Supervisor: Nosipho Makhakhe**

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## DECLARATION

I declare in good faith that this dissertation is my own original work. All citations, references and borrowed ideas have been duly acknowledged. This dissertation has never been submitted to any other university for any other purpose.

Name: Lindokuhle Sizolwethu Malambe

Student number: 214542262

Date: January 2021

Signature:

## **ABSTRACT**

**Background:** Food is an important aspect of our life and unhealthy food choices are a major cause of Non-Communicable Diseases (NCDs), that lead to rising mortality globally and in South Africa. The transition from high school to university makes food choices very challenging to university students, who were used to home-prepared meals. As students move away from home and become more independent as they enter university life, they tend to opt for easy and convenient foods served in cafeterias or fast-food outlets on and around campus. These fast foods are generally regarded to be unhealthy due to high fat and carbohydrate compositions. These dietary habits are detrimental to university students' health and wellbeing, which increase their susceptibility to chronic illnesses in later years. The aim of the study is to explore qualitatively the factors that influence food choices among students at the University of KwaZulu-Natal, Howard College Campus in Durban, South Africa in applying the Food Choice Process Model (FCPM).

**Objective:** The study explores the factors that influence food choices and whether these factors propel or hinder healthy food choices among university students. It aims to examine students' beliefs, attitudes, and knowledge regarding food and healthy eating, and how best to inform students about making healthy food choices.

**Methods:** An in-depth semi-structured interview guide was used for data collection which allowed for flexibility of responses since it is iterative in nature and consists of open-ended questions, that gives opportunities for further probing and exploration. Purposive sampling was used to invite 16 university students to participate in the study and thematic analysis was used to analyze the data.

**Results:** The findings suggest that university students describe their food choices with respect to life events or experiences and personal food systems. As a life experience, university students perceived modifications to the food environment that includes an increase in fast foods establishments and convenient stores and restaurants, which also marks a shift from traditional to modern foods. University students indicated how factors such as taste, time, convenience, and the daily living determine their dietary patterns.

**Conclusion:** University students seem to have adequate knowledge on what constitutes healthy dietary patterns, but do not practice these habits despite their awareness of the

benefits of healthy eating and the risks associated with unhealthy eating. The study further revealed the importance of different stakeholders and health supportive environments in promoting healthy food choices among university students.

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## **LIST OF FIGURES**

**Figure 1:** The Food Choice Process Model

## **LIST OF TABLES**

**Table 1:** Food Choice Process Model

**Table 2:** Demographic information of participants

## **ABBREVIATIONS**

**NCDs**- Non-Communicable Diseases

**FCPM**- Food Choice Process Model

**MNCs**- Multi-nationals corporations

**UN**- United Nations

**WHO**- World Health Organization

**LMICs**- Low- and Middle-Income Countries

**MICs**- Middle-Income

**FDI**- Foreign Direct Investments

**SANHANES-1**- South African National Health and Nutrition Examination Survey-1

**HSRC**- The

Human Sciences Research Council

**DDS**- Dietary Diversity Score

**South African National Health and Nutrition Examination Survey-1**- (SANHANES-1)

**INP**- Integrated Nutrition Program

**RDPs**- Rural Development Program

**KFC**- Kentucky Fried Chicken

**LO**- Life Orientation

**NSFAS**- National Student Financial Aid Scheme

**SES**- Social Economic Status

## **DEDICATION**

To my daughter Nosihle Ntshangase whom I love the most.

## Table of Contents

<b>DECLARATION</b> .....	ii
<b>ABSTRACT</b> .....	iii
<b>Background:</b> .....	iii
<b>Objective:</b> .....	iii
<b>Methods:</b> .....	iii
<b>Results:</b> .....	iii
<b>Conclusion:</b> .....	iii
<b>ACKNOWLEDGEMENTS</b> .....	v
<b>LIST OF FIGURES</b> .....	vi
<b>Figure 1:</b> .....	vi
<b>LIST OF TABLES</b> .....	vii
<b>Table 1:</b> .....	vii
<b>Table 2:</b> .....	vii
<b>ABBREVIATIONS</b> .....	viii
<b>DEDICATION</b> .....	ix
<b>CHAPTER 1: INTRODUCTION</b> .....	1
<b>1.1 Background</b> .....	1
<b>1.2 Rationale</b> .....	2
<b>1.3 Objectives</b> .....	3
<b>1.4 Research questions</b> .....	3
<b>CHAPTER 2: LITERATURE REVIEW</b> .....	4
<b>2.1 Introduction</b> .....	4
<b>2.2 Transitions that impact dietary patterns period</b> .....	4
<b>2.3 Food Choices</b> .....	8

2.3.1 Economic factors.....	8
2.3.2 Food preferences.....	10
2.3.3 Time and convenience .....	11
2.3.4 Environmental factors.....	11
2.3.5 Social factors .....	14
2.3.6 Culture and religion .....	15
2.3.7 Psychological factors .....	16
2.3.8 Globalisation .....	17
2.3.9 Health status.....	18
2.4 Theoretical Framework .....	18
2.4.1 The Food Choice Process Model .....	18
2.5 Summary .....	20
<b>CHAPTER 3: METHODOLOGY .....</b>	<b>22</b>
<b>3.1 Introduction .....</b>	<b>22</b>
<b>3.2 Research design .....</b>	<b>22</b>
<b>3.3 Research paradigm: An interpretivist approach .....</b>	<b>23</b>
<b>3.4 Study setting and context.....</b>	<b>24</b>
<b>3.4.1 The researcher as the key research instrument.....</b>	<b>24</b>
<b>3.4.2 Entry into the field.....</b>	<b>26</b>
<b>3.4.3 Selection of study participants.....</b>	<b>26</b>
<b>3.5 Data collection .....</b>	<b>27</b>
<b>3.6 Data analysis .....</b>	<b>28</b>
<b>3.7 Ethical considerations .....</b>	<b>30</b>
<b>3.7.1 Trustworthiness .....</b>	<b>30</b>
<b>3.8 Summary .....</b>	<b>33</b>

<b>CHAPTER 4: FINDINGS .....</b>	<b>34</b>
<b>4.1 Introduction .....</b>	<b>34</b>
<b>Table 1 .....</b>	<b>34</b>
<i><b>The Food Choice Process Model .....</b></i>	<b>34</b>
<b>4.2 Socio-demographic characteristics of participants .....</b>	<b>36</b>
<b>4.3 Life Course.....</b>	<b>37</b>
<b>4.4 Influences .....</b>	<b>38</b>
<b>4.4.1. Food Context .....</b>	<b>39</b>
<b>4.4.2 Resources .....</b>	<b>41</b>
<b>4.4.3 Intra-Personal factors .....</b>	<b>44</b>
<b>4.4.4 Social factors .....</b>	<b>45</b>
<b>4.4.5 Ideals .....</b>	<b>46</b>
<b>4.5 Personal systems.....</b>	<b>48</b>
<b>4.5.1 Value negotiations.....</b>	<b>48</b>
<b>4.5.2 Sensory perceptions.....</b>	<b>49</b>
<b>4.5.3 Monetary Considerations.....</b>	<b>49</b>
<b>4.5.4 Convenience .....</b>	<b>51</b>
<b>4.5.5 Managing relationships.....</b>	<b>52</b>
<b>4.5.6 Familiarity.....</b>	<b>53</b>
<b>4.5.7 Traditions and religion.....</b>	<b>54</b>
<b>4.5.8 Health and nutrition.....</b>	<b>54</b>
<b>4.6 Strategies to promote healthy eating .....</b>	<b>56</b>
<b>4.7 Chapter summary .....</b>	<b>57</b>
<b>CHAPTER 5: DISCUSSION OF FINDINGS .....</b>	<b>58</b>
<b>5.1 Introduction.....</b>	<b>58</b>

5.2 Life Course.....	58
5.3 Influencers.....	60
5.3.1 Resources.....	61
5.3.2 Managing relationships.....	63
5.3.3 Change in the Food context .....	64
5.3.4 Ideals .....	65
5.3.5 Personal factors.....	66
5.3.6 Social factors .....	67
5.4 Personal food systems .....	69
5.4.1 Sensory perceptions.....	70
5.4.2 Monetary considerations.....	71
5.4.3 Quality .....	73
5.4.4 Convenience .....	74
5.4.5 Traditions and religion.....	76
5.4.6 Health and nutrition.....	77
5.5 Strategies to promote healthy eating .....	79
5.6 Summary .....	79
<b>CHAPTER 6: CONCLUSION, LIMITATIONS AND RECOMMENDATIONS ...</b>	<b>82</b>
6.1 Conclusion.....	82
6.2 Limitations .....	85
6.3 Recommendations .....	86
<b>APPENDIX 1: INFORMED CONSENT LETTER.....</b>	<b>108</b>
<b>APPENDIX 2: INTERVIEW GUIDE.....</b>	<b>113</b>
<b>APPENDIX 3: ETHICAL CLEARANCE.....</b>	<b>114</b>

## **CHAPTER 1: INTRODUCTION**

### **1.1 Background**

Food choices remain a global challenge because people's food choices are often contradictory to their health and wellbeing. The contribution of unhealthy diets coupled with unhealthy lifestyles and behaviours results to the global and national increase in Non-Communicable Diseases (NCDs). This continues to impact the global burden of NCD (Swinburn et al., 2013) and resulting in early morbidity and mortality (Spires, Delobelle, Puoane, Hoebel, & Swart, 2016). In essence, lifestyle and behaviours account for more diseases than contagious diseases. An urgency is therefore needed to raise awareness and improve knowledge regarding healthy food choices and a supportive environment to enable easy access to healthy foods that are beneficial to the health and wellbeing of individuals.

The end of apartheid led the international community to lift economic sanctions in South Africa, and this increased economic growth, as foreign investors were lured to South Africa by development opportunities. Multinationals corporations (MNCs) from Western countries were therefore attracted to new markets. These include McDonald's, KFC, and Coca-Cola. Global fast food and soft drink manufacturing corporations played a role in altering the eating habits of South Africans, particularly shifting young people from eating more traditional foods to a modern Westernised diet (Salameh et al., 2014). As a result, dietary-related diseases, i.e. NCDs that include diabetes, hypertension, coronary heart disease, chronic kidney disease, most cancers and osteoporosis are now common (Raz et al., 2014). Moreover, the widespread access and affordability of processed foods in South Africa have largely contributed to obesity and NCDs (Puoane et al., 2012). Thus, food choices are important in the quality of diets that is not only dependent on relevant knowledge but also supportive environments that enable access to healthier options.

Coupled with this is the fact that university students are autonomous and impulsive when making decisions on food, and therefore may not consider selecting healthier foods, despite the knowledge they have on healthy eating. According to Bosu (2015), nutrition transition refers to the sequence and the kinds of nutritional and dietary patterns that are associated with cultural, economic, social, environmental, technological, and demographic factors.

These are the factors that play a significant role in propelling or hindering healthy food choices among university students. This highlights the importance of encouraging individuals to always actively make healthier food choices at all times, especially if they have different options available to them

## **1.2 Rationale**

Insufficient nutrition has negative consequences on the health and well-being of university students and may also impact academic progress. However, unhealthy diet habits established in the youth years manifest in later years as NCDs. The transition from high school to university gives them extra freedom to select the kind and the amount of food students desire to eat. This freedom puts university students' health at risk because they tend to make bad dietary choices that can cause problems in their wellbeing. Yet, it is important and very beneficial for university students to meet nutritional requirements and normalise good eating habits to improve one's health and optimal functioning.

Information in nutritional values among university students is important because some students start to develop unhealthy dietary patterns and have a tendency to choose meals according to convenience, accessibility rather than their nutritional content (Abraham, Noriega, & Shin, 2018).

It is fundamental that university students have healthy meals, this can aid their physical and cognitive wellbeing and improve their intellectual development to stimulate academic performance (Deshpande et al., 2009). Engaging in unhealthy diets is very detrimental to their health because such poor dietary patterns may not only occur during their university period alone but could be retained throughout their lives. Therefore, it is vital to conduct research that would explore factors that influence food choices among university students to prevent an increasing prevalence of diet-related diseases such as obesity, diabetes, cardiovascular disease, cancer and osteoporosis (Deliens, Clarys, Bourdeaudhuj, & Deforche, 2014). Recommendations will be made to strengthen healthy food choices for the student population.

Globally, the food environment and systems are changing, and they are dominated by large transnational food and beverage corporations (Monteiro, Moubarac, Cannon & Popkin,

2013). Globalisation has had an impact on the food environment by determining the kinds of food available and accessible to individuals (Bacon & Krpan, 2018). Therefore, this study will look at how environmental factors and the availability of food influence students' food choices because there is a link between the kind of foods that are available and individuals' dietary patterns. The study would consider how intrapersonal and interpersonal factors influence food choices, as well as the importance of food in the wellbeing of university students because food plays a very significant role in their lives, both socially, economically, and in their cultural aspect.

Against the knowledge that food is critical in our daily lives and the national increase in morbidity and mortality linked to the increase in NCD propelled the need for research among the youth and university students in particular because of their growing independence in making their own choices around food. There is also a dearth of literature on factors that influence food choices among students in a university setting (Kabir, Miah & Islam, 2018). This study also forms part of a bigger cross-country study i.e. Sustainable Healthy Food Systems (SHEFS) project in which healthy food choices have been highlighted as critical sustainable food choices.

### **1.3 Objectives**

This study consists of three objectives that have a wide application on the factors which influence food choices among university students. The main objectives were to:

1. Explore factors which influence food choices; that is, whether these factors propel or hinder healthy food choices among university students.
2. Explore students' beliefs, attitudes, and knowledge regarding food and healthy eating.
3. Explore how best students can be informed about and motivated to make healthy food choices.

### **1.4 Research questions**

1. What are the factors that influence food choices among university students?
2. What are students' beliefs, attitudes, and knowledge around food?
3. How best can students be informed about and motivated to make healthy food options?

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter would present an overview of related literature, with regards to factors that influence food choices. The disease burden of Non-communicable diseases (NCDs) would be discussed, as well as the preventable lifestyle behaviours that university students practise when making food choices. According to Mayosi et al. (2009), South Africa is in the midst of profound health transition, which is characterised by a burden of Non-communicable diseases such as cancer, type 2 diabetes, and cardiovascular heart diseases. These diseases are emerging in both urban and rural areas and are most prevalent among the urban poor (Hunter-Adams, Battersby, & Oni, 2019).

The number of people who are dying from cancer, diabetes, and other chronic diseases is also increasing due to the rising burden of NCDs. As Spires et al. (2016) observe, NCDs might increase rapidly in South Africa in the next coming years if no measures are taken to prevent and address the rise of this burden to individuals' lives. Therefore, there is deep-seated need for effective advocacy and action in order to control the risk factors of NCDs in South Africa, as they also affect the youth. Most NCDs share common risk factors, in the same way as physical inactivity, and unhealthy diets could lead to cardiovascular disease, cancer, and diabetes (Ei Fessikh, Rkain, Bakri, & Dakka, 2018). This study focused on university students since they are increasingly independent from families and expected to make their own decisions about the foods they choose to eat and cook.

### **2.2 Transitions that impact dietary patterns period**

The transition from high school to university significantly affects students' choices of food, with diverse health complications. The living environment at universities places students in disadvantaged circumstances because they are strongly attached to families but become more independent to make their own dietary choices (Wang & Fielding-Singh, 2018). As parental control begins to diminish amongst university students, they become more autonomous and therefore tend to make unhealthy food choices (Tam, Yassa, Parker, O'Connor, & Allman-Farinelli, 2017). A student's life in the university setting is characterised by many changes in eating behaviours and dietary patterns because students become autonomous in choosing their diet (Tam et al., 2017).

It involves adaption to a new environment accompanied by new responsibilities which propels greater autonomy in having their own dietary patterns and making decisions on how much, what, when, and where to consume food that may be healthy or have negative consequences for health. There is a global concern on food consumption patterns of university students because they are not eating the recommended variety of nutritious foods needed for their health and wellbeing (Viljoen, Van der Spuy, & Du Rand, 2018). Some university students are neither consuming the recommended amount of vegetables and fruits, protein and complex carbohydrates, but rather eat less nutritious foods that are energy-dense, highly processed, and detrimental to their health (Borg, 2011).

Due to the changes in living arrangements, students' lifestyles are also influenced by peers, an important reference group, and may tend to engage in other risky health behaviors, including hazardous alcohol consumption (Supski, Lindsay, & Tanner, 2017). These practices may facilitate weight gain, because excessive alcohol consumption, unhealthy eating, and little physical exercise, contribute to weight gain and diet-related diseases, such as chronic illnesses in later years (Deliens et al., 2014).

Apart from students' experiences of personal transition from home to university, major dietary transition has taken place across the world. Globally, food environments and systems are changing since they are dominated by large transnational food and drink corporations and this is very much linked to obesity in South Africa (Martins, Levy, Claro, Moubarac, & Monteiro, 2013). The transition from traditional foods to modern foods in South Africa began to change in the 1990s due to an increase in trade and Foreign Direct Investments (FDI) (Schram, Labone, & Sanders, 2013). Economic instability, poverty, and unemployment have allowed big corporations to have major influence on supplying food and beverages in South Africa.

They created environments that made their products more affordable and more available to low and middle-income classes, and this has marked an increased sale of almost all categories of both processed and packaged foods (Allender et al., 2011). According to Swinburn et al. (2011), the consumption of processed foods is further motivated by the lack of refrigeration in many households for the safe storage of foods. Unhealthy Western diet patterns have become entrenched in all segments of society, more especially in communities with predominantly low income and low socioeconomic status.

Statistics revealed that sales of sugary fizzy soft drinks rose by more than 40% when compared with the worldwide average of 89 Coca-Cola products per person per year (Monterio et al., 2013). In 2010 South Africans consumed 254 Coca-Cola products per person per year, an increase from around 130 in 1992 and 175 in 1997 (Ng, Sangster & Priestly, 2019). According to Ng et al. (2019), in general, students can easily access these unhealthy foods from the cafeterias and vending machines available on campuses. According to Kroone and Alant (2012) half of the young people in South Africa eat cakes and biscuits, fast foods, sweets, and cold drinks at least four days a week. There is an increased rate of obesity and overweight from the years 2000 together with high levels of underweight and nutritional deficiencies in South Africa (Spires et al., 2020).

According to De Wet-Billings and Frade (2020) data from the South African National Income Dynamics Survey (NIDS) revealed that about 1400 youth in South Africa had NCDs between 2007 and 2017. In 2020 Spires referred to the dietary changes in South Africa which led to the increased deterioration of health status among individuals, whilst increasing the burden of obesity resulting in NCDs (Spires, 2020). Thus, it was argued by Monteiro et al. (2013) that NCDs would continue to have negative effects on the quality of life in South Africa. According to Delobelle, Sanderr, Puoane, and Freudenberg (2016), this impose a large continuous burden on socio-economic development of South Africa.

The world has reached a decisive point in the history of NCDs which were responsible for 71% (57 million) deaths globally in 2016. Statistics from the WHO (2016) outlines that the major NCDs responsible for these deaths included cardiovascular diseases which resulted in 17.9 million deaths. Diabetes resulted in 1.6 million deaths with 4% of all NCDs deaths and 3% of global deaths. There was even a higher proportion of premature deaths of about 75% (WHO,2016).

The World Health Organization (WHO) have agreed on a time-bound set of nine voluntary global targets to be attained in 2025. These targets are aimed to reduce the high consumption of alcohol, salt, and sodium intake, increased physical inactivity amongst people, as well as educating them how such lifestyles contribute to the rise in obesity and diabetes (World Health Organization, 2014). WHO outlines that there is a need for improved availability and affordability of technologies and essential medicines to manage NCDs as the human, social, and economic consequences of NCDs are felt worldwide,

especially among poor and vulnerable populations (World Health Organization, 2013). About 38 million (68%) of the 56 million death worldwide was due to NCDs in 2012, and more than 40% of them (16 million) were premature deaths which occur in low- and middle-income countries. Alcohol consumption has resulted in an estimated 5.9% (3.3 million) of all deaths worldwide and 5.1% of disability-adjusted life years (DALYs) in 2016. In 2016, 28% of adults aged 18 years and above were insufficiently physically active, and 81% of adolescents aged 11 to 17 years were physically inactive globally, and even up to date the world is not on track to meet the global 2025 target for increased physical activity. This has resulted in 3.2 million deaths and 69.3 million premature deaths due to insufficient physical activity (Wandai, Aagaard-Hansen, Mandac, & Norrissa, 2020).

In 2014, 26% of individuals aged 18 years and older were obese and more than 42 million children under the age of 5 years were overweight in 2016, and the global prevalence of diabetes in 2014 was estimated to be 9%. Cardiovascular disease was the leading cause of NCDs deaths in 2012 and was responsible for 17.5 million (46%) deaths. There is also a prevalence of high blood pressure which has risen by 27% in the African region in 2015. About 28% of the population in low-income countries had high blood pressure as compared with 18% of the population in high-income countries. Currently overweight and obesity remains a major risk factor for the high prevalence of NCDs, particularly among women posing a major risk for diabetes in South Africa (Wandai et al., 2020)

Apart from overweight, Naicker, Mathee, and Teare (2015) stated that about 70% of households in South Africa are still struggling with micronutrient, food insecurity and deficiencies, which contribute to the increase of the burden of mental health disorders and chronic diseases. The latest South African National Health and Nutrition Examination Survey (SANHANES-1) indicates that children were most vulnerable concerning under-nutrition, with 26% of children aged 1-3 years suffering from malnutrition and stunted growth (Reddy, Zuma, Shisana, Jonas & Sewpaul, 2015). Thus, South Africa has challenges with both over-nutrition and under-nutrition which has implications in the development of obesity and overweight, and interventions are needed to address both problems (Claasen, van der Hoeven, & Covic, 2016).

At the heart of overnutrition is the food choices that people make around the kind of foods they eat, the quantity, and frequency. According to Mchiza, Parker, Sewpaul, Onagbiye,

and Labadarios (2020) overweight black South African (women in particular) tended to have greater aspirations to gain weight, despite having the awareness that they already have heavier body sizes. Similarly, individuals from rural and informal residents equate heavy body sizes to economic freedom and success and they aspire to be heavier than their Body Mass Index as they regard this as being healthy and beautiful.

### **2.3 Food Choices**

Food choice refers to what one prefers to consume and can afford. Food choice is important because it creates consumer demand for suppliers in the food systems that produce, process, and distribute food (Lusk & Briggeman, 2009). It also determines what one chooses to eat at any particular time and whether alone or with preferred individuals/friends and also incorporates other aspects of food and eating behaviors such as social gatherings (Leng et al., 2017). According to Ronquest-Rose et al. (2015), food choices are not only influenced by individual factors, but also by the complexity of environmental and systematic drivers. Food plays a vital role in the symbolic, economic, and social elements of life by expressing preferences, identities, and cultural meanings (Lusk & Briggeman, 2009).

Food choice also determines which nutrients and other substances enter the body and subsequently influence health, morbidity, and mortality. It helps researchers to understand why people eat what they eat in order to intervene and implement effective dietary changes that are needed for improved health and wellbeing (Jabs & Devine, 2006). Several factors influence food choices that are explored in subsequent sections.

#### **2.3.1 Economic factors**

According to Daliens et al. (2016), economic factors influence university students' food choices. According to Frewer, Risvik, and Schifferstein (2013), food prices play a significant role in influencing food choices among individuals, as it determines the kind of foods one can afford or purchase than its quality and nutritional value. Individuals who have a low-income who are driven by the exigency of hunger, are likely to purchase inexpensive foods and consider their quantity, without considering their nutritional value and quality (Hanson & Connor, 2014).

It has been reported that individuals from low-income levels have a low intake of fruits and vegetables because these are viewed as too expensive to buy as the result, they generally consume unbalanced diets. According to Ruhm (2012), these individuals might prefer to

eat food that will fill their stomachs and have the energy, and that is why their diets are predominantly refined carbohydrates (starchy foods) and high in trans fats. Individuals with a lower level of income seemed to be inclined to try multiple recipes with the same ingredients and buy less expensive canned foods (Micevski, Thornton, & Brockington, 2014).

However, those with higher income are able to purchase expensive foods, and some consider their nutritional value and quality rather than quantity (Steenhuis, Waterlander, & De Mul, 2011). They can afford to buy expensive organic foods, which are much healthier with no additives (Savelli, Murmura, Liberatore, Casolani, & Bravil, 2017). According to Temple, Steyn Fourie and De Villiers (2011), healthier diets can cost 69% more than a typical South African diet and for that reason, most university students are unable to afford healthy foods, because public universities in South Africa (including the University of KwaZulu-Natal) draw most of its students from lower quantile schools. This means that most university students cannot afford to practice healthy diet habits because some are dependent on the National Student Financial Aid Scheme (NSFAS) (Ngwato, 2020).

As Shisana et al., (2013) reported in the Human Sciences Research Council (HSRC) study of 2012 that a typical South African diet is based mainly on starches (carbohydrates), such as maize, rice, and bread. Hence a staple breakfast usually consists of maize porridge, oats, and sorghum, and eggs depending on what is available. This is either eaten plain or with sugar, butter, milk. Lunch is typically a quarter loaf of bread accompanied by a combination of leafy vegetables, such as spinach, or fried chips. Dinner usually consists of maize-meal pap or rice, served with some vegetables and cheap cuts of poultry meat, fish or mopane worms (Shisana et al., 2013).

Hence the dietary diversity score (DDS) in South Africa, which assesses what people eat on a typical day, and how those foods fit into nine different dietary categories, averaged 4.2, which is not a good sign, since a DDS score under 4.0 is considered deficient in the necessary nutrients (Hird, 2017). Thus, it seems clear that typically, people of low-income Socio-Economic Status (SES) cannot afford and have limited access to diverse types of food, resulting in a low average intake of fruits and vegetables. Just over 45% of South Africans are eating meals with less nutritional diversity and the rest are consuming meals

with average nutritional diversity (Sedibe et al., 2014). Approximately 28% of South Africans face hunger, and another 26% face the risk of experiencing hunger.

As the South African National Health and Nutrition Examination Survey-1 (SANHANES-1) revealed, that a great number of South Africans live in rural and informal peri-urban and urban areas, where over 40% of the population are nutritionally deficient, with a diet characterized by low dietary diversity and also living with challenges around food security (Shisana et al., 2014). In urban areas, in higher-income regions where food diversity was high, foods eaten were also unhealthy as it was high in fat, sugar, and associated with obesity and health problems. Labadarios et al. (2011), stated very aptly that South Africa is facing a nutritional war on two fronts: the battle against nutritional deficiency and the onslaught of high rates of obesity across Socio Economic Status (SES) (Labadarios et al., 2011).

### **2.3.2 Food preferences**

Food preferences also influence university students' food choices. According to Brown, Shaibu, Maruapula, Maletle, and Compher (2015), texture, appearance, flavor, familiarity, and smell and attitudes towards certain foods are important factors in determining food choices among university students. Taste is the major influence on food choices because it is the sum of all sensory stimulation that is produced when ingesting foods (Kourouniotis et al., 2016). According to De Cosmi, Scaglioni, and Agostoni (2017), individuals' choice of food based on its taste, is influenced from the infancy stage when one is introduced to certain foods, especially sweet ones, and instantly dislikes bitter foods. These are innate human traits that are basic survival instincts as adults continue to crave sweet foods, with pleasant smells, as well as hot and spicy foods (Chamoun et al., 2019).

These characteristics also differentiate between favourable and unfavourable, also linked to attitudes towards certain foods without considering its nutritional value and the related positive effects it has on the body in terms of health consequences. Sensory characteristics of food can consciously or subconsciously influence food choices to a greater or lesser extent. Thus, taste preference has influenced many university students to make poor choices resulting in poor nutritional habits and a barrier to healthy eating because healthy foods are perceived as unappealing to university students, despite the knowledge they have of nutrition (Deshpande et al., 2009).

### **2.3.3 Time and convenience**

Factors, such as time constraints and labour costs, followed by the lack of motivation in food preparation, are barriers to healthy eating among university students (Deliens et al., 2014). The authors stated that the reason students make unhealthy food choices, specifically in schools, is that the lunch break is normally very short. They, therefore, have insufficient time to queue for healthy foods, and instead, consume unhealthy foods from the snack cart. This is most common in the urban environment, which indicates that health benefits are a minor factor in adolescents when making food choices (Punitha, Amudhan, Sivaprakasam, & Rathanaprabu, 2015).

Consequently, students fail to meet the minimum recommended intake of a nutritious diet, while exceeding the intake of sweet foods such as cakes, ice creams, chocolates, and soft drinks, as well as too many fatty foods, white bread, and cookies (Hilger, Loerbroks, & Diehl, 2017). This also applies to university students because time constraints and convenience influence their food choices since they seem to have less time in preparing their own food (Abraham, Noriega, & Shin, 2018). According to LaCaille, Dauner, Krambeer, and Pedersen (2011), students prefer to spend time doing other activities rather than cooking because some meals require so much cleaning after preparing which also takes a lot of their time.

It seems thus that it is very difficult for students to eat healthy foods regularly as they would rather consume fast foods such as pizzas and burgers. However, these fast foods are not healthy, and they increase the risk of weight gain and obesity because they have high energy density with the presence of high levels of fats and sugars, and low levels of protein, vitamins, and fiber (Giles, Davidson & Sas 2016). Vitality is another major factor affecting students' food choices because students consume more energy-dense food when they are tired, whereas convenience motivates them in determining what to consume (Daliens et al., 2014). As Abraham, Noriega, and Shin (2018) reported some university students are not able to prepare nutritious and healthy foods due to busy schedules, therefore they opt for faster and easier options.

### **2.3.4 Environmental factors**

According to Chen and Yang (2014), environmental factors also influence food choices among university students, either by promoting or hindering healthy eating. If the

environment supports healthy food options individual's food choices are more likely to be facilitated and sustained. There is a shift in attention to environmental and policy determinants of eating behaviour. Both social environments i.e. family, peers, social networks, and physical environments, such as retail food stores, school cafes, and restaurants influence food choices among university students (Murimi, Chrisman, McCollum, & Macdonald, 2016). According to Hartman, Dohle, and Siegrist (2013) availability and accessibility of healthy foods and cooking supplies influence students' choices of foods, especially those who are living at university residences.

Restaurants and food franchises within university campuses and surrounding areas play a crucial role in determining students' food choices because they offer meals that are convenient for students to consume (Ciccone, 2013). However, Shareck, Lewis, Smith, Clary, and Cummins (2018) maintain that healthy eating remains an individual's choice and it has earlier been reported in an earlier report *South Africa - The Journey to Nutritional Health documentary* (2007) [as cited by Fitzgerald et al., 2010] that some stigma was attached to certain foods, especially to healthy foods and eating. More recently it has been found that learners in poverty quintile schools who eat lunch provided by the feeding scheme in terms of South Africa's Integrated Nutrition Program (INP) in schools are stigmatized as poor as they do not have enough money to bring their own lunch or have pocket money to buy sweets or snacks like "fat cake" (Van Den Ende, Twisk & Monyeki, 2014). It is therefore clear that, stigma and food choices play a role and not necessarily affordability in eating healthy as they may choose to consume unhealthy foods, even if it costs less than unhealthy foods (Larson & Story, 2009).

The availability of space also influences students' food choices, especially those living in school residences. Some students reside in tiny rooms that do not have enough refrigerators, and at times share those refrigerators with others, and therefore struggle to keep perishable foods, such as fruits and vegetables due to storage problems. For that reason, some students are limited to buying canned foods, frozen products, and ready to cook foods (Kabir, Miah, & Islam, 2018). The availability of cooking supplies and cooking skills also influence students' choices of foods because limited cooking supplies and lack of cooking skills often lead to unhealthy food choices. After all, students would not have enough means to improvise and make healthy foods.

The student environment is also a push-pull factor for university students who are living at halls of residence and not practising healthy eating habits (El Ansari, Stock, & Mikolajczyk, 2012). As Kapinos and Yakusheva (2011) stated that students in residence prefer cooking together with their friends and give themselves enough time when preparing their meals, which increases the chances of making a healthy meal. In this way, the student environment may have a positive influence on eating behaviours. The social setting influences individual's choices of food because food plays an important role in social interactions and, in most cases, food brings people together (Giles et al., 2016).

According to Murimi et al. (2016), the environments in which people live, also influence their food choices, as people tend to live in multiple settings. The physical environment or food systems, such as supermarkets and restaurants also determine the kind of foods university students have access to or afford to purchase. Some university students who live at home with their parents may be more inclined to eat healthy, but when they come to university, may fail to eat healthy foods because campus cafeterias significantly influence their food choices. When they are on campus, their food choices are determined by the kinds of foods being sold at the campus and surrounding areas. Most cafeterias in schools are selling foods that are detrimental to students' health and wellbeing, because they are highly processed, have too many fats and sugars, and have low nutritional value (Dhillon et al, 2019).

Moreover, these junk and unhealthy foods are sold at lower prices, which are cheaper for students to buy because they often compete with more nutritious school lunch schemes. These junk foods sold at school campuses are also appealing for students to consume because they are tasteful soft drinks, snacks, sweets, and cakes, or highly spiced fatty foods (Kaushik, Narang, & Parakh, 2011). According to Avram and Oravitan (2013), fast foods have high levels of fats and sugars, which are not only unhealthy but addictive, making it hard for university students to choose healthy foods. One of the consequences of the ready availability of cheap food outside home, is the devaluation of cooking skills (Goon, Bipasha, & Islam, 2014).

Accessibility to shops also influences students' food choices, in turn these are also dependent on resources, such as cooking facilities, transport and their geographical location. Some students' residences are far from town and there is also a scarcity of

transport, thus creating a challenge to procuring healthy foods and students find themselves relying on fast foods (Goon et al., 2014). Therefore, purchasing junk foods on campus becomes a habit that allows students to develop an addiction to junk foods, especially if these foods become preferable regardless of whether the food is healthy or not healthy (Bagordo, Grassi, Serio, Idolo, & De Donno, 2013).

According to Llanaj, Adany, Lachat, and D'haese (2018), meal patterns also influence student's food choices, particularly when looking at the effects of snacking. Most students prefer snacking rather than cooking because snacking saves time and energy since healthy foods on campus are not always available. However, snacking also has negative effects on students' health, because junk food contains a high density of energy and lacks some nutritional values, such as fiber, vitamins, and proteins.

### **2.3.5 Social factors**

Food choice is influenced by social factors because food strengthens social interaction among individuals. This leads to familiarity with certain foods, which in turn leads to the development of positive attitudes towards certain foods. These food habits and familiarity become a form of self-expression, and modeling is the key aspect of the learning process. For example, a strong determinant for the consumption of fatty foods and fast foods among students can be influenced by the food they have consumed repeatedly in high school and thus may continue with such eating habits even at the university. This is the reason why cultural or traditional foods persist so strongly among individuals (Giles et al., 2016). Although most of the food is eaten at home, people tend to eat a large amount of food outside the home.

People tend to eat differently when they are with other people than when they eat alone. This is because some people conform to the behavior of others, who they regard as models to them, and may want to conform by eating the same foods because they want to feel a sense of belonging. However, these social eating norms make one susceptible to overweight. Social functions outside of campus may prompt students to engage in alcohol use and also to consume unhealthy foods, such as snacks, too many fatty foods, and highly sugared foods. General socialization and the need for social contact with friends for fun also play a role in going out for some ice cream, chocolates, and fast foods from the

restaurants, this is also more prevalent when they feel bored (Ashurst, 2018) or want distraction from their academic demands.

Therefore, the consumption of foods considered trendy can have a bearing on one's food choices, especially when eating out with peers. Eating healthy foods such as fruits and vegetables is generally considered as being poor or boring (Brown, Shaibu, Maruapula, Malete, & Compher, 2015). Thus, social identity influences one's food choices, because if a person affords to buy fast foods, he/she is regarded with high esteem and receives much respect and recognition from peers around him.

### **2.3.6 Culture and religion**

According to Daliens, Deforche, Annemans, De Bourdeaudhuij and Clarys (2016), traditions and religion also influence students' dietary patterns. Individuals tend to develop some habitual consumption patterns due to their cultural preferences as it propels or hinders them to consume certain foods. Some cultures have restrictions from eating certain foods, such as not having meat in their diets, which predominantly establishes cultural norms for foods (Chignell, 2018). Genetic and other ethnic factors make some populations susceptible to NCDs, hence the need to make healthy food choices. According to Mayosi et al. (2009), familial hypercholesterolemia occurs in one of 200 Afrikaners, resulting in early cardiovascular disease in affected individuals.

An individual's background and attitudes towards food do influence their dietary habits in many instances linked to their cultural traditions. The University of KwaZulu-Natal hosts many Indian students, and there is also an increased risk of type 2 diabetes and ischemic disease in the South African Indian community because they are more insulin resistant than other ethnic groups (Mayosi et al., 2009). It is important to understand the food culture of certain groups to inform culturally relevant and acceptable public health interventions (Croxford & Itsiopoulos, 2020).

Thus, cultural, and ethnic background can also influence food choices among university students, and it can also lead to habitual consumption of certain foods and traditions on how to prepare them. Culture can also lead to restrictions on certain foods such as milk, meat, and eggs, particularly to those who are vegans and vegetarians (Solomon, Russel-Bernett, & Previte, 2012). Cultures and traditional practices are the foundation that builds

food choices among individuals, due to cultural boundaries that were laid towards certain foods, which give people values, identity, and beliefs in different foods and eating patterns (Giles, 2016).

According to Burgess Champoux, Larson, Neumark-Sztainer, Hannan and Story (2009), the family is also regarded as the primary influence on eating behaviors among individuals. Therefore, students also tend to practice their family habits on foods and consume foods they have been eating with their families from childhood, which are familiar and comforting to them.

Inadequate nutrition affects students' health and academic success. Students seem to be knowledgeable that consuming fast food, soda, and processed food are unhealthy, and they contain additives. However, students may have adequate knowledge of nutritional requirements for health, but their dietary habits are not necessarily aligned to this knowledge since they prioritize convenience and taste of food over health considerations (Abraham, Noriega & Shin, 2018).

### **2.3.7 Psychological factors**

Psychological factors such as personality, mood, attitudes, and motives towards foods can influence food choices among individuals. As Prinyawiwatkul (2020) states, there is a relationship between food choice and emotional status. Some students have a special connection with certain foods and eat them to find comfort in them in times of distress and sadness. This improves their emotional status and restores vigor. Stress, anxiety, and depression can make people choose certain foods such as tea, coffee, alcohol, and energy drinks which they would not choose if they were in a different emotional state (Michel, Man, Vinck, & Verbeyst, 2020).

According to Badrasawi and Zidan (2019), emotions do not only influence what one eats, but also influence the amount of food to be eaten, and this leads to impulse eating, such as consuming too much junk food, alcohol and smoking as well. Thus, students tend to eat too many snacks, ice cream, biscuits, cakes, milkshakes and chocolate during their examination period because of too much anxiety and stress (Abraham, Martinez, Salas, & Smith, 2018).

### **2.3.8 Globalisation**

Globalization also influences students' food choices, through advertisements on mass media. Marketing companies design adverts to increase customers' demand for one brand over another. According to Ng et al. (2019), advertising plays an important role in influencing individuals' food choices, because big brand companies invest a lot in mass media through advertising and using the concept of modelling to influence consumers' demand. They do so by using celebrities and social figures to attract customers into buying their products, more especially to young people.

These kinds of food, therefore, become part of their daily diets and become popular among consumers (Boyland et al. 2016) and thus positive attitudes towards these foods. According to Antony and Bhatti (2015), television advertisements of food are widespread and are one of the mediums that promotes a variety of junk foods, which is the major reason why most young people are addicted to foods that are detrimental to health. Nutritional information on healthy foods for students is usually available on mass media, through the radio, televisions, and magazines. However, multinational corporations like McDonald's also influence students' choices on food because students buy foods from food franchises, such as KFC, Nando's, and Steers in order to fit in with their peers.

Food promotion also influences food choices among university students, because some food manufacturers go to students' campuses to promote their brands and offer 'freebies' to students. False information about those foods and the launching of events in promoting certain foods and drinks influences students' desire to consume those foods more often (Zimmerman & Shimoga, 2014). These foods that are marketed are detrimental to students' health, as they are highly processed and have a very high concentration of fats, sugars, colorants, flavoring, refined carbohydrates, and other additives (Gauntlett, 2008).

Furthermore, multinational food corporations and the media influence university students' dietary patterns because unhealthy foods are tasty and rich in sweets, fats, oil, and salts which gives them a rich taste (Kroone & Alant, 2012). In every grocery supermarket, sodas, snacks, and instant meals are always available and are even sold at vending machines within the university premises. This is because junk foods seem to be cheaper most of the time as compared to fruits and vegetables and processed foods and snacks have also a

longer shelf life, another attraction to students. Thus, buying cheaper foods that are highly processed is viewed as the best option by most university students, who have insufficient money to buy expensive foods (Temple et al., 2011).

### **2.3.9 Health status**

According to Giles (2016), an individual's health status can also influence his or her food choice. Positive beliefs in the health benefits of certain foods can increase an individual's food consumption of some foods, such as fruits and vegetables (Larson & Story, 2009). Students who are concerned about being overweight are more selective in the kinds of foods they consume. Lately, some even engaged in banting diets. According to Symons et al. (2013) banting is a method of dieting by avoiding foods that are too fatty, oily, and sugary, and energy dense foods.

It should be noted that some students' food choices are being influenced by their health status, due to allergies and following of doctors' orders. However, some choices are being influenced by their parents' health status, or regarding the type of foods their parents consume due to health-related issues. As Leng et al. (2017), illustrates, if a student grew up in a home where one of the parents is diabetic and does not consume sugary foods, the student would get used to foods with less sugar and salt content and may continue to practice that habit, even at university level.

## **2.4 Theoretical Framework**

### **2.4.1 The Food Choice Process Model**

According to Jabs and Devine (2006), the food choice process model is an approach that seeks to explain factors that influence individual food choices. This model outlines that there is a complex interplay of different factors that determine dietary patterns among university students which are influenced by the bio-psychosocial perspective that includes the physical, cognitive and socio-cultural influences and processes, as the drivers of food choices (Oddo, Kodish, Antiporta, Chodur, & Jones-Smith, 2016). It emphasises the constructionist approach that sensory, biological, behavioural, and social structural factors also contribute to food choices and people actively negotiate, interpret and consider possible food choices and exercise their agency in defining, managing, perceiving, conceptualising, and enacting food choices (Jabs & Devine, 2006).

Social negotiations and cognition are the key processes in the construction of food choices (Leng et al., 2017). The food process choice model has three components that work together when people construct food choices, and these are the life course, influences, and personal systems (Sobal, Bisogni, Devine, & Jastran, 2006). The theory outlines that as people make a transition from one place to another, the environment they live in changes them and they personally construct an individual life course that involves past and current food eating experiences and situations, as well as expectations about future possibilities. This is because people change and develop over time, while gradually lacking some parental control and start making their own decisions in life.

Influences refer to a variety of factors that come into play in determining individuals' food choices, and these factors include the food context, resources, personal factors, social factors and ideal foods. The theory further suggests how these factors interchangeably influence the dietary habits of university students. The personal systems component outlines how one's beliefs, attitudes and knowledge play a significant role in influencing individuals' food choices. The FCPM acknowledges that individuals' background influences their attitudes, beliefs and knowledge about food and will in turn determine their food consumption patterns.

Independency enables individuals to become more responsible for their lives, the choices they make, and exercise a sense of urgency. Thus, food choices are dynamic and evolve with life stages, from growth to maturation and aging (Sobal et al., 2006). The theory further outlines that various factors from past and current situations influence individuals' eating habits. These include intrapersonal factors such as the taste of food, affordability, psychological, and health status of an individual, as well as the knowledge people have about food. Interpersonal factors include social influence from others, culture, religion, family socialisation, media, and advertisements. It explains how various factors determine an individual's food choices, and how those factors encourage and hinders them to practice healthy lifestyles when choosing their food choices, as well as how to prepare healthy foods (Sobal et al., 2006).

## **2.5 Summary**

The literature suggests that the transition from home to university have a negative effect on university students who are residing at school campus as it gives them more independence to choose their dietary patterns. This has appeared to have bad effects in their health and wellbeing because students are more like to be engaging in unhealthy eating and other unhealthy lifestyles which is detrimental to their health and academic wellbeing. The unhealthy dietary patterns of university students contribute to the burden of chronic diseases later years of life as these behaviours are likely to persist over time. However, not all university students are unaware of healthy eating, but their economic status seem to have a significant effect on their dietary patterns. The pricing of food therefore influences university student's food choices as it determines what they can afford or not as well as accessibility to healthy foods related to geographical location. It was also stated by Carlisle and Hanlon (2014) that the quality of food is important as it determines the nutrition value of the food. However, the available financial resources determine what is affordable and thus what is consumed.

Furthermore, the preference university students have for foods appeared to hinder healthy dietary choices because many are not concerned about the nutritional value of the food but are more concerned about its taste, flavour and texture. A person's emotional status also influence food choices as people tend to consume certain foods depending on their emotional state e.g. find comfort in energy-dense and sugary foods. Time constraints, convenience and the environment appeared to hinder healthy eating because of time demands at university. The university environment and surroundings determine what is accessible and might not necessarily provide health food options may propel them to seek out fast foods at affordable prices.

Socialisation, familiarity, culture and traditions also influence food choices and what is eaten. Peer pressure plays a role in university students food choices and it seems that unhealthy food options are preferred when eating together with friends. This could be due to familiarity of certain foods or conforming to a group's norm. One's culture and traditions

can either prohibit or compel to follow dietary patterns as a way of conforming to the cultural norms and beliefs.

The influence of media has a negative effect on the quality of food consumption behaviours among university students. The dependence on media and its increasing influence play a role in eating particular foods as a way to fit in with some trending lifestyles, without considering the effects it might have on their health and wellbeing. University contexts that health conscious may believe in the benefits of healthy eating and may have healthy option available.

## **CHAPTER 3: METHODOLOGY**

### **3.1 Introduction**

Methodological aspects of the study will be outlined in this chapter by showing how the researcher has designed a qualitative study using an exploratory research design. The sampling strategy, research instrument, and data collection procedures and how the viewpoints and experiences of participants were elicited to generate data will be addressed in detail. This is followed by describing the method of data analysis, discussion, and interpretation.

### **3.2 Research design**

This study is qualitative and exploratory in nature, and it aims to generate an in-depth understanding of factors that influence food choices among students at the University of KwaZulu Natal, Howard College Campus in Durban. Qualitative research is concerned with collecting data in the form of people's perceptions and experiences. The participants are the experts of their own lived realities (Maxwell, 2012).

According to Maxwell (2012), a qualitative research design is concerned with an in-depth understanding of social processes and experiences and, as it seeks to interpret meanings individuals attach to social phenomena. Due to its explorative approach qualitative research has both pre-structured and emergent questions; it is also repetitive and allows the researcher to be flexible enough to generate rich data. This can be done by using more open-ended questions that allow for a more elaborate response through probing (Bradshaw & Stratford, 2010).

Qualitative research focuses on subjective ideas of a chosen population and analyses these ideas by examining patterns and themes, unlike quantitative research which loses focus of natural details of social life through its reliance on numbers (Neuman, 2016). Furthermore, qualitative research design asserts that people create and construct meaning through interactions with one another and within the wider social systems. Therefore, the world is constructed and interpreted by people. Hence this study is located within an interpretivist

approach, where the researcher converses with the participants which allows for the creation of knowledge, interpretations, and observation of the social world.

### **3.3 Research paradigm: An interpretivist approach**

The research methodology is grounded in the selected paradigm that steers the research methodology. “A paradigm refers to a research culture with a set of beliefs, values, and assumptions that a community of researchers has in common regarding the nature and conduct of research” (Antwi & Hamza, 2015, p. 218). It is an approach to doing research and thinking about the framework, structure, pattern, and systems of academic and scientific values, ideas, and underlying assumptions. Furthermore, the concepts of ontology, epistemology and methodology are three crucial dimensions in a research process. According to Edirisingha (2012), the way the investigator defines the truth and reality is called ontology, which is the process in which the investigator comes to know the truth, and reality is epistemology, and the methods used in conducting the investigation is called methodology. Therefore, these three elements provide an interpretive framework that guides the entire research process including method, strategies, and analysis.

A qualitative study assumes that meaning is embedded in participants’ experiences its methodology is underpinned by interpretivist epistemology and constructionist ontology, and the researcher mediates this meaning through their own perceptions (Kalu & Bwalya 2017). In qualitative research designs, researchers immerse themselves in social experiences of individuals through interacting, observing and participating in activities such as interviewing the target population and analyzing generated data (King, Horrocks, & Brooks, 2018). The goal of qualitative research is to understand the views of the target population being studied and qualitative researchers believe that this should be done within a natural context (Lee, 2012).

Observation and interpretation are the major activities done in an interpretive paradigm because a researcher needs to observe, collect information on certain events, and try to make meaning of it by interpreting it (Khan, 2014). It seeks to understand meanings attached to individuals’ lives and analyses the context by understanding the world from the subjective experiences of individuals (Antwi & Hamza, 2015). In essence, “this approach

focuses on the full complexity of human sense-making as the situation emerges, instead of predefining dependent and independent variables” (quantitative research) (Maxwell, 2012, p. 218). Its aim is to explain the subjective reasons and meanings that lie behind social action. Researchers within the interpretivist paradigm are naturalistic and aim to understand real-world situations as they unfold naturally, that is why they are naturalistic (Maxwell, 2012).

### **3.4 Study setting and context**

The study was conducted at the University of KwaZulu-Natal’s Howard College campus, in Durban. A venue was booked so that interviews could be conducted in a safe, quiet area where participants felt comfortable since they were familiar with the place. This also helped to avoid any disturbances and any other unforeseen circumstances that could have disrupted the data collection process. The researcher selected the participants, who were students in their third level of study and therefore presumed to have ample experience with university life and environment. In selecting these participants, the researcher spoke to a variety of students from various departments, cultures, ethnic groups, lifestyles, and social status, which makes them heterogeneous. This resulted in data that reflected diverse views and experiences.

#### **3.4.1 The researcher as the key research instrument**

Semi-structured interview guide was developed through the gaps found in the literature and this guide was used for in-depth interviews. The open-ended nature of the interview questions allowed participants to speak in-depth and gave more opportunities for probing about each subject. This further helped in the exploration of emerging themes. The demographic information of participants was also covered, and this included their age, race, nationality, language, and educational level. Intrapersonal factors such as economic status, health status, and interpersonal factors such as the environment, society, media, and advertisement and status on how they influence their dietary patterns were covered. During the in-depth interviews, the researcher translated the interview guide from English to IsiZulu, especially for those participants who found it convenient to use their first language during the interview.

The researcher is a key instrument in qualitative interpretive research and plays the role of a primary instrument in doing data collection and data analysis. Important skills that are necessary for successful data collection procedures are therefore needed and the researcher must make efforts to develop those important skills before entering the field. The researcher did some piloting prior conducting the actual interviews and this has helped to find gaps and possible mistakes that would have happened while conducting the interviews. The researcher also went back to read the literature review and the theoretical framework to check whether the research questions match with what the theoretical framework delineates. Therefore, researcher biases were reduced through developing data collection tools using the lenses of the theory as opposed to framing it from their lived experiences. This has helped the researcher in gaining direction and focus when conducting interviews with participants. While the researcher developed an interview guide it was not prescriptive, questions were not pre-determined, instead the researcher followed the cues of the participants. Validity was also ensured through comparing and contrasting of theoretical perspectives on the subject against the study's field experiences. The deductions thus further strengthened the validity, rigour and reliability of the study results.

Since this is qualitative interpretive research, an engagement and conversation between the researcher and the participants were required. The researcher was able to exercise the skills of listening, observing, probing, and posing questions, as well as interpreting issues. The researcher had to make sure that the participants feel at ease and that they own the study since they were the primary sources of information and had all the information that the researcher needed. Even though this would have been challenging, since the researcher had no solid relationship with the participants (who could somehow have felt uncomfortable with the stranger), the researcher was able to guide the interview process and maintained a good rapport with them.

Therefore, in order to eliminate bias and lack of interest, the researcher diligently listened to every detail the participants were revealing and also appreciated their suggestions throughout the sessions. This was possible through active and careful listening, which enable the researcher to pay attention to what the participants were saying and allowed the participants to open up since qualitative research is iterative in nature. Questioning skills

were also important in collecting data within this qualitative interpretive research. Rubin (2005), identify three types of questions that produce detail, depth, and richness and these are the main questions, follow-ups, and probes. Consistent with this principle, questions in this study were formulated in a way that enhanced a thorough examination of the research problem.

### **3.4.2 Entry into the field**

Initial access to the research site was negotiated by writing a letter to the registrar, asking the gatekeeper's permission to collect data within the university premises, since the study is in a university setting. A gatekeeper is a person, group of persons, or an institution with either formal or informal authority to regulate access to the site or research subjects (Neuman, 2016). In other words, gatekeepers are people who have the mandate to determine who is allowed or denied access, usually parties concerned with the subject under investigation or the welfare of prospective participants (MacFayden & Rankin, 2016). Therefore, a gatekeeper's letter was granted to the researcher by the registrar, allowing her to collect the data at Howard College campus subject to full ethical clearance from the Humanities that were granted Reference, No. HSS/0424/019H.

### **3.4.3 Selection of study participants**

This chapter was influenced by an interpretivist approach. In order to collect qualitative data, the researcher should have direct interaction with people who have first-hand experience in the phenomenon of interest. Access to participants was negotiated based on their level of study, which was 3rd level in different faculties; law, engineering and social sciences at Howard College campus. Diversity in terms of race, culture, and gender were also considered. Unlike in quantitative research, participants for a qualitative study are not selected on the basis of being statistically representative, but because they can provide a substance that fulfills an investigative purpose (Sergeant, 2012). According to Cochran (2007), qualitative research has various sampling techniques.

This study used purposive sampling, and only participants who met the selection criteria were invited to participate (Tongco, 2007). Purposive sampling allowed the researcher to apply personal judgment when choosing participants for the study. In this sampling

technique, the researcher decides what needs to be known and can invite people who are willing to impart their knowledge and experiences on factors influencing their food choices. This sampling technique is exemplified through key informant. The key informants are observant and reflective community members of interest who know much about the research topic and are willing to share their information. The selection of participants was left open until data saturation was reached (Saunders, 2018). About 10 of the participants approached declined participation as they made some excuses that they were having a tight schedule, some were not feeling comfortable opening up about their food choices since food seems to be a very sensitive topic. Sixteen in-depth interviews were therefore conducted before data saturation was reached. The researcher's sample included students from different ethnic groups i.e. African, Indian, Whites, and Coloreds.

### **3.5 Data collection**

The ethical clearance for the study was obtained from the University of KwaZulu-Natal, Durban, South Africa, and the ethical approval were granted by the Humanities and Social Sciences Research Ethics Committee of the University of KwaZulu-Natal, protocol reference number HSS/0424/019H. An engagement with university students in preparation for data collection commenced at the beginning stages of the study. That was done to identify students who could be willing to participate and impart their knowledge and experiences on the research topic. The researcher, therefore, started approaching students who met the required criteria for participating and took their phone numbers to contact them when it was time for data collection. Arrangements to conduct interviews was made with participants through phone calls.

When collecting data, the researcher had personal contact with participants, and this was done through individuals interviews (Patton, 2005). Therefore, a relationship was built with the participants, and there was constant communication between the researcher and the participants, and this has helped in making the data richer and obtained thicker descriptions (Kostova, 2017). Ethical procedures were also explained to participants, and issues of confidentiality were also emphasized to participants that whatever said during the interview will be kept between them and the researcher, the anonymity of data and that participation is voluntary, they can withdraw anytime they feel uncomfortable to participants was also

stressed. Thus, the researcher encouraged participants to speak freely and understand the investigator's quest for insight into factors that influenced food choices - a phenomenon that the participant has experienced.

Food is a very sensitive topic because the kind of food one eats also defines one's social status, making it uncomfortable to disclose this kind of information in front of other people. Thus, these issues were taken into account when scheduling and conducting the interviews. Privacy was thus very important in collecting data for this qualitative research. The interviews were held at a place (setting) and time that the participant felt secure and comfortable with and a venue was booked in the psychology seminar room to ensure the safety of participants and allowed flexibility since it was a familiar venue to them. This in turn also helped to establish trust between the researcher and the participants and the degree of trust increased with the depth of the interview.

The researcher revisited information-rich participants, which was beneficial in building trust, as well as increasing access to more information and clarification of issues in a prior interview. The researcher explained the objectives of the study that it aimed to explore factors that influence food choices among university students. The researcher also asked permission to audiotape the interview and it was granted by the participants. A token of appreciation was given to participants, and it was explained that it was not a stipend for participation but a way of showing heartfelt gratitude for partaking in the study as it would never been a success without them. The interviews were audiotaped with the prior permission of the study participants as it allows not only for data analysis purposes but also in keeping the information provided by participants in a safe and secure place. Data will be kept in a safe, locked file cabinets in a secure building, and audios will be stored in a google drive where no other person except the researcher and supervisor will have access to. The interviews were about 20 to 45 minutes long.

### **3.6 Data analysis**

Data analysis in qualitative research is an on-going process that informally occurs even prior to the formal stage of data analysis. It is not considered as an event that should occur once all the data is collected. It is therefore important that researchers engage their own

intellectual knowledge in order to make sense of the data (Sgier, 2012). Thematic analysis was therefore used when analysing data since it is the most commonly used method used in qualitative research. “It is a method of identifying, analysing, and reporting patterns in the data. It is transparent and reflects on realities of individuals by understanding their contexts and examining the way participants make meaning of their experiences” (Braun & Clarke, 2006, p. 105). Braun and Clarke (2006) posit that thematic analysis is inspiring because emerging themes, as well as concepts permeating the interview, are discovered. A deductive and to a lesser extent an inductive process was used in analyzing the data by seeking novel insights but also map data to the themes, subthemes and sub-sub themes of the theoretical framework.

Braun and Clarke (2006) identify six stages of thematic analyses, of which the first one is familiarising with the data. In this phase, repeated readings and listening of the recordings were done and the data was then transcribed. This helped the researcher to immerse herself in the data and this immersion resulted in an intimate familiarity with the data. The second phase is generating initial codes, which is the most important segment of the raw data. The researcher worked through the data and coding minor descriptions, using a few simple words indicating what was going through in the data or what is the data about (Braun & Clarke, 2006). The third phase is searching for themes, whereby the researcher searched for tentative themes by sorting different codes into broader themes, with their relevant extracts to access how codes can be combined or collapsed to form themes.

Themes that share the same meaning or patterns were combined. The fourth phase is reviewing and refining themes (Braun & Clarke, 2006). During this phase, the distinctions between the key themes and sub-themes became emerges. The fifth phase involves defining and naming themes. The researcher defined themes in a couple of sentences, by providing a detailed analysis in relation to the research questions. Subthemes were useful since the data was quite complex. Names of the themes were concise and provided an indication of what the theme was about. In the sixth phase namely producing the report, the researcher compiled the narrative of the data and argued for its value by providing the required evidence i.e. the direct quotes as witness to the rigour of the research analysis process as detailed by (Braun & Clarke, 2006).

### **3.7 Ethical considerations**

As mentioned earlier, ethical clearance was granted by the University of KwaZulu-Natal's Humanities and Social Sciences Ethics Committee. For ethical considerations, the researcher was responsible for gaining informed consent by first inform participants of the study aim and objectives before signing the consent form. Participants were also made aware of all procedures involved when partaking in the study as well as giving them an assurance that all foreseeable risks and measures were put in place. By doing so, participants were able to fully understand what was expected from them when partaking in this study and this in turn allowed them to make autonomous decisions. Participants were also given an opportunity to get clarifications and ask questions where they had some misunderstandings.

The researcher emphasized to participants that they could withdraw anytime they felt not comfortable to participate because participation was voluntary. There was also an emphasis on the issue of confidentiality and anonymity to assure participants that what had been discussed would be treated confidentially and data would be stored as anonymous. The researcher took considerable caution in ensuring that all participants were treated with equity and fairness and that no harm could befall them during the whole research process. Sensitive issues were going to be directed to the study supervisors of this study since the researcher did not have any experience in dealing with such issues (Ponterotto, 2010).

#### **3.7.1 Trustworthiness**

Trustworthiness is vital when conducting qualitative research as it deals with how the researcher can be convinced, as well as convincing others that the research findings are worthwhile (Connelly, 2016). According to Houghton, Casey, Shaw, and Murphy (2013) certain measures has to be taken to improve the trustworthiness of the data and this is very important in qualitative research, as it provides evidence for the methodological rigour of the study. Four criteria can be used to enhance trustworthiness, and these are credibility, transferability, dependability, and confirmability outlined hereunder.

### *Credibility*

According to Williams and Morrow (2009), credibility refers to the degree the data provided corresponds with the perceived reality of the participants and to the level of. To make research findings credible, they must be convincing and believable. The researcher employed spot member checking to test the credibility of the findings and this was done through probing by asking participants to clarify their questions during the interviews to make sure that the researcher had an in-depth understanding of what the participants were saying. Efforts were also taken to ensure that participants' views, including divergent ones, were respected, and reflected in both the presentation of findings and in the analysis. In this study, credibility was also achieved in the data from participants with different cultural backgrounds, race, geographical areas, and their different academic faculties to produce discrepant findings. The researcher has also provided quotes of the participants as evidence for the themes, in order to enhance the credibility of the research findings.

### *Transferability*

Transferability refers to the degree to which the findings of a study might be applicable in similar contexts. Similar results would be found if there are inherent similarities between study participants, contexts and research questions. Since transferability in qualitative research is influenced by the degree of similarity between sending and receiving contexts, detailed data were collected adequately and interpreted with the necessary caution and accuracy. This was done to allow the reader to make judgments about transferability, also known as extensibility (Houghton et al. 2013). The researcher used purposive sampling to provide a rich description of the findings, provide enough data, and contextualising the findings of the study in the discussion. This would enhance the ability of the reader to assess the transferability of the results to similar contexts with which they are familiar. However, if findings from this study are to be transferred to other contexts, attention should be given to contextual factors (Williams and Morrow 2009).

### *Dependability*

Dependability refers to the extent to which the reader can be convinced and attest that the findings indeed occurred as the researcher says they did. It also states whether the

difference in the data collection method and analysis can be tracked as the research process unfolds so that changes in reality or in the meaning of the data and the reasons behind these changes can be identified. Further pertaining to dependability, comprehensive field notes, and reflections on the research process were used when collecting data to ensure dependability (Williams and Morrow, 2009). The researcher ensured the attainment of reliability by providing thick descriptions of the various steps taken and giving justifications for decisions taken during the execution of the study in the field. It is the researcher's estimation that key research questions in this study were simple and fitted well into the research design and study objectives.

### *Confirmability*

Confirmability refers to the degree to which study findings are a direct result of the study focus as compared to the biases of the researcher (Anney, 2014). Despite that the researcher acknowledges his/her position in the research, the distinction between personal values and those of study participants is maintained, which is self-reflexivity. Reflexivity has helped the researcher to eradicate biases in research designs, analysis to maintain an objective position as a researcher.

In addition, reflexivity was practiced by questioning my own biases and beliefs and recognizing that research is a balanced and reflexive narrative where different participants' stories interconnect in some way. This has helped in exploring and analyzing the relationship between the researcher and the participant as well as their impact on knowledge. The researcher also acknowledged the constructive nature of the conversations as well as focusing on life. Furthermore, to understand that research is a process of becoming rather than an already established truth. Reflexivity makes the researcher aware of situational dynamics since both the researcher and the participants are jointly involved in knowledge production. As new findings emerged, reflexivity allowed the researcher to reframe questions as the topic unfolds.

An attempt was also made provide a detailed description of the findings as evidence of the outcome of the conversations. The limitations of the study have been noted, and evidence of the researchers' identifications of their own biases has been provided. Another important

part of confirmability is bracketing. Bracketing helps to recognize and set aside the researcher's own preconceptions, knowledge, opinions, and biases before assumption about the research topic with the intention of having maximum receptive and open-minded to participants' experiences. (Bazeley, 2013).

Participants' knowledge of factors influencing their food choices was reflected upon to ensure confirmability. The researcher made an effort to make sure that any personal biases about what could be found in the results were set aside to allow perceptions of participants to unfold as organically as possible. Confirmability was also achieved through maintaining and reviewing field notes to enable realignment with the original focus of the study. To ensure there was no bias towards or against any of the participants, data from all interviews was included in the findings and the transcripts were manually analysed using pen, highlighters, and hard copies, and PowerPoint was used to classify each finding per participant.

### **3.8 Summary**

The aim of this chapter was to provide a detailed description of the methods employed in this study. It provides details about the design of the study, its approach, its setting and context. It also outlines the sampling techniques, data collection tools, how data was analysed, and ethical considerations.

## CHAPTER 4: FINDINGS

### 4.1 Introduction

This chapter presents, interprets, analyses the findings of the study in relation to what was expressed by participants. The chapter shows how the findings integrate with the food process model, with its three main concepts of life courses, influences, and personal food systems, which are intricately interwoven into a complex web. The findings from this study are dynamic and multifaceted in nature. The main focus of this study was an exploration of factors that influence food choices among students at the University of KwaZulu-Natal's Howard College campus in Durban. The analysis of findings was done through distinct stages of thematic analysis as explained in the previous chapter while the themes were linked to the food process model as depicted in figure 1 as used by Furst, Connor, Bisogni, Sobal and Falk(1996) in their study of food choice: a conceptual model of the process. This table outlines the key study themes presented in the model.

Table 1

*The Food Choice Process Model*

Theme	Sub-theme
Life course	
Influences	Food context Resources Personal factors Social factors Ideals
Personal systems	Value negotiations Sensory perceptions Monetary considerations Convenience Managing relationships Familiarity Traditions and religion

Strategies to promote healthy eating

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The Food Choice Process Model of Jabs and Devine (2006); Furst et al. (1996). The arrows in the model show how the relationship of these components are generated and how they influence each other.

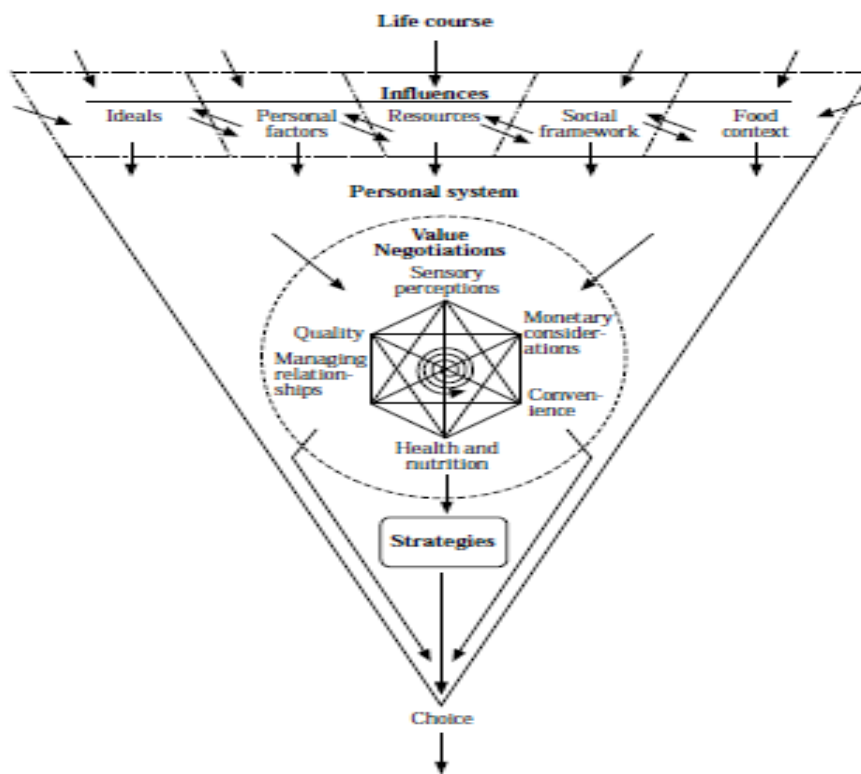


Figure 1. A conceptual model of the components in the food choice process

As figure 1 shows, the first theme is the life course, that reflects the transition process of students moving from secondary school to university life. The model argues that when people change and develop over time, the environment they live in changes them, and they personally construct an individual life course, that involves past and current food and eating experiences. This theme has one subtheme, the influencers that are also divided into sub-themes: ideals, personal factors, resources, social frameworks and food context. The

second theme is the personal system and value negotiation is the subthemes. These subthemes are sensory perceptions, monetary considerations, convenience, health and nutrition, tradition and religion, managing relationships and quality, and familiarity. The third theme is strategies where it presents the strategies that can be incorporated in promoting healthy eating behaviours. These themes were used to structure the findings of the study.

#### 4.2 Socio-demographic characteristics of participants

In this study, 16 participants across different ethnic groups and aged 20 to 22 years were interviewed. English was the dominant language spoken by most participants, and those who identified themselves as Zulu were speaking both isiZulu and English. For reasons of confidentiality and anonymity, pseudonyms were used when referring to participants.

Table 2

*Demographic information of participants*

Name	Age	Race	Residential Status	Course of study	Sex
Olivia	19	Coloured	Home	Law	F
Buzz	22	White	Home	Psychology	M
Nondumiso	20	Black	School residence	Political Science	F
Venon	22	White	Home	Engineering	F
Nilesh	21	Indian	Home	Engineering	M
Taylor	21	White	Home	Psychology	M
Pillay	21	Indian	Home	Engineering	F
Joseph	21	Indian	Home	Law	M
Alice	20	White	Home	Property Development	F
Anderson	21	White	Home	Engineering	M
Taylor	20	Indian	Home	Psychology	F
Bethwell	21	Black	School residence	Political Science	M

Shaine	20	Coloured	Home	School of Arts and Drama	F
Mak	19	Black	School residence	Community Development	M
Sihle	20	Black	School residence	Psychology	F
Themba	20	Black	School residence	Engineering	M

### 4.3 Life Course

The transition from home to university life plays an important role in determining university students' dietary patterns. In the life course development, late adolescents are generally characterised by greater independence, especially when young people enter university life. Greater independence is noted in the food choices students make when transitioning from home to university life or living at home as well on campus. The lack of parental supervision in students' life has granted them the freedom to make autonomous decisions when it comes to food choices. This independence in making food choices has negative influences for some university students because an increased control over their food choices is facilitated by several factors, such as an increase in the ability of the individual to purchase food, to prepare or cook food, and his/her increased autonomy. This is supported by the following response from interview sessions:

*“I would say it has influenced me badly because most of the time I am exposed to these fast foods here at university, which I couldn't get while I was at home. I was fully dependent on my family and I ate whatever they provided for us, although most of it was healthy. So, now that I am here, I eat whatever comes to my mind.”* (Themba - living at campus residence).

*“Negatively, because now if I feel hungry, I can just go and buy food I wouldn't when I was at school because my mom used to pack lunch for me, so now its like there is cheap food, and it is also fast, and I eat unhealthy*

*staff than I would when I was still under my parent's supervision all the time.” (Anderson-living at home)*

However, some participants mentioned that making a transition from home to university has had positive influences on their dietary patterns and has also taught them responsibility on how to handle their money and buy groceries. One participant shared the following:

*“It has influenced me, I think to some degree, in a positive way because I could buy what I want, and it has helped me to embark on this journey of dieting, cutting down on carbohydrates, fats, oils, and sugars. This is something I could not do while I was at home because I had to eat what my family would provide.” (Nondumiso - living at campus residence)*

*“Now that I am university I just eat cereals in the morning, and have any food I want, which is something I wasn't eating while I was at home.” (Sihle-living at school residence)*

*“At home I didn't have much of a choice in the type of food that I eat, had to eat whatever it is that is prepared and whatever my parents can afford to provide for me. At res, I have a choice to eat what I want and I don't want, and I am more propelled to even try more recipes and things that may not be particularly be cooked back at home, so there has been a change” (Mak-Living at campus residence)*

#### **4.4 Influences**

A variety of influences come into play in determining individuals' dietary patterns. This section will further present various influences that influence food choices among university students. These include food context, resources, personal factors, social factors and ideals.

#### 4.4.1. Food Context

The findings revealed a link between the geographical location of participants and unhealthy eating. Most participants intimated that spending too much time on campus is associated with excessive consumption of junk foods. Participants shared the following:

*“I would say that even the environment I am living in influence my choice of fast foods because we are surrounded by restaurants (fast food outlets). They are so nearby and, therefore, we have easy access to these fast foods. So, you can go there any time because some fast food franchises like MacDonald’s open 24hrs, and even if you did not go there, your friend can just buy for you.”* (Themba - living at campus residence)

*“So, we do have a lot of unhealthy, fast and quick food around the school campus* (Venon- Living at home)

The findings from participants who were living at home seemed to be different from those who were living full-time at the university’s residences. Such participants continued to adhere to their parents’ supervision in matters of food choice, because some of them brought lunch to school which was, in most cases, prepared by their mothers. Therefore, lack of parental control on what students eat and increased access to money and freedom to buy their own food at campus, lead resident students into consuming unhealthy foods at university. Participants shared the following:

*“When I was in high school, my mother used to pack lunch for me; but now I do eat fast foods a lot because I am at university and I am exposed to it. I am more independent now, whereas when I was in school, I had to stick to my lunch all the time, as there was no choice. Here I am more independent, and I eat fast foods as much as I want. So, my eating habits have changed.”* (Olivia - living at home)

*“The fact that we are in university we have to buy everything for ourselves, so you just end up buying take ways now and then, which is not healthy and highly processed.”* (Sihle-living at school residence)

The findings show that students' eating habits on a typical day seem to differ. However, their daily intake seems to be predominantly foods that are high in carbohydrates and fats, with little protein and salad or fruits. It seems students are not health conscious in their food choice.

*"I'll have like a shawarma, a shawarma or like chicken strips and chips"*  
(Olivia-living at home)

When participants were asked about what they eat on a typical day, most of them revealed that they only have two meals a day. Most participants preferred light foods in the morning, such as carbohydrates, that would give them energy until lunch. For lunch, most participants preferred something fast and convenient, which are in essence junk foods that are available at campus, rich in carbohydrates and fats. Some participants preferred to have some protein-rich foods at either midday or evenings. One participant shared the following:

*"I prefer a sandwich with tomato and lettuce in the morning, and sometimes I eat noodles, but I hardly cook. For lunch, I buy from the café, because sometimes I carry my sandwich to school and eat noodles for supper."*  
(Nondumiso -living at campus residence)

It seems students are a lot more health-conscious when eating at home than on campus. This is supported by the following response from participants:

*"University life affects us negatively because when I feel hungry at campus, I can just go and buy food. I could not buy food when I was in high school because my mother used to pack lunch for me. So, now that I am at university I buy whatever I want with my money and find myself eating more unhealthy stuff than I would when I was still under my parent's supervision all the time. My parents used to pack lunch for me, so I had to eat whatever they packed for me."* (Mak - living at home)

*"For dinner at home I will have, salad and meaty stuff, so it is the biggest meal of the day"* (Nelish-living at home)

#### 4.4.2 Resources

Tangible resources refer to aspects such as money, equipment and space while intangible resources may be in the form of knowledge, skills and time (Furst et al. 1996). Money considerations are discussed below in personal food systems where costs are a real consideration.

Students living in university residences talked about storage and cooking facilities on how it determines the kinds of food they can buy. This may be due to the fact that some residences have limited cooking facilities such as stoves. Some students mentioned:

*“Storage does influence my food choice, especially for students like us who are staying at res because we share fridges and the space isn’t enough for all of us.”* (Nondumiso- living at campus residence)

*“Also, the university residences limit us on how we would like to prepare our food because it does not have adequate cooking facilities that could enable a variety of cooking methods like baking, because some of the residences does not have ovens and other cooking essentials. So, it’s either we decide to fry, boil or steam when preparing food.”* (Themba- living at school residence)

With regards to intangible resources various sources of knowledge on food choices were revealed by respondents, and this indicates individual differences in interest and motivation when it comes to food choices. Three primary sources were mentioned, and these are parents (especially mothers at home who focus on healthy eating), the school, and the mass media (e.g. Television). The findings show how families, schools, Television, and participants’ own motivation and research on food, play a significant role in providing individuals with knowledge that inform their food choices. Participants revealed how their families and particularly their mothers’ focus on healthy eating influenced them in making decisions about the food. Participant shared the following:

*“I learned it from my mother because she focuses on healthy eating a lot.”*  
(Nondumiso -living at campus residence)

*“Like I said, is mainly from my mother”* (Taylor)

*“From my parents, when I was small, they brought me and introduce me on what I should eat or not” (Venon-living at home)*

Some participants revealed that their families play an important role in extending their knowledge about eating a variety of foods, which in turn has influenced their personal choices about food and is thus seen as the reason why they are eating healthy. One participant shared the following:

*“I got knowledge about food while I was growing up because my family has played a significant role in introducing me into the different kind of foods I am eating right now.” (Themba - living at campus residence)*

*“From my parents, especially from my dad because he loves cooking” (Anderson-living at home)*

As can be expected, electronic media was mentioned to be one of the influential factors in influencing student’s food choices, especially those who tend to do more research on healthy and balanced meals. This helps students with recipes and cooking methods when preparing their food. This is supported by the following response from interview sessions:

*“I did a bit of research on food choice because of the fact that I like to eat healthy, so when it comes to eating healthy I’d like to eat, depending on the type of day, carbohydrates and proteins. I wouldn’t like to have too much sugar, so I don’t like junk food, and that’s my understanding.” (Sihle– living at campus residence)*

*“The internet, basically when you are searching certain sites that talk about nutrition” (Nilesh)*

Participants confirmed that the media and advertisements influence their food choices, especially nowadays because their lives are highly dependent on technology. Participants revealed that social media platforms, such as Instagram and Facebook are strongly determining what they eat or not as they inform students about the recipes that enable them to prepare or cook their own meals. One participant shared the following:

*“My food choices are pretty much influenced by social media because that is where I learn more about different types of foods. For instance, if I want to cook a certain kind of food, I can go online and then find it out there.”*

(Mak - living at home)

Participants also revealed how TV advertisements of fast foods influence their food choices, even though such foods are detrimental to their health. Some participants intimated how food promotions prompted them to go and buy these foods. Participant shared the following:

*“I think TV influences me even more because advertisements have a way of attracting us and when you see them, you will just go and get the food.”*

(Nondumiso - living at home)

*“I get it from TV, media”* (Joseph-living at home)

Students have further mentioned to receive messages alerting them on the sales and promotions of foods that make them eager to go and buy the foods on special. One participant shared the following:

*“We also get messages from Shoprite, notifying us about the sale and then you will be tempted to buy”* (Venon- living at home)

Students also mentioned how adverts from the television portray alcohol consumption as one of the stress coping mechanisms, thus influencing young people into use and abuse substances. This is supported by the following response from the interview sessions:

*“Media has made alcohol seems as if it is very important to people and convinces people that you can actually be happy if you drink alcohol. People really experiment that and find themselves drinking too much alcohol when they are too stressed.”* (Themba- living at campus residence)

Thus, the school has played a significant role in influencing students' food choices. Participants have also revealed how the Life Orientation (LO) at school has taught them the importance of eating a balanced diet and the different food groups that are vital in keeping them healthy. This is supported by the following response from interview sessions:

*“In high school, we were taught how to eat healthy in LO subject”*  
(Themba- living at school residence)

*“My source of knowledge, it is just school”* (Shaine - living at home)

#### **4.4.3 Intra-Personal factors**

An individual’s mood or emotional state plays a vital role in influencing students’ food choices. Despite having enough knowledge of healthy and unhealthy foods, students tend to consume too much junk and fast foods and engage in stress-eating when they are feeling depressed, or when stressed by excessive schoolwork. The consumption of fast foods, or foods high in carbohydrates and fat, though detrimental to their health, seems to be a coping mechanism when faced with emotional challenges, as students find comfort and pleasure in those foods. However, some participants revealed that they would try to eat foods that have a less negative impact on their health by making decisions to eat foods with less fat and sugar. This is supported by the following responses from interview sessions:

*“I buy a lot of junk food, especially when I am very sad. I buy a bunch of chocolates, and there is also this small piece of cake that I love to buy at Checkers. I buy a lot of chips/snacks and I double the dose of noodles when I am stressed. So, instead of one packet, I will make two, and I like Vienna’s. I can eat like the whole packet same time when I am stressed.”* (Nondumiso - living at campus residence)

*“Yes, my food choice is influenced by my mental state, when I am stressed or swamped with work. If I am studying, that will affect my psychological state, and I eat lots of junk, and you know foods that tend to be comforting. So, that’s all that I will be looking for, but even in that aspect, I don’t go for foods that are very toxic; I’ll go for popcorn or something that is less detrimental and has less of sugars.”* (Sihle - living at campus residence)

Social identity influences university students’ food choices because some participants revealed that they sometimes chose to eat certain foods because they are trying to boost their self-esteem.

*“I find myself buying because I am trying to identify myself with the group, to meet the standards of my friend because I don’t want to be seen like someone who is stingy and always accepting but never give back”.* (Nondumiso- living at campus residence)

*“I’d also say friends also have an influence in my choice of food. For example, if I went out with my friend to the mall, and then you get to sit down and eat in a certain restaurant and they choose certain food to eat there. You’d eat that whatever your friends are choosing, even if it isn’t good or up to standard, regardless of its nutritional value because all your other friends are ordering the same meals. So, you will be tempted to try what they are eating too because I will be trying to identify myself with them and it actually gives you a sense of belonging, which is one of the important thing and very exciting feeling to us as individuals.”* (Themba-living at campus residence)

However, participants who were health-conscious revealed that they eat particular foods that assisted them with mental alertness and stress. One participant shared the following:

*“I do eat certain foods when exams are nearer because they help me to study. I do not mean supplements but I’m saying, for example, I’d have fish and nuts because they help my psyche so that I can study better. So, I do eat certain foods given the circumstances of that time.”* (Pillay - living at home)

#### **4.4.4 Social factors**

The influence of others seems to play a noteworthy role in food choice and thus eating behaviour. Role modelling was found to propel university students to make certain dietary choices because they want to look like certain people who are significant in their lives and aspire to be like them. Participants intimated that certain foods, restaurants, and other social spaces were associated with affluence, a high social status, and all aspects that they aspire to, and thus may pretend to have the desired lifestyle ending up “faking their lives to please others”. Participants shared the following:

*“I think it’s just status like if you take a picture of yourself eating at Starbucks, you would be just showing off that you can afford this. I think status plays a big role and ego as well.”* (Joseph - living at home)

*“Yes, it also has to do with social status because you can just decide to buy your burger and eat it without taking its photo, but because you want to show off that you can afford you will definitely post it”* (Themba- living at campus residence)

The findings also revealed the role of modelling in influencing food choices. Participants intimated that they sometimes base their food choices on people who inspire them and on role models that they are looking up to. Also, the word of mouth encourages or discourages one’s food choices. One participant shared the following:

*“I am a media person; I am more influenced by those celebrities I am following.”* (Nondumiso - living at campus residence)

#### **4.4.5 Ideals**

Most participants prefer home-cooked meals, which are nutritious and well-balanced, as the preferred or ideal foods for them. One participant shared the following:

*“Home-cooked food prepared without using too many fats is the ideal for me. So, ideal food for me is the kind of food I was eating back at home when I grew up because it gives me that satisfaction and feeling that I have eaten and am actually full.”* (Themba - living at campus residence)

*“The ideal food to eat must have all the food groups; it must have carbohydrates, vitamins, and so on. It should be a balanced meal and that would be healthy, with probably less fats and oils; that is, less fast foods obviously.”* (Pillay - living at home)

Participants revealed their awareness about the role of fruit and vegetables in a healthy diet. Fruits and vegetables were particularly mentioned as the preferred or ideal foods to eat. This is supported by the following response from interview sessions:

*“Ideal food is healthy food, a meal that consist of fruits and vegetables because they are healthier and more nutritious”. (Nondumiso- living at campus residence)*

*“I like vegetables and preferably stuff with less preservatives and not deep fried foods and primarily home cooked foods would be ideal” (Venon-living at home)*

*“I’d like to have fruits because fruits are good “(Nilesh-living at home)*

*I do like vegetables I won’t lie, like cauliflower, I like that,” (Olivia-living at home)*

Some participants referred to balanced meals as meals that consist of all food groups in moderate amounts. Their knowledge of the food pyramid was evident in their descriptions of well-balanced meals. One participant shared the following:

*“For me, an ideal food would be all you need - to have your dairy, your proteins, carbohydrates, fats, and oils. But I prefer to have foods high in Omega 3 and I don’t have them regularly. Also, I’d like to have fruits because fruits are good, and I don’t have them often as well; but they are good as they have a certain type of sugar as compared to white sugar in your food. Basically, that is how my ideal food would be - to have carbohydrates and proteins and to have what you are supposed to be having in a day.” (Sihle - living at campus residence)*

*“For me an ideal food would be you need to have your dairy, your proteins, carbs, fats and oils, but I prefer to have like 3 to 6 capsules of oil and don’t have them regularly Basically, for me that’s how my ideal food would be, to have carbs and proteins and to have what you are supposed to be having in a day” (Buzz)*

However, the opposite also seems to be true as some participants considered fast foods, fried foods, and carbohydrates as their preferred foods and were actually passionate about them. One participant shared the following:

*“The ideal food is fast food; that’s my favorite- and my best food is fried chips with anything or with chicken, because I just love them, and I feel so good about myself and having fried chips. Like I said, it’s one of my favorite fast foods basically.”* (Mak - living at home)

#### **4.5 Personal systems**

A variety of systems come into play in influencing university students’ dietary patterns. The following section will be presenting a variety of subthemes on how they determine what students choose to consume on their daily basis. These are (i) value negotiations, (ii) sensory perceptions (iii) monetary considerations, (iv) convenience, (v) managing relationships, (vi) familiarity, (vii) traditions and religion, and (ix) health and nutrition.

##### **4.5.1 Value negotiations**

The quality of food in terms of its nutritional value seems not to bother most university students when choosing their dietary patterns as some participants revealed that the quantity of food was most important as they would like to put on weight (fat), then health issues, and lastly taste. One participant shared the following:

*“I would honestly say having enough that will fill my stomach, and that will increase my fat levels, is primary, because I care less about taste. Even if it is the same food every day, I am always focused on that food because my mind is not always working on food things. Secondly, it would be health, but the quantity is primary, health is secondary, and the taste is tertiary.”*  
(Buzz - living at home)

*“When I eat all the food I eat, like I have told you I don’t really think about what will do to my body like if it’s too much, because some of the things that are in the food have too much fats and sugars. I don’t like to eat healthy because it doesn’t taste nice and they are fatty foods around me, so I just don’t like healthy foods because of the taste to be honest, it just put me off.”*  
(Shaine- living at home).

### **4.5.2 Sensory perceptions**

Participants revealed that the taste of food is the primary factor in influencing students' food choices. For some participants, the nutrition value of food was irrelevant, and the choices were only based on taste. Therefore, foods high in sugar and fat dominate decision-making when eating. Fast foods that are predominantly fried were what many participants preferred since they "taste nicer" than healthy foods. This is supported by the following response from interview sessions:

*"When I eat food, I do not really think about what will do to my body as long as it tastes nice. So, taste is the most important thing to me, and I do not like to eat healthy food because it does not taste nice."* (Alice - living at home)

For those participants who were health-conscious, taste was a secondary factor when choosing what to eat. One participant shared the following:

*"Taste for me has not been a major factor, but I think taste has been an influencing factor for everyone. Personally, it was never an influencing factor, but it has always played a role in the types of food I choose to eat."* (Joseph - living at home)

Thus, while nutrition is important, it seems to be secondary to taste. Participants revealed that if the focus of eating is not on nutrition it would be based on taste, and this leads to the preference for fast foods. One participant shared the following:

*"Basically, if it is not nutritional content, the taste factor comes in first. So, besides nutrition, it would be taste, because if I am not focusing on nutrition, I would be focusing on the taste, especially when I go for fast foods."* (Sihle - living at campus residence)

### **4.5.3 Monetary Considerations**

One's economic standing has proved to be a major influence on food choices among university students. Since they are students, most of them are dependent on their parents and/or student funding from the National Student Financial Aid Scheme (NSFAS). Thus, because of their financial dependence and limited disposable income, participants revealed

that they do not always afford to buy healthy foods, which they believe to be expensive. One participant shared the following:

*“It does influence me - because now as a student I can’t afford what I want because if I had the cash to do what I wanted, then I would have more healthy meals and have more nutritious meals.”* (Mak- living at campus residence)

*“I can’t afford to have variety in my diet because my financial circumstances doesn’t allow me to do that, because the funding I receive from NSFAS doesn’t give us enough money to buy fast foods here like other students.”* (Sihle-living at school residence)

Participants also revealed that pricing is a major factor influencing their choice of foods. Hence students consider quantity because buying in bulk helps them save more money and the goods will also last longer. This is also a barrier to healthy eating, mainly when purchasing their own foods. One participant shared the following:

*“I consider quantity because if I spend more on quality, I will have less food, so I prefer to have more food than to starve myself. Quality food is more expensive especially when it comes to brands.”* (Nondumiso - living at campus residence)

*“I suppose having no money to be honest, because most of the healthy food in shops these days are of the higher people and people of a certain amount of wealth, while poor people have no choice, but they actually eat less healthy food. So, actually it will just be money to be honest.”* (Buzz-living at home)

In contrast to those that looked at the quantity when buying food, some participants believed that quality was much more important, because of the inability to use all the food before it gets spoiled, which would result in unnecessary wastage of food. One participant shared the following:

*“It has to be quality at all costs, because it’s pointless to buy food, in large volumes (quantities), which is not of good quality because at some point it might get spoiled before it gets finished.”* (Mak - living at home)

#### **4.5.4 Convenience**

Convenience is a major factor in determining students’ food choices because findings reveal that some students do not prepare or cook their food, but they just get something quick for breakfast or lunch. Even at home cooking is usually done by parents, while university students do it occasionally. However, it seems frying is the common method of preparing food, with baking being second for both students and parents. One participant shared the following:

*“I prefer frying my meat and baking like in an oven.”* (Taylor-living at home)

Boiling seems to be the method of choice when preparing meat and vegetables, followed by frying meaty foods because they believe it is the quickest way. This is supported by the following responses from interview sessions:

*“I am not using too much oil yet, because most foods are too oily and some have too much fat, especially meat. So, I prefer to boil meaty foods when cooking.”* (Bethwell -living at campus residence)

*“I fry my food in most cases because this is how they also prepare food at home and I grew up having fried foods, so I am used to that cooking method.”* (Themba - living at campus residence)

Furthermore, participants revealed that university life is too busy, and it is the reason most of them skip some meals, usually breakfast and lunch. This is supported by the following response from interview sessions:

*“Yes, it depends, especially now that I am at varsity; if I am late in the morning, I will not eat breakfast because I will be rushing to classes. Most of the time I get occupied with schoolwork, and I even forget to have something for lunch.”* (Themba - living at school residence)

*“I think time is the factor, because university students don’t have time to cook”* (Sihle-living at campus residence)

Fast foods appeared to be the most convenient and handy to participants, more especially when they were on campus. Participants revealed that they spend most of their time attending classes or doing schoolwork. Hence, they tend to eat fast food as it saves them a lot of time both in terms of preparation and eating. One participant shared the following:

*“I think time is the factor because university students don’t have time to cook, so it has become a trend to eat fast foods. It saves you time for cooking because fast foods are always ready to eat - you just grab and eat.”*  
(Bethwell - living at school residence)

*“Because we are on campus, all we are working, so we tend to buy fast foods because we won’t have time to make nutritious meals.”* (Nilesh-living at home)

Participants revealed that even when they decide to prepare their own meals, they go for something fast and easy to cook. One participant shared the following:

*“So, I buy baked beans because they are convenient, easy to cook, and therefore saves time.”* (Themba - living at campus residence)

*“If I don’t have time, I normally cook pasta because it is quick to prepare”*  
(Mak- Living at campus residence)

#### **4.5.5 Managing relationships**

Food plays a significant role in maintaining relationships amongst individuals. The participants also shared the influence that friends have on what they eat, especially when going out with them. In essence, students want to fit in, have a sense of belonging to the people they surround themselves with, especially their roommates and friends. One participant revealed that he changed from eating meat to a vegetarian diet because of the influence from his friends. This is supported by the following responses from interview sessions:

*“When I was young, I did not enjoy eating meat nor feel comfortable having it because it used to make me feel guilty after consuming it. This year I made a choice to become vegetarian because one of my friends has influenced me to be vegetarian since he is also a vegetarian too.”* (Joseph - living at home)

The findings revealed that students value eating as a social activity with their peers. In this research, most participants also revealed that they eat out with their peers on weekends. One participant shared the following:

*“Most of the time we go to fast-food restaurants and we buy some burgers, pizzas, and other foods which are considered highly unhealthy, and we eat them anyway.”* (Themba - living at campus residence)

*“Definitely, my friends love shawarmas and I like it too because of them. Because they were always here and they loved jolaj (shawarma), I told myself to try it. It became a social thing, and it became a habit to have it; it’s like a group thing, also like pizzas.”* (Pillay - living at home)

#### **4.5.6 Familiarity**

The family plays an important role in influencing students’ dietary patterns. Students value foods that they eat back at home, and they continue to consume more of that even at campus residences. Most of their food choices are based on the kinds of foods they were eating while growing up. In this study, participants also revealed that certain foods were a sort of a signature to certain families and were very sacred to such families. One participant shared the following:

*“I think I got it from the place where I come from, especially from my family and my mother. Looking at what we eat, I have also brought that style even here at university because the foods that I have been eating back home I am still eating even here at university, and nothing has changed. I only modified my eating habits.”* (Bethwell - living at campus residence)

*“What I always do is that when I am buying grocery, I always buy food that I am familiar with, the one we used to buy even at home, food such as rice,*

*vegetables, meat and baked beans. So, when I am cooking, I also use the methods I am familiar with from back home, I don't try something new and I do not follow these cooking guidelines that are considered to be healthy, but I do it the way they do it back home.*" (Themba- living at campus residence)

#### **4.5.7 Traditions and religion**

Participants' culture and religion also influenced their dietary habits, since some of them placed more importance on their cultural and religious practices. Participants also shared how their culture and religion restricted them from consuming certain kinds of foods that are considered to be a sin or disrespectful to one's religion and culture. This is supported by the following responses from interview sessions:

*"Like I said, I am coming from an Afrikaans family, so culture definitely has an impact on us a lot. We eat a lot of red meat without much flavouring. Afrikaans families don't really eat that type of food; it's more like red meat, fats, and pap. I don't think our culture really restricts but there is more towards a certain type of food. We don't eat pasta a lot and we don't eat western food as often we eat curries and stuff, but we usually just get used to Afrikaans food because that's how we've been brought up, but our culture doesn't really restrict us from eating other foods."* (Alice - living at home)

*"Yes, at home we are Christians, so they believe that pork is not something that we should be consuming as Christians, so anything that has pork, we do not eat it at home."* (Mak - living at home)

#### **4.5.8 Health and nutrition**

Research findings revealed that some students prefer unhealthy foods despite having clear knowledge and understanding of the importance of healthy eating. Participants intimated that healthy eating was associated with having fruits and vegetables in the diet, and a moderate amount of all kinds of food groups and water. Interestingly, participants also showed an understanding that eating nutritious food is coupled with going to the gym or exercising for improved health. Some participants expressed that health consideration was the reason why they chose a particular diet and times of eating. Constipation, nausea, and

the family history of diabetes were among the conditions that motivated some participants to stick to a “healthy” diet. Participant shared the following:

*“For me, healthy eating means fruits and vegetables, because this diet is cool, healthy, and nutritious. However, healthy eating is not just fruits and vegetables, but eating from all food groups. That’s why I have my own special diet. I make sure that I have carbohydrates, even if it’s in small quantity because I can’t rely on proteins alone; I need fats and all the other nutrients. So, I think healthy eating is when you are having foods from all food groups, just in small quantities because even more food is not healthy in the body.”* (Anderson - living at home)

*“I usually eat cornflakes or veetbix because I have got a problem with constipation, so I was told that I must eat something that has fibre.”* (Bethwell- living at campus residence)

Some participants revealed that they eat healthy foods to maintain their body structure. Having a bigger body size is regarded with shame and associated with having chronic diseases, like obesity. One participant shared the following:

*“It has to do with my health because I am trying to live healthily and build my body. I want to look good and it’s also just my wish to be smaller in body size, and I also want to be fit in general.”* (Nondumiso- living at school residence)

*“For instance, there is this stigma that people who have obesity are obese because they have been consuming unhealthy food.”* (Bethwell- living at campus residence)

Unsurprisingly, reading labels and nutritional information appeared to go hand in hand with healthy eating. Participants who checked the labels and nutritional tables on products when buying groceries were usually the ones who were more health-conscious. They did this to check for specific or vital nutritional content. However, it also appears that some participants did not understand much of what was written on those nutrition tables. This perception is supported by the following responses from interview sessions:

*“Yes, I do. Even if I am going to buy bread, I like checking that and make sure that it is the best products and I look at the ingredients and effects in the body. I do read the labels.”* (Pillay - living at home)

*“No, I do not read the labels because I don’t understand them, and I think one needs to have that scientific information in order to understand them.”* (Bethwell - living at campus residence)

Participants also revealed that reading labels when shopping depends on the store they are buying from, and its rating, and the reputation of that store.

*“If it’s a store that I know and that I trust, and that has a good reputation, then I don’t necessarily pay attention to check out the labels, but if it happens to be a store where I’ve heard about some criticisms about it, then I do make an effort to sort of reading the labels, just to be on the safe side.”* (Mak - living at home)

#### **4.6 Strategies to promote healthy eating**

Participants expressed their different views on the strategies that can be incorporated to promote healthy eating among university students. They questioned the subsidies on staple foods and feel that more attention should be paid to making fruit and vegetables more affordable and accessible. Some participants shared the following:

*“The government should give subsidies to healthy foods. They have subsidies on rice, brown bread, and maize, but there are no subsidies on vegetables and fruits, which is something they should also subsidize since it is healthy, and most people can’t afford to buy them when vegetables are so expensive in shops.”* (Nondumiso- living at campus residence).

*“I think there should be a national campaign to inform everyone about the implications of eating unhealthy foods. The government should also make some means to subsidize these healthy foods to make them more affordable to everyone. The university management also need to play part in ensuring that university students have access to healthy foods because these foods are expensive, and the students cannot afford to buy them. They must bring*

*subsidy for those businesses who want to sell healthy foods on campus, and they must create campaigns to encourage university students to eat those healthy foods.” (Bethwell- living at campus residence)*

One participant mentioned that mass media communication strategies is important in educating the public about what a healthy diet consist of and the consequences of eating unhealthy food. He also felt that retailers need to also take health more seriously by making healthy foods more accessible.

*“So, it would be nice or ideal that if they were advertising, they also explain to us and inform us how to eat healthily and the implications of unhealthy eating. I think they should pay more attention to healthy food, rather than having many shops selling one and the same thing.” (Joseph- living at home).*

#### **4.7 Chapter summary**

This chapter sought to present findings from participants’ views and perceptions on factors influencing food choices among university students. It provides evidence of participants’ knowledge and perceptions pertaining to the topic and how their opinions correspond with the review of literature. It also shows how this study has been informed and guided by the Food Choice Process Model (FCPM) as well as how unique views were sought to align with the interpretivists’ study design.

## **CHAPTER 5: DISCUSSION OF FINDINGS**

### **5.1 Introduction**

In this chapter research findings from interviews are discussed and relevant literature are integrated with the theoretical framework of the study, that is, the food choice process model. The participants described the factors influencing their food choices in terms of the life course events i.e. transitioning from school to university and related influencers, as well as their personal food systems. In terms of life course experiences, the participants perceived modifications to the food environment that includes an increase in restaurants, fast foods establishments, and convenient stores, to be key factors in their food choices. This also marked a shift from traditional to modern foods that were seen as facilitators and barriers in making healthy food choices. Thus, the personal transitioning and consequential change in food contexts, in conjunction with personal and social aspects played a role in the autonomous decision making of food and dietary patterns.

The taste of food and monetary considerations appeared to be the primary influences of food choices among university students. The convenience of food, quality, managing relationships, religion and traditions seem to be secondary factors influencing the food choices of university students. Health and nutrition appeared to be the tertiary factor when university students choose their dietary patterns. Strategies employed to simplify the food choice processes developed over time. The conceptual food choice process model represents the rich and complex bases of food practices and provides a theoretical framework for the interpretation of the findings (Jabs and Devine, 2006).

### **5.2 Life Course**

The transitional process, as mentioned above, is a significant life event and the numerous systems of relationships that individuals have may facilitate or constrain healthy food choices. Food choices are thus not only an individual's decision but significant others (i.e. the family and friends) because some enjoy eating with others, especially people they admire the most influence food choices and dietary patterns (Sobal, 2000; Sobal & Nelson, 2003).

The Food Choice Process Model (FCPM) states that the transition period marks a shift in a person's life course that makes people develop choices regarding their dietary patterns,

and these dietary patterns might persist over time (Wethington, 2005). People actively construct their food behaviours as they grow in life, and individuals might have had prior decisions on food choices, as well as their anticipation and expectations about future possibilities. It is inevitable that transition to university life exposes students to a new environment, where they would have to be responsible for their own dietary patterns, plan their own meals, and prepare them (Sobal, Bisogni, Devine & Jastran, 2006). This involves an individual's persistent thoughts, strategies, actions, and feelings as they approach food choices (Devine, Connors, Bisogni, & Sobal, 1998).

Findings from this study have shown how transitioning from home to university has both negative and positive effects on their dietary habits. Even though university students seem to be aware of the importance of nutritious food for their health, their general attitudes and motivation might hinder them from changing their behaviors of consuming unhealthy foods. The transition from high school to university and the adaptation process to the new context resulted in greater autonomy in food decision making and the establishing of new dietary patterns characterized by more fast foods.

According to Singh and Verma (2019), unhealthy foods, especially fast foods tend to be addictive because people tend to have cravings for foods that are not healthy nor considered nutritious. Junk foods are addictive because they stimulate the brain system and some people find comfort in them and it can therefore lead to full-blown addiction. Chemicals such as the neurotransmitter dopamine get released in the brain system, and it was designed to reward the brain when an individual does something that encourages survival, and the brain knows that when a person feeds their cravings, they are doing the right thing, thus feeling of pleasure or feel-good chemicals get released in the reward system (Yeh et al., 2016; Volkow, Wise, Baler, 2017). Other additives such as artificial food colouring, sodium nitrite, guar gum, artificial sweeteners, artificial flavouring and trans-fat, are used to enhance flavour, appearance, and texture of processed foods to extend their shelf life (Cediel et al, 2020). Unhealthy foods give the brain system powerful rewards than it could not get from healthy foods.

Even though fast foods seem to be convenient for many, most of them are processed therefore contains a lot of additives such as the Monosodium Glutamate (MSG), which is

used to intensify and enhance flavour of savoury dishes (processed foods) (Lagana et al, 2017). According to Dury and Martin-Prevel (2019), fast foods are highly processed, and nutritionally poor which makes it closely linked with health problems. Therefore, processed foods are low in fibre and highly calorific, hence these additives together with high content of fats, sugars, and salt in fast foods, make individuals susceptible to metabolic syndrome and weight gain, which contribute to obesity and the rising prevalence of chronic diseases, such as diabetes and heart diseases.

According to Tam et al (2017), a greater independence in food choices lead to more unhealthy choices. Students mentioned that this newfound independence in making food choices had negative consequences for them, as it increased the ability to purchase their own food and prepare any food they want. This may impact their health negatively over the long term as these habits might persist into the later years (Sobal & Bisogni, 2009).

It is important to note that for some students this transition to greater independency were positive in that it taught them financial management skills on how to spend their money, what to buy, and to prepare food the way they liked similar to the results of Fitzgerald et al. (2010). This in turn helped them to embark on healthy diets, such as cutting down on carbohydrates, fats, sugars, and oils. This, therefore, yielded positive results on students' health because some students had no choice of their own around food when they lived at home and might have had no choice about the food they were given and how it was prepared as the food was provided by their families.

However, for those who are still living at home with their parents, this transition seemed to have had no negative effects on their dietary patterns. This is because they are still dependent on their parents' food choices, and it has been reported that parents are health conscious, hence prepare healthier meals at home. These students are able to make their own food choices only when they are on campus, especially when they had not brought lunch boxes from home. Thus, the study shows that students' eating habits on a typical day seem to differ according to their living arrangements.

### **5.3 Influencers**

These are the systems of relationships that individuals have which may facilitate or constrain healthy food choices. Food choices are thus not only an individual's decision but

significant others (i.e. the family and friends) as most eating is done together with others in complementary units where the interests of many people are managed and negotiated (Sobal, 2000; Sobal & Nelson, 2003).

### **5.3.1 Resources**

Participants have mentioned various sources of knowledge about food and this shows different interests and motivation of individuals when it comes to food choices. The FCPM asserts that resources can be tangible and intangible. Tangible resources refer to aspects such as money, equipment and space. Intangible resources may be in the form of knowledge, skills and time. (Furst et al., 1996). Money considerations will be discussed in the personal food systems where costs are a real consideration.

Parents, especially mothers, are the primary source of knowledge about food choices. Elder (1985) asserts that the FCPM mentions that individuals construct their food choices based on what they grew up eating. Wethington (2005) states that food choices are influenced by family cuisine and the food preferences of families. Most participants revealed that their mothers were the primary source of information regarding their dietary habits. They mentioned the vital role their families have played in introducing them to a variety of dietary habits that they were still practicing even now at university. This results to familiarity with the consumption of certain foods hence some students revealed that they buy food which they are familiar with back at home.

Food such as rice, vegetables, meat, pasta, and processed foods was amongst the familiar foods which students bought due to familiarity reasons in the consumption of such food. Findings from this study concur well with Gross, Pollock, and Braun's (2010) views on how mothers influence the food choices of the whole family since they are the ones who are doing the cooking almost all the time. In this study, participants who were residing in campus residences asserted that the university does not provide adequate cooking resources, to enhance variety when preparing meals.

Factors such as storage (refrigerators) also determined university students' food choices, more especially for those who are residing in school residences. Students who are sharing have limited storage capacity and space (Sobal & Bisogni, 2009), which restricts them from buying large amounts of food, especially the perishable ones (fruits and vegetables which

lose their nutritional value easily (Varga et al., 2018). This in turn results in the consumption of fast foods because the fast-food industry is a fast-growing industry that makes a lot of profit by selling foods that are detrimental to people's health.

Findings from this study show that fast foods such as MacDonald's, KFC, and Steers are bought by the majority of students. According to Deliens et al. (2014), media and advertising also play a vital role in influencing university students' food choices, and the results showed that when students see food being advertised, either on television or billboards, they become more likely to go buy that food. This study has shown that social media platforms such as Facebook and Instagram are playing a role in what some students eat. That is why nowadays media is influencing many young people's lifestyles and is, in turn, determining what they should and should not eat.

Students have further mentioned that their food choices are pretty much influenced by social media because that is where they get to know more about different types of food and if they want to cook something, they would just go online and figure that out. Some students have mentioned that some shops go to an extent of sending messages when they are having sales and promotions on foods, and this would make students take advantage of the sale and buy more of the items on sale. Students mentioned that advertisements influence their food choices because they advertise the food in a very attractive way that one cannot resist.

Beverages such as alcohol are advertised too often on televisions and it is portrayed as something good, and one of the best mechanisms one can use to cope with stress. According to Mchiza, Temple, Steyn, Abrahams and Clayford (2013), the advertisement of alcohol influences young people into substance abuse, and efforts need to be taken to prevent drinking since drinking affects one's health and many deaths in South Africa are due to alcohol consumption. The word of mouth, advertisement on billboards, media platforms (TV, radio, magazines) and running a promotion to attract customers, seems to attract more university students into consuming unhealthy food excessively.

Food choice is in many ways seen as a secondary subject to the academic program, but it plays a significant role in informing learners on health-related behaviours. The Life Orientation (LO) subject in schools was also mentioned as a source of knowledge about food and healthy eating among university students. The LO program is a learning area that

informs learners on healthy lifestyles and equips them to respond positively to social demands, optimise their life chances, and be responsible for their health (Prinsloo, 2007). The promotion of healthy behaviours is an important role of schools because children spend so much time in schools. Schools are therefore influential institutions that could promote healthy behaviours among children by ensuring that they create healthy school environments, impart knowledge and positive attitudes that may have long-term benefits, which would improve the wellbeing of learners.

This would in turn help students in achieving positive academic results (Samdal, Eide, Barth, Williams & Meland, 2018). The family and school experiences influence individuals' health status later in life because a person's habits, attitudes, and beliefs are learned in the formative years and ultimately prevent NCDs (Scaglioni, Salvioni & Gal. Therefore, healthy habits such as physical activity and healthy eating should be promoted at a young age, because many parents may lack information and knowledge of healthy eating (Samdal et al., 2018). The electronic media, such as the television and internet, were important sources of information about food in general (recipes), and about healthy eating for those who are interested in food and healthy eating.

Media and advertisement can have both negative and positive influences on food choices. Some students have mentioned that media and advertisement have a positive influence on their dietary patterns because seeing their role models in their swimming costumes make them have the same desire of having that "sexy body" and therefore start embarking on a healthy diet, and do some training to have the same body like theirs.

Social media, the internet, and YouTube were classified as the tertiary source of knowledge about food choices. This seems to suggest that it is only those who are interested in food and healthy eating that do more research in this regard and thus are influenced by such social media platforms. Similarly, Kemps, Tiggemann and Hollitt (2014), report that some participants get knowledge on food choices from TV programs that talk about food and healthy eating.

### **5.3.2 Managing relationships**

Family plays a crucial role in influencing student's dietary patterns and this study showed how students value foods that they eat back home and continue to consume the same foods

even now that they are living independently at university. Results from Daliens et al. (2014) showed that students' past eating habits influence their food choices at university.

The FCPM states that some relationships, such as family provide opportunities for making certain food choices and can influence individuals to make either healthy or unhealthy food choices (Bove & Sobal, 2006). Participants revealed that most of the food choices they make at university were based on the kinds of foods they were eating back at home, which is the food they have been consuming while they were growing up. Some participants revealed how these foods were important to them and their families and that they were very sacred to them. Therefore, the home environment is one of the most important settings regarding the preparation of healthy food and developing healthy eating habits, since families who eat together are more likely to encourage healthy eating.

According to Pearson, Biddle, and Gorely (2009), parental modelling and parental food intake are positively and consistently associated with eating a variety of healthy foods, such as fruits and vegetables. In essence, parents play a significant role in encouraging their children to be health-conscious when choosing their dietary patterns. Mothers are role models in influencing and controlling their family's eating behaviors. It is further outlined that mothers prefer that their children always have healthy and balanced meals, including foods for snacking (Dicken & Ogden, 2014). Students who were living at home revealed a more varied choice of healthy food and had a balanced diet in every meal, as they consumed foods such as fruits, carbohydrates (cereal, porridge, bread), and protein (tuna or eggs) for breakfast. However, those who are living at school residence tends to have some slight changes in their dietary due to independency and autonomy.

### **5.3.3 Change in the Food context**

The context and the broader environment influence an individual's food choices, and these include social environment and physical environment (Daliens et al., 2014). This study has shown that food outlets available on the university campus and surrounding areas do not promote healthy eating behaviours amongst students, because the environment makes it easier for students to access junk and unhealthy foods. Roy, Kelly, Rangan, and Allman-Ferinelli (2015) found that the physical environment, the setting in which students live

influences their dietary habits through the availability and accessibility of particular foods, appeal, and pricing of food products.

Popular fast foods mentioned that are available on campus, include shawarmas (filled with little salad, fried chips, and very little meat), fried chips, deep-fried chicken strips, bunny chow (half a loaf of bread filled with a curry either lamb or vegetables) and deep-fried bread dough. called 'vetkoek' or 'fatcake'. However, those who live at home can bring a packed lunch (e.g. a sandwich, leftovers from the previous night, etc.), and eat healthier. However, those students who do live at home, and never bring lunch to campus, seem to make unhealthy food choices when buying their food for lunch on campus.

The university residences in particular also makes it difficult for students to make healthy food choices due to lack of resources because the university does not provide adequate cooking resources such as ovens, to enhance variety when preparing meals. Factors such as storage and refrigeration also determined students' food choices as it restricts them to buy a variety of food, especially the perishable ones (fruits and vegetables) which are also more nutritious. This corroborates with an earlier study reporting that students who are sharing have limited storage capacity and space which restricts them from buying large amounts of food (Sobal & Bisogni, 2009), especially perishable foods such as fruits and vegetables which easily will lose their nutritional value when not properly stored (Varga et al., 2018).

#### **5.3.4 Ideals**

The FCPM asserts that personal factors develop and change over time and allow individuals to be unique in their own way when making food choices evident in dietary individualism, where individuals choose to eat differently than their mealtime companions (Bisogni, Connors, Devine, & Sobal 2002). Findings have shown that home-cooked meals that are prepared without too many fats are ideal to some students because they are perceived to be healthy. These foods are in some instances also what they ate when living at home. For some students, having a balanced meal with moderate amount of all food groups in every diet is ideal for them as it makes them feel they have made more healthy food choices. Students who are health conscious have even gone to an extent of changing their dietary patterns and started embarking on vegetarian diets, which is different from

other family members' meals because they feel it is much healthier. However, for some university students, fast food and fatty foods are ideal to them as it gives them more satisfaction.

Some university students seem to have little concern about the nutritional value of the food when preparing it, and whether the cooking method used would sustain or destroy the nutritional value of the food) This seems common among those university students who are not health-conscious and just eat to fill their stomachs. This likely stems from ignorance in preparing the food. This study shows that for students living at home with their parents, frying is the common method used when preparing food, with baking being the second option, and boiling the third. For those who live in residences boiling and frying seems to be the method of choice because they believe it is the quickest and most convenient way to cook food. This might also be linked to the limited cooking facilities available at the university residences and existing knowledge about food preparation (Fitzgerald et al., 2010).

### **5.3.5 Personal factors**

As mentioned earlier, the transition phase is a significant life event for university students because it results in a significant turning point for food choices. This is linked to them becoming more independent in constructing their own dietary habits (Yahia, Achkar, Abdallah & Rizk, 2008). Findings from this study have also shown that students have adequate knowledge on healthy eating, that is the importance of having balanced diets, and that home-cooked meals are nutritious and satisfying in comparison to fast foods. Despite having enough knowledge on healthy foods and foods that are not good for their bodies, students engage in stress-eating when they are feeling stressed, depressed, and having excessive academic work (Cooke & Papadaki, 2014).

The FCPM according to Shepherd and Raats (2006), argued that psychological factors play a significant role in individual food choices. This study shows that individuals' mood or emotional state plays a vital role in influencing student's food choices. The participants tended to consume too much junk, and fast foods when they are feeling stressed, and this habit of consuming such foods that are used as a coping mechanism when faced with stressors which may impact their long term health if sustained. Thus, the students find

comfort and pleasure in those foods. The findings from this study concur with Daliens et al. (2014) views in that students make unhealthier food choices when the academic pressure is at the peak point, especially during the exam periods. However, in this study students who are health conscious try to eat less amounts of foods that are detrimental to their health, while some consume healthy foods to boost their psyche so that they can focus better on their schoolwork. Hence, even when they are stressed and swamped with schoolwork, they would eat foods that are less detrimental to their health, i.e. foods that have less sugars and fats e.g popcorn, fish, nuts etc. These foods are rich in omega3 and have poly-unsaturated fatty acids that are essential for their health and to safeguard the brain health as it is believed to help stimulate their brain functioning (Derbyshire, 2018).

### **5.3.6 Social factors**

Friendships or relationships among individuals impact food choices since relationships may make one feel obliged to eat what their friends eat. People are socialised and acculturated into cultural and sub-cultural ideals that they selectively perform when constructing their food choices. According to Stead, McDermott, Mckintosh, and Adamson (2011), eating similar food with friends is symbolic as the meanings and values that are attached to food promote trust and interaction among friends and thus strengthening the relationship. These may enhance the selection of foods that would strengthen their relationships (Wooley & Fishbach, 2017).

In this study, the influence of peers was evident as students seem to strongly value eating as a social activity with peers, and many of them have reported eating often outside their home and school residences with their peers on weekends. Social status linked to socio-economic status influenced some students' unhealthy dietary patterns, such as the consumption of fast foods. The findings suggest that individuals find more pleasure when consuming fast foods and it can also be a symbolic expression in the formation of their social identity. Findings from this study are similar to the findings of Daliens et al. (2014), where students emphasized the importance of supporting social networks and how their peers have also influenced their dietary patterns. This makes individuals want to consume the same foods as their friends to have a sense of belonging to that group or their peers,

even when they dislike the particular food. The majority of students confirmed eating less healthy foods during those social outings.

Hence, food consumption patterns have also been found to be linked to one's socio-economic status. As Miura and Turrell (2014), argued that some people consume fast foods more frequently because they want to maintain their social status. However, this may have led to competitive consumption, with destructive financial consequences for students who may not necessarily have the means to maintain this. According to Bisogni et al. (2005), consumers are active co-conspirators in the creation and maintenance of the luxury goods market and increased access to commodities as a symbol of luxury, which in turn give them certain class and status in society. This is also evident in this study because university students indicated that they tend to adopt certain lifestyle and unhealthy dietary habits to fit into prevalent social norms, which are perceived to give one status amongst others and to identify with their peers. Hence, they normally would eat fast foods and consume alcohol, as well as fizzy, sugary drinks. Some choose to consume unhealthy foods, such as alcohol, junk foods, and fizzy, sugary drinks because they are trying to conform to peers' dietary behaviours, which also gives them a sense of belonging to a particular peer reference group.

A sense of belonging is essential for individuals and it is evident in this study, because a sense of belonging seemed to be the most important aspect among university students and strongly linked to their social identity (Fallatah & Syed, 2018). This study also shows that the consumption of certain foods becomes a way of socialising among peers and also plays a significant role in bringing friends together. Students have mentioned that they just plan an outing to go and have some drinks and fast food with friends in a restaurant as a way of socializing, catching up, and having fun. This is because certain foods, according to the findings, promote their reputation in society and a reason why some students end up living their lives up to others' standards. This is the case with the use of alcoholic substances (Davoren, Dahly, Shiely, & Perry, 2018). This is coupled with the consumption of foods from highly recognized fast foods franchises, such as McDonald's, Debonairs, and Spur, among others (Hilger et al., 2017).

Wills, Backet-Milburn, Roberts, and Lawton (2011) reported a link between food and social status in that some foods, such as meat, has some greater social significance than the consumption of vegetables, and individuals tend to spend more money on meat than on vegetables. Some students admitted to taking pictures of their own food before eating so that they can post on social media, as a way of sharing the memories they make with friends around food. Different views have emerged in this regard; as for some, posting pictures on social media is believed to give them some social status and is a way of showing that they have friends and can afford to go out and spend money on desirable fast foods.

According to Liu, Norman, and Pennington-Gray (2013), this practice of taking pictures of one's own food can also be considered as a form of entertainment, where people entertain their friends by posting the foods they have eaten on various social media platforms. Some of the students in this study oppose this behavior as they perceived it as showing off one's wealth and feeding your ego, and may result in forcing some students to live a 'fake life' by living up to the standards of others' lifestyle, that is expected to be maintained.

Role modelling, according to Russo and Simeone (2017), influences an individual's food choices, because young people are looking up to some high-profile people and celebrities. This study also shows how role modelling influences students' food choices because some students have mentioned that they choose to eat some food because they have seen their role models or people who inspire them consuming those foods, and this seems to influence those students who are too dependent on social media. Findings from Daliens et al. (2014) support this view, as it shows that a student's body image can influence their dietary habits and want to look like their role models, more especially if they feel that having a certain body (e.g. fat) makes them feel unattractive.

#### **5.4 Personal food systems**

Food choice is influenced by a variety of personal systems that comes into play in determining what one consume on a daily basis. Factors such as sensory perceptions, monetary considerations, quality, convenience and traditions and religion, and health and nutrition on how they influence food choices among university students. Strategies will also be discussed on how they determine the dietary patterns of university students.

### **5.4.1 Sensory perceptions**

According to Shepherd (1989) the taste of food seems to be one of the primary drivers for food choice. Students revealed that the taste of food always comes first when choosing their meals, and they focus more on taste rather than the nutritional content of the food. According to Shepherd (1989), the taste of food plays a significant role in influencing university students' food choices. Students have indicated different myths that are attached to the consumption of healthy foods and evidence has been shown in this study when students were expressing their views and preferences for fast foods. University students revealed that the main reason for not buying healthy nutritious foods does not necessarily imply costs but rather personal preferences (i.e. that one values most, compared to the other, for example, taste). University students believe that healthy foods do not taste good as opposed to unhealthy foods and that healthy foods are expensive. Therefore, they also find it boring and old-fashioned to consume healthy foods, such as fruits and vegetables, hence they prefer consuming high caloric foods and energy-dense foods that taste good, but which are not necessarily healthy food choices that would enhance health and wellbeing (Kabir et al., 2018).

Results from this study correlate with the ones of Daliens et al. (2014) who also found that taste is an important factor in influencing most students' food choices. The taste of food reinforces unhealthy eating for students who are not health conscious but will never determine dietary habits for students who are health conscious as they value the nutritional content of food over other factors.

Most students prefer foods that are spicy, sugary, and fatty, while healthy foods need to have little sugars, oils, and spices. Some students find healthy foods tasteless as their taste buds are not used to healthy diets. This study shows that the taste of food makes students eat whatever they want without any concern for the health effects that the food might have. According to Chan, Tse, Tam, and Huang (2016), this becomes so difficult for them to adapt to healthy foods because their taste buds are used to sugary, salty, and fatty foods, which makes adjusting to healthy diets difficult for many (Reeder, 2005). Despite having enough knowledge on how these foods are detrimental to their health, students mentioned that healthy foods do not taste nice, that is why they always opt for fast foods.

Fast food industries are paying money to ensure that consumers keep coming for fast foods. They do that by maintaining the bliss point in each fast food they sell. According to Moss (2013), the bliss point is the ratio of ingredients used when making food such as the salt, fat, and sugar ratios to optimize the taste. So, this bliss point ensures that these fast foods are too satisfying to ensure that consumers would keep coming for more. Hence, students have found that fast foods are addictive, taste nice and they are like a drug that makes one feel better after taking it. This is because once they start thinking about fast foods they would never feel better until they get them, despite having enough knowledge on how detrimental they are to their health. Foods such as fried chips, burgers, and Kentucky Fried Chicken were reported to be often consumed by students because of taste and convenience.

On the other hand, for students who are health conscious, the taste of food is a secondary factor in determining their dietary choices, since they consider the nutritional content of the food as important. Students who are health conscious disagree with the notion that healthy foods do not taste nice, as they assert that it depends on the knowledge and skills on how to prepare the food.

#### **5.4.2 Monetary considerations**

The cost of food has appeared to have a significant impact in determining university students' dietary patterns and data from this study has shown a very strong link between food pricing, marketing, and the decisions university students make when buying food. Most students have asserted that unhealthy foods that are rich in fats, carbohydrates, and sugars are priced at a lower cost, and healthier foods such as fruits, vegetables, and protein-rich, are priced at a higher price, which makes it impossible for many students, especially those from low-income households to afford and have access to healthy food. It has been found from this study that students would be more likely to opt for and buy healthier foods if it was costing less and if there were subsidies on healthier foods (Steenhius et al., 2011).

Students have also mentioned that healthier food options available on campus are more expensive and thus not frequented by most students. It is also evident that students believe that to eat healthily, one must buy expensive food, which is also not convenient for them considering that it requires much attention when preparing it. Data from this study shows that the economic status of university students is a primary influencing factor in their food

habits. This is because most university students are dependent on their parents, and most students come from disadvantaged backgrounds and are therefore dependent on government funding through the National Student Financial Aid Scheme (NSFAS). This dependency seems to be one of the reasons why they do not have enough money to buy healthy food, which is believed to be expensive, and not within their reach. As Bisogni et al. (2005) argue, food choices are drawn from a variety of factors, such as the socio-economic status of individuals, as they determine what one can consume, afford, and have access to.

The economic status of university students also hinders healthy food choices to individuals who have limited human capital, as it constrains the selection of a variety of foods. The FCPM asserts that the SES of individuals plays a vital role in decision making about food. In supporting that, students have asserted that their food choices are drawn from various forms of capital, and these include the wealth and income of an individual, materials such as equipment, and human capital such as skills and knowledge. Economic factors can therefore inhibit food choices, especially for those who have limited resources as it restricts what one can buy (Bisogni et al., 2005).

Linked to the SES of students is the pricing of food, an important factor in determining students' food choices. The general belief is that healthy foods are expensive, especially organic foods and thus not affordable on their limited budgets. The pricing and affordability of food seem to affect particularly those students who are living independently at the university residences or privately because food marketing is an essential component of the eating environment. This is supported by the findings of the current study, as it reveals how the environment in which students live influences their food choices. Hence, they have mentioned that unhealthy foods that are too fatty, oily, and sugary are being sold at a very low price within the university premises, and in supermarkets in town. It was further outlined that the university setting may offer little variety of healthy foods and its pricing is too high and not easily affordable nor accessible by the majority of students (Haws, Reczek, & Sample, (2017).

According to Schneider, Bradshaw, Steyn, Norman, and Laubsher (2009), individuals from disadvantaged backgrounds are negatively affected, because limited financial resources

limit food choices and the affordability of healthy foods. This is because the university setting does not enable students to have access to healthy foods, as the majority of foods available on the university premises are high in fats, oils, and sugars. This makes it easy for students to have access to unhealthy foods such as fried fish, fried chips, and many sugary drinks that may contribute to the increased risk of chronic diseases, such as obesity linked to diabetes, cancers, and heart disease in later years (Sobal & Bisogni, 2009).

According to Sobal et al. (2006), the FCPM asserts that skills and knowledge on how to prepare food influence individuals' food choices and is regarded as one aspect of human capital that can facilitate or inhibit individuals' food choices. Students who have a passion for food and cooking are likely to be more informed about different ways to prepare food and cooking methods to ensure that they maintain the nutritional value of food. Therefore, requisite culinary skills, confidence, and knowledge are needed, when university students want to take control of their dietary habits (Murray et al., 2016). It is evident that a lack of culinary skills and knowledge, financial instability, and inadequate access to healthy food options, play a significant role in limiting students' ability to prepare healthy meals. There is also a need to educate students on how they can serve different healthy meals on one plate to enjoy their meals (Katz et al., 2011).

### **5.4.3 Quality**

University students have asserted that despite having enough knowledge on the importance of consuming quality foods that are considered to be healthier, considering quantity over quality when buying food seems to be the best option for them. This is because it helps them to get large quantities of food that can sustain them longer, perhaps for the whole month rather than buying fresh fruits and vegetables that are perishable and get spoiled easily. However, it is also possible that students are aware that they lack the ability to manage their budgets over the month and need to ensure that they buy food that can sustain them for the whole month, rather than keeping money for fruit and vegetables. In contrast to this, considering the quality and the nutritional content of food can never enable them to buy large quantities of food.

However, for students with higher SES status, the quality of food is more important than the quantity, as the focus seems to be more on the nutritional value of the food. Wight,

Kaushal, Waldfogel, and Garfinkel (2014) state that there is a link between poverty and food insecurity especially among the low-income groups, hence they do not spend much on food and they opt for lower-quality diets that are energy-dense (potatoes, processed foods that are high in fats and sugars), which may lead to obesity and other chronic diseases. Obesity is rampant among individuals of low and middle income in South Africa (Vorster, 2010) and may be aggravated by the economic slowdown due to COVID-19.

Moreover, some students do not have enough knowledge of what constitutes healthy foods, since most of them believe that healthy foods are those foods that are organic and costly and that one needs to be well off to buy healthy and nutritious (quality) foods (Cooke & Papadaki, 2014). For example, few students recognize that the cost of fruits and vegetables can be equivalent to the cost of fast foods students buy every day on campus.

#### **5.4.4 Convenience**

Living arrangements, preparation of food does influence students' dietary habits due to time constraints, especially students who are living independently in the university residences. However, this seems not be an issue among students who are living with their parents because food is conveniently more available for them. This is because parents at home prepare meals, which makes it easier and more convenient for students to access food. Students who are not living at home choose to consume convenient foods that do not need too much time to prepare. These foods seem to be primarily carbohydrate-rich, such as bread, noodles, vetkoek (deep-fried bread dough). In essence, university students tend to consume too much unhealthy food even for breakfast, because they find eating junk food convenient and easy to prepare, unlike healthy foods.

Breakfast eating habits can positively or negatively affect individuals' health; hence it seems to be the meal that is skipped most often by university students, and thus associated with poor academic performance (Díaz-Torrente & Quintiliano-Scarpelli, 2020). Most students have mentioned that time constraints influenced them to skip breakfast because students are almost always swamped with schoolwork and rushing to classes also reported by Green, Harrel, Pinkney, and Stephens (2019). This is however not good for students' health. As Fujiwara and Nakata (2010) state, skipping breakfast has adverse effects on

one's life and it can lead to constipation, dysmenorrhea, and may also affect the reproductive function of females, such as causing menstrual disorders.

It is also apparent that students do not only skip breakfast, but they also skip lunch at times because of time constraints. According to Neslisah and Emine (2011), breakfast and lunch were the most frequently skipped meals with a total of 47.7% of students skipping breakfast, and 25.2% skipping lunch. Hence, the students who do not live at home do not appear to be health-conscious when choosing their foods, as they prefer to buy fast foods and/or what is available on campus, because of easy access and convenience. As mentioned earlier, these foods seemed to be mostly high in refined carbohydrates, fat, and sugar.

Even though carbohydrates are often associated with weight gain, they are also a necessary element in balancing any healthy diet, as it helps to improve the functioning of individuals' brain and muscles. It is therefore important to have carbohydrates for breakfast because it helps the body gain nutritional goals for the day and boost the immune system. According to Hayes, Giles, Mahoney, and Knarek (2018) cereals, such as bran cereal are healthful and carbohydrate-rich for breakfast. This is because 1 cup serving of dry bran cereal is equivalent to 128 calories and 32 grams of carbohydrates.

In essence, foods such as oats, milk, eggs, whole-grain bread, bananas, and low-fat yoghurt, avocados, and nuts and butter are some of the best foods for breakfast that should be consumed by university students, because they are rich in nutrients that help boost one's mind (Spence, 2017). However, an over consumption of carbohydrates is according to Dehghan et al. (2018) associated with conditions such as type 2 diabetes, heart diseases, and obesity, as a too high level of much carbohydrate intake increase one's blood sugar levels, resulting in rapid fluctuations of insulin in the body, and can make one feel satisfied.

Beverages, such as tea and coffee, also appeared to play a vital role in helping students' to kick-start the day and in boosting their energy for the day, because foods that contain caffeine helps to restore mental functioning, boosts the mood, metabolism, and physical performance (Loomis et al, 2016). It is however advised that individuals should consume low to moderate amounts of caffeine, because excessive consumption of caffeine may lead to anxiety, fatigue, impact sleep patterns, causes muscle breakdown, increase high blood pressure, heart diseases, and increased urinary frequency (Bordeaux & Lieberman, 2013).

#### **5.4.5 Traditions and religion**

The FCPM states that cultural ideals are behaviours, rules, and standards that are used by a group of people as a reference point to judge and assess food behaviours, whether they are right or wrong, acceptable or not, and whether they are appropriate or not (Falk, Bisogni, & Sobal 2000; Devine et al., 1999). This is also evident from the study as it has shown that an individual's culture and religion influence their dietary habits since some students place important value in their cultural and religious practices. Food such as rice, vegetables, meat, pasta, and processed foods was amongst the familiar foods which students bought due to familiarity reasons in the consumption of such food. For that reason, some students' culture and religion restrict them from consuming certain foods, because eating them is considered a sin. This study shows that Christianity forbids people from consuming pork because they believe it has some demons, therefore eating pork is viewed to be a sin before God.

Individuals develop some rules or strategies in their food choices, which provide guidelines that individuals can adhere to when consuming some foods. These personal guidelines restrict or regulate individuals to eat certain foods or to avoid foods with certain ingredients, especially if they have decided not to consume either that food or ingredients. These major strategies facilitate food choice decisions by making them more habitual (Sobal et al., 2006; Falk, Bisogni, & Sobal, 1996). However, for some students, religion does not really influence their food choices; instead, their culture influences their food choices to a certain extent.

Results from this study correlate with Daliens et al.'s (2014) study, whereby students' norms and personal beliefs influence their food choices. Hence some students intimated that moral conviction had driven them to become vegetarians. Vegetarians also seem to make healthy food choices for their lunch, as they do not have many varieties of foods to choose from. According to Rocha, Laster, Parag, and Shan (2019) vegetarians have a lower risk of being infected by diseases such as diverticular disease, gallstones, constipation, and appendicitis, and risk reductions for mortality in cardiovascular diseases, diabetes, and chronic kidney disease. This is because vegetarian diets are meat-free meals, and tend to

consume a high proportion of fresh, healthful, and plant-based foods that provide fiber and antioxidants (Craig, 2010).

The FCPM states that ethnic food cultures are one of the major factors that influence an individual's food choices (Devine et al., 1999). Some students mentioned that having a fuller body is something significant, especially in the African context. According to Watson, Broadbent, Skouteris and Fuller-Tyszkiewicz (2016), having a fuller body is seen as healthy and desirable for women. Findings from this study also show how the culture and tradition of Indians have a huge effect on what they eat. This is because Indian families tend to have their traditional dishes such as Indian curries, biryani, and samosas (for snacking) approximately four times a week. This influences their food choices as they choose to consume foods that are fried and high in vegetable oils.

#### **5.4.6 Health and nutrition**

Participants have stated the importance of healthy eating to their health and intimated that healthy eating is having diets that consists of moderate amount of all food groups (Carbohydrates, proteins, vitamins). Results from this study show that some university students seem not to be health-conscious despite having adequate knowledge on what healthy eating entails. Lacking a sense of agency regarding their health and future state of health seems to be an important issue for many university students because they seem not to be concerned or committed to make healthy and nutritious dietary patterns a habit (Hilger et al. 2017).

On the other hand, the findings also showed an understanding that eating nutritious food is coupled with going to the gym or exercising for improved health. However, this does not necessarily motivate some university students to engage in healthy eating behaviours nor even bothered how risky these unhealthy lifestyles can be to their health and wellbeing in future. This is likely due to the fact that they still think they are too young to engage in healthy behaviours and have not yet suffered the consequences of both unhealthy eating and physical inactivity (Koehler & Drenowatz, 2019). However, for students who are health conscious, and their body image is of great importance and is the motivating factor towards healthy eating and physical activity.

The FCPM states that value negotiations are very important when making decisions on food choices because some values are more important than others and they can provide boundaries that can exclude some choices on food (Connors et al., 2001; Smart & Bisogni, 2001). Some university students have asserted that having a fuller body makes them feel uncomfortable and it is also associated with being diabetic and obese. Therefore, some students cut down from eating fatty and sugary foods, as it is one of the major causes of obesity and diabetes. Findings from this study correlate with the study that was conducted by Gunter and Wykes (2004) on body image amongst university students in Italy. Results reported a higher desire for thinness among university students in Italy, and 81% of these students would like to be thinner and the prevalence of body image dissatisfaction was 87%. Interestingly, participants also showed an understanding that eating nutritious food is coupled with going to the gym or exercising for improved health.

In this study, the state of health appears to be the reason behind some university students choosing a particular diet and/or times of eating. Constipation, nausea, and a family history of diabetes were among the conditions that motivated some university students to take on a healthy diet. The health status of an individual also influences university students' food choices. Individuals who are having some genetic illness, such as diabetes and obesity, are always conscious of their dietary habits. Findings from this study show that health status of parents play a significant role in determining students' dietary pattern because some students tend to follow dietary habits of significant family members, who might be having certain health conditions that restrict them from consuming certain foods. The findings from this study revealed that students who are health conscious, tend to read labels when shopping for their foods because they are always conscious of what they put into their bodies.

It also appeared in this study that nonetheless some do not understand a lot of what is written on those nutrition tables; hence the nutritional information is scientific, therefore they find it hard to understand. Hawley et al. (2013) argue that a lot of people do not understand the information written on these tables, because it is too scientific. Therefore, they tend to purchase foods that do not match their nutritional value preferences. The life of university students does not only restrict them to practice healthy dietary habits, but it

also limits their time to engage in physical activity due to excessive schoolwork most of the time. This is not good for their health hence it increases the risk of overweight and obesity, as Van Der Merwe and Pepper (2006) states, the inability to engage in physical activity may contribute to some individuals' susceptibility to obesity.

### **5.5 Strategies to promote healthy eating**

Students in this study shared different views of the strategies to promote healthy eating amongst university students at the campus and outside the campus. Students' suggestions addressed the roles of different stakeholders, which include the government, university management, and researchers in promoting healthy eating behaviors among university students. The need for more information on healthy food choices and the consequences of unhealthy eating were highlighted. The availability of healthy food on campus was another important issue in enhancing healthy eating habits among university students, aligned with the accessibility of healthy food.

The university management should also pay more attention to promote healthy food choices on campus and ensuring access (availability and costing) to healthy foods, rather than allowing to have too many shops that are selling similar unhealthy foods (Pelletier & Laska, 2013). The university must ensure students have better storage and cooking facilities as they are necessary for students to prepare healthy meals within the residences. The subsidisation of healthy foods on campus was also mentioned; hence the university management and the government should subsidise healthy foods on campus to enable easy access to healthy eating among students (Tam et al., 2017). It was interesting that while some argued that the university management should get rid of all fast foods around campus, others felt that healthy eating is a choice and selling unhealthy food is not illegal, so this can never stop university students to consume fast foods because they can always buy them outside the campus. Thus, being aligned to the principles of the Ottawa Charter of Health Promotion (1986), for example, the importance of an enabling environment that facilitates healthy food choices plays a significant role in promoting healthy food choices.

### **5.6 Summary**

The main findings in this study showed how individual factors, social factors, and environmental factors play a significant role in influencing the food choices of university

students. Behavioural factors such as the taste of food, knowledge, and perceptions towards food, and economic status, mood, and health status influence one's food choices. Findings from this study have shown the significance of palatability when students choose their dietary patterns. Despite having adequate knowledge on what is healthy or not for their bodies, the taste has been identified as the most significant factor when students choose what to eat because foods that taste nice seem to satiate their appetite.

The economic status of individuals has also proved to affect university student's food choices as it restricts the dietary patterns of disadvantaged individuals since they do not have the option to choose from a variety of foods while enabling those who are financially stable to decide on what they want to consume. Factors such as health status, body image, and psychological status also determine one's food habits. Emotions and the way individuals feel about themselves propel and hinder them to consume certain foods, which are linked to emotional gain expected after consuming them. Students who indicated to be health-conscious tended to maintain their body fitness because healthy eating and physical activity helps boost the functioning of the mind.

Social or interpersonal factors such as family, friends, and social media influence university students' food choices. Food is used in many social spaces and it can facilitate social interaction among friends and family. Therefore, findings from this study have shown how food can create a bond between friends, maintain friendships and help one conform to friendship expectations, which is having a sense of belonging. Findings from this study have shown how food brings families together, as well as how individuals learn food patterns from their families that they tend to practice for the rest of their lives. The role of social media and social status has also been outlined in this study, on how university students learn certain food practices from social media and strive to engage in those food practices to maintain social status amongst others.

The environment and the geographical location university students live in also influence their food choices. This study has shown how the university environment promotes unhealthy eating, which hinders university students to practice healthy eating around campus. The school residences, where students reside are surrounded by fast foods, and students find it easier and convenient to access fast foods due to time constraints, due to

limited time to prepare meals because of study obligations. Inadequate cooking facilities, limited storage capacity in school residences also restricts students to use a variety of perishable foods and cooking methods when preparing foods. However, students who are living at home appear to have healthier food choices because their families decide what they eat, and they have adequate facilities to use for storing food and different cooking methods when preparing foods.

## **CHAPTER 6: CONCLUSION, LIMITATIONS AND RECOMMENDATIONS**

### **6.1 Conclusion**

The findings from this study demonstrated the broad range of factors perceived by university students as influencing their dietary patterns and these findings also suggest that there is a quite complex relationship between these factors. The transition from home to university was shown to have a significant impact on university student's food choices as they became more independent and moved to university. This is because the living environment in the university places students in usual circumstances that involve detachment from their family members. While some make new friends and meet new roommates, others struggle to adapt to the university environment that propels them to make more unhealthy food choices as previously when they were living at home and when parents made the decisions about what to eat.

Students have revealed various sources of knowledge about food choices as well as interests and motivation students have when it comes to food. Family is reported to be the primary source of knowledge on food choices, especially from mothers because students consume what they grew up eating at home and are still making their food choices based on what their families used to provide for them. Findings have shown some slight changes to university students who are living independently at campus residences in their breakfast because students have indicated that they never ate cereals back at home, but now that they are at university, they can buy them for themselves.

The school is also a source of knowledge for students' food choices. Students learned about food choices from LO subject as it taught them foods that are healthy and unhealthy for their bodies. However, the application of what was taught from this subject was a major challenge to most students as their families did not have the means to provide healthy food for them. Television (TV) is also a source of knowledge about food for university students, and this has a huge impact on students' food choices, especially those who are more passionate about food and health-conscious, as they tend to follow those food programs on TV. Students who are health conscious also tend to research the kinds of food they should consume.

Ideal food according to university students is a home-cooked balanced meal that is considered nutritious. Ideal food should consist of all the food groups in a moderate amount, and it should not be food that has too many fats, sugars, and oils or processed and have too many preservatives, as these foods are considered very detrimental to one's health. Balanced and nutritious food gives students a feeling of satisfaction and can actually make them feel full after eating it. However, for some students, ideal food is fried chips and fried chicken as results show that students feel satisfied after consuming such food. This leads to the fact that student's eating habits differ on a typical day.

Time constraints have been shown to hinder university students to practice healthy dietary patterns and they tend to buy junk food from fast food franchises because it is convenient, easy to prepare, and does not require much cleaning after having a meal. The shortage of cooking facilities and lack of cooking skill within the school residences can also hinder university students to have healthy meals because they lack what it takes to make healthy diets

The taste of food appeared to be the primary factor in determining students' dietary patterns as it has appeared to be the primary factor in food choices among university students. However, for students who are health conscious, the taste of food seems to be a secondary factor in their dietary habits, because they are always conscious of what they put into their bodies. Students disagreed with the notion that healthy food does not taste good; hence it is up to the individual's knowledge and capabilities to make healthy food tastes nice.

The economic status of university students seems to be of major influence in determining their food choices. This is because most students are coming from low-income families and some are dependent on the National Student Financial Aid Scheme (NSFAS), which is not even enough to cater to some of the students. This made students to unable to afford healthy food, as they tend to consider quantity over quality when buying foods so that they can buy enough food to sustain them for a whole month. In contrast to this, the economic status does not seem to have much effect on students who are living at home with their parents, because their daily basic needs are always catered for by their parents at home.

Interpersonal factors such as the influence from peers and the environment individuals live in influence their food choices. Students place more value on eating as a social activity

with peers and students enjoy eating out with their friends during weekends, and they seem to make unhealthy food choices when eating as a group with friends as compared to eating alone. Social status also influences university students' dietary patterns because they want to live up to their peers' social standards and have some social identity amongst others. So, this makes students practice the habit of taking pictures of their food so that they can post on social media platforms to boost their ego and as a sign that they can afford to buy expensive trendy food.

However, some students seemed to be against the habit of taking one's own food and post them on social media, because they think people who are doing so are just feeding their ego and are just showing off their wealth, which they consider as being inhuman. Media and advertisements through television, billboards, and various social media platforms, play a vital role in influencing students' dietary patterns. When students see an advert either on television or social media, they want to try that food too. Modeling from celebrities and high profiled people also influences students' food choices because some students' food choices are based on the people who inspire them or who they look up to.

Culture and religion can hinder or propel university students' consumption of certain foods. Students from Christianity reported that consuming pork is prohibited because it is known to have demons and consuming it is regarded as a sin. Some students' moral conviction has driven them to become vegetarians because they believe killing an animal for food is a sin. Students' state of health influences their food choices, because those who perceive themselves healthy are not conscious of what they consume, and do not even care about the consequences of consuming unhealthy food in the future. However, those students who have some health problems or come from families with the genetic disease are very conscious of what they consume, because they do not want to worsen their health condition.

Thus, students who are health conscious tend to read labels when shopping, whilst some students complained that some of the nutritional information there is very scientific and therefore difficult for them to understand, and some end up searching the meanings on the internet. University students seem to understand the implications of unhealthy eating, but they do not put their knowledge into practice. They mentioned that unhealthy eating can reduce a student's academic performance because healthy foods boost the functioning of

the mind. Students have mentioned that unhealthy foods are energy dense and can make one feel fatigued, that is why they end up drinking energy drinks to boost their energy for studying. Various strategies to promote healthy eating have been proposed by students and how different stakeholders can play their roles in promoting healthy eating among university students.

There is a need for more research on the factors that influence food choices among university students, and both the government and the university management should also play their part in meeting researchers to provide funding for workshops, campaigns, and programs that teach students healthy eating behaviours. The university management should also ensure that cafeterias around campus sell healthy foods or at least offer combos of both healthy and unhealthy foods for students. The government should subsidise healthy foods so that it can be easily affordable to everyone. However, students mentioned that healthy eating can also be a choice because even if the university management ensures the provision of healthy foods in school cafeterias students can still decide to consume unhealthy food. There is also a need to provide adequate knowledge and skills on how students can make healthy foods out of the food items they have and knowledge on healthy cooking methods.

## **6.2 Limitations**

Small qualitative study findings are not generalizable to the population of students at the University of KwaZulu-Natal (KZN) nor South Africa (SA). Therefore, more qualitative work is needed among students and vendors to better understand the pricing issues. Students also had issues of confidentiality and food insecurity, hence there is a stigma around some food choices. Participants therefore wanted it to be very confidential as they were very sensitive on their dietary patterns.

The environment in the university seem not to promote healthy eating as students tend to have greater independency in choosing their foods and dietary while the foods available on and around campus seem to promote unhealthy eating practices. Media, especially adverts from television seem not to focus on the promotion of healthy eating but rather fast foods.

### **6.3 Recommendations**

With regards to recommendations for future research, quantitative studies will improve the generalisability of findings regarding food choices and accessibility and affordability of healthy foods.

The following recommendations are drawn from the findings and conclusion of the study. The university should organize nutrition education programs aimed at improving awareness of healthy eating and motivation to develop healthy lifestyle habits, as well as the negative consequences of unhealthy eating. These programs should educate students how to prepare food in easy and affordable recipes. Students need to know about (Non-Communicable Diseases) NCDs, risk factors for NCD and their own genetic predispositions to develop NCDs. Therefore, Students must also be given awareness on the benefits of healthy eating, as it is not only for physical health but also for mental health and academic progress.

The university should therefore be responsible to ensure an enabling environment with more healthy meals available on campus. An independent audit should be conducted by the university pertaining to the kind of foods available and its nutritious value. There should be guidelines for vendors, cafeterias and food stalls on subsidies for healthy foods such as fruits, salads, and zero-sugar beverages, to ensure a balanced diet at an affordable price. UKZN should see what other universities do in this regard to enhance healthy eating such as ensuring that students use prepaid meal cards to eat a balanced lunch as well as structural improvement of storage and cooking of food in the student residences. This will yield to better academic outcomes hence ensuring food security.

Particular aspects that play a role in food choices should be addressed, namely taste, fast food consumption, peer pressure and social status. Students should be made aware of the advertising of fast foods and the health consequences in this regard. There is also a need to revise advertisement regulations on television. This is because adverts focus more on fast foods as opposed to healthy foods and has a major influence on university students' food choices. Adverts should also focus more on raising awareness on the implications of unhealthy eating.

The transition from home to university seems to be one of the factors that influence food choices among university students. Therefore, there should be community projects that will promote the gardening of organic vegetables, which will provide more information on healthy eating whilst encouraging healthy eating habits. Since the university has enough land, it will be easier for students to continue with their gardening habits from home and grow their own vegetables. This will promote healthy eating while reducing costs and also promote physical activity, as this can also be done as leisure activity. Accessibility, affordability, and availability of health foods around and on campus are essential to ensure health and wellbeing among students in support of their academic progress.

## REFERENCES

- Abraham, S., Martinez, M., Salas, G., & Smith, J. (2018). College student's perception of risk factors related to fast food consumption and their eating habits. *Journal of Nutrition and Human Health, 2*(1).
- Abraham, S., Noriega, B. R., & Shin, J. Y. (2018). College students eating habits and knowledge of nutritional requirements. *Journal of Nutrition and Human Health, 2*(1).
- Abraham, S., Noriega, B. R., & Shin, J. Y. (2018). College students eating habits and knowledge of nutritional requirements. *Journal of Nutrition and Human Health, 2*(1).
- Abraham, S., Noriega, B. R., & Shin, J. Y. (2018). College students eating habits and knowledge of nutritional requirements. *Journal of Nutrition and Human Health, 2*(1).
- Allender, S., Gleeson, E., Crammond, B., Sacks, G., Lawrence, M., Peeters, A., ... & Swinburn, B. (2011). Policy change to create supportive environments for physical activity and healthy eating: which options are the most realistic for local government?. *Health promotion international, 27*(2), 261-274.
- Anney, V. N. (2014). Ensuring the quality of the findings of qualitative research: Looking at trustworthiness criteria.
- Antony, M., & Bhatti, R. K. (2015). Junk food consumption and knowledge about its ill effects among teenagers: a descriptive study. *IJSR, 4*(6), 1133-1136.
- Antwi, S. K., & Hamza, K. (2015). Qualitative and quantitative research paradigms in business research: A philosophical reflection. *European journal of business and management, 7*(3), 217-225.
- Ashurst, J., Van Woerden, I., Dunton, G., Todd, M., Ohri-Vachaspati, P., Swan, P., & Bruening, M. (2018). The association among emotions and food choices in first-year college students using mobile-ecological momentary assessments. *BMC Public Health, 18*(1), 573.

- Avram, C., & Oravitan, M. (2013). Fruit, vegetables and fast food consumption among University students. *Timisoara Physical Education and Rehabilitation Journal*, 5(10), 54-60.
- Badrasawi, M. M., & Zidan, S. J. (2019). Binge eating symptoms prevalence and relationship with psychosocial factors among female undergraduate students at Palestine Polytechnic University: a cross-sectional study. *Journal of eating disorders*, 7(1), 33.
- Bagordo, F., Grassi, T., Serio, F., Idolo, A., & De Donno, A. (2013). Dietary habits and health among university students living at or away from home in southern Italy. *Journal of Food & Nutrition Research*, 52(3).
- Barnes, S. P., Brown, K. M., McDermott, R. J., Bryant, C. A., & Kromrey, J. (2012). Perceived parenting style and the eating practices of college freshmen. *American Journal of Health Education*, 43(1), 8-17.
- Bazeley, P., & Jackson, K. (Eds.). (2013). *Qualitative data analysis with NVivo*. SAGE publications limited.
- Bisogni, C. A., Connors, M., Devine, C. M., & Sobal, J. (2002). Who we are and how we eat: a qualitative study of identities in food choice. *Journal of Nutrition Education and Behavior*, 34(3), 128-139.
- Bisogni, C. A., Jastran, M., Shen, L., & Devine, C. M. (2005). A biographical study of food choice capacity: Standards, circumstances, and food management skills. *Journal of nutrition education and behavior*, 37(6), 284-291.
- Blanche, M. T., Blanche, M. J. T., Durrheim, K., & Painter, D. (Eds.). (2006). *Research in practice: Applied methods for the social sciences*. Juta and Company Ltd.
- Bordeaux, B., & Lieberman, H. R. (2013). Benefits and risks of caffeine and caffeinated beverages. UpToDate. com.
- Borg, C. N. (2011). *Food consumption patterns of University students* (Bachelor's thesis, University of Malta).

- Bosu, W. K. (2015). An overview of the nutrition transition in West Africa: implications for non-communicable diseases. *Proceedings of the nutrition society*, 74(4), 466-477.
- Bove, C. F., & Sobal, J. (2006). Foodwork in newly married couples: Making family meals. *Food, Culture & Society*, 9(1), 69-89.
- Boyland, E. J., Nolan, S., Kelly, B., Tudur-Smith, C., Jones, A., Halford, J. C., & Robinson, E. (2016). Advertising as a cue to consume: a systematic review and meta-analysis of the effects of acute exposure to unhealthy food and nonalcoholic beverage advertising on intake in children and adults, 2. *The American journal of clinical nutrition*, 103(2), 519-533.
- Bradshaw, M. B., & Stratford, E. (2010). Qualitative research design and rigour.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.
- Brown, C., Shaibu, S., Maruapula, S., Malete, L., & Compher, C. (2015). Perceptions and attitudes towards food choice in adolescents in Gaborone, Botswana. *Appetite*, 95, 29-35.
- Burgess-Champoux, T. L., Larson, N., Neumark-Sztainer, D., Hannan, P. J., & Story, M. (2009). Are family meal patterns associated with overall diet quality during the transition from early to middle adolescence?. *Journal of nutrition education and behavior*, 41(2), 79-86.
- Carlisle, S., & Hanlon, P. (2014). Connecting food, well-being and environmental sustainability: towards an integrative public health nutrition. *Critical Public Health*, 24(4), 405-417.
- Cediel, G., Reyes, M., Corvalán, C., Levy, R. B., Uauy, R., & Monteiro, C. A. (2020). Ultra- processed foods drive to unhealthy diets: evidence from Chile. *Public Health Nutrition*, 1-10.

- Chamoun, E., Liu, A. A., Duizer, L. M., Darlington, G., Duncan, A. M., Haines, J., & Ma, D. W. (2019). Taste sensitivity and taste preference measures are correlated in healthy young adults. *Chemical senses, 44*(2), 129-134.
- Chan, K., Tse, T., Tam, D., & Huang, A. (2016). Perception of healthy and unhealthy food among Chinese adolescents. *Young consumers*.
- Chen, X., & Yang, X. (2014). Does food environment influence food choices? A geographical analysis through “tweets”. *Applied Geography, 51*, 82-89.
- Chignell, A. (2018). Religious dietary practices and secular food ethics; or, how to hope that your food choices make a difference even when you reasonably believe that they don't.
- Chung, S. J., Ersig, A. L., & McCarthy, A. M. (2017). The influence of peers on diet and exercise among adolescents: a systematic review. *Journal of pediatric nursing, 36*, 44-56.
- Ciccone, J. (2013). Parent and young adolescent perspectives of family meals and meal preparation and the influence of the Kinect-Ed program.
- Claasen, N., Van Der Hoeven, M., & Covic, N. (2016). Food environments, health and nutrition in South Africa: Mapping the research and policy terrain.
- Cochran, William G. *Sampling techniques*. John Wiley & Sons, 2007.
- Connelly, L. M. (2016). Trustworthiness in qualitative research. *Medsurg Nursing, 25*(6), 435-437.
- Connors, M., Bisogni, C. A., Sobal, J., & Devine, C. M. (2001). Managing values in personal food systems. *Appetite, 36*(3), 189-200.
- Cooke, R., & Papadaki, A. (2014). Nutrition label use mediates the positive relationship between nutrition knowledge and attitudes towards healthy eating with dietary quality among university students in the UK. *Appetite, 83*, 297-303.
- Craig, W. J. (2010). Nutrition concerns and health effects of vegetarian diets. *Nutrition in Clinical Practice, 25*(6), 613-620.

- Croll, J. K., Neumark-Sztainer, D., & Story, M. (2001). Healthy eating: what does it mean to adolescents?. *Journal of nutrition education*, 33(4), 193-198.
- Croxford, S., & Itsiopoulos, C. (2020). Cultures, beliefs and food habits. *Food and Nutrition Throughout Life: A comprehensive overview of food and nutrition in all stages of life*, 51.
- De Wet-Billings, N., & Frade, S. (2020). Non-communicable disease comorbidities (NCDCs) among youth in South Africa: the causal contribution of not being in school or work and other socioeconomic characteristics. *Journal of Public Health*, 1-8.
- Dehghan, M., Mente, A., Zhang, X., Swaminathan, S., Li, W., Mohan, V., ... & Amma, L. I. (2017). Associations of fats and carbohydrate intake with cardiovascular disease
- Deliens, T., Clarys, P., De Bourdeaudhuij, I., & Deforche, B. (2014). Determinants of eating behaviour in university students: a qualitative study using focus group discussions. *BMC public health*, 14(1), 53.
- Deliens, T., Deforche, B., Annemans, L., De Bourdeaudhuij, I., & Clarys, P. (2016). Effectiveness of pricing strategies on French fries and fruit purchases among university students: results from an on-campus restaurant experiment. *PLoS One*, 11(11), e0165298.
- Delobelle, P., Sanders, D., Puoane, T., & Freudenberg, N. (2016). Reducing the role of the food, tobacco, and alcohol industries in noncommunicable disease risk in South Africa. *Health Education & Behavior*, 43(1\_suppl), 70S-81S.
- Deshpande, S., Basil, M. D., & Basil, D. Z. (2009). Factors influencing healthy eating habits among college students: An application of the health belief model. *Health marketing quarterly*, 26(2), 145-164.
- Devine, C. M., Connors, M., Bisogni, C. A., & Sobal, J. (1998). Life-course influences on fruit and vegetable trajectories: qualitative analysis of food choices. *Journal of Nutrition Education*, 30(6), 361-370.

- Devine, C. M., Sobal, J., Bisogni, C. A., & Connors, M. (1999). Food choices in three ethnic groups: Interactions of ideals, identities, and roles. *Journal of nutrition education, 31*(2), 86-93.
- Dhillon, J., Diaz Rios, L. K., Aldaz, K. J., De La Cruz, N., Vu, E., Asad Asghar, S., ... & Ortiz, R. M. (2019). We don't have a lot of healthy options: Food environment perceptions of first-year, minority college students attending a food desert campus. *Nutrients, 11*(4), 816.
- Dickens, E., & Ogden, J. (2014). The role of parental control and modelling in predicting a child's diet and relationship with food after they leave home. A prospective study. *Appetite, 76*, 23-29.
- Dury, S., & Martin-Prével, Y. (2019). Nutritional risks of unhealthy diets. *FOOD SYSTEMS AT RISK*, 111.
- Edirisingha, P. (2012). Interpretivism and positivism (ontological and epistemological perspectives). *Research Paradigms and Approaches*.
- El Ansari, W., Stock, C., & Mikolajczyk, R. T. (2012). Relationships between food consumption and living arrangements among university students in four European countries-a cross-sectional study. *Nutrition journal, 11*(1), 28.
- El Fessikh, M., Rkain, H., Dakka, T., Bakri, Y., & Dakka, N. (2018). Factors Related to Unhealthy Eating Habits and to Physical Inactivity among Moroccan University Students. *Asian Journal of Applied Sciences, 6*(2).
- Elder Jr, G. H. (1985). Life course dynamics: trajectories and transitions 1968-1980.
- Falk, L. W., Bisogni, C. A., & Sobal, J. (2000). Diet change processes of participants in an intensive heart program. *Journal of Nutrition Education and Behavior, 32*(5), 240-250.
- Fallatah, R. H. M., & Syed, J. (2018). A critical review of Maslow's hierarchy of needs. In *Employee Motivation in Saudi Arabia* (pp. 19-59). Palgrave Macmillan, Cham.

- Fitzgerald, A., Heary, C., Nixon, E., & Kelly, C. (2010). Factors influencing the food choices of Irish children and adolescents: a qualitative investigation. *Health promotion international, 25*(3), 289-298.
- Florence, M. D., Asbridge, M., & Veugelers, P. J. (2008). Diet quality and academic performance. *Journal of school health, 78*(4), 209-215.
- Frewer, L. J., Risvik, E., & Schifferstein, H. (Eds.). (2013). *Food, people and society: a European perspective of consumers' food choices*. Springer Science & Business Media.
- Fujiwara, T., & Nakata, R. (2010). Skipping breakfast is associated with reproductive dysfunction in post-adolescent female college students. *Appetite, 55*(3), 714-717.
- Gauntlett, D. (2008). *Media, gender and identity: An introduction*. Routledge.
- Giles, K., Davidson, J., & Sas, M. (2016). Influence of Gender and Social Setting on College Student Food Choices. *Undergraduate Research Journal for the Human Sciences, 15*(1).
- Goon, S., Bipasha, M. S., & Islam, M. S. (2014). Fast food consumption and obesity risk among university students of Bangladesh. *European Journal of Preventive Medicine, 2*(6), 99-104.
- Green, V., Harrell, N., Pinkney, T., & Stephens, E. (2019). Evaluation of Breakfast Eating Habits of Female College Students.
- Gross, S. M., Pollock, E. D., & Braun, B. (2010). Family influence: key to fruit and vegetable consumption among fourth-and fifth-grade students. *Journal of Nutrition Education and Behavior, 42*(4), 235-241.
- Hanson, K. L., & Connor, L. M. (2014). Food insecurity and dietary quality in US adults and children: a systematic review. *The American journal of clinical nutrition, 100*(2), 684-692.

- Hartmann, C., Dohle, S., & Siegrist, M. (2013). Importance of cooking skills for balanced food choices. *Appetite*, *65*, 125-131.
- Hawley, K. L., Roberto, C. A., Bragg, M. A., Liu, P. J., Schwartz, M. B., & Brownell, K. D. (2013). The science on front-of-package food labels. *Public health nutrition*, *16*(3), 430-439.
- Hayes, J. F., Giles, G. E., Mahoney, C. R., & Kanarek, R. B. (2018). Breakfast food health and acute exercise: Effects on state body image. *Eating behaviors*, *30*, 22-27.
- Hilger, J., Loerbroks, A., & Diehl, K. (2017). Eating behaviour of university students in Germany: Dietary intake, barriers to healthy eating and changes in eating behaviour since the time of matriculation. *Appetite*, *109*, 100-107.
- Hird, T. R. (2017). *Risk factors for cardiometabolic disease in the eThekweni Municipality (City of Durban), South Africa* (Doctoral dissertation, University of Cambridge).
- Houghton, C., Casey, D., Shaw, D., & Murphy, K. (2013). Rigour in qualitative case-study research. *Nurse researcher*, *20*(4).
- Jabs, J., & Devine, C. M. (2006). Time scarcity and food choices: an overview. *Appetite*, *47*(2), 196-204.
- Kabir, A., Miah, S., & Islam, A. (2018). Factors influencing eating behavior and dietary intake among resident students in a public university in Bangladesh: A qualitative study. *PloS one*, *13*(6), e0198801.
- Kalu, F. A., & Bwalya, J. C. (2017). What makes qualitative research good research? An exploratory analysis of critical elements. *International Journal of Social Science Research*, *5*(2), 43-56.
- Kapinos, K. A., & Yakusheva, O. (2011). Environmental influences on young adult weight gain: evidence from a natural experiment. *Journal of Adolescent Health*, *48*(1), 52-58.
- Katz, D. L., Katz, C. S., Treu, J. A., Reynolds, J., Njike, V., Walker, J., ... & Michael, J. (2011). Teaching healthful food choices to elementary school students and their

- parents: The Nutrition Detectives Program. *Journal of School Health*, 81(1), 21-28.
- Kaushik, J. S., Narang, M., & Parakh, A. (2011). Fast food refers to food that can be served ready to eat. The terms fast food and junk food are often used interchangeably. Most of the junk foods are fast foods as they are prepared and served fast, but not all fast foods are junk foods, especially when they are prepared with nutritious contents [1]. The definitions of various food items are described in Table I. *Indian Pediatr*, 48, 97-101.
- Kemps, E., Tiggemann, M., & Hollitt, S. (2014). Exposure to television food advertising primes food-related cognitions and triggers motivation to eat. *Psychology & health*, 29(10), 1192- 1205.
- Khan, S. N. (2014). Qualitative research method-phenomenology. *Asian Social Science*, 10(21), 298.
- King, N., Horrocks, C., & Brooks, J. (2018). *Interviews in qualitative research*. SAGE Publications Limited.
- Kostova, I. (2017). Thick Description. *The Wiley-Blackwell Encyclopedia of Social Theory*, 1-2.
- Kroone, D., & Alant, B. (2012). Understanding influences on teenage food choices in a Durban High School with a view to improving praxis. *International Journal of Consumer Studies*, 36(4), 472-479
- Labadarios, D., Mchiza, Z. J. R., Steyn, N. P., Gericke, G., Maunder, E. M. W., Davids, Y. D., & Parker, W. A. (2011). Food security in South Africa: a review of national surveys. *Bulletin of the World Health Organization*, 89, 891-899.
- LaCaille, L. J., Dauner, K. N., Krambeer, R. J., & Pedersen, J. (2011). Psychosocial and environmental determinants of eating behaviors, physical activity, and weight change among college students: a qualitative analysis. *Journal of American College Health*, 59(6), 531-538.

- Lachat, C., Otchere, S., Roberfroid, D., Abdulai, A., Seret, F. M. A., Milesevic, J., ... & Kolsteren, P. (2013). Diet and physical activity for the prevention of noncommunicable diseases in low-and middle-income countries: a systematic policy review. *PLoS Med*, *10*(6), e1001465.
- Laganà, P., Avventuroso, E., Romano, G., Gioffré, M. E., Patanè, P., Parisi, S., ... & Delia, S. (2017). Food additives and effects on the microbial ecology in yoghurts. In *Chemistry and Hygiene of Food Additives* (pp. 33-37). Springer, Cham.
- Larson, N., & Story, M. (2009). A review of environmental influences on food choices. *Annals of Behavioral Medicine*, *38*(1), 56-73.
- Lee, C. J. G. (2012). Reconsidering constructivism in qualitative research. *Educational Philosophy and theory*, *44*(4), 403-412.
- Leng, G., Adan, R. A., Belot, M., Brunstrom, J. M., de Graaf, K., Dickson, S. L., ... & Reisch, L. A. (2017). The determinants of food choice. *Proceedings of the Nutrition Society*, *76*(3), 316-327.
- Leppo, K., Ollila, E., Pena, S., Wismar, M., & Cook, S. (2013). *Health in all policies-seizing opportunities, implementing policies*. sosiaali-ja terveystoimistöt.
- Liu, I., Norman, W. C., & Pennington-Gray, L. (2013). A flash of culinary tourism: Understanding the influences of online food photography on people's travel planning process on flickr. *Tourism Culture & Communication*, *13*(1), 5-18.
- Llanaj, E., Ádány, R., Lachat, C., & D'Haese, M. (2018). Examining food intake and eating out of home patterns among university students. *PLoS One*, *13*(10), e0197874.
- Loomis, D., Guyton, K. Z., Grosse, Y., Lauby-Secretan, B., El Ghissassi, F., Bouvard, V., & Straif, K. (2016). Carcinogenicity of drinking coffee, mate, and very hot beverages. *Lancet Oncology*, *17*(7), 877.
- Lusk, J. L., & Briggeman, B. C. (2009). Food values. *American Journal of Agricultural Economics*, *91*(1), 184-196.

- Martins, A. P. B., Levy, R. B., Claro, R. M., Moubarac, J. C., & Monteiro, C. A. (2013). Increased contribution of ultra-processed food products in the Brazilian diet (1987-2009). *Revista de saude publica*, *47*(4), 656-665.
- Maxwell, J. A. (2012). *Qualitative research design: An interactive approach* (Vol. 41). Sage publications.
- Mayosi, B. M., Flisher, A. J., Lalloo, U. G., Sitas, F., Tollman, S. M., & Bradshaw, D. (2009). The burden of non-communicable diseases in South Africa. *The lancet*, *374*(9693), 934-947.
- McFadyen, J., & Rankin, J. (2016). The role of gatekeepers in research: learning from reflexivity and reflection. *GSTF Journal of Nursing and Health Care*, *4*(1), 82-88.
- Mchiza, Z. J. R., Parker, W. A., Sewpaul, R., Onagbiye, S. O., & Labadarios, D. (2020). Body image and the double burden of nutrition among South Africans from diverse sociodemographic backgrounds: SANHANES-1. *International journal of environmental research and public health*, *17*(3), 887.
- Mchiza, Z. J., Temple, N. J., Steyn, N. P., Abrahams, Z., & Clayford, M. (2013). Content analysis of television food advertisements aimed at adults and children in South Africa. *Public health nutrition*, *16*(12), 2213-2220.
- Micevski, D. A., Thornton, L. E., & Brockington, S. (2014). Food insecurity among university students in Victoria: A pilot study. *Nutrition & dietetics*, *71*(4), 258-264.
- Michels, N., Man, T., Vinck, B., & Verbeyst, L. (2020). Dietary changes and its psychosocial moderators during the university examination period. *European Journal of Nutrition*, *59*(1), 273-286.
- Miura, K., & Turrell, G. (2014). Reported consumption of takeaway food and its contribution to socioeconomic inequalities in body mass index. *Appetite*, *74*, 116-124.

- Monteiro, C. A., Moubarac, J. C., Cannon, G., Ng, S. W., & Popkin, B. (2013). Ultra-processed products are becoming dominant in the global food system. *Obesity reviews, 14*, 21-28.
- Moss, M. (2013). The extraordinary science of addictive junk food. *New York*.
- Murimi, M. W., Chrisman, M., McCollum, H. R., & Mcdonald, O. (2016). A qualitative study on factors that influence students' food choices. *J Nutri Health, 2*(1), 6.
- Murray, D. W., Mahadevan, M., Gatto, K., O'Connor, K., Fissinger, A., Bailey, D., & Cassara, E. (2016). Culinary efficacy: an exploratory study of skills, confidence, and healthy cooking competencies among university students. *Perspectives in Public Health, 136*(3), 143-151.
- Naicker, N., Mathee, A., & Teare, J. (2015). Food insecurity in households in informal settlements in urban South Africa. *South African Medical Journal, 105*(4), 268-270.
- Neslişah, R., & Emine, A. Y. (2011). Energy and nutrient intake and food patterns among Turkish university students. *Nutrition research and practice, 5*(2), 117-123.
- Nestle, M. (2013). *Food politics: How the food industry influences nutrition and health* (Vol. 3). Univ of California Press.
- Neuman, W. L. (2016). *Understanding research*. Pearson.
- Ng, K. W., Sangster, J., & Priestly, J. (2019). Assessing the availability, price, nutritional value and consumer views about foods and beverages from vending machines across university campuses in regional New South Wales, Australia. *Health Promotion Journal of Australia, 30*(1), 76-82.
- Ngwato, S. E. (2020). *Factors which contribute to poor academic achievement in TVET colleges: a case study* (Doctoral dissertation).
- Oddo, V. M., Kodish, S. R., Antiporta, D., Chodur, G., & Jones-Smith, J. C. (2016). An Application of the Food Choice Process Model—Understanding Factors

- Influencing Food Choices on American Indian Lands. *The FASEB Journal*, 30(1\_supplement), 1151-10.
- Patton, M. Q. (2005). Qualitative research. *Encyclopedia of statistics in behavioral science*.
- Pearson, N., Biddle, S. J., & Gorely, T. (2009). Family correlates of fruit and vegetable consumption in children and adolescents: a systematic review. *Public health nutrition*, 12(2), 267-283.
- Pelletier, J. E., & Laska, M. N. (2013). Campus food and beverage purchases are associated with indicators of diet quality in college students living off campus. *American Journal of Health Promotion*, 28(2), 80-87.
- Ponterotto, J. G. (2010). Qualitative research in multicultural psychology: Philosophical underpinnings, popular approaches, and ethical considerations. *Cultural Diversity and Ethnic Minority Psychology*, 16(4), 581.
- Popkin, B. M. (2006). Global nutrition dynamics: the world is shifting rapidly toward a diet linked with noncommunicable diseases—. *The American journal of clinical nutrition*, 84(2), 289-298.
- Prinsloo, E. (2007). Implementation of life orientation programmes in the new curriculum in South African schools: perceptions of principals and life orientation teachers. *South African journal of education*, 27(1), 155-170.
- Prinyawiwatkul, W. (2020). Relationships between Emotion, Acceptance, Food Choice, and Consumption: Some New Perspectives.
- Punitha, V. C., Amudhan, A., Sivaprakasam, P., & Rathanaprabu, V. (2015). Role of dietary habits and diet in caries occurrence and severity among urban adolescent school children. *Journal of pharmacy & bioallied sciences*, 7(Suppl 1), S296.
- Puoane, T. R., Tsolekile, L. P., Caldbick, S., Igumbor, E. U., Meghnath, K., & Sanders, D. (2012). Chronic non-communicable diseases in South Africa: Progress and challenges: Social and environmental determinants of health. *South African Health Review*, 2012(2012/2013), 115-126.

- Raz, I., Ziegler, A. G., Linn, T., Scherthaner, G., Bonnici, F., Distiller, L. A., ... & Procházka, V. (2014). Treatment of recent-onset type 1 diabetic patients with DiaPep277: results of a double-blind, placebo-controlled, randomized phase 3 trial. *Diabetes Care*, *37*(5), 1392-1400.
- Reddy, P., Zuma, K., Shisana, O., Jonas, K., & Sewpaul, R. (2015). Prevalence of tobacco use among adults in South Africa: results from the first South African National Health and Nutrition Examination Survey. *South African Medical Journal*, *105*(8), 648-655.
- Reeder, N. A. (2005). *A tasteful education: healthy and delicious lessons about food* (Doctoral dissertation).
- Rocha, J. P., Laster, J., Parag, B., & Shah, N. U. (2019). Multiple Health Benefits and Minimal Risks Associated with Vegetarian Diets. *Current nutrition reports*, *8*(4), 374-381.
- Roy, R., Kelly, B., Rangan, A., & Allman-Farinelli, M. (2015). Food environment interventions to improve the dietary behavior of young adults in tertiary education settings: a systematic literature review. *Journal of the Academy of Nutrition and Dietetics*, *115*(10), 1647-1681.
- Rubin, D. B. (2005). Causal inference using potential outcomes: Design, modeling, decisions. *Journal of the American Statistical Association*, *100*(469), 322-331.
- Ruhm, C. J. (2012). Understanding overeating and obesity. *Journal of Health economics*, *31*(6), 781-796.
- Russo, C., & Simeone, M. (2017). The growing influence of social and digital media: Impact on consumer choice and market equilibrium. *British Food Journal*, *119*(8), 1766-1780.
- Salameh, P., Jomaa, L., Issa, C., Farhat, G., Salamé, J., Zeidan, N., ... & Lebanese National Conference for Health in University Research Group. (2014). Assessment of dietary intake patterns and their correlates among university students in Lebanon. *Frontiers in public health*, *2*, 185.

- Samdal, G. B., Eide, G. E., Barth, T., Williams, G., & Meland, E. (2017). Effective behaviour change techniques for physical activity and healthy eating in overweight and obese adults; systematic review and meta-regression analyses. *International Journal of Behavioral Nutrition and Physical Activity*, *14*(1), 1-14.
- Sargeant, J. (2012). Qualitative research part II: Participants, analysis, and quality assurance.
- Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., ... & Jinks, C. (2018). Saturation in qualitative research: exploring its conceptualization and operationalization. *Quality & quantity*, *52*(4), 1893-1907.
- Savelli, E., Murmura, F., Liberatore, L., Casolani, N., & Bravi, L. (2017). Food habits and attitudes towards food quality among young students. *International Journal of Quality and Service Sciences*.
- Scaglioni, S., Salvioni, M., & Galimberti, C. (2008). Influence of parental attitudes in the development of children eating behaviour. *British Journal of Nutrition*, *99*(S1), S22-S25.
- Schneider, M., Bradshaw, D., Steyn, K., Norman, R., & Laubscher, R. (2009). Poverty and non-communicable diseases in South Africa. *Scandinavian journal of public health*, *37*(2), 176-186.
- Schram, A., Labonté, R., & Sanders, D. (2013). Urbanization and international trade and investment policies as determinants of noncommunicable diseases in Sub-Saharan Africa. *Progress in cardiovascular diseases*, *56*(3), 281-301.
- Sedibe, H. M., Kahn, K., Edin, K., Gitau, T., Ivarsson, A., & Norris, S. A. (2014). Qualitative study exploring healthy eating practices and physical activity among adolescent girls in rural South Africa. *BMC pediatrics*, *14*(1), 211.
- Sgier, L. (2012). Qualitative data analysis. *An Initiat. Gebert Ruf Stift*, *19*, 19-21.
- Shareck, M., Lewis, D., Smith, N. R., Clary, C., & Cummins, S. (2018). Associations between home and school neighbourhood food environments and adolescents' fast-food and sugar-sweetened beverage intakes: findings from the Olympic

- Regeneration in East London (ORiEL) Study. *Public health nutrition*, 21(15), 2842-2851.
- Shepherd, R. (1999). Social determinants of food choice. *Proceedings of the Nutrition Society*, 58(4), 807-812.
- Shepherd, R., & Raats, M. (Eds.). (2006). *The psychology of food choice* (Vol. 3). Cabi.
- Shisana, O., Labadarios, D., Rehle, T., Simbayi, L., Zuma, K., Dhansay, A., ... & Hongoro, C. (2013). SANHANES-1 Team. South African National Health and Nutrition Examination Survey (SANHANES-1). Cape Town.
- Shisana, O., Labadarios, D., Rehle, T., Simbayi, L., Zuma, K., Dhansay, A., ... & Hongoro, C. (2014). The South African National Health and Nutrition Examination Survey, 2012: SANHANES-1: the health and nutritional status of the nation.
- Smart, L. R., & Bisogni, C. A. (2001). Personal food systems of male college hockey players. *Appetite*, 37(1), 57-70.
- Sobal, J. (2000). Sociability and meals: facilitation, commensality, and interaction. *Dimensions of the meal: The science, culture, business, and art of eating*, 119-133.
- Sobal, J., & Bisogni, C. A. (2009). Constructing food choice decisions. *Annals of Behavioral Medicine*, 38(suppl\_1), s37-s46.
- Sobal, J., & Nelson, M. K. (2003). Commensal eating patterns: a community study. *Appetite*, 41(2), 181-190.
- Sobal, J., Bisogni, C. A., Devine, C. M., & Jastran, M. (2006). A conceptual model of the food choice process over the life course. *Frontiers in Nutritional Science*, 3, 1.
- Solomon, M., Russell-Bennett, R., & Previte, J. (2012). *Consumer behaviour*. Pearson Higher Education AU.
- Spence, C. (2017). Breakfast: The most important meal of the day?. *International journal of gastronomy and food science*, 8, 1-6.g

- Spires, M., Delobelle, P., Sanders, D., Puoane, T., Hoelzel, P., & Swart, R. (2016). Diet-related non-communicable diseases in South Africa: determinants and policy responses. *South African Health Review*, 2016(1), 35-42.
- Stead, M., McDermott, L., MacKintosh, A. M., & Adamson, A. (2011). Why healthy eating is bad for young people's health: Identity, belonging and food. *Social science & medicine*, 72(7), 1131-1139.
- Steenhuis, I. H., Waterlander, W. E., & de Mul, A. (2011). Consumer food choices: the role of price and pricing strategies. *Public health nutrition*, 14(12), 2220-2226.
- Supski, S., Lindsay, J., & Tanner, C. (2017). University students' drinking as a social practice and the challenge for public health. *Critical Public Health*, 27(2), 228-237.
- Swinburn, B. A., Sacks, G., Hall, K. D., McPherson, K., Finegood, D. T., Moodie, M. L., & Gortmaker, S. L. (2011). The global obesity pandemic: shaped by global drivers and local environments. *The Lancet*, 378(9793), 804-814.
- Swinburn, B., Sacks, G., Vandevijvere, S., Kumanyika, S., Lobstein, T., Neal, B., ... & L'abbé, M. (2013). INFORMAS (International Network for Food and Obesity/non-communicable diseases Research, Monitoring and Action Support): overview and key principles. *Obesity reviews*, 14, 1-12.
- Swinburn, B., Vandevijvere, S., Kraak, V., Sacks, G., Snowdon, W., Hawkes, C., ... & L'abbé, M. (2013). Monitoring and benchmarking government policies and actions to improve the healthiness of food environments: a proposed Government Healthy Food Environment Policy Index. *Obesity reviews*, 14, 24-37.
- Symons, C., Polman, R., Moore, M., Borkoles, E., Eime, R., Harvey, J., ... & Payne, W. (2013). The relationship between body image, physical activity, perceived health, and behavioural regulation among Year 7 and Year 11 girls from metropolitan and rural Australia. *Annals of Leisure Research*, 16(2), 115-129.

- Tam, R., Yassa, B., Parker, H., O'Connor, H., & Allman-Farinelli, M. (2017). University students' on-campus food purchasing behaviors, preferences, and opinions on food availability. *Nutrition, 37*, 7-13.
- Temple, N. J., Steyn, N. P., Fourie, J., & De Villiers, A. (2011). Price and availability of healthy food: a study in rural South Africa. *Nutrition, 27*(1), 55-58.
- Tongco, M. D. C. (2007). Purposive sampling as a tool for informant selection. *Ethnobotany Research and applications, 5*, 147-158.
- Van Den Ende, C., Twisk, J. W. R., & Monyeki, K. D. (2014). The relationship between BMI and dietary intake of primary school children from a rural area of South Africa: the Ellisras longitudinal study. *American Journal of Human Biology, 26*(5), 701-706.
- Van Der Merwe, M. T., & Pepper, M. S. (2006). Obesity in South Africa. *Obesity reviews, 7*(4), 315-322.
- Viljoen, A. T., van der Spuy, E., & du Rand, G. E. (2018). Food consumption, lifestyle patterns, and body mass index of a group of white South African students. *International Journal of Consumer Studies, 42*(5), 533-546.
- Volkow, N. D., Wise, R. A., & Baler, R. (2017). The dopamine motive system: implications for drug and food addiction. *Nature Reviews Neuroscience, 18*(12), 741.
- Vorster, H. H. (2010). The link between poverty and malnutrition: A South African perspective. *Health SA Gesondheid, 15*(1).
- Wandai, M. E., Aagaard-Hansen, J., Manda, S. O., & Norris, S. A. (2020). Transitions between body mass index categories, South Africa. *Bulletin of the World Health Organization, 98*(12), 878.
- Wang, J., & Fielding-Singh, P. (2018). How food rules at home influence independent adolescent food choices. *Journal of Adolescent Health, 63*(2), 219-226.

- Watson, B., Broadbent, J., Skouteris, H., & Fuller-Tyszkiewicz, M. (2016). A qualitative exploration of body image experiences of women progressing through pregnancy. *Women and Birth, 29*(1), 72-79.
- Wethington, E. (2005). An overview of the life course perspective: implications for health and nutrition. *Journal of nutrition education and behavior, 37*(3), 115-120.
- Wight, V., Kaushal, N., Waldfogel, J., & Garfinkel, I. (2014). Understanding the link between poverty and food insecurity among children: Does the definition of poverty matter?. *Journal of Children and Poverty, 20*(1), 1-20.
- Williams, E. N., & Morrow, S. L. (2009). Achieving trustworthiness in qualitative research: A pan-paradigmatic perspective. *Psychotherapy research, 19*(4-5), 576-582.
- Wills, W., Backett-Milburn, K., Roberts, M. L., & Lawton, J. (2011). The framing of social class distinctions through family food and eating practices. *The Sociological Review, 59*(4), 725-740.
- Woolley, K., & Fishbach, A. (2017). A recipe for friendship: Similar food consumption promotes trust and cooperation. *Journal of Consumer Psychology, 27*(1), 1-10.
- World Health Organization. (2013). *Global action plan for the prevention and control of noncommunicable diseases 2013-2020*. World Health Organization.
- World Health Organization. (2014). *Global status report on noncommunicable diseases 2014* (No. WHO/NMH/NVI/15.1). World Health Organization.
- World Health Organization. (2016). *Global report on diabetes*.
- Yahia, N., Achkar, A., Abdallah, A., & Rizk, S. (2008). Eating habits and obesity among Lebanese university students. *Nutrition journal, 7*(1), 32.
- Yeh, J., Trang, A., Henning, S. M., Wilhalme, H., Carpenter, C., Heber, D., & Li, Z. (2016). Food cravings, food addiction, and a dopamine-resistant (DRD2 A1) receptor polymorphism in Asian American college students. *Asia Pacific journal of clinical nutrition, 25*(2), 424.

Zimmerman, F. J., & Shimoga, S. V. (2014). The effects of food advertising and cognitive load on food choices. *BMC Public Health*, *14*(1), 342.

## **APPENDIX 1: INFORMED CONSENT LETTER**

Dear Participant

**PARTICIPATION IN A RESEARCH PROJECT:** The exploration of factors that influence food choices among university of KwaZulu-Natal students at Howard College Campus

My name is Lindokuhle Malambe, I am a student registered for the Master of Social Science in Health Promotion in the Discipline of Psychology, School of Psychology, Howard Campus, University of KwaZulu-Natal in Durban. My supervisor is Professor Anna Meyer-Weitz in the Discipline of Psychology, School of Applied Human Sciences, at the University of KwaZulu-Natal.

You are being invited to consider participating in the study on the exploration of factors that influence food choices among university of KwaZulu-Natal students at Howard College Campus. This research study is part of the requirements for my degree mentioned above.

The aim and purpose of this research is to:

- Explore factors that influence food choices and whether these factors propel or hinder food choices among university students
- Explore student's understanding with regards to the consequences of unhealthy eating
- Explore how individuals can be informed about ways of healthy eating behaviours

You are required to participate in an interview that will take about 30 minutes to complete. It is expected that all information that is shared will be treated as confidential and anonymous between the participant and the researcher.

Please note the following:

- The information you will provide will be treated confidentially and will be anonymous as no name or information can be linked to you personally
- The information that will be shared during the interview will be treated confidentially and will be recorded and reported anonymously.

- Reporting of research information will only be done at an individual level.
- You have a choice to participate, not participate or stop participating in the research. There will be no negative consequences should you decide not to participate in the study.
- Data will be stored in secure storage in the Discipline of Psychology and destroyed after 5 years.
- Your involvement is purely for academic purposes only, and there are no financial benefits involved.
- We request your permission to audiotape the interview

This study has been ethically reviewed and approved by the UKZN Human Social Science Research Ethics Committee. Should you require clarification of further information regarding the study, please do not hesitate to contact me, my supervisor as well as the Humanities Social Science Research Committee. The contact details are below.

If you are willing to participate please indicate so by signing the section below. You may keep this letter for your information.

(Name) Lindokuhle

**Contact details of Researcher**

Address: 277 Rick Turner Road

Albert Luthuli Residence

Tower, Block E Room E506

Glenwood

4001

Tel: 0827184264

Email: malambelindokuhles@gmail.com

**Contact details of supervisor**

Address: Discipline of Psychology

School of Applied Human Sciences

College of Humanities

Howard College

University of KwaZulu-Natal

Glenwood

Tel: +27 (0)31 2607618

Durban

Email: [meyerweitza@ukzn.ac.za](mailto:meyerweitza@ukzn.ac.za)

**Contact details of the Humanities and Social Sciences Research Ethics Committee  
(HSSREC)**

Dr Rosemary Sibanda (Chair)

Westville Campus

Govan Mbeki Building

Private Bag X54001

Durban 4000

Telephone: (031) 260 8350

Fax: 031 260 4609

Email: [Snymanm@ukzn.ac.za](mailto:Snymanm@ukzn.ac.za)

Website: [www.ukzn.ac.za](http://www.ukzn.ac.za)

Kind regards

Lindokuhle Malambe

✂=====

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**PARTICIPANT DECLARATION**

I ..... (full names of participant) hereby confirm that I understand the contents of this document and the nature of this research project, and consent to participating in this study.

I hereby acknowledge that:

- Information I provide will be confidential and anonymous
- Participation in the study is voluntary
- I am at liberty to withdraw from the project at any time, should I so desire without any negative consequences
- I consent / do not consent to audiotape the interview

\_\_\_\_\_

Signature of Respondent

\_\_\_\_\_

Date

\_\_\_\_\_

Signature of researcher

\_\_\_\_\_

Date

## **APPENDIX 2: INTERVIEW GUIDE**

- What do you understand by food choice?
- What is the source of your knowledge of food choices? Explain.
- What would you eat in a typical day, and why?
- How do you normally prepare the food you eat?
- Which factors influence your food choices?
- What do you consider as ideal food?
- What are your thoughts regarding fast foods?
- How does advertising influence your food choice?
- Has the transition from home to the university influenced your food choice?
- What do you understand by healthy eating and what factors has influenced your understanding?
- What factors would influence your choice of healthy foods?
- Do you consider or read labels when shopping?
- What is your understanding of the nutritional value of the foods you consume?
- Does factors such as culture or religion play a role in your choice of food?
- Does the media and popular culture influence your food choice?
- The latest trends in popular culture is to take pictures of one's food, does that practice have any bearing on the kinds of food you choose to eat?
- How food consumption patterns and unhealthy eating can cause implication to the individuals health.
- How should individuals be informed about healthy foods eating behaviours?
- Do you have anything to suggest or add to the discussion we have had?

## **APPENDIX 3: ETHICAL CLEARANCE**