

**CONSUMERS' ATTITUDES TOWARDS READY-TO-EAT FAST-FOOD PRODUCTS  
AND THEIR RELATIONSHIP WITH OBESITY IN MDANSTANE TOWNSHIP IN THE  
EASTERN CAPE PROVINCE, SOUTH AFRICA**



**University of Fort Hare**  
*Together in Excellence*

*A Dissertation Submitted in Fulfilment of Requirements for the Degree Masters of Science in  
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## DECLARATION

I, Pamela Matyolo, declare that this research dissertation on “Consumers’ attitudes towards ready-to-eat fast-food products and their relationship with obesity: A case study of Mdanstane in the Eastern Cape province, South Africa” is the result of my work. It has not been submitted anywhere before for any degree purposes or examinations at any other university and all the sources that I have quoted or used have been indicated and acknowledged as complete references. This dissertation is being submitted in partial fulfilment of the requirements Master of Science in Agriculture (Agricultural Economics) at the University of Fort Hare, Alice.

I also hereby declare that I am fully aware of the institution’s policy on plagiarism and I have taken every precaution to comply with the regulations.

Signed at Fort Hare on this..... day of.....2017

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## **DEDICATIONS**

This dissertation is dedicated to my mother (Nosipho Matyolo), my family, and all the consumers of fast foods in South Africa and all those individuals affected by obesity.

## ACKNOWLEDGEMENTS

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## ABSTRACT

*The South African fast-food industry has experienced substantial recent growth. However, as consumers have incorporated more fast food into their daily diets, obesity has become a major problem. The aggressive marketing techniques of fast food firms coupled with the busy urban lifestyle have significant implications for dietary health habits. The study aimed at investigating consumers' attitudes towards fast food and the relationship between fast food consumption and obesity. The field survey design of the study employed a mixed-methods approach involving the use of a semi-structured questionnaire. The study was limited to the Mdantsane Township located in the Eastern Cape Province of South Africa. A quota sample of 200 respondents ( $n = 200$ ) was selected from which data were collected using a self-administered questionnaire. Descriptive results revealed that the participants had positive attitudes towards fast foods. Although they agreed that eating fast foods increased body weight, the participants mostly did not feel overweight or obese. The participants were well aware of the negative health implications of excessive fast food consumption. This knowledge generally did not deter their positive fast food attitudes, although participants expressed their desire for additional healthier fast food options in the market.*

*Regression estimates further revealed that carbohydrate and starchy type of fast foods ( $P < 0.01$ ), other sources of fast foods ( $P < 0.05$ ), age group, physical appearance and meaty type of fast foods ( $P < 0.10$ ) had significant influence on the frequency of fast food consumption. The results further revealed that physical appearance ( $P < 0.01$ ), religion ( $P < 0.05$ ), age group and supermarkets and source of fast foods ( $P < 0.1$ ) had significant influence on respondents' BMI scores. The study concludes that there exist socio-economic and institutional factors that have considerable bearing on consumers' fast food consumption and BMI scores. The study advocates for public health policy making concerning awareness of the negative health consequences of fast food consumption targeting mostly young adult females who mainly purchase in franchises and supermarkets with a high meaty diet.*

**Key words:** BMI, diet, fast foods, obesity, South Africa.

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## LIST OF ACRONYMS

AIDS:	Acquired Immune Deficiency Syndrome
BMI:	Body Mass Index
CBD:	Central business district
FAO:	Food and Agricultural Organisation
FBDGs:	Food-Based Dietary Guidelines
FF:	Fast food
HIV:	Human Immune Virus
ICTs:	Information and Communications Technology
KFC:	Kentucky Fried Chicken
NCCDPHP:	National Centre for Chronic Disease Prevention and Health Promotion
RDAs:	Recommended Daily Allowances
RECAPT:	Retailer and Consumer Acceptance of Promising Novel Technologies
RIDP:	Regional Investment Decentralisation Programme
SSA:	Sub-Saharan Africa
UN:	United Nations
USDA:	United States Department of Agriculture
WHO:	World Health Organisation

## **CHAPTER 1 : INTRODUCTION**

### **1.1 INTRODUCTION**

This study investigated consumers' attitude towards ready to-eat fast foods products and their relationship with obesity. In this chapter, background information regarding fast-food consumption, the problem statement, objectives of the study, research questions, research hypothesis, justification, thesis delimitation and limitation of the study and overview of the study are presented.

### **1.2 BACKGROUND INFORMATION**

Fast foods are ready-made, convenient, time saving, tasty and easy to eat (Tabassum & Rahman, 2012). Globally, the fast food industry encompasses all firms that sell such food, whether they are specialised restaurants, supermarkets (that is, in-house delis, bakeries and so on) or street vendors. The most common fast food items are burgers, fried chicken, pizza and sandwiches (Islam & Ullah, 2010). Before the advent of democracy in 1994, South Africa's fast food industry was restricted to local firms with market offerings that mirrored those of popular international chains. Local demand for such fast food was high. Therefore, it came as no surprise when the local market embraced the myriad of international fast food outlets that were introduced after the country's post-apartheid re-introduction to the global economy. Fast food's popularity is an effect of globalisation (Tabassum & Rahman, 2012). The local fast food industry has experienced recent growth (Murray, 2017). However, as consumers incorporated more fast food into their daily diets, obesity became a major problem with worse impact on human health than excessive smoking or drinking (Sturm, 2002).

Today, South Africa has one of the highest rates of obesity in the world, ranked as the world's 76<sup>th</sup> 'fattest country' with 53.3% of local adults aged 15 and above having body mass indexes (BMI) equal to or greater than 25 (Forbes, 2015). In Sub Saharan Africa (SSA), South Africa has the highest rate of obesity, with 70% of women and 40% of men classified as obese or overweight (Claasen, van der Hoeven & Covic, 2016). The emergence of obesity and other major health problems caused by fast food consumption has led to concerns being voiced by

health professionals, consumer groups and other interested parties. Thus, consumers are beginning to pay more attention to the relationship between the food they consume and its impacts on their health (Tudoran, Fischer, van Trijp, Grunert, Krystallis & Esbjerg, 2012). This is in addition to the controversy of using genetically modified foods in fast foods (McGill, 2006), which have also been identified as causing further health implications for consumers beyond the traditional nutrition-based concerns (Smith, 2009).

The national government has invested large sums of taxpayer's money towards health awareness campaigns to fight illnesses related to food over-consumption (Nutrition Society of South Africa, 2013). However, these efforts conflict with the government's economic interests as they strive to attract foreign investment into the country which includes large international fast food chains like Kentucky Fried Chicken (KFC), McDonald's and Burger King. Indeed, fast food plays a major role in economic growth, particularly in its support of local agriculture. For instance, in 2007, fast food contributed 29% (R7 619 million) of the total income of the local food and beverages industry (Statistics South Africa, 2007). The industry is not limited to just the fast food outlets, but also extends to the fast foods sold in supermarkets and in streets by vendors (Henderson, 2011). In South Africa, as around the world, the fast food market is dominated by young and urban consumers, including students and workers (Ergin & Akbay, n.d.). In addition, fast food outlets have expanded into townships and rural areas, thereby becoming more accessible to previously disadvantaged black communities (Oni & Matiza, 2014). The geographic locations of fast food outlets affect rates of obesity as outlets' proximity generally increases fast food consumption (Currie, DellaVigna, Moretti & Pathania, 2009).

### **1.3 PROBLEM STATEMENT**

The study investigated the problem of the modern urban lifestyle in South Africa that encourages increased consumption of fast foods. Consumer behaviour towards food is influenced by person-related factors, environmental factors, food properties and the decision process (Steenkamp in Wierenga, van Tilburg, Grunert, Steenkamp & Wedel, 1997). The environmental factors play the most influential role in this regard. Most employed people in the country work in urban areas. The industries in large urban centres around South Africa employ many people who spend long hours at work, have less time available for cooking at home but have more money to buy fast

food. Since workers spend so much time at work, they have enough disposable income to afford fast food products and feel encouraged to buy these ready-to-eat meals, especially as the companies advertise this food through mass media (Oni & Matiza, 2014; Hawa, Kanani, Patel, Taneja, Maru, Kaliwala, Gopani, Sharma, Sharm & Patel, 2014). Moreover, South Africa's status as a middle-income country places it between the high incomes of developed countries and those of most developing countries. General increases in the incomes of the wider global population have contributed to fast food industry growth (Oni & Matiza, 2014). Furthermore, despite the high national unemployment rate, which stands at about 27.7 % (Statistic South Africa, 2017), state grants enable even households with no breadwinners to afford the affordably-priced fast foods sold by local and foreign restaurants, street vendors and supermarkets. As a result, the local demand for fast food, just like the international demand, is increasing. This trend can be further attributed to the impact of globalisation on South Africa (Tabassum & Rahman, 2012). Meanwhile, heavy advertising, local and international fast food franchises have also sought to increase consumer accessibility to fast food by locating outlets closer to consumers (Currie *et al.*, 2009).

The increasing consumption of fast foods in South Africa contradicts with consumers' increased health-consciousness in recent times regarding food (Tudoran *et al.*, 2012) as consumers seek to incorporate more healthy food in their diets. Moral attitude also influences ready-to-eat meal consumption (Olsen, Sijtsema & Hall, 2010). The increased concerns for health with respect to fast food consumption have been justified by its contribution to the growing problem of obesity globally, and South Africa is not immune to these accusations (Pereira, Kartashov, Ebbeling, van Horn, Slattery, Jacobs & Ludwig, 2005; Jeffery, Baxter, McGuire & Linde, 2006). Concerns have been raised that health-care providers are not fully aware of the dangers that obesity causes (Aronne, 2002). Obesity not only increases health costs, but combines with other illnesses leading to deaths (Goedecke, Jennings & Lambert in Steyn, Fourie & Temple, 2006). Therefore, obesity is a greater health problem than cigarette smoking and alcoholic drinking (Sturm, 2002). The study thus investigated consumers' attitudes towards fast foods, as well as the impact of their fast food consumption on their body weight and BMI to determine to what extent fast food consumption contributes to consumer overweight and obesity.

## **1.4 RESEARCH OBJECTIVES**

The broad objective of the study was to investigate consumers' attitudes towards fast food and the relationship of fast food consumption on obesity. In pursuit of this objective, the study focused on the following specific objectives:

In pursuit of this objective, the study focused on the following specific objectives:

1. To investigate consumers' attitudes towards fast foods in Mdantsane Township, South Africa;
2. To identify different types of fast food consumed by consumers in Mdantsane Township, South Africa
3. To analyse factors affecting consumers' frequency of fast food consumption in Mdantsane Township, South Africa; and
4. To assess socio-economic factors and fast food products that influences the BMI of fast food consumers in Mdantsane Township, South Africa.

## **1.5 RESEARCH QUESTIONS**

In achieving the above objectives, the following Central Research Question was answered:

What are consumers' attitudes towards fast food and what is the relationship of fast food consumption among consumers?

In achieving the above objectives, the following research questions were also answered:

1. What different types of fast food are consumed by consumers in Mdantsane Township, South Africa?
2. What are consumers' general attitudes towards fast food in Mdantsane Township, South Africa?
3. Which factors affect consumers' choices of fast foods in Mdantsane Township, South Africa?
4. What effects do socio-economic and fast food consumption factors have on consumers' BMI levels in Mdantsane Township, South Africa?



## **1.7 JUSTIFICATION OF THE STUDY**

The study was necessitated by the impact of negative health due to consumptions of fast food by South African consumers. The high rate of fast food consumption increases overweight, obesity and other associated health complications. This results in increased health costs incurred by households, employers and the state. Despite fast food franchises amassing greater profits, fostering national economic growth, fast food consumers' rising morbidity and mortality lower economic productivity. As a result, this reduces growth as Gross Domestic Product and Gross National Product figures decline. The findings to be generated by the study can guide government policies relating to the fast food industry. The policy can also serve to advise companies in the fast food industry to reduce the negative impacts of their market offerings on consumers' health. The findings of the study might also act as a guide and educate consumers on the negative impacts of fast food consumption.

## **1.8 THESIS DELINEATION**

This section focuses on the delineation of the study, in line with specific objectives to avoid generalisation.

### **1.8.1 STATEMENT OF LIMITS TO THE PROJECT**

The study concentrated on consumer's attitudes towards ready-made fast food products and the impact of fast food on obesity in Mdantsane Township.

## **1.9 OVERVIEW OF CHAPTERS**

The dissertation is organised in five chapters. In **Chapter 2**, the relevant literature on consumers' attitude towards fast foods and the relationship between fast food consumption and obesity is reviewed. **Chapter 3** discusses the study site and sample, as well as elaborates on all aspects of the research methodology. While **Chapter 4** presents the descriptive and inferential statistical results, further discussing the results in relation to previous empirical findings and theory. Finally, **Chapter 5** summarizes the study, presents conclusions thereof and offers recommendations for future policy, research and practice.

## **1.10 CHAPTER SUMMARY**

This chapter outlined the background to the study. It presented an overview of the fast food industry in South Africa and internationally. The problem statement on fast foods consumption and obesity was articulated. The research objectives and questions were also stated. The following chapter presents literature review of the study.

## **CHAPTER 2 : LITERATURE REVIEW**

### **2.1 INTRODUCTION**

The literature to date includes a wealth of theoretical and empirical knowledge concerning fast food, obesity and the relationship between the two. Therefore, this chapter presents a review of the literature relevant to the study. First, key terms are identified and defined. The conceptual and theoretical frameworks are revealed. These sections precede a presentation of varied empirical literature from past studies regarding consumers' fast food attitudes and consumption, nutrition, nutrients and obesity. The chapter concludes with a brief summary.

### **2.2 DEFINITIONS**

The literature documents wide-ranging terminology with regard to the research area concerning this study. The following sections present key terms and operational definitions for each term used in previous research that applied to this study.

#### **2.2.1 FAST FOOD**

Fast foods are one of the several types of Ready-to-Eat foods (Selvaraj, 2012). Fast food refers to "any food which may be cooked easily, and is sold by restaurants to be eaten quickly or taken away" (Marchesini, Ridolfi & Nepoti, 2008:568). Fast food has also been defined as "food that can be served ready to eat" (Kaushik, Narang & Parakh, 2011:97). Fast food can also be defined as "many items that can be prepared and served quickly, usually outside the home" (Baranidharan, 2012:3). These definitions emphasise the quickness of fast food's preparing and serving. They also enabled the differentiation of fast food from other types of food sold in the market during the study.

#### **2.2.2 OBESITY**

Obesity has been defined in relation to overweight. Thus, "obesity refers to an excess of fat, while overweight refers to body weight in excess of a fixed standard" (Kirk, 2006:123). Obesity

can also be defined as having a Body Mass Index (BMI) score of 30 or above (Centres for Disease Control and Prevention, 2015). Obesity also refers to “refers to excessive body fat or adipose tissue in relation to lean body mass” (He & Beynon, 2006:125). The essence of obesity is in the excess of bodily fat and was used in the present study as such.

### **2.2.3 ATTITUDES**

Attitudes refer to personal evaluations of external environmental stimuli (such as people, objects and events) as either favourable or unfavourable (Anderson, Watt, Noble & Shanley, 2012). Thus, consumers develop positive and negative attitudes towards products. Attitudes comprise cognitive, affective and behavioural components, with the behavioural attitude component resulting from the cognitive and affective components (Hasan, 2010). That is consumers’ thoughts and feelings towards a product influence their behaviour regarding that product. For instance, positive thoughts and feelings towards fast food would lead consumers not only to consume such food, but do so frequently and in large servings. Based on this, it is clear that attitudes can be important indicators and, indeed, influencers of behaviour (Blair, Dasgupta & Glaser, 2015 in Mikulincer, Shaver, Borgida & Bargh, 2015).

### **2.2.4 PERCEPTIONS**

While attitudes are evaluations of external environmental stimuli, perceptions refer to the manners in which individuals consider such stimuli, with preferences, such as fondness for particular types of products (for instance, meaty or sweet fast food), developing on the bases of both attitudes and perceptions (Van Acker, van Wee & Witlox, 2010). Individuals’ perceptions of environmental stimuli depend on how these stimuli are experienced through the senses. Thus, consumers form perceptions of fast food from how it tastes, smells, feels, looks and sounds. Physical setting is a major influencer of consumer perceptions towards products (Axelsen & Swan, 2010). Fast food franchises’ efforts to provide inviting, pleasant and conducive eating environments for the consumer are thus crucial to their profitability.

### **2.2.5 BODY MASS INDEX (BMI)**

The term body mass index refers to “The term body mass index refers to a [person’s] weight divided by the square of [the person’s] height ( $BMI = \text{weight}/\text{height}^2$ )” (Clemmons & Friedman, 2008:1). The BMI alternatively refers to “refers to both the amount of a person's body fat and how it is distributed over the body” (Kettle, Roebathan & West, 2005:82). Similarly, BMI refers to the “ratio of body weight (kg) relative to height ( $m^2$ )” (Beals, 2004, p. 225). This relationship of body weight to mass reveals whether or not one is obese. The study used this formula to calculate participants’ BMI to determine whether or not the respondents were obese.

### **2.2.6 NUTRITION**

Nutrition can be defined as “the taking in of food to support growth, renewal, maintenance and repair of the body” (Rodriguez, 2004:7). According to Falella (2005:7), nutrition refers to “all the processes related to the eating and digesting of food and the breaking down of food and its nutrients into energy.” Similarly, also it is “the processes by which a living organism ingests, digests, absorbs, transports, uses, and excretes nutrients” (Williams & Wilkins, 2007:4). These definitions highlight aspects of nutrient ingestion, digestion and absorption of food.

### **2.2.7 NUTRIENTS**

Nutrients refer to “elements that are essential to the growth and reproduction of living organisms” (Brant & Kauffman, 2011:6-5). Nutrients are “those chemical substances in foods that are required in the diet for survival and well-being of the organism” (Nisha, 2006:10). Alternatively, they refer to “substances found in food that nourish [the] body” such as carbohydrates, proteins and fats, as well as vitamins and minerals are all nutrients (United State Department of Health and Human Services, n.d.:319). These definitions highlight nutrients’ aspects of being substances, food-sourced and nourishing.

## 2.3 CONCEPTUAL FRAMEWORK

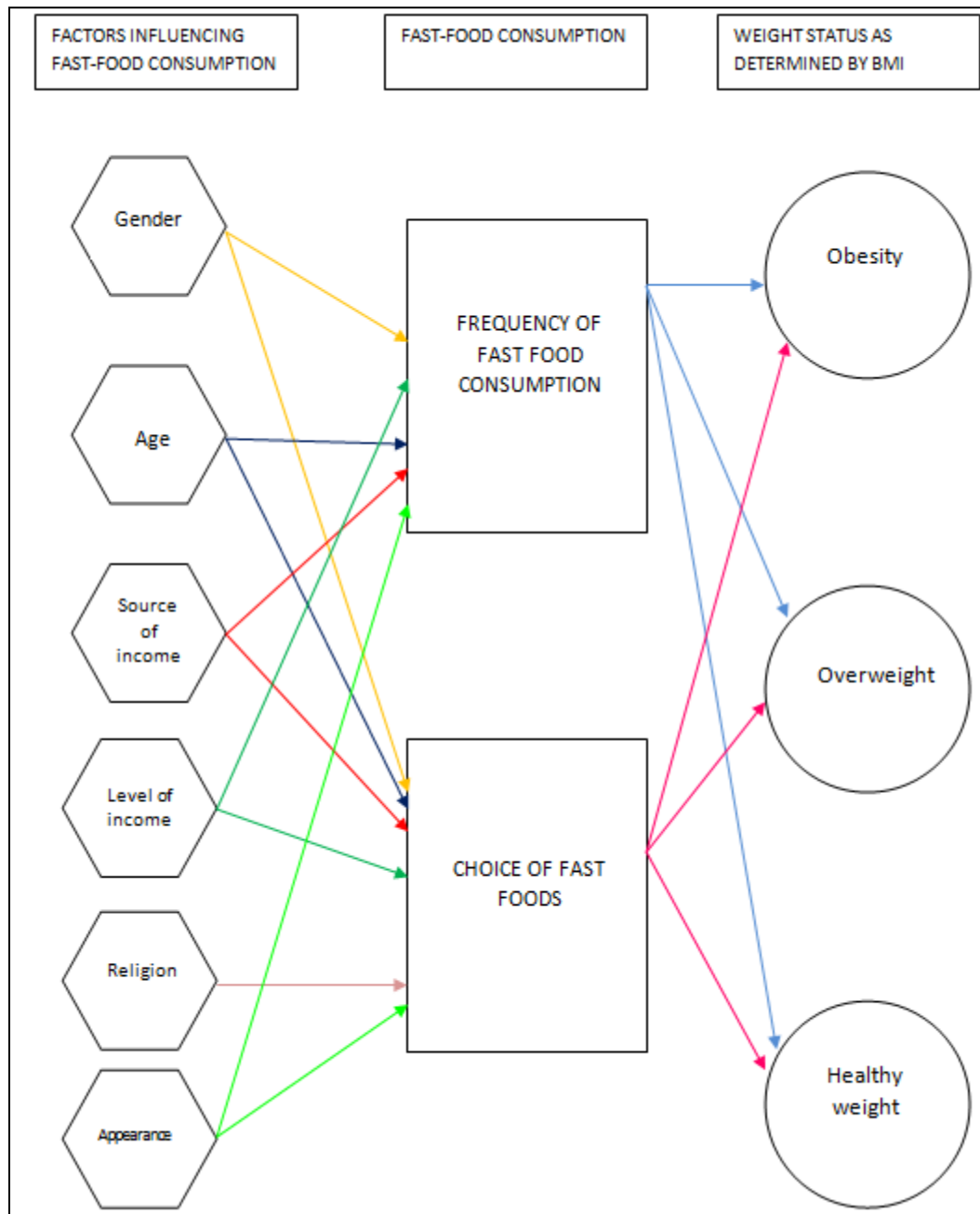


Figure 2.1: Conceptual framework

Source: Author,( 2017)

Figure 2.1 shows the conceptual framework of the study. A consumer's sex can influence his or her frequency of consumption as well as choices of fast food to consume (Brindal, 2010; Flegal, Carroll, Ogen & Curtain, 2010; Marlow & Shiers, 2012; Majabadi, Solhi, Montazeri,

Shojaeizadeh, Nejat, Farahani & Djazayeri, 2016; Musaiger, 2014; Rummo, Meyer, Green Howard, Shikany, Guilkey & Gordon-Larsen, 2015). Similarly, age (Ergin & Akbay, n.d.; Dunn, Sharkey & Horel, 2012; Dave, An, Jeffery & Ahluwalia. 2009; Brindal, 2010; Alfawaz, 2012; Feeley, Musenge, Pettifor, & Norris, 2012; Athens, Duncan & Elbel 2016; Bhat, 2016), source of income (Jeffery *et al.*, 2006; Malhotra, Hoyo, Østbye, Hughes, Schwartz & Tsolekile, 2008; Marlow & Shiers, 2012), level of income (Chang & Lauderdale, 2005 in Marlow & Shiers, 2012; Malhotra *et al.*, 2008; Brindal, 2010; Steyn, Labadarios & Nel, (2011); Marlow & Shiers, 2012; Rummo *et al.*, 2015; Bhat, 2016) and physical appearance (Washi & Ageib, 2010) can affect both fast food consumption choices and frequency. On the other hand, the extant literature shows that income levels, among other factors, place individuals into particular social classes, with social status and groupings influencing fast food consumption choices and frequency (Dave *et al.*, 2009; Higgs & Thomas, 2016; Majabadi *et al.*, 2016). Other research studies also highlight that price, income level and educational level are social class-related factors that influence choice of fast food restaurant (Akbay, Tiryaki & Gul, 2007).

Religion has been associated with weight status, with more obese individuals being observed in areas of higher religious affiliations (Ferraro, 1998). For instance, higher prevalence of obesity has been found among Christians than among non-Christians (Ferraro, 1998; Cline & Ferraro, 2006). Kim, Sobal and Wethington (2003) found religious denomination to be significantly related to higher body weight. Dodor (2012) observed higher sedentariness, fast food consumption and BMIs among more devout religious followers. While religion can influence one's choice of fast food to consume, it does not impact on how often one consumes such ready-made cuisine.

Fast food preference and rate of consumption together impact on consumers' weight status as determined by their BMI score. A BMI score of 18.5 to 24.9 is indicative of a healthy weight class. A score of 25 and above classifies one as being overweight, while a person termed 'obese' is one with a BMI score of 30 and above (Goedecke *et al.* in Steyn *et al.*, 2006). While, the BMI index presents a fourth category, that of underweight individuals, it was not considered in the study since fast food consumption does not contribute to underweight (Reece, 2008).

## **2.4 THEORETICAL FRAMEWORK**

The literature to date contains numerous and various theoretical perspectives. While some of the models and concepts representing these perspectives are peculiar to specific branches of knowledge, others are more generic and apply across disciplines. Thus, many theories aligned with this study. These included the theoretical framework such as The Three Pillars of Food Security and Pilgrim's Model relating to consumers' relationship with food and the Components of Attitudes Model linking individuals' thoughts, feelings and behaviour towards objects such as food items. A further two theoretical perspectives, namely, the Consumer Behaviour Model and Consumer Decision-Process Model, explain the consumer behaviour aspect. These theoretical perspectives are discussed in detail below.

### **2.4.1 PILGRIM'S MODEL**

The study used Pilgrim's model to explain how personal, environmental and gastronomic factors contribute to consumer behaviour towards food, including fast food. The model suggests that one's acceptance of food depends on one's perception of it, which is seen as a consequence of food's physical effects, sensory perception and environmental influences. These determinants' interactions influence food choice, that is, they impact on individuals' decisions on whether to consume fast food or not and, if so, which types of fast food to buy. Consumers' undergo a decision process which Pilgrim suggested, comprising four stages: need recognition (for example, need for a meaty fast food meal), search for information (regarding, for instance, KFC's chicken, McDonald's burger, Steers' steak, and so on), evaluation (for example, Steers' steak offers the most meat, KFC is cheapest, but McDonald's offers to most variety) and choice, thus when a consumer chooses where to buy their fast food from, for instance, buying the Steers steak (Steenkamp in Wierenga *et al.*, 1997). Therefore, the study also explored how the personal, gastronomic and environmental factors' influence on such decisions have health implications.

### **2.4.2 THE THREE PILLARS OF FOOD SECURITY**

The poor nutrition of fast food can contribute to food insecurity. This is explained by the Three Pillars Model of Food Security. The theory was derived from the 1996 World Food Summit



definition of food security, that is, “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life” (World Health Organisation, 2015). Thus, food security can only exist with all three pillars are present. The three pillars are:

- food availability;
- food access; and
- food use.

Food availability refers to enough food being available as and when needed. Food access involves having adequate resources (for example, money to buy food, transport to food markets and other sources, and so on) to obtain appropriate foods necessary for a nutritious diet. Food use involves utilising food appropriately based on nutritional knowledge, in addition to sufficient water and sanitation. The three pillars theory was used in this study to demonstrate how over-consumption of fast food contributes to food insecurity.

### **2.4.3 THE CONSUMER DECISION-PROCESS MODEL**

Developed by Engel, Blackwell and Miniard (1995:155), the Consumer Decision-Process Model shares similarities with Kotler’s Consumer Behaviour Model. However, the Consumer Decision-Process Model contains additional information on individual differences that influence the consumer’s purchasing decisions as shown in Figure 2.2 (Engel *et al.*, 1995:155). The model also outlines steps a consumer goes through related to marketer-dominated stimuli, as well as various feedback loops that reflect the process’ cyclic and continuous nature (Rutenberg, 2003). The model was adopted to describe the intrinsic and extrinsic processes fast food consumers experience between the time that they are exposed to several stimuli and when they purchase fast food products.

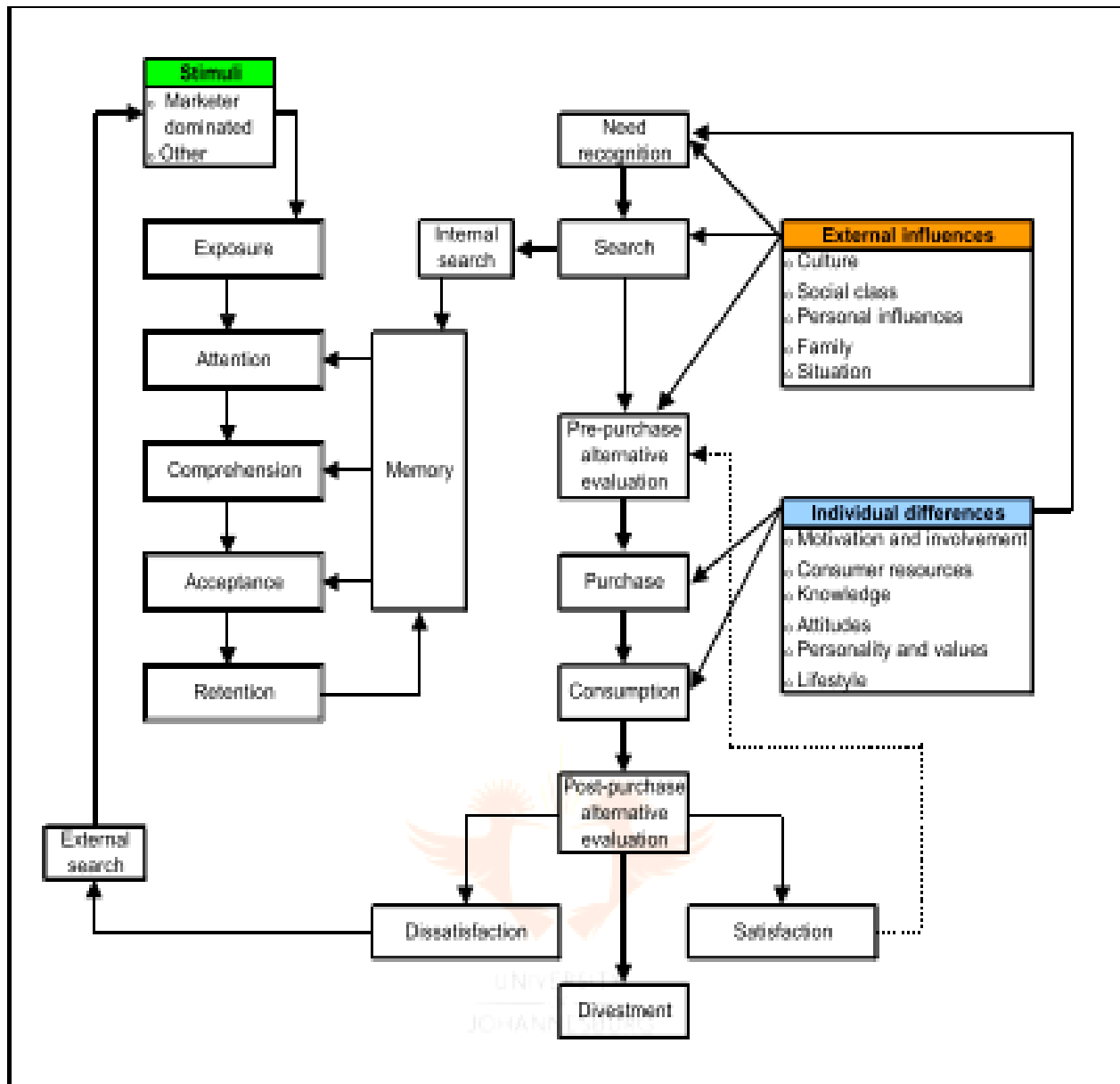


Figure 2.2 : Consumer Decision-Process Model

Source: Engel *et al.* (1995:155)

#### 2.4.4 COMPONENTS OF ATTITUDES

An attitude is a “consistent favourable or unfavourable orientation towards objects, concepts or situations” (Hawkins, Best & Coney, 2001:395). They comprise three components: cognitive, affective and behavioural components. The cognitive component encompasses one’s knowledge

and beliefs regarding an (attitude) object, whereas the affective component entails a person's feelings towards the object. The behavioural component pertains to one's behaviour or actions towards the object. Figure 2.3 (Hawkins *et al.*, 2001:395) summarises how attitudinal components lead a consumer towards developing an attitude towards an object. The model was used in the study to explain the developmental origins of fast food consumers' attitudes.

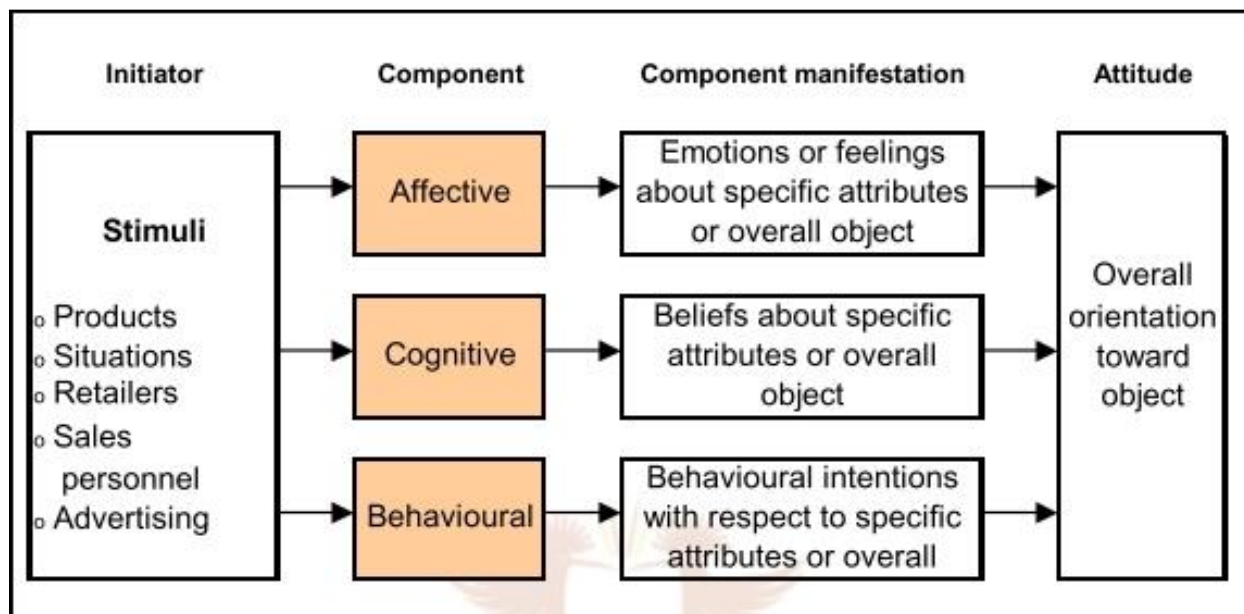


Figure 2.3: Attitude components and manifestations

Source: Hawkins *et al.* (2001:395)

#### 2.4.5 CONSUMER BEHAVIOUR MODEL

Kotler (2000) proposed a model to explain consumer behaviour, which refers to “the acts of consumers in obtaining and using goods and services and the decision process that determines these acts” (Naik & Reddy, 1999:23). The model, presented in Figure 2.4, reveals the macro-environmental (that is, political, economic, social, technological and so on) stimuli and marketing stimuli (that is, product, price, place, promotion, people, processes and physical evidence) that influence consumers' purchasing decisions. The marketing stimulus of price, for example, influences consumers to purchase fast food (Brindal, 2010; Musaiger, 2014), which is typically cheaper than other foodstuffs (Majabadi *et al.*, 2016), though price is subordinate to other considerations in especially older fast food consumers' minds (Oyewole, 2013; Abdullah,

Mokhtar, Bakar & Al-Kubaisy, 2015). The Consumer Behaviour Model explains purchasing decisions as including choices of product, brand, dealer, purchase timing and purchase amount. For instance, in terms of fast food consumption, product choice is largely dependent on the taste of fast food offerings, which influences the purchasing of fast food (van Zyl, Steyn & Marais, 2010). Those buyer decisions, in turn, affect characteristics of the buyer (that is, cultural, social, personal and psychological characteristics), as well as the buyer's decision process, which includes the steps of problem recognition, information search, evaluation of alternatives, purchase decision and post-purchase behaviour. Kotler's model was used in the study to understand consumers' behaviour that influences firms' market offerings to satisfy consumers' needs (Rutenberg, 2003).

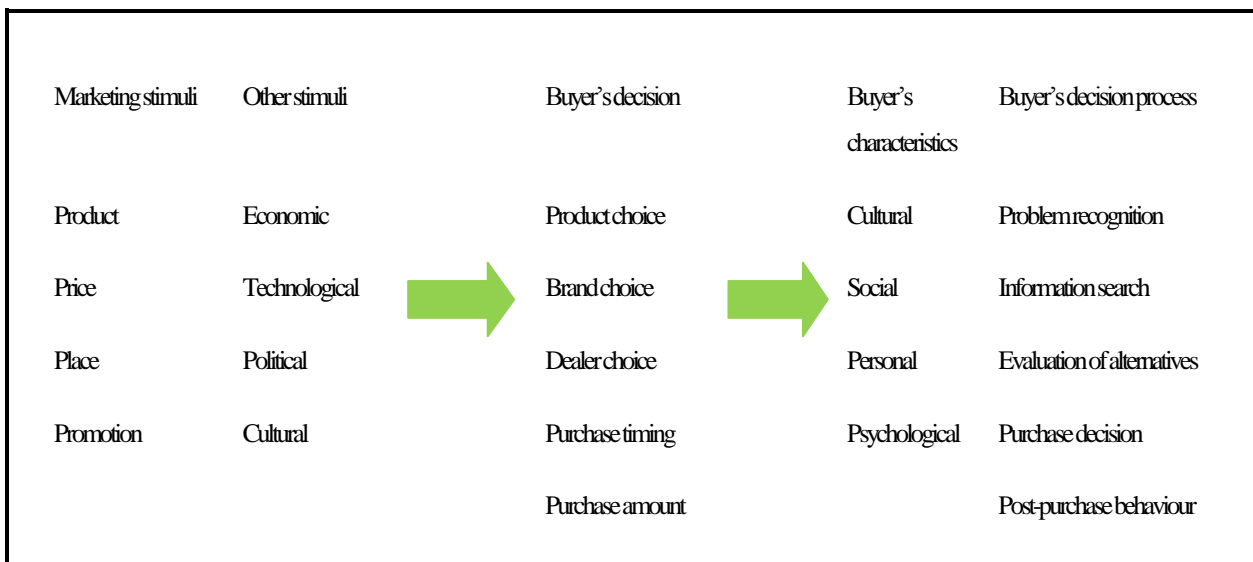


Figure 2.4: Kotler's Consumer Behaviour Model

Source: Siddiqui (2016)

## 2.5 EMPIRICAL LITERATURE

The empirical literature regarding consumers' fast food-related attitudes and consumption was reviewed, revealing the vast body of knowledge to date. The following sections present aspects of this research-based knowledge relevant to the study. Research regarding consumer attitudes

towards fast foods is first reviewed. Nutrition, as it relates to fast food consumption, is discussed. Studies concerning fast food nutrients are also discoursed. The empirical literature review further assesses the contribution of fast food consumption to obesity. Finally, fast food consumption studies are considered.

### **2.5.1 CONSUMERS' ATTITUDES TOWARDS FAST FOODS**

Fast food's popularity as a result of globalisation implies consumers' consumption positive attitudes towards such food (Tabassum & Rahman, 2012). This emanates from its benefits as being ready-made, convenient, time saving, tasty and easy to eat (Tabassum & Rahman, 2012; Hawa *et al.*, 2014). Despite this, high fast food consumption poses health risks that concern consumers, among them overweight and obesity, heart diseases and heart attacks, hypertension, stroke, diabetes, cancer and infertility (Bowman & Vinyard, 2004; Currie *et al.*, 2009; Van Zyl *et al.*, 2010; Afolabi, Oyawoye, Sanni & Onabanjo, 2013; Musaiger, 2014; Majabadi *et al.*, 2016). As a result, consumers are increasingly concerned about the impact of food consumed on their health (Tudoran *et al.*, 2012), particularly as their nutritional education increases, thereby influencing consumers' fast food attitudes.

Many consumers have blamed fast food corporations for the incidence of obesity (Brindal, 2010). However, while consumers' health-related attitudes towards fast food change, many consumers persist with high-frequency fast food consumption. Some study results have found no significant association between fast food consumption frequency and perceived healthiness of fast food (Dave *et al.*, 2009). A number of consumers have adopted a more selective approach to the purchasing of fast foods by choosing healthier fast foods with higher nutritional value without necessarily reducing fast food consumption frequency or amounts (Brindal, Mohr, Wilson & Wittert, 2008; Brindal, 2010).

Dave *et al.* (2009) investigated the relationship of attitudes towards fast food and frequency of fast food intake among adults. The latter was significantly associated with perceived convenience of fast food and dislike towards cooking but not with perceived unhealthiness of fast food. The convenience of fast food has seen the number of consumers eating at fast food outlets grow (Van Zyl *et al.*, 2010; Musaiger, 2014), while consumer satisfaction with fast food

has increased (Majabadi *et al.*, 2016). This implies that legislators' research-backed warnings and health care activists' awareness campaigns about fast food's unhealthiness hardly influence its continued excessive consumption (Van Zyl *et al.*, 2010; Bryant, 2011). This may be explained by the observation of Van Zyl *et al.* (2010) that most respondents in their study were seldom concerned about their health.

Consumers' attitudes towards fast food are conscious, sub-conscious and unconscious. Maison, Greenwald and Bruin (2004) studied the relationships between these origins of attitudes. Using the Implicit Association Test to gauge fast food consumers' implicit brand attitudes in three studies, they showed that the use of the test enhanced behavioural prediction in relation to explicit attitude measures alone.

Fast food attitudes and intake differ with gender. A study by Musaiger (2014) assessing such male-female differences found that 95% of consumers felt fast food was harmful to health. However, 92% of consumers continued eating fast food suggesting health information on fast foods did not affect consumption. Men were observed to consume fast food more frequently and in larger quantities than women. Furthermore, men have been found to consume breakfast more frequently than females and to snack more while watching television (Van Zyl *et al.*, 2010). This suggests that males consume relatively large quantities of food, with their fast food intake reflecting that. As Pilgrim's model suggested, Musaiger (2014) concluded that fast food consumption is influenced by gender, media and socio-cultural factors.

Moral attitudes also bear on consumers' fast food consumption. Olsen *et al.* (2010) found moral attitude to be a major predictor of fast food consumption. Consumers' moral obligations, manifested in feelings of guilt, negatively affected consumer's intentions to eat ready meals. Attitude significantly affected intention and behaviour.

### **2.5.3 NUTRITION**

International concerns of nutrition and food security have shifted focus over several decades. The initial concern was disposal of food surplus in the 1950s. In the 1960s, food for development was the agenda. The world redirected its focus to food assurance in the 1970s. In the 1980s, this aspect broadened and food security became the main issue. From 1990, the international

community was preoccupied with ensuring freedom from hunger and malnutrition (Gross, Schoeneberger, Pfeifer & Preuss, 2000). Thus, progress has been made towards improving global nutrition.

The link between fast food consumption and obesity (Bowman, Gortmaker, Ebbeling & Pereira, 2004; Sharifirad, Yarmohammadi, Azadbakht, Morowatisharifabad & Hassanzadeh, 2013) necessitates the availing of nutrition information to consumers. Wootan, Osborn and Malloy (2006), researching on the availability of point-of-purchase nutrition information at fast food outlets, found that three-fifths of outlets provided such information. However, in about as many instances, two employees or more had to be asked to obtain the information, an indication that, though information was available, it was not easily accessible.

The existence of fast food outlets and the frequent or regular consumption of fast food threaten human health (Singh, 2015). A study by Harris, Schwartz and Brownell (n.d.) assessing young consumers' fast food consumption concluded as much. For instance the results of the study showed that frequent and regular fast food consumers in that study had more calories, fat and sugar and less balanced diets than occasional consumers. In addition, advertisement of fast food to youths, mostly through traditional mass media increased. Moreover, fast food chains used new information technology-based social and mobile media, which have been found to influence fast food consumption frequency (Harris, *et al.*, n.d.; Cassim, 2010). However, as exceptions to the norm, some past research has found that mass media messages do not influence fast food consumption among most consumers (Van Zyl *et al.*, 2010). Despite this, Mchiza, Temple, Steyn, Abrahams & Clayford (2013) found that fast food advertisements accounted for 20% of all food-related advertising on South African television, second only to sweet advertisements. In other words, mass media advertising, and television advertising, in particular, are among the most significant causes of increased fast food consumption (Van Zyl *et al.*, 2010; Haque, Rahman, Ahmed, Yasmin & Asri, 2011; Priyadharsini, 2014; Singam, Karunagaran, Pandiyan, Subramanian & Govindan, 2014). Mass media expands consumers' social learning. For instance, individual consumers learn fast food consumption behaviour from other people through direct observation of those individuals in their social classes and groupings (membership reference groups) and indirect observation of others (aspirational and dissociative reference groups)

through mass media (Mihalcea & Catoi, 2008; Hsu, Chuan-Chuan Lin & Chiang, 2013; Broderick & Phillips, 2016; Majabadi *et al.*, 2016).

The frequency of fast food consumption appears to be negatively associated with fruit and vegetable and dairy intake. That finding was made in a study by Boutelle, Fulkerson, Neumark-Sztainer, Story and French (2007), who investigated fast food family meal purchases in relation to food at home, as well as to parent and adolescent food intake. The results further illuminated that family meals were purchased for their convenience to busy households.

Consumption of fast food differs with gender. Morse and Driskell (2009) assessed the fast food consumption and nutritional self-assessments of male and female varsity students. Results showed that significantly more females than males were highly concerned about the nutritional content of food. The male students' BMIs were markedly higher than those of their female counterparts. Since BMI impacts on physical appearance (Franklin, Denyer, Steinbeck, Caterson & Hill, 2006), females' lower BMI may be explained by their perceived desire for slender build (Majabadi *et al.*, 2016).

Fast food consumption and the associated risk of overweight and obesity vary with consumers' ages. A statistically significant relationship has been found to exist between age and BMI (Pietrobelli, Faith, Allison, Gallagher, Chiumello & Heymsfield, 1998; Dave *et al.*, 2009; Krishnamoorthy, Muthu, Ramakrishan & Suja, 2015). Slower body metabolism and decreased physical activity with an increase in age mean that older fast food consumers are more prone to overweight and obesity (Jeffery *et al.*, 2006; Swenke & Bauer, 2008; Callahan, 2013). However, fast food consumption levels have been found to be higher among younger consumers (Ergin & Akbay, n.d.; Feeley *et al.*, 2012). This implies that overweight and obesity affect all age groups.

#### **2.5.4 NUTRIENTS**

The USDA (2015) has collated data about the amount of nutrients found in different fast food items in its National Nutrient Database for Standard Reference. The database contains such details as the calories, fat, saturated fat, cholesterol and sodium content in a long list of fast food menu items such as pizza, pancakes, fried chicken, hamburgers and carbonated soft drinks (Duyff, 2006). Fast foods are typically energy-dense foods containing low amounts of micronutrients and fibre and high amounts of fat, sugar and salt (Musaiger, 2014). Therefore,



high fast food consumption has been empirically linked to low nutrient consumption (Bowman & Vinyard, 2004). High fat levels in fast food raise cholesterol levels, contributing to weight gain and thus overweight and obesity (Majabadi *et al.*, 2016).

Therefore, the imperative of providing nutritional information for fast foods stems, besides consumers' rights, from fast foods' harmful impacts on health. Thus, dietary guidelines providing fast food nutritional information “[recommend] that people limit their intake of calories, saturated and trans fat and sodium for better health and to reduce risk of obesity and poor diets...including eating in restaurants” (Wootan *et al.*, 2006).

International standards for human nutrient requirements have been established and are reviewed and recommended. The World Health Organisation's (WHO) Department of Nutrition for Health and development works with the Food and Agricultural Organisation (FAO) in continuously revising and finding information worldwide regarding human nutrient requirements, as well as recommending nutrient intakes. As the WHO and FAO are agencies of the United Nations, UN member states are expected to adopt this information and incorporate it into their national dietary allowances (WHO, 2015).

The healthy consumption of nutrients in South Africa is based on the National Department of Health's Recommended Daily Allowances (RDAs). The RDAs for each nutrient emanate from the department's Food-Based Dietary Guidelines (FBDGs). These guidelines advise people on how to enjoy a variety of foods as part of the concept of a 'balanced diet' that includes nutrients from each of four food groups: starchy foods, protein, fruits and vegetables and dairy. The FBDGs further recommend sparing consumption of salt, fats and sugars, as well as drinking plenty of water. An active lifestyle is also recommended (Senekal, 2014). Individuals with enhanced self-image tend to adopt such healthier lifestyles (Simfukwe, van Wyk & Swart, 2017).

The consumption of fast foods is increasing worldwide, an implication that these foods contribute to the ever-growing proportions to individuals' nutrient intakes. Bowman and Vinyard (2004) investigated fast food consumption among adults, observing the impacts of nutrient and energy intakes on individuals' weights. They found that fast food supplied over a third of male and female adults' energy and fat intakes. Participants who consumed fast foods on at least one

of the two survey days registered higher BMIs than those who did not consume fast foods on any of the survey days.

While fast foods contain several of the nutrients found in healthier food, they typically contain excessive amounts of nutrients that contribute to weight gain, such as fat and carbohydrates. If not burnt through regular appropriate physical exercise, the high energy in fast foods leads to excess body weight in the form of overweight or obesity. The following section will discuss obesity in relation to fast food consumption.

### **2.5.5 OBESITY**

Long-term consumption of fast food has been associated with high BMI scores (that is, overweight and obesity). Braithwaite, Stewart, Hancox, Beasley, Murphy & Mitchell (2014) made this observation in their international study of children and adolescents. Their results were consistent in showing associations of frequent and very frequent fast food consumption with higher BMI scores among children and adolescents and even across the gender barrier. Jeffery *et al.* (2006) observed a significant positive association between fast food consumption frequency and BMI.

Bowman *et al.* (2004) also investigated the much-hypothesised relationship between fast food consumption and obesity. Fast food consumption was found to be high in both genders and across all race and religious groups in the study's diverse sample of children and adolescents. Findings confirmed that fast food consumption adversely affects dietary factors linked to obesity risk. Currie *et al.* (2009) observed positive associations of fast food consumption with overweight and obesity. Similarly, Brindal (2010) demonstrated that increased fast food consumption contributes to weight gain and thus overweight and obesity over time. Abdullah *et al.* (2015) could find no significant association between fast food consumption frequency and obesity. However, Fraser, Edwards, Cade and Clark (2010) found a link between the two variables. Taken together, these findings suggest that the frequency of consumers' fast food consumption is not as important in determining their overweight and obesity as the amount and type of fast foods consumed at each seating. Consciously choosing to exclusively consume

healthier, more nutritious, fast food would likely promote maintenance of normal weight and even weight loss when coupled with exercise.

The geographical proximity of fast food outlets appears to affect their rate of consumption. Currie *et al.* (2009) investigated that relationship using a sample of schoolchildren and pregnant women. The hypothesis held true only for fast food restaurants within very close proximity for both sub-sets of participants. The availability of non-fast food restaurants was not correlated with weight gain. Moreover, proximity to fast food outlets was not related to current overweight and obesity.

The nutrients found in certain food products promote weight gain. A panel conducted a review on nutrition exercise and cancer prevention. The review's results led to recommendations that people should, restrict or avoid consumption of energy-dense foods (including fast foods) and avoid sugary drinks (World Cancer Research Fund & American Institute for Cancer Research, 2007). This indicates that fast foods contain excessively high energy and sugar contents (U.S. Department of Health and Human Services, n.d.:319).

Empirical evidence suggests a relationship of obesity with sleep duration, which has been implied as a risk factor for morbidity and mortality. Obesity may mediate the relationships of sleep duration with morbidity and mortality. While prior studies showed obesity to be linked with neither long nor short sleep durations, Marshall, Glozier and Grunstein (2008) found high BMI to be associated with low sleep duration. Guidolin and Gradisar (2012) also noted the inconsistency of results of studies investigating the relationship.

Though the South African government considers obesity as less of a concern than poverty, unemployment and HIV/Aids, it should take this growing threat more seriously. This is due to obesity's status as a risk factor for accompanying morbidity and mortality. Overweight and obesity have reached epidemic proportions in South Africa. In 2002, 29% of men and 56% of women were classified as being overweight (that is, a BMI above 25) or obese (that is, a BMI above 30); Goedecke *et al.* in Steyn *et al.*, 2006).

There are varying perceptions about overweight and obese individuals. The negative perspective regards overweight and obese people as belonging to a lower social class, lacking knowledge concerning healthy living (for example, healthy diet and exercise) and self-control in terms of

food consumption choices, amounts and frequency (Brindal, 2010). Hence, Grampp-Eshleman (2008) observed a negative relationship between BMI and physical appearance-related self-esteem. The alternative positive perspective considers excess body weight to symbolize physical health (for example, negative HIV status), affluence, beauty and happiness (Goedecke *et al.* in Steyn *et al.*, 2006; Kruger, Puonane, Senekal & van der Merwe, 2005; Birrell, 2014; Butzlaff & Minos, 2016). However, obesity is regarded as a risk factor for illness and death. This suggests that the former perspective should be adopted with regard to health.

There are considerable gender differences regarding the occurrence of obesity. However, the relevant empirical evidence in the literature contrasts. Some documented findings suggest that obesity is more prevalent among females (Flegal *et al.*, 2010 in Marlow & Shiers, 2012). Other research studies observed more occurrences of obesity among males (Marlow & Shiers, 2012; Rummo *et al.*, 2015). Despite these gender differences, factors such as caloric intake and physical activity ultimately determine individual weight status.

## **2.5.6 FAST FOOD CONSUMPTION**

Various types of fast food are sold and consumed. Van Zyl *et al.* (2010) found meaty fast foods to be the most popular type of fast food among consumers. Thus, fast food has been termed a ‘meaty’ industry because various meat-based offerings, including beef, chicken and fish are typically served at fast food outlets (Feeley *et al.*, 2012; Van Zyl *et al.*, 2010; Morris, 2015). However, in a study by Steyn *et al.* (2011), it was observed that fruit and soft drinks were the most commonly consumed fast food offerings in South Africa. Fried chips and fish, boerewors (traditional sausage), pies and vetkoek (deep-fried dough bread) were the most consumed fast foods in Soweto (Feeley *et al.*, 2012).

Much of the fast food consumed is energy dense. This food, being high in caloric content, contributes to weight gain and thus overweight and obesity over time (National Centre for Chronic Disease Prevention and Health Promotion, 2006). On the other hand, meat is among the most popular fast foods, is one such fast food due to its fat content (NCCDPHP, 2006; Van Zyl *et al.*, 2010). The consumption of meaty fast food appears to have been on the rise in recent times (Jallinoja, Niva & Latvala, 2016). Other popular energy dense fast food offerings, such as

soft drinks, chocolates and ice cream are consumed in large quantities, compounding excessive weight gain, particularly among those engaging in sedentary lifestyles (Feeley *et al.*, 2012). The large servings of energy dense food typically offered at many fast food outlets further contribute to significant weight gain (NCCDPHP, 2006). Starchy fast foods, being the cheapest caloric source, are widely consumed (Schwartz, Riis, Elbel & Ariely, 2012; Hewitt, 2017), with aggressive advertising of these (and other high-carbohydrate) fast food offerings (Boyland & Halford, 2013) fuelling their consumption to such an extent that fast foods in general have tended to be high in refined starch (Bowman *et al.*, 2004).

Fast food is consumed for a number of reasons. The convenience of such food is a major factor. In the US, fast food was mainly consumed because of its convenience, being appealing to busy individuals too tired or short on time to cook after long working days and those who simply disliked cooking (Dave *et al.*, 2009). Thus, many consumers save time and energy by purchasing fast food meal packages (Abdullah *et al.*, 2015).

Generally, little, if any, information is provided about the nutritional value of fast food offerings. Consumers have remained largely unaware of the nutritional values of various fast foods (Steyn *et al.*, 2011; Abdullah *et al.*, 2015). Knowing such information would enable consumers to identify and choose healthier fast food options. In a study by Van Zyl *et al.* (2010), over three-quarters of respondents indicated that they would choose healthier food options if they were available. Non-traditional fast foods have widened the range of fast foods available to consumers. Pingali (2007) noted growing demand for these newer offerings, some of which may be nutritionally more beneficial to consumers, as long as consumers know which the healthier offerings are. Fast food retailers should thus provide more nutritional information about their offerings.

## **2.6 SUMMARY**

In sum, the above review revealed that the literature incorporates varied theoretical and empirical knowledge regarding fast food, obesity and the relationship between the two. The conceptual framework identified mostly demographic determinants of fast food consumption, which was delineated as fast food consumption frequency and choice, both of which, in turn, influence weight status (healthy weight, overweight and obesity). The presentation of the theoretical framework included the explanations of Pilgrim's Model, Consumer Decision-Process Model,

Kotler's Consumer Behaviour Model and Components of Attitudes Model pertaining to how personal (internal), environmental and gastronomic (external) factors influence consumer behaviour concerning fast food. In addition, the theoretical framework incorporated the suggestion by the Three Pillars Model of Food Security that over-consumption of low-nutrient fast foods threatens the food use pillar and thus food security. It was evident from the reviewed empirical literature that consumers possessed positive attitudes towards fast foods (concerning fast food's saving of food preparation time, ease of consumption and enjoyable taste), as well as negative attitudes (concerning fast food's generally low nutritional value and subsequent health risks). Despite the negative attitudes, studies have shown that consumption of fast foods has remained high. The review of related literature also highlighted how the high fat and sugar contents in fast food and the frequent consumption thereof with overweight and obesity across various demographic groups. The next chapter will explore the research methodology employed in the present study.

## CHAPTER 3 : RESEARCH METHODOLOGY

### 3.1 INTRODUCTION

This chapter focuses on the research methods used. The researcher conducted the study in an uncontrolled field setting. The survey design and analytical framework are presented.

### 3.2 STUDY AREA

The study area was the main taxi rank in Mdantsane, commonly referred to as “Highway” and “Golden Highway” among locals despite the absence of a highway in the vicinity (Dlanga, 2011). Figure 3.1 shows one section of the taxi rank (Department of the National Treasury of South Africa, 2010). The taxi rank’s geographical coordinates are S 32° 56' 36.24" latitude and E 27° 45' 19.08" longitude. Mdantsane, of the former Ciskei homeland, is the second largest township after Soweto in South Africa (Plak South Africa, 2015).



*Figure 3.1: Mdantsane Taxi Rank*

Source: Treasury (2010)

Founded in the early 1960s to house black labour working in neighbouring East London, the town's population increased with the state's inclusion of the township in the Regional Investment Decentralisation Programme (RIDP), which eventually relocated. This led to job losses because many firms closed due to this relocation. In 1990 Mdantsane witnessed a violent coup against the Ciskei government which worsened the local economy, with more businesses closing. The government declined declaring the township a disaster zone, whereby it would compensate local businesses for the losses. Since then the local government's efforts to restore the economy have failed (Department of the National Treasury of South Africa, 2010). This explains the current high unemployment, lacking socio-economic infrastructure and poor service delivery.

Poverty and unemployment have fuelled the high crime rate in the township (Department of the National Treasury of South Africa, 2010). This, coupled with frail local markets, has kept investors away. Mdantsane was targeted as one of eight nodes for President Mbeki's National Urban renewal Programme, which sought to accelerate service delivery and enhance communities' quality of life by creating jobs, developing infrastructure and stimulating economic growth. The Mdantsane Urban Renewal Programme started in 2003 and its objectives were related to improving living environments, reviving the local economy, increasing economic opportunities, developing partnerships, bettering strategy implementation and improving urban renewal capacity. Mdantsane falls under the Buffalo City Local Municipality in the Eastern Cape. The township is 17km from the city of East London and 40km from King William's Town (Department of the National Treasury of South Africa, 2010). Figure 3.2 shows the locations of the three areas in relation to each other.

Many households in Mdantsane experience poor socio-economic conditions. They lack access to basic services including electricity (Groenewald, 2010), with 58% of the population without electricity (Business Trust, 2007) working taps and flush toilets (Groenewald, 2010). The area has also been characterised by poor road infrastructure, poorly managed transport networks (Business Trust, 2007) and a shortage of health centres (that is, hospitals and clinics) and health care (Amathole District Municipality, 2007). Among areas in Buffalo City Municipality, Mdantsane had the least job opportunities available. For instance, about 70% of the population of Mdantsane had only secondary educational qualifications, a factor that has hindered socio-



economic development and growth in the community (Business Trust, 2007). Just 23% of Mdantsane residents of economically active age were formally employed (Amathole District Municipality, 2007).

The population size of Mdantsane is 156 835 (N = 156 835) (Department of the National Treasury of South Africa, 2010) and is spread over a land area of 45.55km<sup>2</sup>, giving a population density of 3 443.46 people per km<sup>2</sup>. The residents of Mdantsane comprise males (47.26% of the population in 2011) and females (52.74%), who make up a marginal majority. Almost all Mdantsane residents are Black (99.48%), with Asians (including Indians), Coloureds, Whites and other ethnic groups comprising the rest of the population. IsiXhosa is the predominant 'mother tongue' in Mdantsane, with 93.91% of the population speaking isiXhosa as their first language (Frith, 2011). All of the other 10 official languages in South Africa are also spoken as first languages. Mdantsane residents live in the township's 24 residential areas. Mdantsane Units 6, 5, 2 and 1 are the most populous areas (Frith, 2011). Therefore, the dense population of the Mdantsane area presents a consumer base for fast food retailers, while the busy lifestyle in Mdantsane encourages increased consumption of fast foods

Despite its lack of economic growth, Mdantsane is a vibrant township which has several businesses in operation. Consumers can purchase fast food in and around Mdantsane's Highway Taxi Rank from local and international fast food outlets (KFC) and retail supermarkets (Spar), as well as informal traders, such as street vendors (Department of the National Treasury of South Africa, 2010). The researcher's recent visits to the study area revealed that street vendors at the Highway Taxi Rank sell fast food (as defined above) that is similar to that found in the fast food outlets and supermarkets, such as rice or pap combined with a variety of meat and vegetables and fat cooks. This demonstrates the effects of globalisation that were felt in the township after South Africa's re-introduction to the global economy.

The study hypothesised that the availability of fast food from multiple sources relates to and predicts a high rate of obesity among Mdantsane residents. This hypothesis is supported by literature reflecting the busy urban lifestyle led by the majority of the residents which leads them to buy cost-effective and time-saving fast food, disregarding its impacts on their health. Linked with the foregoing, it is clear that several political, economic, social, technological, legal and other macro-economic environmental factors affect the fast food within Mdantsane's local

economy. Conversely, the fast food industry itself impacts each of those aspects within Mdantsane.

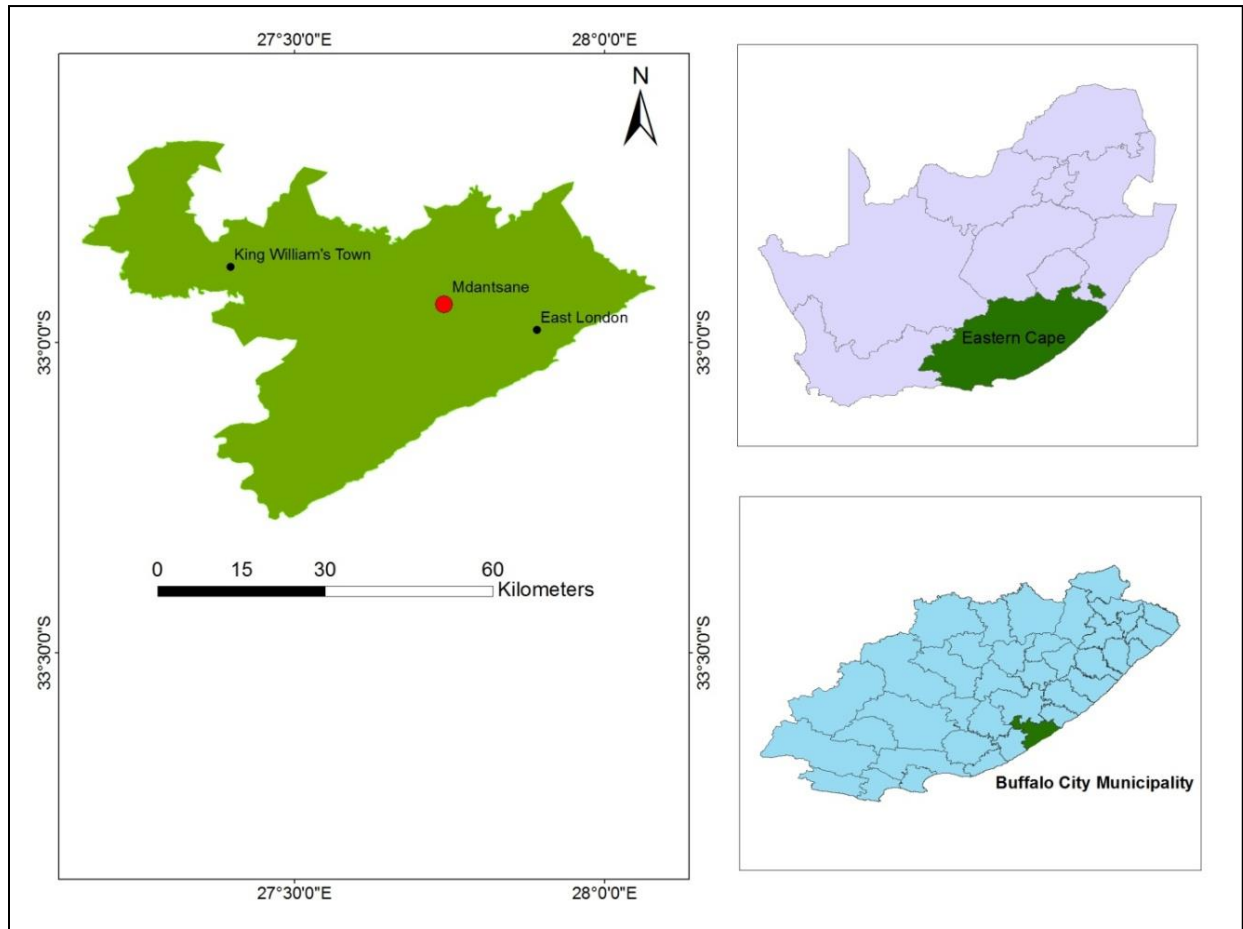


Figure 3.2: Location map of Mdantsane Township and surrounding areas

Sourc: Author (2017)

### 3.3 RESEARCH METHODS AND DESIGN

This section presents research methods and design used in the study. The research methodology explains the manner in which data was collected and analysed.

### 3.4 RESEARCH METHOD

Research methodology explains the manner and the way in which data was collected and analysed. According to Kothari (2004:7), research methods are the techniques used in conducting

research. The study used quantitative research methods. This ensured that the study objectives were achieved. Triangulation that combines the quantitative and qualitative methods has several advantages. These include the verification of quantitative and qualitative results against each other; the facilitation of each method by the other, a more complete big picture of the problem being studied, adequate addressing of the process and structural aspects of the study environment and bridging the gap between the micro- and macro-levels of research (Punch, 1998).

### **3.5 RESEARCH DESIGN**

A research design refers to “the overall plan that allows researchers to gather answers to study questions and tests study hypotheses” (Aparasu, Aparasu & Bentley, 2015:33). The study employed a non-experimental field survey design. The cross-sectional study was conducted in a natural environment where the researcher elicited data from selected participants on a single occasion. As this was a field study, the researcher did not attempt to control extraneous variables that could affect the inter-relationships of the variables of interest. This design was chosen to enable the researcher to gather data from fast food consumers near or at different fast food outlets in Mdantsane’s main taxi rank.

### **3.6 UNITS OF ANALYSIS**

The units of analysis for the study were the fast food consumers found during visits to the Mdantsane Golden Highway taxi rank. While a number of those individuals were residents of Mdantsane township, others were residents of nearby communities in transit to and from work and home. The units of analysis were diverse in terms of demographic factors such as age and gender. The sample was, to some extent, representative of the commuters who typically frequent the taxi rank.

### **3.7 SAMPLING FRAME**

According to Cooper & Schindler (2006), a sampling frame is the actual representation of elements from which a sample has been drawn. Thus, a sampling list is a complete list of the

study population. Because Mdantsane Highway is a taxi rank, compiling a full list of commuters and non-commuters who visit the rank and consuming fast food would have been quite difficult to achieve. For this reason, a non-random sampling method was adopted.

### **3.8 SAMPLING AND SAMPLING PROCEDURES**

A sample of 200 individuals passing along the Mdantsane Golden Highway was drawn ( $n = 200$ ). The researcher calculated this sample size using the online Raosoft Sample Size Calculator by entering an estimated population size and choosing a response distribution of 50%, a confidence level of 95% and a margin of error of 7%.

Given the difficulties associated with obtaining a sampling frame (that is, a list of all population members) required for probability sampling, participants were selected from the study population using non-probability sampling. The non-probability sampling method of quota sampling was used. Quota sampling is defined as “the selection of sample units on the basis of population characteristics, so that the total sample will have the same distribution of characteristics assumed to exist in the population being studied” (Burger, 2014:51). Apart from the difficulty of obtaining a sampling frame of the population of interest, quota sampling was used to ensure that the sample was, to a degree, representative of the population. It was important to ensure representativeness particularly in terms of gender. This was adopted in order to identify gender-based differences regarding fast food consumption habits and the impact of such habits on male and female body weight and BMI statuses.

The study selected only participants aged between 15 and 65 years. The study participants were limited to these ages because children aged below 15 were less likely to buy their own fast food often because they do not have their own adequate income to spend on fast food as they wish. Moreover, such decisions were typically determined by their parents or guardians. Furthermore, the selected age groups were the economically active section of the population, which means that they had adequate income to afford fast food and a significant proportion of this group tended to work for long hours, leaving them with little time for cooking at home. Thus, in applying quota sampling, the researcher travelled to the research site, which was Mdantsane’s Golden Highway, and the researcher approached each individual meeting the demographic selection criteria and

according to the researcher's targets in terms of gender, race and age. The individual was briefed about the study before being asked to participate in it. Those who agreed to participate were automatically included into the study sample and provided with the questionnaire. The researcher used her discretion to identify those respondents who were interested to participate as interviewees. In addition to completing questionnaires and interviews, the participants had measurements of their heights and weights taken. These were used to calculate their BMI scores. The literature suggests that substantial differences exist between male and female fast food consumers. Quota sampling enabled the investigation of such differences in the present study.

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### **3.9 PRIMARY DATA**

In the study, primary data was collected. Primary data refers to data that a researcher collects from the field of study. The primary data was collected using the aforementioned research instruments of the questionnaire and semi-structured interview. The primary data also included measurements of participants' weight and height, as well as other quantitative data that included responses to closed-ended questionnaire items relating to consumers' attitudes towards fast food, the types of fast foods that they consume, the nutritional quality of fast food consumed and factors that affect their fast food consumption choices. The qualitative primary data collected related to consumers' attitudes towards fast foods and the types of fast food consumed.

### **3.10 RESEARCH INSTRUMENTS AND DATA COLLECTION PROCEDURES**

This section covers research instruments that were used in the study, including questionnaires, tape measure and scale. It also explains the procedures of data collection.

#### **3.10.1 QUESTIONNAIRE**

A self-administered questionnaire was completed by participants in order to elicit the quantitative data required. However, for illiterate respondents, a questionnaire statement was read out to them. Where necessary, the questionnaire statements were verbally translated to participants to ensure that they understand. The questionnaire comprised a series of items or

statements whereby the participants must indicate the extent to which they agree or disagree with each statement on a Likert scale ranging from 1 ('strongly disagree') to 5 ('strongly agree'). The questionnaire was in English. However, because the majority of people along Mdantsane Golden Highway were Xhosa-speaking, most participants were briefed about the study and the contents of the questionnaire were explained in isiXhosa.

### **3.10.2 TAPE MEASURE**

To determine participants' height, the researcher used a tape measure. As BMI scores use the metric system, the tape measure was calibrated in millimetres, centimetres and metres.

### **3.10.3 SCALE**

The BMI scores also required the measurement of participants' body weight. Thus, an electronic scale was used. This scale, calibrated in grams and kilograms, had foot pads on which participants were standing still until the final measurement of body weight was recorded.

## **3.11 DATA ANALYSIS IN RELATION TO EACH STUDY'S SPECIFIC OBJECTIVE**

### ***Objective 1: To investigate consumers' attitudes towards fast food***

To meet the objective relating to consumers' attitudes towards fast food, which was partly in the form of responses to the questionnaire items, the study used descriptive and inferential statistical methods. The descriptive statistical component included the use of frequency distributions represented graphically as bar graphs, pie charts and histograms to summarise sample data. Furthermore, it included the measures of central tendency (that is, mean, median and mode) and variability (that is, standard deviation and range) summarised in tables. The objective also used a five-point Likert scale which ranged from 1 (strongly disagree) to 5 (strongly agree). The Likert scale allows measurement of respondent's intensity to multiple-choice responses. It includes

numbers that can be used as codes and generates interval and ordinal data from rating scale (Cooper & Schindler, 2006; Tustin, 2005).

***Objective 2: To identify different types of fast food consumed by consumers***

To address the second objective concerning the types of fast foods consumed, the researcher analysed the quantitative data from the questionnaire items using descriptive statistical methods such as frequency distributions, measures of central tendency and measures of variability. The data were also analysed using the aforementioned inferential statistical methods.

***Objective 3: To analyse factors affecting consumers' frequency of fast food consumption***

***Objective 4: Socio-economic factors and fast food aspects affecting fast food frequency of consumption***

*Multiple linear regression analysis*

In this study, for the objectives 3 and 4, Multiple linear regression analysis was used using STATA software. Multiple linear Regression analysis is a form of statistical analysis that investigates inter-variable relationships. It allows for the observance of a causal-effect relationship between one or more independent variables and a dependent variable (Ng & Low, 2010). For objective 3, the STATA software was used to estimate the parameters and marginal effects of factors (independent variables) affecting the dependent variable of frequency of fast food consumption. Fast food consumption frequency was measured by asking respondents to indicate how many times in the past month they had eaten fast food. Similarly, for objective 4, the parameters and marginal effects of socio-economic factors and fast foods (independent variables) that influence the BMI of fast food consumers (dependent variable) were estimated. BMI was calculated by dividing each participants weight (in kilogrammes) by the square of their height (in metres).

The variables included in the model for objective 3 are presented in equation 1 and summarised in Table 3.1.

$$Y_{1\dots n} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \epsilon_i \dots \dots \dots \quad (1)$$

where,

For objective 3: Y= frequency of fast foods consumption

For objective 4: Y= BMI

$\beta_0$ = constant

$\beta_i$ = estimated coefficient of the explanatory variables

$X_i$ = explanatory variables

$\epsilon_i$ = Disturbance term

By fitting the variables into the model, the model was presented as illustrated in equation 2

Y (frequency of fast food consumption) = f (Gender, Age group, Source of income, Religion, Level of income, Physical appearance, Type of fast food consumed, Types of fast food consumed (meaty), Types of fast food consumed (carbohydrates), Types of fast food consumed (starchy), Types of fast food consumed (other), Sources of fast food (supermarkets), Sources of fast food (supermarkets), Sources of fast food (street vendors), Sources of fast food (other), For objective 4, the same variables for objective 3 were used in to run the model together with BMI variable).

These variables are discussed in the section below.

### **3.12 DESCRIPTION OF VARIABLES SPECIFIED IN THE MULTIPLE LINEAR REGRESSION MODEL**

This section focuses on description of the explanatory variables and their expected relationships with the dependent variable specified in the multiple linear regression model as presented in Table 3.1.



*Table 3.1: Description of variable specified in the Multiple linear regression model*

Variables	Type of measure	Coding system	Expected sign
Dependent variable (fast food consumption frequency)		0=Low frequency consumption 1=High frequency consumption	
X <sub>1</sub> =Gender	Dummy	0= Gender 1= Female	-/+
X <sub>1</sub> =Age group	Continuous	Age of respondents	+
X <sub>2</sub> =Source of income	Categorical	0=Wages/salary, 1=remittances, 2=State of social welfare grant, 3=Informal income, 4=Other	+
X <sub>3</sub> =Religion	Categorical	0=Christianity, 2=Islam, 3=Hindu, 3=Judaism, 4=African traditional religion, 4=Other	-/+
X <sub>4</sub> =Level of income	Categorical	0=<R500, 1=R500-R999, 2=R1000-R1999, 3=R2000-R2999,4=R3000-R3999, 5=R4000-R4999,5=>R5000	+
X <sub>5</sub> =Physical appearance	Categorical	0= Slim build, 1= Medium build, 2= Heavy build	+
X <sub>6</sub> =Type of fast food consumed	Categorical	0= Vegetarian, 1=Vegan, 2= Meat eater	+
X <sub>7</sub> =Types of fast food consumed (meaty)	Dummy	1 if consuming, otherwise 0	+
X <sub>8</sub> =Types of fast food consumed (carbohydrates)	Dummy	1 if consuming, otherwise 0	+
X <sub>9</sub> =Types of fast food consumed (starchy)	Dummy	1 if consuming, otherwise 0	+
X <sub>10</sub> =Types of fast food consumed (other)	Dummy	1 if consuming, otherwise 0	+
X <sub>11</sub> =Sources of fast food (supermarkets)	Dummy	1 if purchasing, otherwise 0	+
X <sub>12</sub> =Sources of fast food (franchises)	Dummy	1 if purchasing, otherwise 0	+
X <sub>13</sub> =Sources of fast food (street vendors)	Dummy	1 if purchasing, otherwise 0	+
X <sub>4</sub> <sub>1</sub> =Sources of fast food (other)	Continuous	List of other sources of fast foods	+
X <sub>15</sub> =BMI	Categorical	0=underweight, 1=Normal weight, 2=Overweight, 3=Obese	+

In the study, the multiple linear regression model was used to explain how various factors identified in Pilgrim's model affect the frequency of consumers' fast food consumption. In Pilgrim's model, gastronomic factors such as perceptions of the taste, smell, feel and sight of particular fast foods determine whether and how frequently those offerings are consumed. Environmental factors such as perceptions of fast food production and preparation technologies,

product prices and social class can also influence fast food consumption frequency. Personal factors such as a desire to achieve or maintain a particular physical appearance may exert further influence. The researcher differentiated frequent consumers from non-frequent consumers of fast foods. This was determined by identifying those who consumed fast foods less than 15 times per month as non-frequent consumers and those who consumed fast foods more than 15 times per month as frequent consumers. That information was used in data coding to differentiate non-frequent fast food consumers from frequent fast food consumers.

A number of factors influencing the frequency of fast food consumption are discussed below.

### **3.13 SOCIO-ECONOMIC FACTORS INFLUENCING FREQUENCY OF FAST FOOD CONSUMPTION**

In this section socio-economic factors (variables) are discussed, namely: fast food consumers' genders, age groups, sources of income, levels of income, religions, physical appearances, types of fast food consumed, types of meaty fast foods consumed, types of carbohydrate-based fast foods consumed, other types of fast food consumed, supermarket fast food sources, franchise fast food sources, street vendor fast food sources, other fast food sources and consumers' BMI statuses.

- **Gender:** Both male and female were consumers of fast foods. A dummy variable was used to code these variables as follows: 0=male, 1=female. A consumer's gender can influence his or her frequency of consumption as well as choices of fast food to consume (Brindal, 2010; Flegal *et al.*, 2010; Marlow & Shiers, 2012; Musaiger, 2014; Rummo *et al.*, 2015; Majabadi *et al.*, 2016;). Females were therefore expected to consume more of fast foods than male, and a positive correlation was expected.
- **Age group:** Age was measured by the actual number of years of the respondent. For instance, the younger participants were expected to consume fast foods more than older consumers. The literature also shows that fast food consumption levels have been found to be generally higher among younger consumers (Ergin & Akbay, n.d.; Feeley *et al.*, 2012).

- **Source of income:** Sources of fast foods were measured as categorical variable, and have a priori expectations. It was coded as follows 0= wages or salary, 1=remittances, 2=state social welfare grant, 3=informal income, 4=other. Source of income In the U.S., Jeffery *et al.*, (2006) identified that having more than one source of income could explain the obesity levels.
- **Religion:** Religion was measured by a dummy variable. Kim *et al.* (2003) found religious denomination to be significantly related to higher body weight. Dodor (2012) observed higher sedentariness, fast food consumption and BMIs were among more devout religious followers.
- **Level of income:** Level of income was measured based on the amount of the money the respondents were receiving per month. The variable was coded as follows: 0=<R500, 1=R500-R999, 2=R1 000-R1 999, 3=R2 000-R2 999, 4=R3 000-R3 999, 5=R4 000-R4 999, 6= $\geq$ R5 000. Consumers with high level of income were expected to consume more of fast foods and could choose to purchase from expensive to cheap fast foods.
- **Physical appearance:** Physical appearance was measured as a categorical variable, the variable was coded as follows: 0= slim build, 1=medium build, 2= heavy build. Physical appearance is expected to have a positive correlation towards fast consumption and consumers BMI. Majabadi *et al.* (2016) found that some participants held the view that girls consume less fast food than boys because the former wished to maintain a more slender physical appearance.
- **Type of fast food consumed (meaty):** Respondents were asked to select the type of fast foods they consumed, and they were anticipated as meat consumers. Van Zyl *et al.* (2010) revealed meaty type of fast foods was a common type of fast food among fast food consumers.
- **Types of fast food consumed (carbohydrates):** Respondents were given options to select from list of types of fast foods the fast foods they consuming, in order to know the most common types of fast foods they consume. A value of 0 was given to consumers consuming carbohydrates types of fast foods and 1to consumers who are not consuming carbohydrates. Normally, most fast foods are expected to contain more carbohydrates. Boyland and Halford (2013) noted an increased preference for high-carbohydrate fast foods among consumers most exposed to television advertising.

- **Types of fast food consumed (starchy):** Bowman *et al.* (2004) observed that fast food meals in general to be high in refined starch. Thus, starchy fast foods were expected to positively influence fast food consumption and obesity.
- **Types of fast food consumed (other):** There is not much literature on other types of fast foods consumed by consumers, Mdantsane consumers' mentioned other types of fast foods which were not listed by the researcher. For example, they mentioned chicken legs. The different types of fast foods consumed may positively influence the consumption of fast foods and obesity.
- **Sources of fast food (supermarkets):** Supermarkets sources of fast foods were expected to be a common place where consumers purchase their fast foods, since they provide a wider variety of fast foods.
- **Sources of fast food (franchises):** KFC, Burger King and McDonalds are franchise sources of fast foods. Franchise sources of fast food besides supermarkets, street vendors and others sources of fast foods were identified as a factor that can lead to obesity.
- **Sources of fast food (street vendors):** Source of fast foods (street vendors) was measured as a dummy variable assuming a value of one if the consumers purchased their fast foods at street vendors and zero if not. Tabassum and Rahman (2012) noted that, the fast food industry, whether in South Africa or the world, is full of firms that sell such food, be they specialised restaurants, supermarkets and street vendors.
- **Sources of fast food (other):** Sources of fast foods (other) was also measured as a dummy variable, coded as follows 0= purchasing of fast at other sources of fast foods and 1= not purchasing fast at sources of fast foods others. Since the study was conducted at a township, sources of fast food (other) was expected to positively correlate with frequency of fast foods that could lead to obesity. Zikmund & Babin (2007:288) noted that multinational fast food chains have experimented with adding non-traditional fast food offerings to their menus.
- **BMI:** The BMI scores of respondents were measured by each participant's weight divided by the square of the participant's height ( $BMI = \text{weight}/\text{height}^2$ ). Variables were categorically coded as follows: >18.5= underweight, 18.5-24.9= normal weight, 25-29.9= overweight, and >30= obese (Goedecke *et al.* in Steyn *et al.*, 2006). The majority of the respondents were found to have a BMI score of more than 30 (obese). According to

Bowman *et al.* (2004) and Sharifirad *et al.* (2013), fast food consumption has been linked to obesity.

### **3.14 LIMITATIONS OF THE STUDY**

The limitations of the study are factors influencing the study that are out of the researcher's control (Simon, 2011). For the present study, these included time, finance and transport limitations. The study needed to be conducted within budgetary constraints which led to the researcher's cautious and economic use of resources throughout the study. Finally, the considerable distances between the researcher's place of residence and the research sites (that is, transport limitations) resulted in limited visits to the sites, due to transport costs.

### **3.15 DE-LIMITATIONS OF THE STUDY**

A study's de-limitations are factors affecting the study that are within the researcher's scope of control (Simon, 2011). Therefore, they include the choices of research problem, objectives, variables, theoretical viewpoints and methodology. The research problem influenced the researcher's focus throughout the study. The objectives, determined by the problem chosen, determined the statements and questions in the study instruments. The pre-determined variables also influenced the correct use of data collected tools utilised in the study. The theories preferred by the researcher were adopted at the exclusion of other competing theories. The methodological choices had several impacts on the manner in which the study was carried out, such as the gathering of both qualitative and quantitative data.

### **3.16 ETHICAL CONSIDERATIONS**

When conducting research, scholars should ensure that they avoid causing physical, mental or emotional harm to participants, other people or animals. Achieving such involved the researcher observing several ethical considerations in the present study, which included:

- informed consent, whereby the researcher informs individuals about the study before obtaining their permission to participate;

- confidentiality, whereby the classified information of respondents and organisations is kept private;
- acknowledgement, whereby participating individuals and organisations, as well as information sources are duly acknowledged for their contributions;
- transparency, whereby every aspect of the research process can be scrutinised by participants, researchers and other interested parties; and
- objectiveness, whereby the researcher avoids bias in dealing with data, participants and other aspects of the study.

In addition, the researcher made efforts to give recognition to authorities in the study area. This was achieved partly by way of in-text citation of the academics. Referencing the various sources of the information obtained from these authors furthered such recognition.

The researcher followed these ethical guidelines as prescribed by UFH’s Ethics Committee. In addition, an ethical clearance certificate was obtained before conducting the fieldwork of the study.

*Table 3.2: Summary of research objectives and analytical framework*

Objective	Hypothesis	Data	Analytical tools
To investigate consumers’ attitudes towards fast food	Most consumers have negative attitudes towards fast food	The extent to which consumers like fast food	Likert scale
To identify different types of fast food consumed by consumers	Consumers eat a wide variety of fast food	Types of fast food in different categories (for example, meat-based, vegetable-based, starch-based fast foods)	Descriptive statistics
To analyse factors affecting consumers’ frequency of fast food consumption	There are various factors affecting consumers’ frequency of fast food consumption	Demographic data (for example, consumers’ gender, income level and source, religion)	Multiple linear regression model
To assess the effect of fast food products on obesity	Fast food products contribute to consumers’ obesity	Body Mass Index	Multiple linear regression model

### **3.17 CONCLUSION**

This chapter presented the various methodological aspects of the study. The research methods and design used justified the choices of research instruments. That, in turn, affected the nature and analysis of data collected. The mobile nature of the population members in relation to the study area determined sampling method selection. The planning of the research methodology ultimately facilitated the study, enabling the achievement of the study objectives. The next chapter focuses on the study results, interpretation and their discussion. The discussion is related to the research proportion and research questions.

## **CHAPTER 4 : RESULTS AND DISCUSSION**

### **4.1 INTRODUCTION**

This chapter presents the results of the study. The data include both quantitative and qualitative data which was obtained from consumers of fast foods at the Highway taxi rank, Mdantsane, Eastern Cape Province, South Africa. Data analysis goes beyond interpretation. This section truncates the meaningful groups which are translated for interpretation. Interpretation of the results entailed meaningful reference to previous studies and context specific factors.

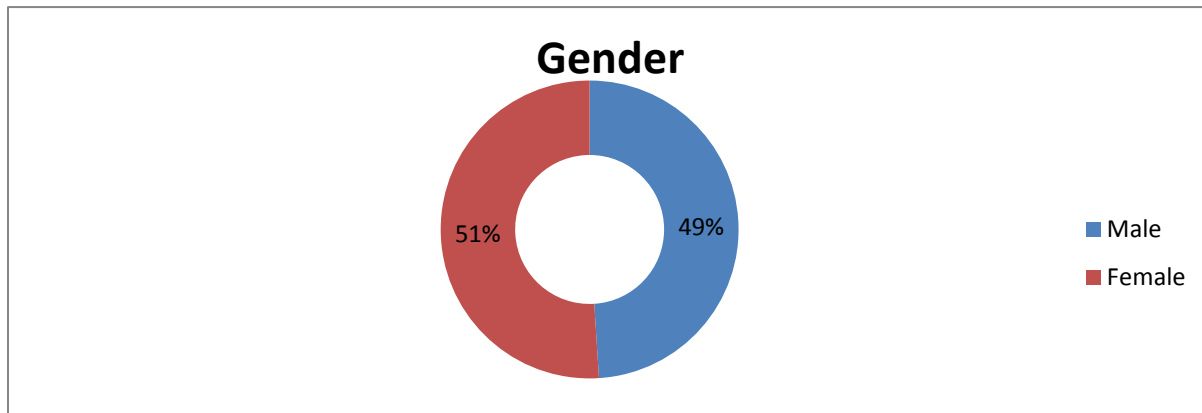
Descriptive statistics including tables, bar graphs, pie charts, doughnut charts and column charts aided in the interpretation of the results. Multiple linear regression model was utilised to empirically analyse the data. The chapter outlines the socio-economic status of the respondents in the study area, then goes on to examine the attitudes of the respondents towards fast foods. The chapter further identifies the different types of fast foods consumed, socio-economic factors affecting the consumption of fast foods and the determinants of BMI amongst the respondents in the Multiple linear regression model.

### **4.2 SOCIO-ECONOMIC CHARACTERISTICS OF THE RESPONDENTS**

This section profiles the respondents in the study area in terms of their socio-economic characteristics.



#### 4.2.1 GENDER



*Figure 4.1: Gender frequency distribution*

Source: Survey data (2017)

Figure 4.1 shows that 51% of the respondents were female, relative to the 49% who were male. Participants were almost evenly distributed according to gender. The drawing of nearly as many males as females for the sample using the quota sampling method resulted in the sample being highly representative of the population not only in terms of the small percentage difference between the genders, but also with regard to females constituting a marginal majority. Musaiger (2014) identified that men were observed to consume fast food more frequently and in larger quantities than women. Feeley *et al.* (2012) and Van Zyl *et al.* (2010) found males consuming more regular breakfast than females and snacking while watching television. Therefore, the study's gender distribution reflects the views of both men and female regarding fast food consumption. In a 25-year longitudinal study, Rummo *et al.* (2015) actually found that there were significant lower differences of males with higher BMIs. However, Flegal *et al.* (2010) cited in Marlow and Shiers (2012) found evidence that obesity was more prevalent in females.

#### 4.2.2 AGE

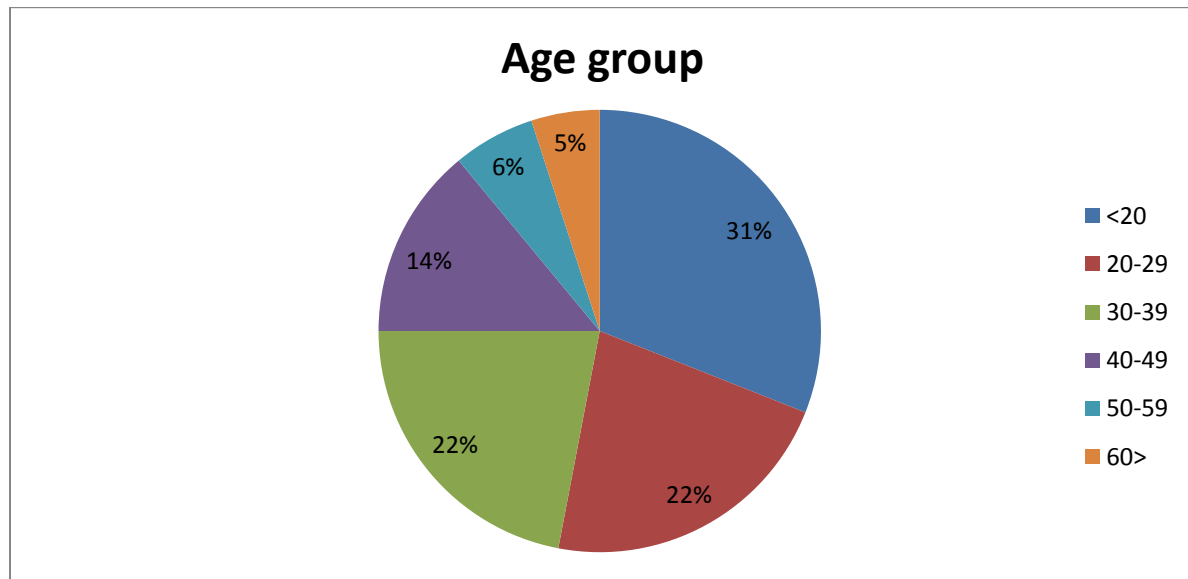


Figure 4.2: Age group frequency distribution

Source: Survey data (2017)

Thirty-one percent of the respondents were teenagers aged less than 20 years, while 22% were young adults aged between 20 and 29 as well as 30 and 39 years respectively (Figure 4.2). Fourteen percent of the respondents were aged between 40 and 49 years with 6% between 50 and 59, while 5% were aged 60 years and above. The vast majority of participants were thus of economically active age (15 to 64 years old). Given the relatively high unemployment in Mdantsane (Amathole District Municipality, 2007; Department of the National Treasury of South Africa, 2010), many of these working participants had to commute to surrounding areas, like East London and King William's Town, that offered more economic opportunities. Therefore, it can be assumed from the emerging results that most of the respondents spent much of the time after working hours finding transport to return home and commuting, leaving them with little time to prepare home-cooked meals. Moreover, the exertions of a full working day leave many workers too tired to cook dinner (Dave *et al.*, 2009). The lack of electricity in many Mdantsane households (Business Trust, 2007) may make cooking more time-consuming. Therefore, since fast foods are affordable, ready to eat and easily available on the way back home, they become appealing to workers.

Most of the teenagers who attend school preferred to purchase ready-to-eat meals to preparing home cooked meals. According to Ergin & Akbay (n.d.), in South Africa, and worldwide, the fast food market is dominated by young and urban consumers, including students and workers. In a related study of adolescents by Feeley *et al.* (2012) in Soweto, South Africa, age was identified as having a positive correlation to consumption of fast foods. An increase in age increased the likelihood of consuming soft drinks and chocolates. This corroborated Marlow and Shiers' (2012) finding of a positive influence of age on overweight. Jeffery *et al.* (2006) also alluded that an aging population with smaller families could also be a leading cause in fast food consumption ultimately leading to obesity. Consumption of fast food has been found to be generally higher among younger consumers despite their lower income compared to older consumers (Ergin & Akbay, n.d.; Feeley *et al.*, 2012). This may be due to the tendency of the youth to associate fast food consumption with the Western lifestyle, which is adopted by the majority of youngsters (Pingali, 2007).

#### 4.2.3 INCOME LEVEL

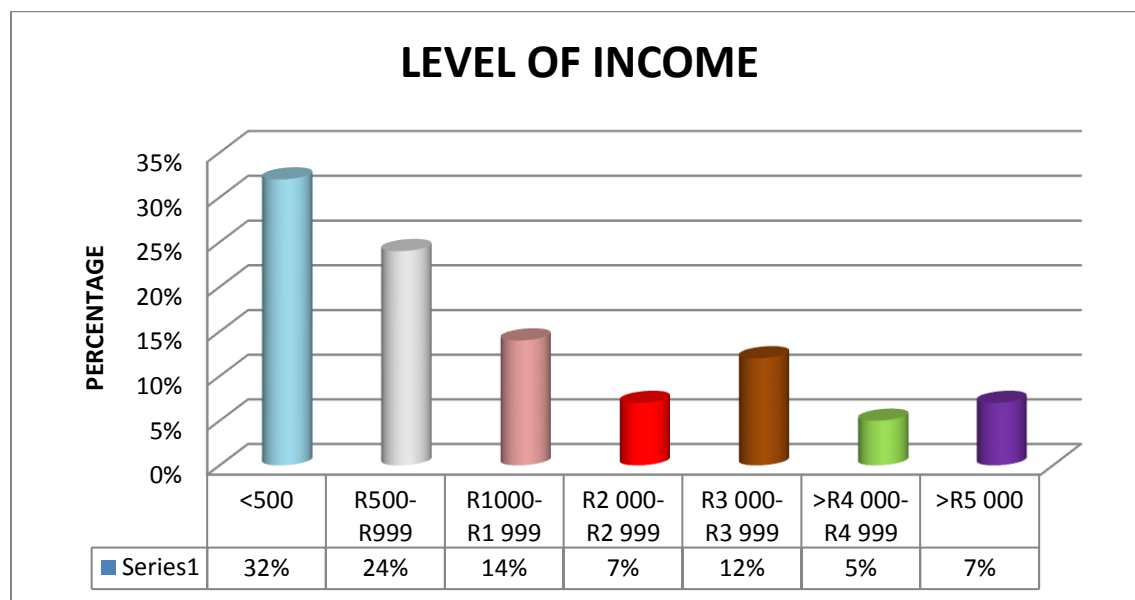


Figure 4.3: Income level frequency distribution

Source: Survey data (2017)

Figure 4.3 shows the income levels of the respondents. Most of the respondents were earning an income of less than R1 000. The findings may be influenced by the persistently high unemployment rate in Mdantsane (Department of the National Treasury of South Africa, 2010), which mirrors the high unemployment rate in the country (Statistics South Africa, 2017). Therefore, many Mdantsane residents only depend on state social grant-based income. Mdantsane's relatively high population as the second largest township in South Africa (Plak South Africa, 2015) requires job creation within the local economy to reduce the high rate of unemployment. Despite the high national unemployment rate, which stands at about 27.7 %, state grants enable low-income consumers to purchase affordably priced fast foods sold by local and foreign restaurants (Statistic South Africa, 2017).

Low standard measure is assessed by how the level of income would negatively influence consumption of fast foods (Steyn *et al.*, 2011). The close proximity of various fast food options for Mdantsane residents may also encourage increased fast food consumption. The variety of fast foods available around the Golden Highway taxi rank and the fast foods at outlets strategically located within the entire township are supplemented by the wider and often more appealing range of fast food in the city of East London just 17km from Mdantsane (Department of the National Treasury of South Africa, 2010). Even with low incomes, many Mdantsane households can afford the low transport fare to nearby East London during weekends and buy the affordable fast food meals on offer. Those commuting to East London to work are exposed more often to the many fast food outlets in the city. Better still, to save on transport costs and time, residents can alternatively purchase fast food from fast food outlets, supermarkets and vendors in and around the Golden Highway (Department of the National Treasury of South Africa, 2010). Though Mdantsane residents spend less per person on fast food by tending to buy the less costly options more frequently, the relatively dense population of the township (Frith, 2011) makes for a large customer base that attracts even the large international fast food retailers to the area, which remains profitable enough for them to keep operating there.

#### 4.2.4 SOURCE OF INCOME

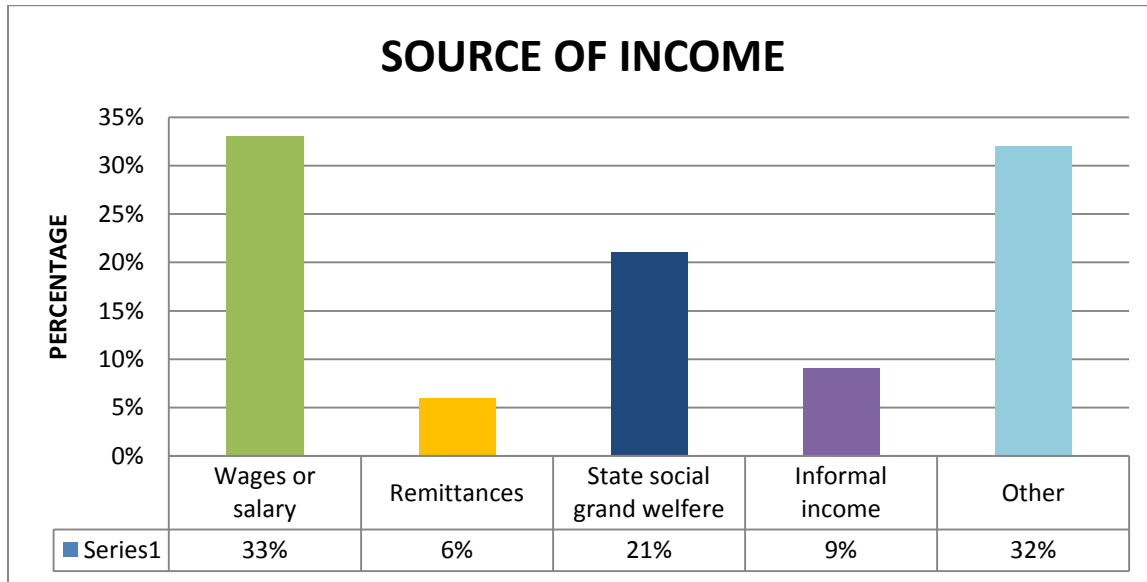
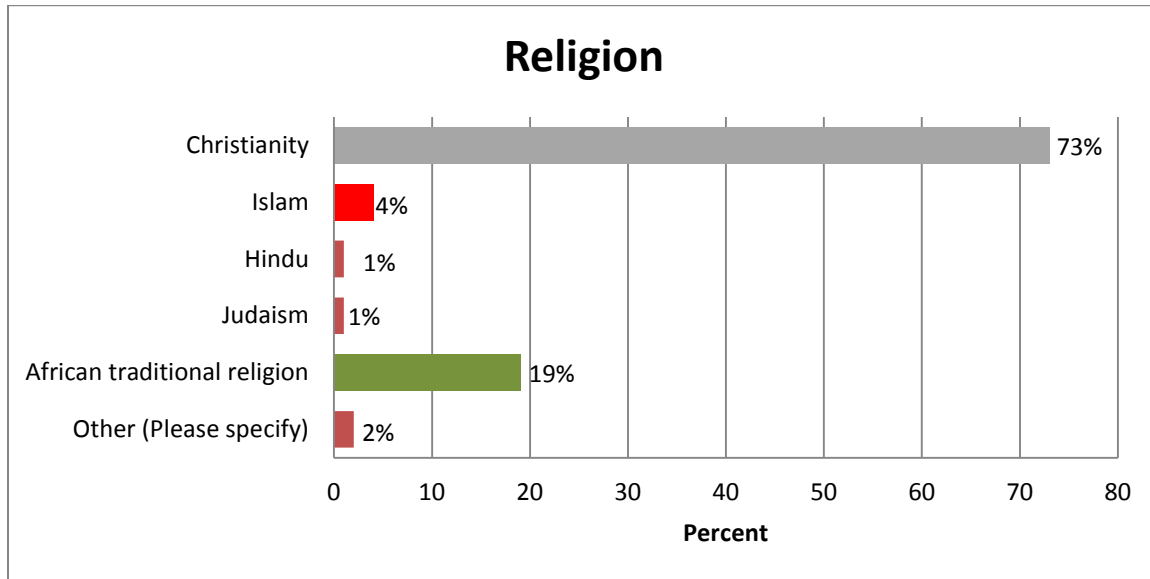


Figure 4.4: Income source frequency distribution

Source: Survey data (2017)

Figure 4.4 indicates that 33% of respondents were earning wages and salaries, while 32% were unnamed sources, with 21% receiving state grants as their sources of income. Only 9% of the respondents were obtaining informal income and 6% were receiving remittances. The large proportion of the other income was also attributed to the large number of non-income earning teenagers and school goers found in the study area. Some Mdantsane youths may have received cash as ‘pocket money’ from their parents and guardians. It is possible that many of the male youths may have also derived money from criminal activities given the reportedly high crime rate in Mdantsane which is fuelled by the high poverty and unemployment (Department of the National Treasury of South Africa, 2010). The results also imply that, due to such a harsh economic environment, some of the female youths may have fallen victim to ‘sugar daddies’ from whom they were receiving money or even engaged in prostitution to purchase fast foods.

#### 4.2.5 RELIGION



*Figure 4.5: Religious affiliation distribution*

Source: Survey data (2017)

Figure 4.5 shows the religious orientations of the respondents in the study area. The majority of respondents were Christians (73%), followed by other religions. This percentage was similar to the national figure. Christianity has by far been the most dominant religion in South Africa, with over 43 million Christians in the country, accounting for approximately 78% of the national population in 2016 (Statistics South Africa, 2016). African traditional religion was the second most popular religion among the respondents (19%), followed by Islam (4%). Likewise, African traditional religion has been second in terms of popularity to Christianity, representing 4.4% of the national population in 2016, followed by the 1.6% of South Africans who identify with the Muslim faith (Statistics South Africa, 2016). Religious gastronomic principles influence consumer fast food choices, as well as fast food outlets' offerings (Wright & Annes, 2013). Thus, religion factored into some participants' perception of fast food consumption. According to Cline and Ferraro (2006), religion determines lifestyle and moral action, especially in attaining, maintaining, recovering physical and emotional health. Ferraro (1998) cited claims that more obese individuals were observed in areas claiming higher religious affiliations, seeking a consoling and welcoming environment from social stigma.

#### 4.2.6 PHYSICAL APPEARANCE

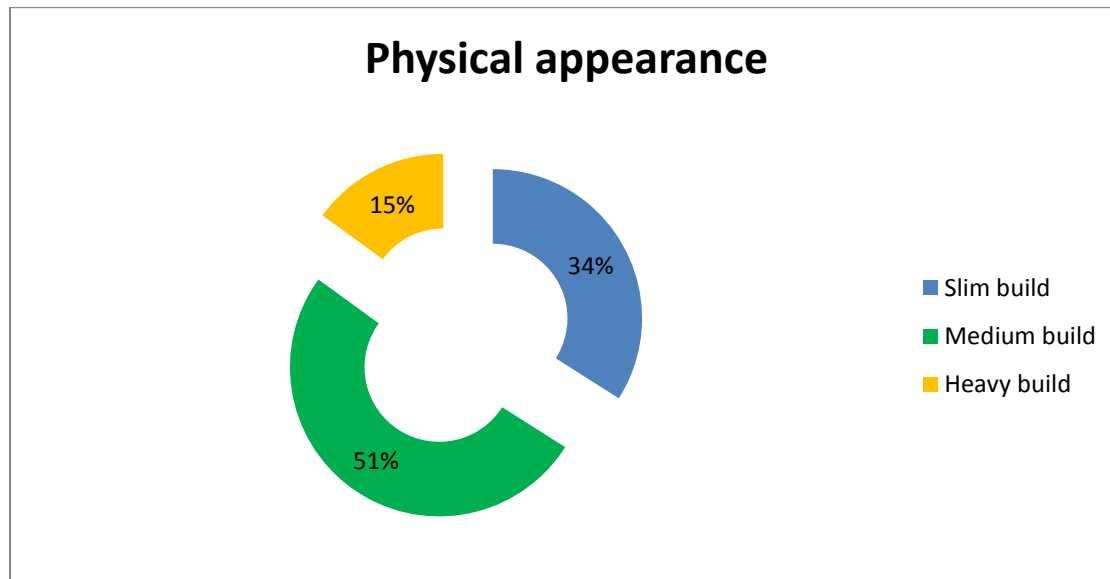


Figure 4.6: Physical appearance (build) distribution

Source: Survey data (2017)

Figure 4.6 shows respondents' physical appearance or build as subjectively judged by the enumerator. The results showed that, fifty-one percent of the respondents were of medium build, while 34% were slim and 15% were heavily built. These results suggested that most of the respondents were not visibly obese. This was in contrast to previous findings that the majority (53.3%) of South African adults were obese (Forbes, 2015). It could be that the low income levels of Mdantsane residents to some extent regulate portions of fast food and other food consumed. Additionally, low income essentially limits the amounts of food purchased, with smaller servings of food being consumed to ensure that the food lasts for longer periods. However, fast food, being ready made, is typically consumed relatively shortly after its purchase.

Birrell (2014) identified that physical appearance was influencing social status of South Africans, identifying men preferring chubby women, as well as fatness being a sign of success. Thus health conscious eating is ignored by many, fuelling uncontrolled consumption of fast foods. Goedecke *et al.* in Steyn *et al.* (2006) identified that in the black South African community, overweight especially in women symbolizes negative HIV/AIDS status, health, affluence, beauty and happiness. However, as cultures are integrating due to globalisation, more black women are becoming conscious about their appearance. Simfukwe *et al.* (2017) conducted

a study on socio-economic factors and fast food products that influence the BMI levels of fast food consumers involving health workers in KwaZulu-Natal, South Africa. Simfukwe *et al.* (2017) found that workers with enhanced self-image were following a healthier lifestyle with better state of health and appearing healthier. Thus, it can be implied that the adoption of Western lifestyle by many youths in developing nations (Pingali, 2007) has resulted in a number of female teenagers and female adults aiming to have slim builds (Senekal, Lasker, van Velden, Laubscher & Temple, 2016). This may further explain the low number of heavily built participants in the study.

### 4.3 CONSUMER ATTITUDES TOWARDS FAST FOODS

People develop predispositions towards environmental stimuli to which they are exposed. Consumers thus develop attitudes towards products advertised and consumed. Consumers form positive and negative attitudes towards fast food products. The results concerning these attitudes and the subsequent effects thereof on body weight are presented below.

The study evaluated consumer attitudes towards fast foods in Mdantsane using the statements presented in Table 4.1.

*Table 4.1: Consumer attitudes towards fast food in Mdantsane Highway*

	SA	A	NS	D	SD
	%	%	%	%	%
<b>I like fast food.</b>	27	45	11	11.5	5.5
<b>I believe that fast food has few negative impacts on health.</b>	12	47.5	19	12.5	9
<b>Adverts influence my consumption of fast foods</b>	12	37.5	22.5	17.5	10.5
<b>Adverts influence my attitudes towards fast foods</b>	12	35.5	21.5	18	13
<b>Fast foods are convenient</b>	19	54	16.5	9	1.5
<b>Fast foods are nutritious</b>	9	34	27	26	6.5
<b>Fast foods are cheap</b>	26	50	7.5	8.5	8
<b>My social status influences the types of fast foods I consume</b>	11	34	29.5	16.5	9
<b>My social status influences the places where I buy and consume fast food</b>	13.5	39.5	23	13	11

Key: SA= Strongly agree, A= Agree, NS= Not sure, SD= Strongly disagree, D= Disagree

Source: Survey data (2017)



The Likert scaled items pertaining to consumer attitude towards fast food were tested for reliability using Cronbach alpha. The instrument registered a Cronbach alpha ( $\alpha$ ) value of 0.708, marginally exceeding the minimum reliability threshold of 0.70 recommended by Nunnally (1978). The statements used were thus sufficiently reliable.

Table 4.1 shows that a total of 72% of respondents indicated that they liked fast foods, relative to the 17% who disagreed with the relevant positive statement. These results imply that most of the participants appreciated fast foods for their perceived benefits of being cheaper than other foods, ready-made, convenient, time saving, tasty and easy to eat (Tabassum & Rahman, 2012; Majabadi *et al.*, 2016). These participants assigned less importance to the reported health risks associated with fast foods (Van Zyl *et al.*, 2010; Afolabi *et al.*, 2013; Musaiger, 2014; Majabadi *et al.*, 2016). The minority of participants that disliked fast food were to take health risks more seriously. Brindal (2010) indicated that it is actually the children that tend to like fast foods, and this in turn forced their parents to like it too. This also corroborates the demographics of the study where most of the respondents were teenagers and school goers. Van Zyl *et al.* (2010) and NCCDPHP (2006) identified that it is the taste of the food that contributes to eating decisions. The liking of fast foods has been tied to the good taste assigned by consumers (Van Zyl *et al.*, 2010).

The results of the study further showed that over fifty-nine percent of respondents were in agreement that fast foods had little effect on the states of their health, whereas 21.5% were in disagreement, with 19% unaware. This implies that most participants did not consider the fast food they consumed to be particularly unhealthy as compared to other food they consumed. In contrast, results by Musaiger (2014) revealed that 95% of consumers in that study felt fast food was harmful to health. Frequent or regular consumption of fast food threatens human health (Harris *et al.*, n.d.). Fast food consumers are concerned about their health and their main health concern was suffering from conditions that fast food consumption contributes to, such as overweight and obesity, as well as heart disease and diabetes, among other conditions (Van Zyl *et al.*, 2010). Dave *et al.* (2009) found in their study that frequency of fast food consumption was not significantly associated with perceived healthiness of fast food, which suggests that consumer knowledge of fast food consumption's harmfulness to health does not affect how frequently they consume fast food. This implies that consumers value good taste and other

perceived benefits of fast food consumption over their health. Therefore, the majority of participants were either not fully aware of the negative health effects of fast food or, if aware, underestimated the extent of such effects.

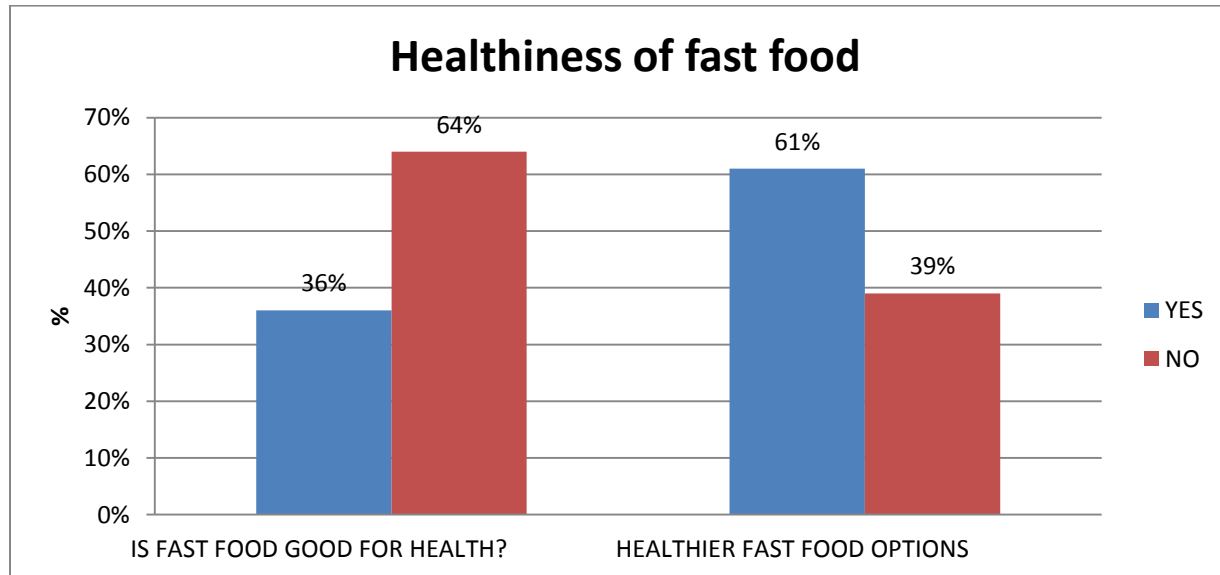


Figure 4.7: Perceived healthiness of fast food

Source: Survey data (2017)

In a separate questionnaire section, participants had to indicate the impact of fast food on health by answering “Yes” or “No” to a question rather than indicating their extents of agreement with the corresponding statement. Specifically, the question was stated as “Do you think fast foods are good for consumers’ health?” The results showed that 64% of the respondents answered “No”, indicating that fast foods were, in their views, generally not good for their health (Figure 4.7). To an extent, this finding, contrasts with the 59.5% who perceived fast food’s as having few negative health impacts. Thus, while the majority of respondents considered fast food generally not to be healthy for consumers, most participants also believed that any negative health impacts of fast food were largely minimal. Most participants, while acknowledging such impacts, still liked fast foods enough to continue consuming them.

The perceived limitedness of the negative health impacts of fast food probably let participants assume that it was alright to consume fast foods as frequently as they did. To these consumers, the perceived benefits of fast food consumption exceeded the perceived costs thereof, leading to continued fast food consumption. Surprisingly, a considerable proportion of respondents (36%)

believed that fast food was generally good for health. It is possible that many or most of these consumers deliberately sought out and consumed mainly healthier fast food options. These participants likely formed part of the 61% who indicated that if offered healthier fast food options in the future, they would choose to eat such fast food. The belief of the majority of participants that fast food was generally unhealthy suggests that most of the fast food in and around Mdantsane was traditional fast food high in fat, salt and sugar contents.

Emerging from the findings of the study was that 49.5% and 47.5% of respondents agreed that advertising influenced their consumption and attitude towards fast foods respectively (Table 4.1). Conversely, 28% and 31%, respectively, disagreed. In general, these results reveal the powerful influence of mass media advertising on consumer attitudes and behaviour. The impressionable nature of the participants as consumers was also apparent from these findings. As a whole, the results indicated positive attitudes towards fast food by participants. Fast food advertisements were in large part responsible for the development of those positive attitudes. This is especially so since fast food adverts, in their promotional nature, tend to focus on the aspects of fast food products that advertisers believe appeal to consumers. The results were in contrast to Van Zyl *et al.* (2010) who found that media messages did not persuade purchase of fast foods amongst the majority of consumers. The results revealed that respondents were exposed to adverts likely having a bearing on fast food consumption.

Fast food advertising to youths, mostly through traditional mass media, generally increased, with fast food chains also using new information technology-based social and mobile media, which influence frequency of fast food consumption (Cassim, 2010; Harris *et al.*, n.d.). Mchiza *et al.* (2013) even went further to identify that out of all food related advertisement on television in South Africa, 22% were related to sweets, 20% to fast foods, 16% to starchy foods, with only 2% related to fruits and vegetables. Priyadharsini (2014) highlighted that the increase in fast food consumption in India were the result of marketing strategies that McDonalds implemented. Haque, *et al.* (2011) found that Malaysian consumers' fast food consumption was influenced by advertisements, with television having the most influence on their choices of fast food. Previously, Van Zyl *et al.* (2010) also noted television adverts' significant influence on the purchase and intake of fast foods. Singam *et al.* (2014) cited advertisements as among the most

important variables in attracting consumers towards fast food outlets, with colour being the most attractive element in advertising.

A staggering 73% of the consumers were in agreement that fast foods are convenient relative to only 10.5% who disagreed (Table 4.1). Fast food's convenience refers to the ease with which fast food can be consumed compared to other foods (Hawa *et al.*, 2014). For instance, a typical fast food meal of chicken and chips can be easily eaten with only one's hands, unlike a home-cooked meal of rice, beef gravy and lettuce, which requires eating utensils like a spoons, forks and knives. Fast food is also convenient as it is served in a ready-to-eat state, without the preparation time and effort of home-cooked servings required of consumers (Tabassum & Rahman, 2012). The elimination of the need to wash plates, pots, spoons and so on is a further convenience of fast food enjoyed when eaten from the disposable containers in which it is served (Hawa *et al.*, 2014).

The results suggest that most participants personally experienced the ease of consuming fast foods and thus appreciated such convenience. Fast food's popularity is partly due to globalisation (Tabassum & Rahman, 2012). This emanates from the aforementioned benefits of fast food's convenience in terms of being ready-made, time saving, and easy to eat (Tabassum & Rahman, 2012; Hawa *et al.*, 2014). A study by Musaiger (2014) observed that the number of consumers eating in fast foods places has increased as a result of fast foods being convenient. A study conducted by Majabadi *et al.* (2016) showed that respondents were satisfied by fast food because they are convenient. Van Zyl *et al.* (2010) also found convenience to be a major factor in choosing fast food over home-prepared meals.

Only 43% of respondents positively agreed that fast foods were nutritious, with 32.5% of the sample disagreeing (Table 4.1). This result reinforced the generally pro-fast food stance of the participants. Perhaps many of those who believed that fast food was nutritious had more exposure to healthier fast food options than the other participants. Increased consumer health concerns regarding fast food have led to the relatively recent trend of consuming healthier fast food as fast food chains increase the variety of offerings for health-conscious consumers (Brindal *et al.*, 2008). The position that fast food is generally nutritious is contrary to the findings of Bowman and Vinyard (2004) that consumption of fast foods was linked to low consumption of

nutrients such as calcium and magnesium. Majabadi *et al.* (2016) revealed that fast foods containing high amounts of fat raise cholesterol levels and contribute to weight gain. Brindal (2010) indicated that in Australia, nutritional value was considered as important in the purchase of fast foods.

Table 4.1 further shows that 76% of the respondents concurred that fast foods are cheap as compared to the 16.5% who did not. In arriving at the conclusion that fast food was cheap, most participants considered the amounts of money they paid for other food in relation to how much they spent on fast food and other expenses. The low incomes and the high fast food consumption frequencies of participants were strong indicators of the high affordability of the fast food consumed by Mdantsane residents.

The continued operation of various local and international fast food outlets and fast food street vendors in the township (Department of the National Treasury of South Africa, 2010) suggests that consumers there frequently consume fast food. Participants' predominant perception of fast food's affordability supports Musaiger's (2014) and Brindal's (2010) observations that fast food consumption is highly influenced by reasonableness of price. Similar results were noted by Majabadi *et al.* (2016) who highlighted fast foods as being cheaper. While being important factors, the price and cheapness of fast food is not always foremost in consumer's minds. Abdullah *et al.* (2015) found that though consumers in their study considered fast food to be cheap and affordable, few of them cited price as their main reason for choosing fast food.

The findings of the study also indicated that 45% and 53% of respondents agreed that their social status influenced the types of fast food they consumed and where they purchased the foods from respectively, while 27.5% and 24%, respectively, were not in agreement (Table 4.1). The results revealed that social status influences the types of fast food that consumers eat. Majabadi *et al.* (2016) observed in their study that participants consumed fast food to feel like they belonged to a higher social class, as well as to conform to their friends. The findings of the above study are in line with the results of the current study. Furthermore, a study by Higgs and Thomas (2016), commensurate with the emerging results, suggest that consumers' food consumption choices are influenced by the eating choices of people with whom they socially connect. Dave *et al.* (2009)

actually found that in the US frequency of fast food consumption was associated with fun and social outing.

According to the social learning theory, people learn from other people by imitating role models, through direct observation or through indirect interactions via media (Broderick & Phillips, 2016). Individual consumers learn socially in these ways to make purchasing decisions, such as choosing certain types of fast food to consume, from their reference groups (Hsu *et al.*, 2013). These include membership reference groups to which individuals currently belong (for example, family, peers, and so on), aspirational reference groups to which one is attracted and aspires to be a member of (for example, celebrities) and dissociative reference group that individuals wish to avoid being identified with (Mihalcea & Catoiu, 2008). However, Brindal (2010) identified that typical fast food consumers, overweight and obese people were classified as being of a lesser class, lacking knowledge and self-control.

The results revealed that consumers' social status influenced their choice of places where they bought and consumed fast foods. Social status differentiates high income earners and low income earners. Within the wide array of fast food outlets, some outlets cater to the generality of the fast food consumer population (including low income earners). These include KFC, Chicken Licken and McDonald's, among others. Other outlets target high-end consumers (high income earners). Such outlets include Steers, Debonair's Pizza and Nando's. Consumers thus eat out at certain fast food restaurants associated with social groups to which they already belong, that is, membership reference groups or want to belong, that is, aspirational reference groups (Mihalcea & Catoiu, 2008; Majabadi *et al.*, 2016).

High income-earning households often have housemaids who cook their meals. As a result, members of these households tend to eat home-cooked meals more frequently. High-income earners thus tend to eat fast food only occasionally. A number of women in high-income households tend to strive for slimmer builds as they pursue Western perceptions of beauty. For instance, it is assumed they either consume less traditional fast food or consciously consume healthier fast food options that do not result in excessive body weight gain. In low-income households, school-going children and working-parents and single adults cook their own food

when they have time. However, when work and school schedules become hectic and tiring, low-income earning households tend to eat fast food.

Price, quality and other aspects of fast food differentiate the fast food outlets from each other. The influence of price on consumers' choice of fast food restaurant is generally greater among younger consumers than among older consumers (Oyewole, 2013). According to Akbay *et al.* (2007), besides price, income level and educational level are social class-related factors that influence choice of fast food restaurant. Consumers' educational levels may influence the development of attitudes towards fast food.

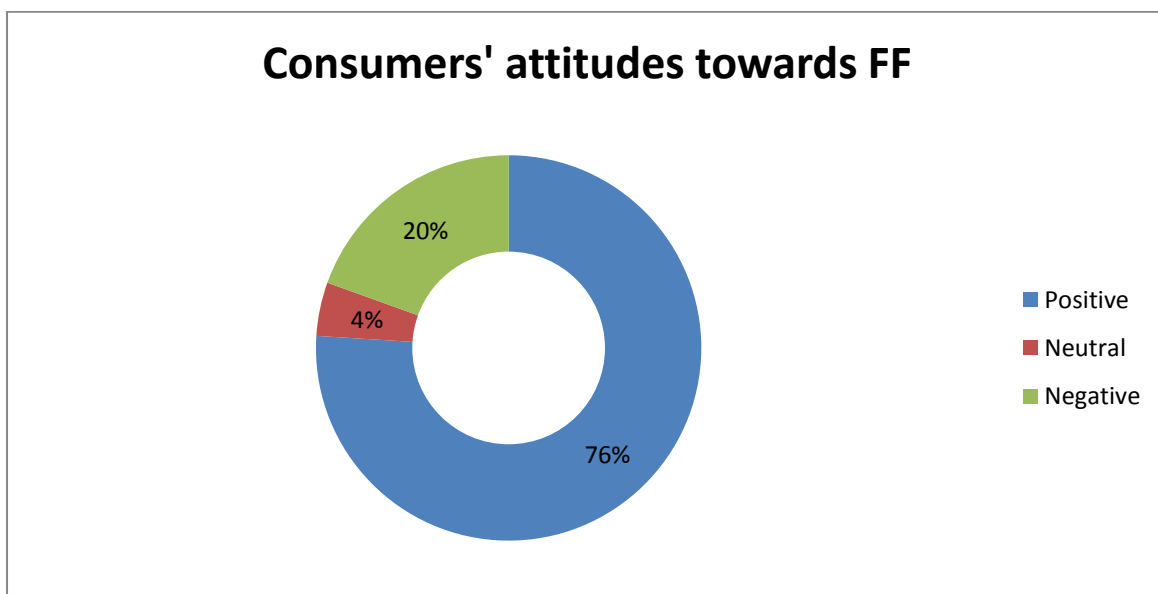


Figure 4.8: Directionality of consumer attitudes towards fast food

Source: Survey data (2017)

Figure 4.8 summarises the directionality of consumers' attitudes towards fast foods. Over 76% of the respondents had generally positive attitudes towards fast food, relative to the 20% who possessed negative fast food-related attitudes and the 4% with largely neutral dispositions of that nature. The majority of respondents held positive attitudes towards fast foods despite well-publicised negative health impacts (Currie *et al.*, 2009; Afolabi *et al.*, 2013; Majabadi *et al.*, 2016) that they must have at least heard of. However, as most participants perceived minimal negative health impacts of fast food and nearly half agreeing that fast foods were generally nutritious, they clearly disregarded public health warnings concerning fast food. These

consumers consciously or subconsciously evaluated fast food in terms of its costs and benefits before deciding that fast foods were largely good, hence the positive attitudes. These attitudes were, according to Hawkins *et al.* (2001:395), manifested in the participants' general feelings, beliefs and behavioural intentions regarding fast fast. This explains the general consistency of positive responses among consumers with respect to fast food.

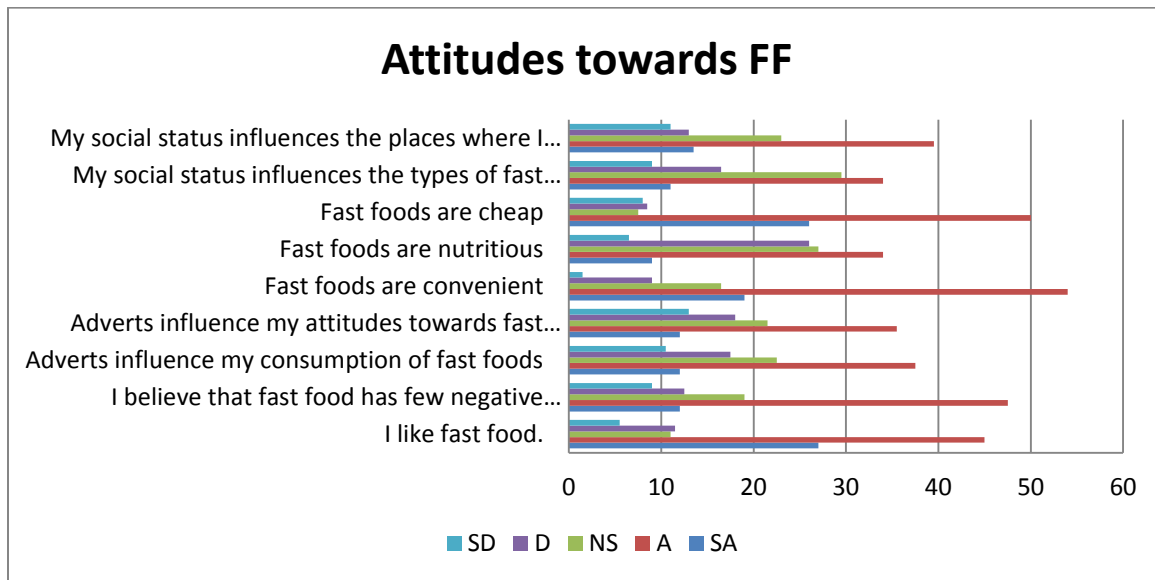


Figure 4.9: Consumer attitudes towards fast food

Source: Survey data (2017)

Figure 4.9 shows how consumers' fast food-related attitudes were pictorially distributed. For instance, the results reveal that 73% of the respondents were in agreement that fast foods are convenient, whereas 76% were also in agreement that fast foods were cheap. On the other hand, 59.5% of the consumers believed that fast foods had few negative health implications while 72% admitted to have a liking for fast food. Relating to social status' influence on place of fast food purchase, 53% of the consumers were in agreement, with 49.5% agreeing that advertising had influenced their fast food consumption as well as 47.5% agreeing that advertising had influenced their attitudes towards fast foods. Only 43% of consumers were in agreement that fast foods are nutritious as well as 45% who identified that their social status dictates the type of fast food they consume.



These affirmative responses, all exceeding the percentages of disagreeing participants, indicated that the sample of consumers had generally positive attitudes towards fast food. These positive dispositions towards fast food influenced participants' consumer behaviour which reflected in high and frequent fast food consumption among a number of respondents.

#### 4.4 CONSUMER ATTITUDES REGARDING THE EFFECTS OF FAST FOOD CONSUMPTION ON THEIR BMI STATUSES

The study evaluated consumer attitudes regarding the effects of the consumption of fast foods in Mdantsane on their weight and BMI statuses using the statements shown in Table 4.2.

*Table 4.2: Consumer attitudes regarding the effects of fast food consumption on their BMI statuses in Mdantsane Highway*

	SA	A	NS	D	SD
	%	%	%	%	%
<b>I feel that I am overweight or obese.</b>	10	23	15	27.5	24.5
<b>Overweight or obesity is a serious health problem.</b>	30.5	47	9	9	4.5
<b>I believe that eating fast food increases weight.</b>	23	52.5	11	8	5.5
<b>I feel that the fast food that I eat has increased my weight.</b>	24	39	14	16	7

Source: Survey data (2017)

The Likert-scaled items relating to consumer attitudes regarding the effects of fast food consumption on their BMI statuses were tested for reliability using Cronbach alpha. The instrument had a Cronbach alpha ( $\alpha$ ) value of 0.568, below the minimum reliability threshold of 0.70 recommended by Nunnally (1978). The questions used were thus insufficiently reliable. This was possibly as a result of the low number of instrument items (Schumann, 2009). The procedure of removing questionnaire items with the lowest correlation in order to increase the Cronbach alpha value was not feasible in this case since the number of items was already too low, and thus all items were retained (George & Mallery, 2003). The results of the study were not expected to be the basis of critical decision-making in which lives would be at stake, but offer insights into the attitudes of the respondents, thereby justifying the use of the instrument in the present study.

Table 4.2 shows that 33% of the respondents felt that they were overweight or obese, with 52% in disagreement. To verify their perceptions, an actual BMI measure was obtained. Figure 4.10 shows that 34% of the respondents were actually obese, while 29% were overweight. On the other hand, 31% of the respondents had normal weight while 7% were underweight.

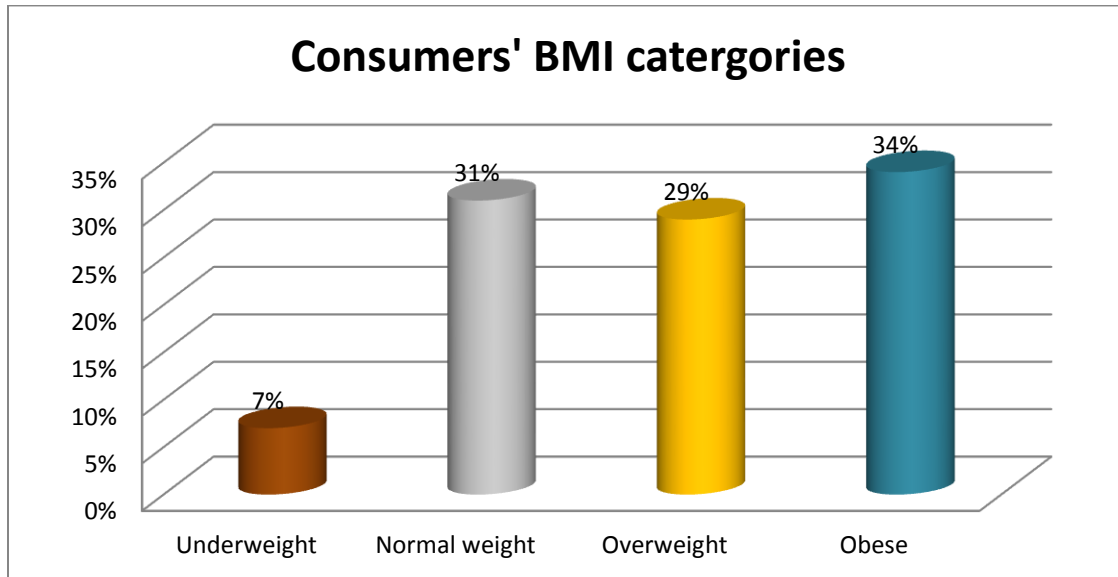


Figure 4.10: Frequency distribution of respondents by BMI categorisation

Source: Survey (2017)

The results revealed that many of the respondents were comfortable with their perceived BMI score and status but had misconceptions about their actual BMI status. While just 33% felt they were overweight or obese, 63% of the respondents were indeed overweight or obese. (Figure 4.10). Thus, a substantial proportion of participants underestimated their BMI status. This indicated a generally poor relationship between BMI status perceptions and actual BMI status among participants. By contrast, a strong, positive and significant association existed between the researcher's perceptions of participants' physical appearance and their BMI scores.

The results of the study speak directly to a study conducted by Van Zyl *et al.* (2010) who identified that about 60% of respondents were seldom concerned with their health. More respondents in that study were concerned about obesity than about any other disease. Several respondents stated that their weight gain resulted from their fast food consumption. Fast food consumption has been linked to obesity (Bowman *et al.*, 2004; Sharifirad *et al.*, 2013). Jeffery *et*

*al.* (2006) observed a significant positive association between fast food consumption frequency and BMI. Weight loss among South African females is often associated with HIV/AIDS and thus is undesired (Kruger *et al.*, 2005), leading to beliefs that slimmer individuals are ill (Butzlaff & Minos, 2016). Hence, respondents considered overweight and obesity as signs of healthfulness as perceived within the South African context.

Table 4.2 highlights that 77.5% of the respondents identified overweight or obesity as a health problem while 13.5% did not. The results revealed that consumers generally perceive fast foods to have negative effects on health. Singh (2015) noted that fast food outlets have become a major threat to the health of members of society. A study by Majabadi *et al.* (2016) found that fast food intake causes illness like cancer and heart attack and can also lead to infertility. A convergence of literature also shows that regular consumers of fast foods may be at risk of obesity which, in turn, is associated with greater risk of conditions like cardiovascular disease, hypertension, diabetes, stroke and cancer (Bowman & Vinyard, 2004; Currie *et al.*, 2009; Afolabi *et al.*, 2013; Musaiger, 2014).

While many health professionals who generally consider fast foods as unhealthy advocate complete avoidance of fast foods, a more recent viewpoint of manageable fast food consumption emerged whereby consumers are encouraged to choose healthier fast food options (Brindal *et al.*, 2008). Efforts to educate the public about the aforementioned perils of consuming fast foods in large amounts have had limited impact on fast food consumers (Bryant, 2011).

The findings of the study illuminated that 75.5% of fast food consumers believed that fast foods contribute to weight gain, with 13.5% in the negative (Table 4.2). The results revealed that the participants generally believed that fast food consumption increases body weight. The results of the study suggest that a number of participants may have held this belief after their first-hand experiences of seeing themselves gain weight over long periods of consuming fast food, with about a third of respondents admitting to being overweight or obese. Participants may have also learnt from various media that continuous fast food consumption contributes to substantial weight gain, learning that these foods typically contain high sugar and fat content that increases body fat.

Musaiger (2014) cited media as a factor that can positively and negatively influence fast food perceptions and consumption. Comments from and general observations of health-conscious people in their lives concerning fast food may have further reinforced the perception. Such social learning has been found to influence fast food-related perceptions and behaviour (Broderick & Phillips, 2016; Mujabadi *et al.*, 2016). A study conducted by Currie *et al.* (2009) revealed similar findings which highlighted that overweight and obesity were positively associated with fast food consumption. Likewise, the study of Brindal (2010) showed that increase of fast food consumption could contribute to weight gain and potentially to obesity in the long run. However, Abdullah *et al.* (2015) found that the occurrence of obesity did not consistently increase with the frequency of fast food consumption. Therefore, the frequency of fast food consumption in that study was not significantly linked to obesity.

Sixty-three percent of the respondents actually thought that fast foods increased their body weight while 23% did not think so (Table 4.2). The results revealed that consumers perceive that fast food consumption contributes to increases in their weight. Some participants likely kept track of their weight over time and noticed gradual weight gains that they could have attributed to the fast food they consumed, knowing how often and in what quantities they consumed that food. Others may have simply accepted at face value the cautionary pronouncements in the mass media about the danger fast food consumption poses to one's healthy BMI status. The link between frequent intake of fast food and occurrence of obesity has been reported (Fraser *et al.*, 2010). Legislators and health care activists have warned the public about the negative health effects of consuming large quantities of fast food (Bryant, 2011). These efforts appear to have educated members of the public who blamed the high incidence of obesity on large fast food corporations (Brindal, 2010).

#### **4.5 FAST FOOD CONSUMPTION**

Various types of fast food offerings are eaten by consumers. The wide range of fast foods available in the market caters to consumers' different tastes. This section presents the results regarding the different types of fast food consumers identified in the study sample based on whether or not they consume meat and animal products. Frequency distributions of the types and categories of fast food consumed by the participants are revealed. The reasons for the

participants' consumption of fast food are also uncovered. Further results presented in this section concern the reasons why the respondents consider fast food to be generally unhealthy.

#### 4.5.1 TYPES OF FAST FOOD CONSUMERS

A majority of 92% of respondents were meat eaters, whereas vegetarian fast food consumers constituted 6% of the sample (Figure 4.11). Two percent of respondents were vegans. These results are testament to the popularity of meat among consumers. Indeed, it could be that the participants consumed mostly meaty fast food offerings as those are the most common offerings from the fast food sellers.

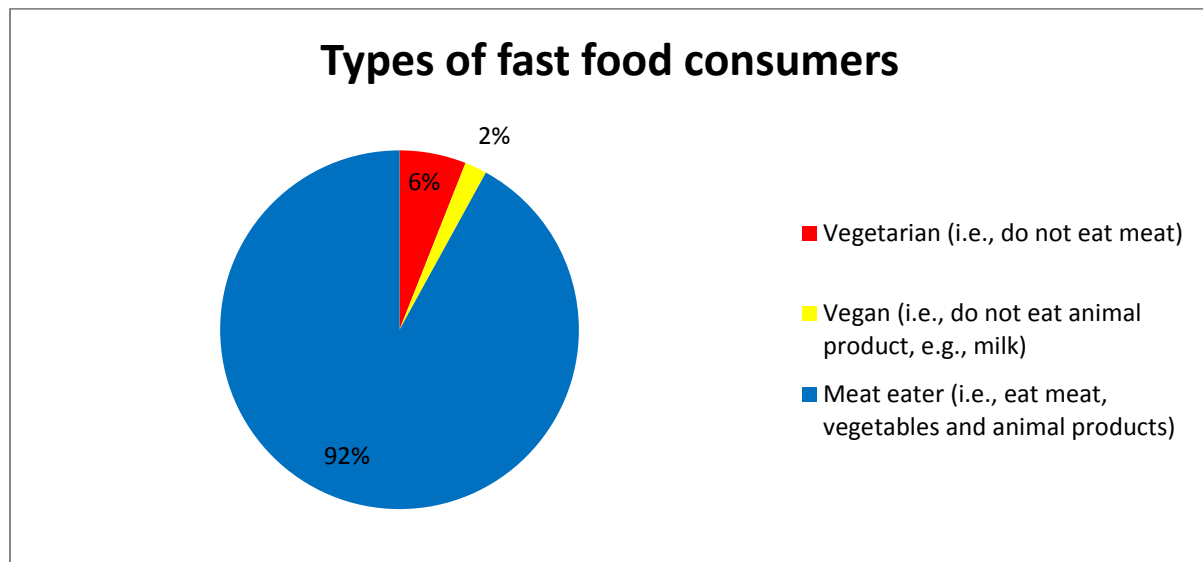


Figure 4.11: Types of fast food consumers

Source: Survey (2017)

The findings of the study align with Van Zyl *et al.* (2010) who found the most commonly consumed type of fast foods being meaty foods. Steyn *et al.* (2011), however, found fruit and soft drinks being the commonly consumed fast food in South Africa. In Soweto, Johannesburg, Feeley *et al.* (2012) found that the most popular fast food items were fried chips and fish, boerewors, pies and vetkoek (deep-fried dough bread). These findings are similar to the current study as most of the fast food types were meaty. Nevertheless, the present study's findings are unique because in addition to meat eaters being differentiated from non-meat eaters, a distinction

is made between vegetarians, who do not eat meat and vegans, who do not consume animal products (for instance, cheese).

#### 4.5.2 TYPES OF FAST FOOD CONSUMED

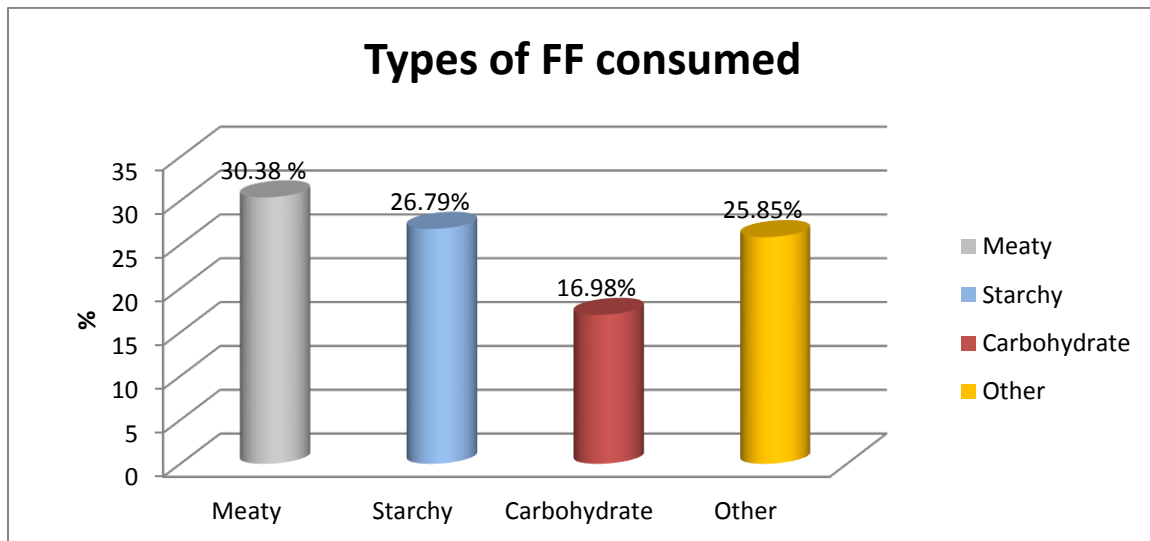
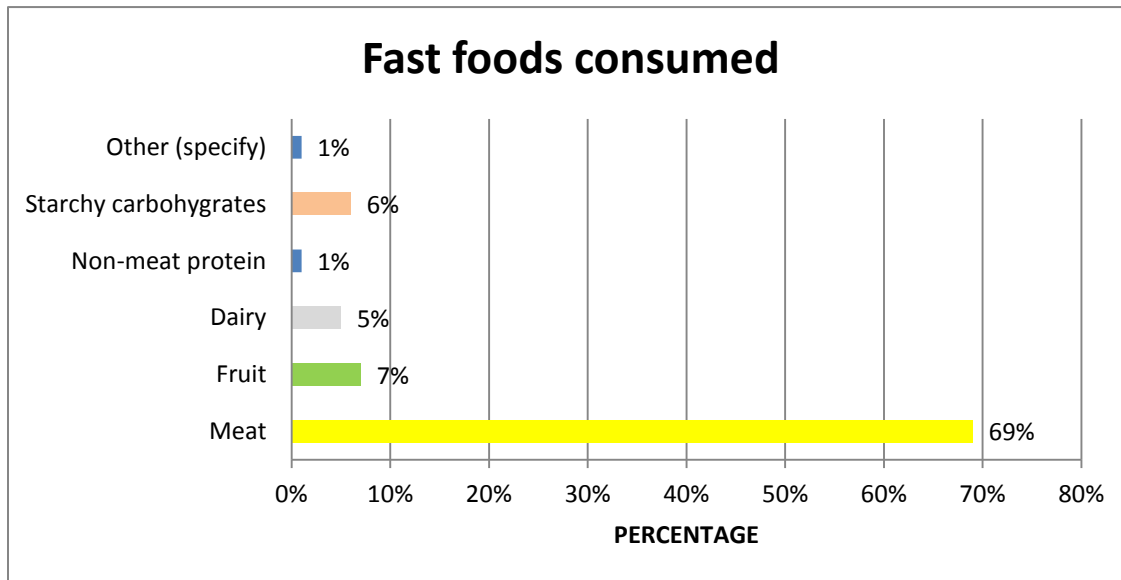


Figure 4.12: Categories of fast food consumed

Source: Survey data (2017)

Furthermore, it could be deduced from the results that comparing with starchy fast foods (26.79%), 30.38% of participants were consuming meaty fast foods and 16.98% were eating fast food containing high amounts of carbohydrates (Figure 4.12). Starchy fast food (for instance, chips, pap, and so on) were nearly as commonly consumed as meaty fast food products perhaps because the two are often combined in typical fast food meals. For instance, fish or chicken are commonly combined with chips, while pap is typically paired with beef. Few characteristic fast food meals include one of these fast food types without the other. These results support findings from a NCCDPHP (2006) study which identified that in the US there were more tendencies to opt for energy-dense foods, high in calories as meat, starch and carbohydrates in general contain particularly high amounts of energy (Wabitsch, 2017). However, meat was identified in that category due to its fat content. Furthermore, larger chunks of food have also been identified as inducing obesity. Jallinoja *et al.* (2016) highlighted the enduring high popularity of meaty fast food. The findings were however antagonistic to Feeley *et al.* (2012) who found adolescents in Soweto preferring soft drinks, chocolates, ice cream and squash.

### 4.5.3 CATEGORIES OF FAST FOOD CONSUMED



*Figure 4.13: Types of fast foods consumed*

Source: Survey data (2017)

Figure 4.13 reinforces findings of meaty fast foods being most preferred by the respondents, with 69% of respondents preferring meat, whereas 13% preferred vegetables and 7% favoured fruit. Only 6% of fast food consumers prefer starchy carbohydrates, 5% dairy products and 1% for non-meat protein. The respondents' fast food tastes varied as they were from the urban areas which offered a wide variety of fast food. Furthermore, Mdantsane Taxi Rank is a place of transit from which people go to different destinations and thus often offers different types of fast food, leading to the development of different fast food tastes.

#### 4.6 CONSUMER REASONS FOR FAST FOOD CONSUMPTION

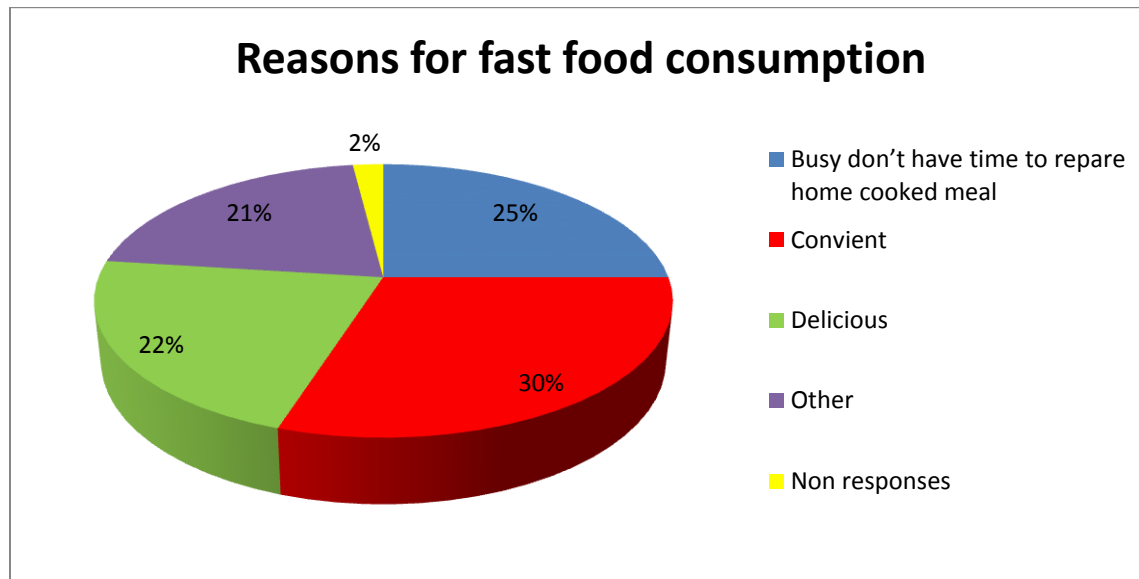


Figure 4.14: Reasons for fast food consumption

Source: Survey data (2017)

The reasons why the participants consumed fast foods were identified. The major reasons are shown in Figure 4.14. The findings revealed that 30% of respondents ate fast foods because they were convenient. Fast food convenience refers to the wide availability and accessibility of fast food, which does not require consumers such as workers to return home to eat. The ready-made nature of fast food is another aspect of its convenience, sparing consumers of the time and effort associated with preparing meals. Various fast foods are also convenient in that they can be eaten with bare hands, without the use of utensils such as forks, knives and spoons.

Abdullah *et al.* (2015) found that in Malaysia, 55.7% of fast food consumers tended to order meal packages because of their convenience. There were similar findings by Dave *et al.* (2009), who found that, in the U.S., fast food was mainly consumed based on its convenience and the dislike of cooking. A quarter of the participants cited the lack of time to prepare home-cooked meals as another motivator for their fast food consumption. Again, this alludes to the read-to-eat nature of fast food, which is possible due to its preparation often before consumers order it. By comparison, home-cooked meals can often only be prepared by the person who eats it and after returning from long hours of work or school days. On the other hand, 22% of the respondents



consumed fast food primarily because they enjoyed its taste. Moreover, the wide variety of fast food available caters to a range of food tastes. Some consumers like sweet fast foods like doughnuts, while others prefer salty foods like meat. There are also spicy fast food options to satisfy still other consumers. Despite the benefits of fast food, this type of food also presents a number of negative health-related consequences about which consumers should be aware.

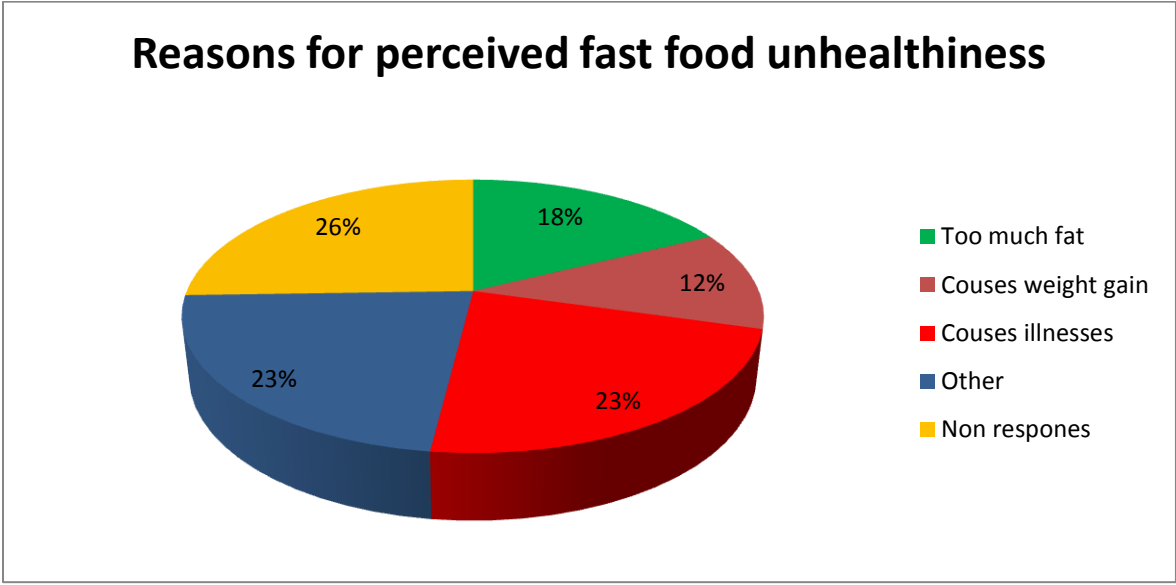


Figure 4.15: Reasons for perceived fast food unhealthiness

Source: Survey data (2017)

Figure 4.15 shows why the participants believed that fast food was generally unhealthy. The pie chart indicates that 23% of these consumers perceived fast food as mostly causing illnesses. Some of these illnesses, such as cancer, are unrelated to weight gain (Majabadi *et al.*, 2016), indicating the wide range of morbidity associated with excessive fast food intake. Another 18% of respondents believed that fast food was unhealthy as it had too much fat. In many fast food offerings, excess oil is easily visible to consumers. For instance, this is the case with certain types of doughnuts, ‘fat cooks’ and chicken. Some consumers may have tasted the high fat content as they bit and chewed fast food. Meanwhile, 12% of the sample held the perception that fast food primarily causes weight gain. This would be especially true of individuals who, living sedentary lifestyles, do not engage in enough physical activity to burn the high energy contained in typical fast food.

These results indicate that consumers are well aware of the specific negative impacts on health that fast food causes. Nevertheless, many respondents continued to consume fast food, due to its aforementioned benefits. Perhaps these participants hoped that they were not consuming so much fast food that their health would adversely suffer in the long run.

The results of the study also highlighted that 61% of the respondents indicated that given the option, they would prefer healthier food options. The finding indicates a lack of healthier fast food options in the market, with most retailers continuing to offer traditional fast food high in fat, salt and sugar contents. These respondents would not prefer complete abstinence from fast food as they wish to continue enjoying the benefits fast food brings, even though such an approach would effectively eliminate the negative health impacts of fast food consumption. These results indicate participants' desire for healthier fast food through better food preparation methods. This would allow them to continue enjoying the same fast food they have grown to like with less impact on their health.

These were similar findings to Van Zyl *et al.* (2010) in Johannesburg, South Africa who found 78% of the respondents felt that they would choose healthier food options if they were availed. More females than males indicated that they would choose options that were much healthier. Van Zyl *et al.* (2010) attributed this choice to an association of health concern. Steyn *et al.* (2011) highlighted that little is known about the nutritional values of fast foods by consumers. This was supported by Abdullah *et al.* (2015) who found that in Malaysia, 48% of fast food consumers were not aware of the nutritional quality of the fast foods.

#### **4.7 FACTORS AFFECTING CONSUMERS' FREQUENCY OF FAST FOOD CONSUMPTION**

In order to satisfy the third objective of the study (that is, to analyse factors affecting consumers' frequency of fast food consumption), the Multiple linear regression model, which was explained in the methodology chapter, was adopted. The Stata software was used to estimate the parameters and marginal effects of factors affecting frequency of fast food consumption. Pseudo  $R^2$  was computed as a proxy estimate to  $R^2$  in OLS regression, which, according to Norusis (2004), measures the proportion of the variation in the response explained by the model. From

the regression model, six variables were statistically significant. That is, the regression line did not pass through the origin. This was evidence to reject the third null hypothesis (that is, Person-related, environmental, gastronomic and decision-process factors do not affect consumers' choices of fast foods) and support the corresponding hypothesis (that is, several person-related, environmental, gastronomic and decision-process factors affect consumers' choices of fast foods). Person-related factors include gender, age group, physical appearance and BMI. Environmental factors include religion, income source and income level. Gastronomic factors include the types of fast foods consumed (including meaty, starchy, carbohydrate and other types of fast foods consumed). Supermarket, street vendor, franchise and other sources of fast foods are among the decision process factors.

*Table 4.3: Socio-economic factors and fast food aspects affecting fast food consumption frequency categories as the dependent variable*

<b>Variables</b>	<b>Coeff.</b>	<b>Std Err.</b>	<b>Z</b>	<b>P&gt; t </b>
Gender	0.1602959	.2395754	0.67	0.503
Age group	-0.1701599	.0931251	-1.83	0.068*
Source of Income	-0.0243626	.0699576	-0.35	0.728
Religion	0.0074663	.0689182	0.11	0.914
Level of income	0.0332117	.0589901	0.56	0.573
Physical appearance	-0.3389666	.2042762	-1.66	0.097*
Types of FF consumed	0.0679799	.2201397	0.31	0.757
Reason for consuming FF	-0.1201802	.1030789	-1.17	0.244
Types of FF consumed meaty	0.7589205	.2842101	1.71	0.087*
Types of FF consumed carbohydrates	0.751717	.2408798	3.06	0.002***
Types of FF consumed starchy	0.17589205	.2479666	3.12	0.002***
Types of FF consumed other	-0.1495293	.2385594	-0.63	0.531
Sources of FF supermarkets	0.0758753	.2423184	0.31	0.754
Sources of FF franchises	0.1074614	.2434943	0.44	0.659
Sources of FF street vendors	0.3871974	.2996274	1.29	0.196
Sources of FF others	-0.4859653	.2324674	-2.09	0.037**
BMI	0.1422444	.1358212	1.05	0.295
_cons	1.726978	.6958612	2.48	0.014**
<b>Model Summary</b>				
Number of obs	200			
Prob > F	0.0102**			
R-squared	0.1615			
Adj R-squared	0.0832			

\*, \*\*, \*\*\*Significant at the 1%, 5% and 10% levels respectively

Source: Survey data (2017)

Table 4.3 shows that respondents' age groups had a negative statistically significant relationship with their fast food consumption frequency. This suggested that younger respondents generally consumed fast food more frequently than older respondents. Past empirical evidence suggests that younger consumers dominate the fast food market globally (Ergin & Akbay, n.d.) possibly out of their desire for Western food and lifestyle. However, a study by Feeley *et al.* (2012) suggests that older consumers eat fast food more frequently. This may be due to their greater income and lack of cooking time as full-time workers. Physical appearance correlated negatively and significantly with fast food consumption frequency. Senekal *et al.* (2016) suggest that heavily built consumers would be expected to consume less, perhaps in efforts to lose weight.

The various types of meaty, carbohydrate and starchy fast foods had positive and significant associations with frequency of fast food consumption. The wider the varieties of meaty, starchy and carbohydrate fast foods were, the more often respondents consumed fast food. Though the majority of respondents most preferred meaty fast food, the results also showed that starchy and carbohydrate-based foods were also popular among respondents. The less conventional (unnamed) fast food sources had a negative and significant relationship with fast food consumption frequency. The more of these rarer fast food sources participants frequented, the less often they would consume fast food, preferring to consume fast foods found in more accessible supermarkets, fast food franchises and street vendors instead. These fast food sources are common in and around the Mdantsane Highway Taxi Rank (Department of the National Treasury of South Africa, 2010).

Table 4.3 shows that the model had a low  $R^2$  value of 0.1615, meaning that the variables in the model only accounted for 16.15% of factors that had a bearing on the frequency of fast food consumption. However, the model summary  $P_{value} < 0.05$ , shows that the model was significant, and suitably fitting the data at the 5% level. Table 4.3 shows carbohydrate and starchy fast foods significant at 1%, other sources of fast foods at 5%, age group, physical appearance and meaty type of fast foods at 10%, all significantly influencing frequency of fast food consumption.

Carbohydrate and starchy fast foods had positive coefficients of 0.7517 and 0.1759 respectively. These results implied that for every unit increase in the frequency of consumption of fast foods, carbohydrate and starchy type of fast foods consumed increase by 0.75 and 0.18 times

respectively. The positive relationship shows the frequency of consuming the carbohydrate types of fast food will increase. The NCCDPHP (2006) indicated that there were more tendencies to opt for high energy density foods, high in calories, with larger chunks contributing to obesity. Bowman *et al.* (2004) observed that fast food meals were generally high in refined starch. Boyland and Halford (2013) support this, highlighting that this was through the overexposed high-carbohydrate fast food television advertising. Similarly, Hewitt (2017) and Schwartz *et al.* (2012) noted that starchy fast foods were the cheapest source of calories, with consumers showing a positive propensity towards their consumption.

Other sources of fast foods besides supermarkets, franchises and street vendors were identified as having a significant and negative influence of -0.4856 on the frequency of consumption of fast foods. This indicates that the more consumers choose other sources of fast foods besides supermarkets, franchises and street vendors, the less frequently they would purchase fast foods by a 48.6% magnitude. Pingali (2007) supports this, indicating an increase in the demand for non-traditional fast foods. Another explanation could be based on the high price exhibited in other fast food sources such as restaurants, who concurrently take more time in preparing their meals.

From Table 4.3, it could be deduced that the age group of the respondents had a significant and negative influence of -0.17016 on the frequency of fast food consumption. Thus there is likely to be less frequency in fast food consumption as the age of the respondent increases. The reason for this may be that a large proportion (31%) of participants in this study was aged below 20 years. Athens, *et al.* (2016), Dave *et al.* (2009) and Bhat (2016) had similar findings that as age increases it is associated with a decrease in frequency of fast food consumption. Abdullah *et al.* (2015) also noted that younger individuals were significantly found to be more frequent consumers of fast foods. Alfawaz (2012) observed a recent spread of fast food consumption, particularly among teenage and youth consumers. Dunn *et al.* (2012) found that younger consumers ate fast food significantly more than older consumers. The results of these scholars are not supported by Feeley *et al.* (2012), Jeffery *et al.* (2006) and Marlow and Shiers (2012), who highlighted that there is likelihood of consuming fast foods as the age increases.

The results show that the physical appearance of the respondents had a significant and negative influence of -0.339 on the frequency of fast food consumption (Table 4.3). This indicates that as the appearance of a respondent shifts from slim, medium to heavy build, the less frequently they would consume fast foods. Over a third (34%) of participants were of slim build, indicative of the desire of young women in particular to possess such build. Thus it may be inferred that those individuals who want to maintain their body figure or shed weight would choose to consume fast foods less often. Similar results by Majabadi *et al.* (2016) found that some participants held the view that girls consume less fast food than boys because the former wished to maintain a more slender physical appearance. Washi & Ageib (2010) noted that the majority of participants in their study related obesity to unattractive physical appearance and thus wished to adopt healthier eating habits, which implied reducing fast food consumption. The low number of heavily built participants (15%) is interesting, considering most participants' expressed love of fast food. Physical appearance, therefore, is not the most accurate way to determine the impact of fast food consumption on consumers.

Table 4.3 also shows that meaty type of fast foods had a significant and positive influence of 0.17589 on the frequency of fast food consumption. Thus for every increase in frequency of fast food consumed, there is a 17.6% chance increase that it would be meaty fast foods. The fast food industry has been characterised as being 'meaty' since many of the fast foods commonly consumed are meat-based offerings, such as burgers, chicken and fish (Morris, 2015; Van Zyl *et al.*, 2010; Feeley *et al.*, 2012). As a result, the offering of a wider variety of meaty fast food alternatives will likely be accompanied by increased overall consumption of fast food.

#### **4.8 SOCIO-ECONOMIC AND CONSUMPTION FACTORS INFLUENCING CONSUMER BMI STATUS**

The last objective of this study was to assess socio-economic factors and fast food products that influence the BMI of consumers. The independent variables were Gender, Age group, Source of income, Level of income, Religion, Physical appearance, Types of fast food consumed, Reasons for consuming fast food, Types of fast food consumed (meaty), Types of fast food consumed (carbohydrates), Types of fast food consumed (starchy), Types of fast food consumed (other),

Sources of fast food (supermarkets), Sources of fast food (franchises), Sources of fast food (street vendors) and Sources of fast food (other). Table 4.4 shows that the model had a low  $R^2$  value of 0.3568 meaning the variables in the model only account for 35.68% of factors that had a bearing on the body mass index. However, the model summary  $P_{value} < 0.01$ , shows that the model was significant, and suitably fitting the data at the 1% level.

Table 4.4 further shows that physical appearance was significant at 10% , religion at 5%, age group and supermarkets as sources of fast foods at 1%, all significantly influencing the BMI statuses of the respondents. The relevant data were obtained through quantitative research, which allowed easier statistical use of the data.

*Table 4.4: Socio-economic factors and fast-food aspects affecting BMI status as the dependent variable*

<b>Variables</b>	<b>Coef</b>	<b>Std Err.</b>	<b>Z</b>	<b>P&gt; T </b>
Gender	.1643915	.1298239	1.27	0.207
Age group	.0959737	.0501853	1.91	0.057*
Source of Income	.0114492	.0380658	0.30	0.764
Religion	-.0792518	.0370491	-2.14	0.034 **
Level of income	.0245026	.0320549	0.76	0.446
Physical appearance	.713123	.0978874	7.29	0.000 ***
Types of FF consumed	.0404527	.119776	0.34	0.736
Reason for consuming FF	-.0041602	.0561009	-0.07	0.941
Types of FF consumed meaty	.0581322	.1546247	0.38	0.707
Types of FF consumed carbohydrates	.0434884	.1310619	0.33	0.740
Types of FF consumed starchy	-.1045585	.1347369	-0.78	0.439
Types of FF consumed other	.0728515	.1297268	0.56	0.575
Sources of FF supermarkets	.2351235	.130734	1.80	0.074 *
Sources of FF franchises	.1743049	.1318965	1.32	0.188
Sources of FF street vendors	-.0026825	.1630753	-0.02	0.987
Sources of FF others	.0579719	.1264503	0.46	0.647
_cons	.733248	.374831	1.96	0.052**
<b>Model Summary</b>				
Number of obs	200			
Prob > F	0.000**			
R-squared	0.3568			
Adj R-squared	0.3006			

\*, \*\*, \*\*\*Significant at the 1%, 5% and 10% levels respectively

Source: Survey data (2017)

Table 4.4 further shows that physical appearance had a positive coefficient of 0.71312 implying that the researchers' perceptions concerning the physical appearance and their actual body mass index had a positive relationship. Thus transcending from slim build, to medium build and

ultimately heavy build, the body mass index tends to increase by 0.7 units. BMI has an effect on physical appearance (Franklin *et al.*, 2006). The relationship between BMI and physical appearance self-esteem has been found to be negative (Grampp-Eshleman, 2008). In South Africa, the physical appearance was identified with social status, with being fat identified with a sign of success, affluence, beauty and happiness (Birrell, 2014; Goedecke *et al.* in Steyn *et al.*, 2006).

The results show that as participants' religious status transcended from Christianity to Islam, African traditional religion and other religions, the less likely the respondents had high BMI. Table 4.4 shows that following this transcendence, the BMI will likely reduce by 0.0793 units. Thus, if a respondent was a devout Christian, the more likely it would be that the respondent would have a higher BMI. These results support Cline and Ferraro (2006) and Ferraro (1998) who found Christians being more obese amongst all the religious affiliation in the US. Even between religiously affiliated and non-religious individuals, Ferraro (1998) found that the more obese individuals were found among the more religious, who shunned society due to stigma and sought solace in the church. Kim *et al.* (2003) found religious denomination to be significantly related to higher body weight. Dodor (2012) observed that: more religious individuals demonstrated lower physical activity and higher BMIs; importance of religion and prayer were highly correlated with eating more fast foods; and increased observances of prayer and importance of religion were associated with high BMI values.

Age group was observed to have a positive coefficient on the BMI of the respondents. The results of the study showed that as age increases, BMI score will increase by 0.09597 units (Table 4.4). Despite the observation that most of the participants who were consumers of fast foods were aged below 20 years, these young consumers had lower BMIs than the older participants because they had not consumed fast food for as many years as the older participants. The younger consumers were probably more energetic and physically active as they were less likely to own cars, meaning that they walked more, even when using public transport. Moreover, it may be implied that the younger consumers probably spent less time seated at desks than more sedentary working older participants. Younger participants were also more likely to be engaged in sporting activities. That physical activity would burn excess body fat, thereby reducing BMI.



Krishnamoorthy *et al.* (2015) and Dave *et al.* (2009) also found a significant relationship between age and BMI. In the present study, the risk of overweight and obesity increased with age. Pietrobelli *et al.* (1998) also found the age and BMI relationship to be significant. Body metabolism slows with an increase in age, as well as physical activity, making fast food consumers who are older to be more susceptible to overweight and obesity (Swenke & Bauer, 2008; Callahan, 2013; Jeffery *et al.*, 2006). Furthermore, the older the population gets, coupled with smaller families, the more they consume fast foods which leads to obesity. However, the results were in contrast to Ergin and Akbay (n.d.) and Feeley *et al.* (2012) who identified that fast foods were more consumed by younger consumers.

In addition, Table 4.4 shows that supermarket sources of fast foods had a positive impact on the BMI of the respondents. Purchasing fast foods from supermarkets was likely to increase BMI by 0.23512 units. The fast food sold in Mdantsane supermarkets was mostly traditional fast food, which is typically high in fat and sugar contents. Furthermore, supermarkets also provided a wider variety of fast foods. Supermarkets additionally exposed consumers to many other fattening foods besides fast food, like sweets, chocolates, cakes and so on, which consumers would possibly eat as snacks between or dessert after fast food meals. The findings are contrary to Athens *et al.* (2016), who found supermarket access negatively associated with fast food dining frequency and BMI level. Apart from traditional fast food, supermarkets also offer healthier food options, the regular consumption of which may regulate weight gain or increase weight loss, resulting in lower BMI levels. Thus, the impact of supermarket accessibility on BMI value depends on whether or not and how often consumers purchase healthy and unhealthy food options available in supermarkets.

#### **4.9 SUMMARY**

The chapter presented and discussed the study results. The first objective of the study was to assess consumers' attitudes towards fast foods. The results showed that consumers had positive attitudes towards fast foods, their convenience, nutrition, cheap price as well as their few perceived negative health effects. There were also agreements that fast foods consumption was due to the influence of advertisements and respondents' attitudes towards fast foods, with social status influencing the types of fast food consumed as well as where it was consumed.

Meanwhile, results also indicated that, on the effect of fast food on consumer attitude, most respondents agreed that eating fast foods increased weight. Though the respondents did not feel overweight or obese, such high BMI statuses were a serious problem as respondents themselves felt that the food they ate increased their weight.

The second objective pertained to identifying the types of fast foods that are consumed by consumers in the study area. The study revealed that most fast food consumers ate meat based fast foods. This was mainly based on the convenience of fast foods, with respondents lacking time to prepare home cooked meals, with the fast foods being tastier. However, most respondents identified that fast foods cause illnesses, with most respondents highlighting that it was important that fast foods should reduce oil and be well cooked.

The third objective was to analyse factors that influence consumer frequency in fast food consumption, while the last objective involved investigating the effects of socio-economic factors on the BMI. The study found out that carbohydrate and starchy type of fast foods were significant at 1%, other sources of fast foods age group at 5%, physical appearance and meaty type of fast foods at 10% , had a significant influence on the frequency of fast food consumption. The study also shows that physical appearance, religion, age group and supermarkets as sources of fast foods had significant influences on the BMI of the respondents.

The next chapter focuses on conclusion and recommendations, the conclusion relates to the results of the study.

## **CHAPTER 5 : CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 INTRODUCTION**

The study aimed at investigating consumers' attitudes towards fast food and the effect of fast food consumption on obesity. Four specific objectives were identified to achieve the main objective. The first objective was to assess consumers' attitudes toward fast foods. The second objective was to identify the different types of fast foods that are consumed, whereas the third objective pertained to analysing the factors affecting consumers' frequency of fast food consumption. The last objective pertained to investigating the effects of socio-economic factors on BMI.

### **5.2 SUMMARY OF THE FINDINGS**

The results of the study revealed, in general, a demographically diverse low-income sample. Though most participants were of slim and medium builds, the majority were overweight or obese. The majority of the sample were found to like fast food and considered such food to have minimal negative health impacts (despite believing that fast food was generally unhealthy), to be convenient and cheap. Overall participant attitudes towards fast foods were overwhelmingly positive. Most respondents believed that their fast food consumption contributed to their weight gain, overweight and obesity. The generality of participants consumed meat, with meaty fast foods proving to be the most popular fast food category. Convenience, lack of time to prepare home-cooked meals and deliciousness were the major reasons for fast food consumption. Age group, physical appearance, meaty, carbohydrate and starchy fast food types and atypical fast food sources were found to significantly predict fast food consumption frequency. Age group, religion, physical appearance and supermarket fast food sources significantly predicted BMI status.

The conclusions envisaged from the study are highlighted in the current chapter, with recommendations aimed at researchers, government policy makers, fast food businesses and fast food consumers being offered.

### 5.3 CONCLUSIONS

A number of conclusions were drawn from the results of the study. The participants were generally low income earners, with 56% of the sample receiving monthly income of less than R1 000. The low income levels, by determining the participants' social groups and what they could afford to purchase, influenced the choices these consumers made regarding their fast food sources and the types of fast food meals they consumed. The participants preferred sources of cheap fast food, such as street vendors, supermarkets and affordable fast food outlets like KFC.

A considerable proportion of the respondents (33%) cited wages and salaries as their income sources and alluded that they spent much of their weekdays at work. This demanding commitment and the additional time spent commuting to and from work left these workers with less time and energy for preparing home-cooked meals. This meant that they were likely to consume typical fast food more frequently, thereby saving time and effort. However, the sedentary nature of modern jobs and the urban lifestyle, as well as the lack of time for workers to exercise, prevent the burning of the high energy in fast food and excess body fat. This, in turn, contributes to the high occurrences of overweight and obesity among workers.

Most participants (72%) revealed they loved fast food. This testifies the popularity of fast food among the demographic diversity of consumers in Mdantsane and beyond. Further evidence of consumers' high demand for fast food in the township is a broad range of small, medium-sized and large local and multi-national fast food retailers that have remained in operation there for the past several years. The Mdantsane Golden Highway and its vicinity are prime selling locations easily accessible to commuting workers and students.

Most participants (59.5%) believed that the negative health effects of fast foods were largely minimal. This view may, at least among some participants, have been a rationalisation of their affinity for fast food. Therefore, such findings from the results also question consumers' awareness of the negative health impacts of fast food. Consumers in Mdantsane, as elsewhere, are exposed, through mass media and physically, to mostly traditional fast food, which has been empirically demonstrated to be unhealthy. Meanwhile, since health concerns related to high traditional fast food consumption continue to grow, consumers will increasingly seek healthier options. However, these are presently limited.

From the results, it can be concluded that nearly half (49.5%) of the sample admitted that advertising influenced their fast food consumption. Fast food retailers employed aggressive marketing techniques that effectively boosted fast food consumption. For instance, Mdantsane residents are constantly bombarded with fast food promotional messages in mass media. Additionally, many fast food retailers are strategically located in areas throughout the township commonly frequented or passed by consumers. The visually distracting signage used at these locales encourage increased fast food intake among residents.

A sizeable majority (63%) of respondents were overweight or obese. An identical percentage of participants felt that fast food increased their weight. Indeed, high fast food consumption likely contributed substantially to their excess weight. Over three-quarters of respondents (77.5%) considered excess body weight a serious problem, opposing the African perception of fatness signifying success and indicating consumers' adoption of Western weight standards. A similar number of participants (75.5%) were convinced that high fast food consumption contributed to weight gain, a result somewhat at odds with other respondents' perception that such consumption had few negative health effects. Despite these results, most participants liked fast food.

The study further concluded that more participants (30.38%) preferred to eat meaty fast food than any other type of fast food. In addition to residual fat after being cut, meat served in fast food meals often contains cooking oil fat. Meat further contributes to body weight gain as a protein source. The high consumption of meat-based fast food thus significantly increases body weight, which, in turn, results in higher BMI scores and thus overweight and obesity.

Meanwhile, the results of the study conclude that 30% of the respondents cited fast food as convenient and 25% were of the view that fast foods were time saving and these were their chief reasons for consuming fast foods. In deciding whether or not and how often to consume traditional fast food, consumers should evaluate these short-term benefits against long-term costs such as excess body fat accumulation. Indeed, consumers can enjoy the pros of fast food while avoiding its drawbacks by consuming healthier fast food. However, consumers in Mdantsane may need to engage in considerable search behaviour to find nearby fast food retailers offering such options.

In addition, the study concludes that young and slim respondents generally consumed fast food more often than their counterparts. Older and less slim individuals could have experienced more exposure to fast food in the past in terms of time and quantity, therefore might have grown tired of fast foods, leading to reduction in their intake. Wider meaty, starchy and carbohydrate fast food varieties and the greater avoidance of fast food from sources other than fast food franchises, supermarkets and street vendors increased fast food consumption frequency among participants. Instead of diversifying into healthier fast food, the common fast food retailers have only differentiated their existing product offerings. Consumers seeking multiple healthier fast food options thus need to expend more time and effort searching for and visiting the fewer (and less accessible) retailers offering those alternatives. The extra time and effort spent would result in less frequent outings for these fast food outlets.

Participants who were older, more religious and of heavier build were more likely to be overweight or obese than their counterparts. Older and heavier respondents, were assumed to be less physically active than their counterparts, burnt less energy and fat, resulting in higher weight gain over time. Purchasing fast food from supermarket sources increased participants' BMI scores. The large national and multi-national supermarket chains typically have more resources and staff than average fast food franchise outlets, offering a wide array of fast food. Besides purchasing fast food, consumers in supermarkets tend to buy other food, also high in sugar and fat contents, to eat between or with their fast food meals. This is likely to lead to higher caloric intake that increases BMI scores when the excess energy is not burnt off through exercise.

## **5.4 RECOMMENDATIONS**

The study offers recommendation on 4 fronts: for the researcher, government policy, fast food enterprises and managers, as well as fast food consumers.

### **5.4.1 RECOMMENDATIONS FOR RESEARCHERS**

The study recommends that, through collaborative and interdisciplinary research, there is need for continued inquiries into both the negative and positive health consequences of fast food consumption vis-à-vis home cooked meals. There is need to develop more nutritional fast food

for consumption at fast food outlets. Further empirical enquiries into social factors that influence fast food consumption are required to enable state and non-governmental organisation players to better affect and utilize social dynamics towards improving consumption habits. Further research is also necessary to better understand the continued consumption of fast foods among consumers despite their awareness and knowledge that they cause weight gain, overweight and obesity.

#### **5.4.2 RECOMMENDATIONS FOR GOVERNMENT POLICY MAKERS**

Given the problem of obesity in South Africa and the evidence linking obesity with fast food consumption, the study recommends that the government should formulate new policy and legislation to better regulate the quantities and quality of fast food served to the public. Such regulation should take cognizance of the recommended daily allowances for each food type. It is important that legislation lowers caloric intake limits per serving, requiring fast food firms to reduce their food portions accordingly. The introduction of fiscal deterrent measures would limit production and ultimately consumption of high-calorie fast food servings. For instance, industry-specific sugar, salt and fat taxes could be instituted. Further deterrents such as the restriction of fast food advertising can also go a long way in curtailing the over-consumption of fast foods. The state can offer corporate tax reduction for fast food firms that provide and promote healthier fast food options. Similarly, full tax exemptions could also be offered. The government should be at the forefront of promoting healthier lifestyles through public awareness campaigns promoting exercise and nutritional diets.

#### **5.4.3 RECOMMENDATIONS FOR FAST FOOD MANAGERS**

Given the growing concerns among consumers regarding the negative health impacts of fast foods, the study recommends that fast food chain managers diversify their portfolio to offer or widen the range of healthier options on their menu. They should engage in more promotional strategies to create awareness among consumers of the availability of healthier fast food options. Moreover, it is likely that many of these healthier meals will be less expensive to provide, with the resultant lower prices of these options appealing to low-income consumers. Though per-unit sales of healthier fast food servings will likely be less profitable for franchises, the number of

unit sales thereof will grow with time and may, at some franchises, eventually exceed the unit sales figures of traditional servings. To boost healthier fast food sales, fast food firms should also promote through advertising the nutritional benefits of healthier fast foods. The managers need to limit the ‘super-sized’ fast food meal options which promote over-eating and ultimately weight gain which leads to overweight and obesity. There is also need to reduce the amount of oil used in preparing the fast foods. Firms can also encompass the production of home-cooked meals, which are not deep fried.

#### **5.4.4 RECOMMENDATIONS FOR FAST FOOD CONSUMERS**

The study recommends that consumers need to be proactive and lead more active lifestyles that include exercise and continuous full-body movement throughout the day, including during working hours. The consumers need to be conscious of the fast foods they consume in terms of fat and calorie contents. This will aid in their choice of healthier fast foods.

There should be awareness programmes that will highlight to consumers how fast food product information they receive from advertisements may be biased as it is intended to merely persuade consumers to buy the promoted fast food products. No warnings are provided in these commercials about the negative health effects of excessive fast food consumption. For more balanced information to make sound purchasing decisions, consumers would then require information from additional sources that educate consumers about the nutritional content of fast food offerings. Recent advancements in ICT have increased Internet availability, resulting in such information being readily accessible on consumers’ computers and cellphones.

Consumers should reduce their reliance on fast food by reducing the appeal of its benefits. Thus, consumers should find meal options that are relatively quick and easy to prepare at home to diminish the time-saving appeal of fast food. Home-cooked meals that are convenient to eat as they require fewer utensils or only hands would lessen this attraction of fast food. Through experimentation, for instance, with various spices and cooking techniques, the taste of home-cooking could surpass that of fast food. It is imperative that these home-cooked meal options are healthier than traditional fast food, containing less sugar, salt and fat than the latter.



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## APPENDICES

### APPENDIX A: COVERING LETTER AND QUESTIONNAIRE



University of Fort Hare  
*Together in Excellence*

#### COVERING LETTER

Dear Sir/Madam,

Re: Research project

My name is Pamela Matyolo. I am a student at the University of Fort Hare. As part of the requirements for my Master's degree, I must conduct a research project and produce a report in the form of a dissertation. I chose to do my project on fast-food consumption. My project is titled "CONSUMERS' ATTITUDES ON READY-TO-EAT FAST FOOD AND ITS EFFECTS ON OBESITY: A CASE STUDY OF THE EASTERN CAPE, SOUTH AFRICA." Specifically, I want to learn more about how fast food affects people's health among other factors. I am appealing to you to participate in the research. If you agree, you will not need to tell me your name. This will ensure that the personal information you provide will be kept strictly private and confidential. The information will be used only for the research. If you will be interested, I will happily provide you with the results of the research once it is complete.

Yours Faithfully,

Pamela Matyolo.



## RESEARCH QUESTIONNAIRE

### SECTION A: DEMOGRAPHIC VARIABLES

Please fill in the following section by ticking ( ✓ ) the most appropriate options below.

#### **1. GENDER**

MALE		FEMALE	
------	--	--------	--

#### **2. AGE (YEARS)**

<20		20-29		30-39		40-49		50-59		60≥	
-----	--	-------	--	-------	--	-------	--	-------	--	-----	--

#### **3. SOURCE OF INCOME**

WAGES OR SALARY	
REMITTANCES	
STATE SOCIAL WELFARE GRANT	
INFORMAL INCOME	
OTHER	

#### **4. RELIGION**

CHRISTIANITY	
ISLAM	
HINDI	
JUDAISM	
AFRICAN TRADITIONAL RELIGION	
OTHER (PLEASE SPECIFY)	

### 5. LEVEL OF INCOME (PER MONTH)

<R500	
R500-R999	
R1 000-R1 999	
R2 000-R2 999	
R3 000-R3 999	
R4 000-R4 999	
≥R5 000	

Which of the following categories do you fall into in terms of physical appearance?

SLIM BUILD	
MEDIUM BUILD	
HEAVY BUILD	

SECTION B: FAST-FOOD CONSUMPTION

Which one of the following are you?

Vegetarian (that is, do not eat meat)	
Vegan (that is, do not eat animal products, for example, milk)	
Meat eater (that is, eat meat, vegetables and animal products)	

Why do you consume fast food?

.....  
.....  
.....  
.....

What types of fast foods do you consume?

.....  
.....  
.....

What are your sources of fast foods?

.....  
.....  
.....

Do you actively look for healthier fast food options in general?

Yes		No	
-----	--	----	--

What changes would you like to see being made to the fast food that you eat?

.....  
.....  
.....  
.....

Do you think fast foods are good for consumers' health?

YES		NO	
-----	--	----	--

Why is that so?

.....  
.....  
.....  
.....

Which of the following categories of fast food do you like most?

MEAT	
FRUITS	
VEGETABLES	
DAIRY	
NON-MEAT PROTEIN (for example, beans, eggs, and so on).	
STARCHY CARBOHYDRATES	
OTHER (SPECIFY)	

Please tick ( ✓ ) which of the fast foods below that you consume and indicate how many times you eat each food in a month.

	WHICH FAST FOODS DO YOU CONSUME?	HOW MANY TIMES IN A MONTH DO YOU CONSUME THESE FAST FOODS?
CAKE		
CHICKEN		
CHIPS OR POTATOES		
DOUGHNUTS		
FISH		
HAMBURGERS		
ICE-CREAM		
MILKSHAKE		
PAP AND VLEIS		
FRUIT SALAD		
VEGETABLE SALAD		
PIE		
PIZZA		
RICE		
SALADS		
SAMP		
SANDWICHES		
SAUSAGE		
OTHER (PLEASE SPECIFY):		

Where do you normally purchase your fast food from?

.....

.....

.....

.....

**SECTION C: ATTITUDES TOWARDS FAST FOOD**

Please fill in the following section by ticking ( ✓ ) the most appropriate options below or writing your response in your own words where necessary.

		Strongly disagree	Disagree	Not sure	Agree	Strongly agree
	I like fast food.					
	I believe that fast food has few negative impacts on health.					
	Adverts influence my consumption of fast foods					
	Adverts influence my attitudes towards fast foods					
	Fast foods are:					
	Convenient					
	Nutritious					
	Cheap					
	My social status influences the types of fast foods I consume					
	My social status influences the places where I buy and consume fast food					

What do you think fast food industry cares about the consumers?

.....  
.....  
.....  
.....

What do you like about fast foods food?

.....  
.....  
.....  
.....

What do you dislike about fast food?

.....  
.....  
.....  
.....

Do you think that fast food’s contribution to weight gain significantly affects the extent to which you like or dislike fast food?

.....  
.....  
.....  
.....

SECTION D: EFFECTS OF FAST FOODS ON OBESITY

Please fill in the following section by ticking ( ✓ ) the most appropriate options below

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I feel that I am overweight or obese.					
Overweight or obesity is a serious health problem.					
I believe that eating fast food increases weight.					
I feel that the fast food that I eat has increased my weight.					

What do you think about your current BMI?

.....

.....

.....

.....



## APPENDIX B: ETHICAL CERTIFICATE