

**ACCESS TO FASTFOOD OUTLETS AND CONSUMPTION BEHAVIOUR  
AMONG PRIVATE PRIMARY SCHOOL PUPILS IN IBADAN NORTH  
LOCAL GOVERNMENT AREA, OYO STATE.**

**BY**

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## ABSTRACT

Previous researches have identified a high increase of “fast food” consumption among children who attended schools closer to a fast food outlet. Accessibility, availability and affordability had been identified to be a cogent factor in fast food consumption. However, the effect of access on the consumption of fast food had not been well documented. This study therefore explored the access to fast food outlets and consumption behaviour among private primary school pupils in Ibadan North Local Government Area, (LGA) Oyo State, Nigeria.

This study was a descriptive cross sectional survey. A six stage sampling technique was employed to select 421 pupils attending 12 private schools in six selected wards out of the 12 wards of Ibadan North Local Government Area. A validated semi structured interviewer-administered questionnaire was used to collect information on the socio demographic characteristics, knowledge of fast food and nutrition, access of fast food snack shop in school and fast food outlet outside the school, consumption behaviour and perception of fast food. Knowledge of fast food was scored on an 8 point scale; scores of  $\leq 3$ ,  $>3 - 6$  and  $>6$  were classified as poor, fair and good knowledge respectively. Knowledge of nutrition was scored on a 5-point scale  $\leq 2$  were categorised as poor,  $>2 - 3$  as fair and  $>3 - 5$  as good. The consumption behaviour was on a 7-point scale  $\leq 4$  were categorised as unhealthy,  $>4-7$  were categorised as healthy. The quantitative data were analysed using SPSS version 21. Descriptive statistics and Chi – square test at  $p=0.05$  were used.

Respondents mean age were  $8.5\pm 0.9$  years. More than half (52.5%) of the respondents were female while 40.4% of the respondents were 9 years. About 38.3% of the respondents were in primary five and many (82.2%) of the respondents were Christians and about three quarter (75.3%) of the respondents were Yoruba. Respondents were knowledgeable about fast food contents such as excess oil (86.9%), and the harm it can cause when consume in excess (51.3%). A total of 41.1% of the respondents visited the snack shop in their schools on a daily basis and majority 76.3% have 50 naira as their daily pocket money which they use in purchasing various snacks.

This study revealed that many pupils bought their snacks from the snack shops inside the school and the type of snacks and drinks sold in these shops are high in salt and sugar content. This accessibility might have made majority of these pupils to consumed various snacks and drinkson a daily basis due to availability and affordability. Strategies such as advocacy to facilitate policy

formation relating to items that should be sold such as fruits, eggs and increasing the price of these unhealthy snacks would be appropriate strategies to reduce the rate of fast food consumption.

**Keywords:** Access, fast food outlets, consumption behaviour, private primary school pupils.

**Wordcounts:**475

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## **DEDICATION**

This project work is dedicated to my Awesome God and most merciful Heavenly Father, whose grace is sufficient to see me through. To Him, all praise is due.

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### **CERTIFICATION**

I hereby certify that this research work was carried out by EBOH, Chioma Precious in the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan.

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## LIST OF ABBREVIATIONS

FF	Fast food
SSA	Sub Saharan Africa
SAC	South African countries
NCD	Non communicable diseases

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## OPERATIONAL DEFINITION OF TERMS

**Fast Food:** “Foods which are often highly processed and prepared in an industrial fashion, with lots of additives such as salt, sugar, preservatives and artificial sweeteners”. Examples beef roll, cake, ice cream, biscuit, doughnut, pizza, puff puff,, buns etc. they are also known as junk food in this study. Fast food according to (Roberto, Anne and David, 2014), is defined as “food that can be prepared quickly and easily and is sold in restaurants and snacks bars as a quick meal or to be taken out”.

**Junk Food** Are used to refer to an empty calorie food. An empty calorie food is a high calorie or calorie rich food which lacks in micronutrients such as vitamins, minerals, or amino acids, and fibre but has high energy.

**Perception** An individual’s view about fast food consumption. It is based on personal judgment.

**Calorie -** A unit of energy, often used as a measurement of the amount of energy that food provides.

**Less dense –** Food that is high in nutrients but relatively low in calories.

**Access:** The method or possibility of getting near to a place, person or something.

**Outlets:** An outlet is a shop that sells the products of a particular manufacturer or supplier.

**Consumption** The amount of something that people use

**Behaviour:** It refers to the way in which one acts or conduct oneself, especially towards others or things.

**Private:** Belonging to, concerning, or accessible only to an individual person or a specific group.

**Primary:** The first year of grade school.

**Pupils:** A student under the supervision of a teacher or professor.

**In - school:** denoting an activity or process that takes place during school hours or on school premises

## CHAPTER ONE

### INTRODUCTION

#### 1.0 Background

Access as defined by the Cambridge English dictionary is the method or possibility of getting near to a place, person or something while fast food according to Roberto, Anne and David(2014), is defined as food that can be prepared quickly and easily and is sold in restaurants and snacks bars as a quick meal or to be taken out. Fast food outlets in this study will include snacks/meal from snack bars, mini snack shops, foods from cafeterias/canteen, fast food companies such as Mr Biggs, Tantalizers, Kentucky fried chicken KFC and local fast food joints. A term usually given to 'Fast food' is called 'junk food' or food reheated orrecooked'. One of the largest influences on the community as a whole especially on children, teens, and even adults has been attributed to fast food. The worldwide influence of fast food on our society, communities and organizations that are against or in favor of its consumption has become a major issue (Schlosser, 2001). A lot of saturated fats is used to prepare fast food which are unhealthy after digestion and releases a lot of poison or diseases into the body. Vitamins and minerals which are necessary to have good health and immunity to fight diseases is absent in fast food..

A global phenomenon resulting in several adverse effect on health is due to the consumption of fast food and experts has attributed the current childhood obesity epidemic to fast foods (Nitin, Maria, Sharada, et al, 2015). Fast food is said to have originated in Southern California in the 1940s. Worldwide, the number of fast food outlets has increased drastically and McDonalds alone owns more than 30,000 outlets (Lorna, Fraser, Kimberly and Graham, 2010). Also in the United States, it has been reported that the average US citizen eats 3 burgers and 4 portions of French fries per week. The epidemic of overweight among children in the United States over the past three decades has been followed by major changes in childhood style of food and beverage consumption. A significant increase is prominent in the consuzmption of foods from restaurants and fast food establishments (Paul, Simon, David, Aida, Margaret, Jonathan and Fielding, 2008).

A study carried out by some researchers reported that, India ranks 10<sup>th</sup> in the fast food per capita spending figures and that the rate of fast food industry is expanding at the rate of 40% every year with 2.1% of expenditure in annual total spending(Nitin et al, 2015). Another study looked at the association between childhood obesity and neighbourhood accessibility to fast food outlets and it happens to be a 6 years nation wide follow up study of 944,487 children in Japan. The

neighbourhood accessibility to fast food outlets in this prospective nationwide study was independently associated with increased odds of diagnosed childhood obesity (Tsuyoshi, Xinjun, Jan and Kristina, 2017). As a result of frequent consumption of fast food, the prevalence of obesity increased from 6.5% in 1980 to 19.6% in 2008 among children within the ages of 6 and 11 years. (Ogden and Carroll 2010). Another Taiwanese population study observed that fast food outlets and walkability increases the risk of general and abdominal obesity in boys and stature in girls in school neighbourhoods and also predicted fatness in boys and height in girls due to fast food exposure in Taiwan (Po-Huang, Mark, Meei et al, 2011).

In a longitudinal study, increased weight gain and insulin resistance among young adults has been associated with fast food, and frequent consumption of fast food might be an independent risk factor for obesity and type 2 diabetes (Ebbeling, Sinclair, Pereira, Garcia-Lago, Feldman, Ludwig, 2004). In developing countries, increase in life threatening conditions especially non communicable diseases such as childhood obesity has increased. (Jaisheeba, Sornaraj, Gayathri, 2012). In Sub Saharan Africa including Nigeria, child obesity is becoming a problem due to the distribution of childhood nutritional diseases which is shifting from a predominance of under nutrition to a dual burden of under and over nutrition (Emma and Linda, 2014). Developing countries, unlike the developed countries has experienced more than 30% increase in childhood obesity. (Bambgoye, 2017). Added to this, problems like poor hygiene during preparation, storage and handling of fast foods leading to contamination by micro organisms are some of the problems in developing countries (Brunner, Menomonie, 2006). Increased caloric and total fat intake, more added sugar intake, less dietary fibre, fewer fruits and vegetables, and other indices of poor dietary quality in children and adolescents is associated with stature of fast food as observed by Ebbeling, Sinclair, Pereira, Garcia-Lago, Feldman and Ludwig, (2004).

Adults and school children here in Ibadan where this study was carried out including other states here in Nigeria has felt the presence of fast food and are patronizing them. Unfortunately, school children are being exposed to these fast food outlets every day and food habits learnt in childhood tend to persist into adulthood. Therefore, it becomes important to educate children about healthy eating habits and make them aware about the health hazards of fast foods right from school level onwards as inappropriate nutrition and inactivity increases the risk of diabetes, osteoporosis, obesity and cardiovascular diseases. It is undeniable that what one eats should play an important role even though other factors could contribute to weight gain. School life therefore is an important stage for individuals as at this time their behaviours are conducive to change (Sajwani, 2009) and the school premises represent an important opportunity for health and



nutritional education. Therefore, this research will help to investigate assess of fast food outlets to schools and consumption behaviour among private primary school pupils in Ibadan North Local Government Area.

### **1.1 Statement of the Problem**

A global international business industry, known as fast food has rapidly grown for decades. Usually, the first thing that comes to the mind of people when they think of fast food are; quick service, convenient to purchase, unhealthy food with low nutrition level and affordable purchase price(Tan,2016). Due to globalization, Mayaki and Gabati, (2014) reported that fast food restaurants serving meals with high salt and sugar content, often also containing saturated fat has been on the increase here in Nigeria. This is supported with an increase in the availability of bottled drinks and canned fruit juices which are becoming fashionable and are replacing natural fruits.

Food sales in schools, has incorporated the idea of fast food to a large extent and unfortunately, low energy dense foods tend to be more expensive and less convenient than energy dense foods(Arulogun and Owolabi, 2011). Due to access of fast food outlets to schools and affordability,the act of high consumption of fast foods like burgers, sandwiches, hotdogs, pastries, popcorn, potato chips, carbonated drinks, biscuits, muffins, toast and chocolates have become common feature of children's diet (Ibrahim and Mohammed, 2014). A cross sectional study carried out by (Abrahams, Villiers, Steyn, Fourie, 2011) in South Africa among children age 10 – 12 years revealed that 49% of the children purchased and consumed at least one item from the school food shop/ vendor. Most fast foods are poor in nutrition and over time, poor nutrition can contribute to stress, tiredness, and our capacity to work.Poor nutrition contributes to the risk of developing illnesses and health challenges such as being overweight or obese, tooth decay, high blood pressure, high cholesterol, heart disease and stroke, type -2 diabetes, osteoporosis, some cancers, depression and eating disorders (SAHEALTH, 2018).

It has been reported that fast food gives room for poor eating and examples of poor eating patterns are under or over eating, not having enough of the healthy foods we need each day or consuming too many types of food and drink which are low in fibre or high in fat, salt and/ or sugar (SAHEALTH, 2018).The ill effects of regular intake of fast foods are mainly poor concentration and obesity leading to inferiority complex, depression, heart diseases, high cholesterol, stunted growth, premature ageing, and tooth decay (Goel, Kaur and Gupta, 2013). The research carried out by (Guthman, 2013) revealed that increase in prevalence of obesity is influenced because people are surrounded by cheap, fast, nutritionally inferior food and a built

environment that discourages physical activities and the availability of these cheap, energy dense foods (including those from snack bars found along the road and fast food outlets) may facilitate the consumption of more calories which can lead to overweight or obesity and other non-communicable diseases in children. It can also cause poor concentration among school children as fast food consumption lacks the necessary nutrients required for brain development(Guthman 2013).

## **1.2 Justification of the Study**

Studies that focused on nutritional research in sub Saharan Africa has primarily high-lighted under nutrition, particularly among vulnerable population subgroups such as women and children. One of the poorest regions in the world with extremely high rates of malnutrition is still sub Saharan Africa and there is suggestive evidence of an ongoing nutritional transition. Data from several developing countries suggest that rising urbanisation and improvements in developmental indicators lead to concurrent under and over nutrition in the population (Kandala and Stranges, 2014).

Therefore, studies that examine relationship between the food environment surrounding schools, eating behaviour and the weight of young people are needed in order to provide robust evidence about contextual determinants of overweight or obesity and by conducting this research, it allows us get to understand more about what are the factors that influences fast food consumption behaviour among selected private primary school pupils in Ibadan North Local Government Area and how access to fast food outlets within and outside the school environment relate to frequent consumption of fast food. Also, researchers in developed and some developing countries have looked at fast food consumption among school children but very few studies have focused on access of fast food outlets and consumption behaviour among private primary school pupils. This study will help give a better understanding of the concept of fast food consumption factors influencing food choices and the health challenges or problems associated with frequent and excess consumption of fast food so as to formulate appropriate nutritional educational strategies. This will in turn help with the prevention of nutritional disorders and non-communicable diseases this consumption might cause among in-school children through health education. The findings of this study could provide an empirical base for an intervention in the eating habit of in - school private primary school pupils so as to address important healthy eating habits towards an enhanced healthy academic performance in Ibadan north local government area. The findings from this study will enhance the body of scientific knowledge and also facilitate the work of

policy makers, NCD experts, health workers, experts in the field of nutrition as well as researchers in the field of life sciences and social science.

### **1.3 Research Questions**

The study will, provide answers to the following research questions

1. What is the level of knowledge of fast food among pupils in selected private primary schools in Ibadan north local government area?
2. What is the perception of fast food among pupils in selected private primary school in Ibadan north local government area?
3. What is the level of access of fast food outlet in schools among private primary school pupils in Ibadan north local government area.
4. What are the factors that influences purchase of fast food among private primary school pupils in Ibadan north local government area.

### **1.4 Research objectives**

#### **Broad objective**

To investigate the access of fast food outlets to schools and consumption behaviour among private primary school pupils in Ibadan north local government area.

### **1.5 Specific objectives**

The specific objectives were to

- 1 Assess the level of knowledge of fast food in selected private primary schools in Ibadan north local government area.
- 2 Determine the perception of fast food among pupils in selected private primary schools in Ibadan north local government area.
- 3 Determine the level of access of fast food outlets in schools in selected private primary schools in Ibadan north local government area.
- 4 Identify factors that influences the purchase of fast food among private primary school pupils in Ibadan north local government area.

## 1.6 Hypotheses Testing

**Hypothesis 1:** There is no significant association between knowledge of fast food and consumption behaviour among private primary school pupils in Ibadan North LGA.

**Hypothesis 2:** There is no significant association between perception of pupils and fast food consumption among private primary school pupils in Ibadan North LGA.

**Hypothesis 3:** There is no significant association between access of fast food and fast food consumption among private primary school pupils in Ibadan North LGA.

**Hypothesis 4:** There is no significant association between factors that influences purchase of fast food and consumption behaviour among private primary school pupils in Ibadan north local government area?

### **Study Variables**

The dependent variables include; -access of fast-food outlets to schools and consumption behaviour. The independent variables include socio demographic variables; age of respondents, religion, ethnicity, class of study, gender and pocket money.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0 Conceptual clarification of fast food

One of the essential requirements for long life is to eat healthy and live healthy. Unfortunately, today's world has been adapted to a system of consumption of foods which has several adverse effects on health. The dough in which most fast food outlets uses for snacks gives empty calorie and according to (Fister, 2005), a high calorie or calorie rich food which lacks in micro nutrients such as vitamins, minerals, or amino acids, and fibre but has high energy is an empty calorie food. The nutrients needed by your body to stay healthy is not contained in these foods. Hence, these foods that has poor nutritional value is termed unhealthy and may be called as "junk food". An informal term applied to some foods which are perceived to have little or no nutritional value, but which also have ingredients considered unhealthy when eaten regularly, or to those considered unhealthy to consume at all is known as junk food(Fister, 2005).

Even in the first boom of "fast Food", people have been knowing this kind of food is unhealthy. The labels people attach to fast food are always "high in calories", "low in nutritional value", "obesity and "addictives". When you hear something contains 150 calories, it's a way of describing how much energy your body could get from eating or drinking it. That means if you know how many grams of each one are in a food, you can calculate the total calories. You would multiply the number of grams by the number of calories in a gram of that food component (Kidshealth. Org). For example, if a serving of puff puff (about 20 puff) has 10 grams of fat, 90 calories are from fat. That's 10 grams x 9 calories per gram. Kids who are overweight might have to make sure they don't eat too many calories. Leftover calories are converted to fat when we eat more calories needed by our body and excess fat can lead to health challenges. Looking at the more sedentary life of children today, calorie intake and activity recommendations need to be re-assessed and better quantified, on a population level(Kidshealth. Org).

Neighborhoods of poor socio demographic make-up appears to be the target of fast-food outlets, resulting in further inequalities in accessibility to healthy foods(kestens, 2010, kwate, 2010). Examples of obesogenic environments is the availability of fast-food outlets and grocery stores. A built environment creating opportunities that support individuals' physical inactivity and

unhealthy diet is known as obesogenic environment. Obesity-promoting ‘obesogenic’ environments recently have received special attention in the attempts to understand the variation in overweight of different populations (Marianna, Ronald and Ian, 2015). A useful way to control the food environment within the school is to prevent obesity by reducing energy intake. Studies assessing the association between fast-food and obesity during a review in 2008, by Rosenheck reported that it is difficult to ascertain the true relationship between fast food consumption and weight gain or obesity, as many confounding factors such as physical inactivity and less inhibited food consumption are independently associated with both fast-food consumption and weight gain or obesity.

## **2.1 Knowledge of fast food and consumption behavior**

‘‘Knowledge’’ according to Wikipedia is ‘a familiarity, awareness, or understanding of someone or something such as facts, information, descriptions, or skills, which is acquired through experience or education by perceiving, discovering, or learning. Knowledge can refer to a theoretical or practical understanding of a subject. while a school is an institution for educating children. Hence, we will be looking at the knowledge of school children pertaining fast food and their consumption behavior. It is undeniable that our environment influences us in one way or the other and children are known to learn fast especially through observational learning and a vigorously uprising trend among youngsters is the culture of fast food. Although its impact exists on whole society, whether belong to lower middle class and / or elite class.

A study carried out by (khongrangjem, Dsouza et al, 2017) revealed that about 31.87% of the participants had inadequate knowledge, 41.88% of the participants had moderated knowledge and 26.25% of the participants had adequate knowledge about the effect of fast food consumption. Another study by (Devi, 2016) revealed that 43.7 % of the respondents had good knowledge and regarding fast food in weight gain 13.3% of the teenagers had moderately adequate knowledge and 0.4% had poor knowledge. Also, participants in the study carried out by (Kumar, Palaha and Kaur, 2013 )were aware that obesity, heart disease are associated with fast food consumption and believed that advertisement influences their fast food eating behavior while majority of the participants 72.5% reported that the main reason for their consumption is a delicious taste of fast food’.

## **2.2 Access to fast food and consumption behaviour**

In a study carried out by (Nnyepi et al.2015) titled the emergence of nutrition transition in Southern Africa Countries (SAC) and food consumption reveals growing prevalence of over weight and obesity across SAC with national prevalence estimated between 30 and 60% in all. In

some sub population groups, overweight prevalence in excess of 60% has been reported. More than 30% of hypertension prevalence has also been reported. Further the prevalence of overweight and obesity and hypertension in many SAC exceeds that of HIV and is often at par with stunting in children’.

Collectively, Non Communicable Diseases (NCD) explain 20 – 31% of mortality for Botswana, South Africa, Swaziland, Mozambique and Zambia. The growing popularity of ready-to-eat food retailers with rising urbanization, makes fatty food easily accessible. Davis and Carpenter (2009) from the California Healthy Kids Survey used detailed 2002-2005 data on more than 500,000 middle- and high-school students to examine whether proximity to fast food outlets was related to eating habits or body weight. The study participants who were overweight were roughly 28 percent and 12 percent were obese. Within a half mile of a fast-food restaurant, over half (55 percent) of the kids attended the schools. Fast-food outlets are often convenient and readily accessible. However, a previous study suggested that children who ate fast food, compared with those who did not, consumed more total energy (Bowman, 2004).

Accessibility to fast-food outlets in a cross-sectional study conducted in the UK was associated with childhood obesity (Fraser, 2010). It was observed that, schools located near a fast-food establishment and the students attending the schools were heavier than other students of similar age, ethnicity and activity level. Whether there was one or more fast food restaurants close by, the effect was the same. Kids going to school near fast food restaurants also were less likely to report eating any vegetables, any fruit, or drinking any juice the day before; they were more likely to say they drank soda on the previous day. Coon and Tucker, (2002) observed that in most homes when a child returns from school, the commonest scenario noticed is that he hangs himself in front of the television, faithfully accompanied by a bowl of wafers, a packet of chips and a can of cola. Such nutritionally weak foods which ultimately leads to many an incurable disease become quickly addictive and can sow the seeds of infirmity and debilitating disease. Most studies have identified buffer zones around school or used school zip-code as an adequate neighbourhood for children’s food consumption environment. For example, (Currie et al., 2009) in their California public school study, observed obesity rate for 9th graders over several years and found that a fast food establishment within a tenth of a mile around a school was associated with approximately 5.2 percent increase in obesity rates.

In a study carried out by (Brennan and Carpenter, 2009) they used a one half mile buffer around schools as food exposure area in their California Healthy Kids Survey and came up with the conclusion that students with fast food outlets around their schools within one half mile consume

less fresh fruits and vegetables whereas they consume more soda and are more likely to be overweight.

### **2.3 Prevalence of fast food**

In various countries, mapping studies have been conducted; when these studies were conducted on adult populations however, they may have represented food-shopping behaviours that differed from those of children (Moorland, 2009). In the USA, where the prevalence of childhood obesity is epidemic, reforming the school food environment, mainly with respect to school lunches is urgently being worked on by policy makers. A study carried out by (Syed, 2017) among school children in Saudi Arabia on the prevalence of risk factors for diabetes and hypertension revealed that 36.4% of these children daily consumed carbonated sugary drinks and 17% are eating at fast food restaurants most days of the week. Another study titled association between fast food consumption and lifestyle characteristics in Greek children and adolescents aged 8 – 17 years conducted by (Tambalis et al, 2018) revealed that the prevalence of fast food consumption among boys is 23.3% and 15.7% among girls per week. They concluded that frequent fast food consumption was associated with an unhealthy lifestyle profile among children and adolescents.

### **2.4 Respondents socio demographics and fast food consumption**

Respondents socio – demographics in previous studies, have been associated with fast food consumption behaviour. One of such studies is the one carried out by (Akabay et al.,2007) where they examined the relationship between consumers fast food consumption frequency and their socio-economic/demographic characteristics and attitudes. The results indicated that age, income, education, household size, presence of children and other factors, such as consumer attitude towards the price of fast food, health concerns and child preference, significantly influenced the frequency of fast food consumption. Also, (Vanzyl, Steyn, Marais.,2010) studied the consumption patterns, socio-economic characteristics and other factors that influenced the fast food intake of young adults from different socioeconomic areas in Johannesburg, South Africa. Results revealed that 21% of all participants had fast food at least once a week, while 27.6% had it two to three times a week. Socio-economic group and gender were significantly related to fast food intake with a larger proportion of participants in the lower socio-economic group showing more frequent use. Another study carried out in Ethiopia by (Mekonnen et al, 2018) aimed to assess the prevalence of overweight /obesity and associated factors among school



children aged 6 – 12 years at Bahir Dar City, Northwest Ethiopia revealed that obesity/overweight is high and thus promoting healthy dietary habit, particularly improving fruit and vegetable intake is essential to reduce the burden of overweight /obesity caused by junk food consumption. Another study carried out by (Vijaya et al, 2003) revealed that socio-economic status is an important factor related to fast food consumption among children when they conducted a study in Hyderabad as children from high socio economic status preferred fast foods to local foods despite their better nutritional knowledge. A pilot education project operating in elementary and secondary schools was conducted by the Caribbean Food and Nutrition Institute. The aim was to study children aged 9 – 11 years of age in the nature, extent, and quality of snacking among them. Findings revealed that every child eats between meals. 60% of the children eat between breakfast and lunch and 8% of all energy is obtained from morning snacks. Soft drinks, fresh fruit, sweets and chocolates are the principal snack foods. (Bartkiw, 1993)

## **2.5 Reasons for consumption of fast food among children**

Anything that is quick, tasty, convenient and fashionable is one of the components of fast food . people are addicted to fast food due to clever fast food advertising, the lure of convenience and taste. According to (Dixon, Scilly, Wakefield, White and Crawford, 2007), Children consume fast food due to the following reasons as documented in various literatures and the following factors generally makes it appealing and attractive; Time factor: simplicity causes Junk food addiction. They are easy to prepare and ready to consume within no time. Taste factor: another important reason to an extent that influences to opt for junk food is the great taste. This taste is achieved owing to lavish usage of oils, salts and or sugar. Attractiveness: by adding food additives and colours in addition to enhancement in flavour, packing of such foods has very attractive appearance. Ad factor: advertising has a major role in attracting the public, particularly children and adolescents to the junk food selling joints. This is because fast food restaurants offer cheap products, advantageous locations and welcoming atmosphere so young people enjoy the time spent there to socialize (Dixon et al 2007). Also, (Islam and Ullah, 2010) studied the preference of fast food consumers in Dhaka city and revealed that “consumers gave more importance to brand reputation followed by nearness to receive and accessibility, similarity of taste with previous experience, cost and quality of food, discount and taste, cleanliness and hygiene, salesmanship and decoration, fat and cholesterol level and self service factors”.

## **2.6 Link between fast food consumption and chronic diseases**

A major public health issue that is presently receiving a great deal of attention due to its broader economic consequences and long term effects on children’s overall health, academic

accomplishments, quality of life and productivity as they become adult is child hood obesity (Currie, 2009) and statistics has indicated that growth in the proportion of children classified as overweight or obese has finally levelled off(Ogden et al. 2010). However, nearly 35 percent of children and adolescents aged 6 to 19 are overweight and just under 19 percent are obese and the rates of overweight and obese children remain high (Ogden et al. 2010). The consequences of overweight/obesity with regard to health,among children include increased risks for a variety of conditions such as hypertension, coronary heart disease, type 2 diabetes, respiratory problems and orthopaedic abnormalities (Ebbeling, Pawlak, and Ludwig 2002).

It has been observed that one of the sectors of the food industry that is being blamed for the prevalence of childhood obesity is the food-away-from-home (FAFH) sector, particularly fast food. It has also been reported that the proportion of meals eaten away from home increased significantly from 16 percent to 29 percent since the late 1970's up to the mid 1990 (Guthrie, Lin, and Frazao 2002); The food habit of school children have mirrored the rapid expansion of the fast-food industry. Children on average, in the year 1977 obtained approximately 20 percent of their caloric intake from food away from home FAFH (Guthrie, Lin, and Frazao 2002; Lin, Guthrie, and Frazao 2001). Food-away-from-home FAFH accounted for 35 percent of children's caloric intake in the data obtained from the 2003-2006 National Health and Nutrition Examination Survey NHANES(Mancino et al. 2010). Several studies have suggested that children who consume more food-away-from-home FAFH, especially fast-food, have lower dietary quality and are likely to be overweight/obese (Mancino et al. 2010; Sebastian et al. 2009; Guthrie, Lin, and Frazao 2002).

Considering the public policy issues and implications surrounding the need to reduce child obesity, the main goal in this research work is to determine whether the access of fast-food outlets to schools is a important driver of high calorie intake in children. Fast-food items typify the dietary characteristics that may increase the likelihood of obesity in children (Ebbeling, Pawlak, and Ludwig 2002). Fast foods tend to have high glycemic indexes, are often high in fats, and are sold in large portion sizes. Moreover, individual food items are generally bundled and sold as energy dense "value" meals. Finally, fast foods are heavily promoted on television and the volume of marketing messages reaching children has been statistically linked to the problem of overweight children and adolescents(Chou, Rashad, and Grossman 2008).

## **2.7 Perception about fast food and its consumption**

Organised fast food companies are letting their presence felt throughout the world. A study carried out by (Allehdan et al 2017) on fast foods perception among adolescents by gender and weight status, aimed to examine the perception of Jordanian adolescents towards fast foods relative to gender and obesity observed that the majority of participants perceived foods which are eaten as sandwiches as fast foods. A significant difference between boy and girl adolescents was reported regarding perception of French fries, fried chicken, fried eggs as fast foods. Also, food prepared fast and eaten fast in self service outlets, and food rich in calories were significantly perceived as fast food by Jordanian adolescents. Another study by (Mattsson and Helmersson, 2007) explored high school youths' attitudes and perceptions of fast food in Sweden. The study in general revealed that high-school students, have a clear opinion about the unwholesomeness of regular fast food consumption. The positive and negative characteristics of fast food is known to these children. Another study carried out by (Tate et al. 2015) titled Children's executive function and high calorie, low nutrient food intake: mediating effects of child perceived adult fast food intake came to a conclusion that "children's executive function difficulties may increase their perception of parent concurrent fast food intake, contributing to their own unhealthy food intake.

## **2.8 HowToPreventHighConsumptionOfFastFood**

The best approach for reversing the rising global prevalence of fast food consumption is the prevention of high consumption of fast food, especially in the young. A study carried out by (Briefel et al 2009) on school food environments and practices affect dietary behaviours of US public school children reported that to reduce obesity and improve children's diet, continued changes to school food environments and practices are essential. Removing sugar sweetened beverages from school food stores and snack bars and reducing the frequency of offering French fries merit testing as strategies to reduce energy from low nutrient, energy dense foods at schools. Another study carried out by (Gortmaker et al, 1999) suggested price reduction as one of the most effective strategies to the purchase of healthy foods among children and adolescents. Price reduction on low fat snacks (fresh fruits and salad) and placement of low fat label were associated with significant increase in their consumption among adolescent population. In a study by (Tandon et al. 2010), it was observed that a 10% increase in the cost of fast food meal led to 3% increase in consumption of fruits and vegetables'. Other methods that can help reduce fast food consumption.

## **FamilyLevelPrevention**

Since parents are believed to be role models to their children, encouraging parents to offer appropriate food portions, foster physical activity, maximize activities of daily living, and minimize inactive behaviour will serve as basic measures of prevention. Most government guidelines have traditionally focused on ensuring adequate nutritional intake (Welsh, 2010). However, for assuring energy intakes that are appropriate for contemporary sedentary lifestyles, this may be less useful.

### **Institutional(NurseryOrSchool)LevelPrevention**

The school setting is viewed as a universal “enactment” for children and most randomized prevention trials have been in the school setting. Altering the caloric content of school meals and increasing physical activity are mostly some prevention programs carried out. The removal of vending machine from schools to curb the availability of energy dense snack foods is one area hotly debated in the US. However, snack foods from vending machines contributed only 1.3% of total daily calories from snacks in a national survey conducted in the US, while home snacks contributed 69.1 %. There have been at least 9 systematic reviews of randomized controlled trials of school-based childhood obesity prevention programmes (Gonzalez, 2009). Earlier reviews noted a lack of evidence of effectiveness and the poor quality of studies; whereas more recent reviews suggest that school based interventions may be effective. A recent review identified 19 high-quality trials of school based interventions and found reduced odds of being overweight or obese in intervention compared to control groups(pooled odds ratio 0.74 (95%CI: 0.60, 0.92). (Gonzalez, 2009).

### **Community-LevelPrevention**

Public policies and mass media campaigns should include prevention at the community level. Increasing pressure for labelling caloric contents on restaurant menus has been on demand for the past decades, especially at fast food restaurants. However, regarding the effectiveness of such labelling for preventing childhood obesity, there are limited data (Yamamoto,2005). The Centers for Disease Control launched a 2-year marketing campaign in 2002 in the US via media advertisements to promote physical activity in children aged 9–13 years (Wong, 2004). Assessed by self-report, Children’s physical activity increased but effects on BMI were not assessed. Currently, for addressing the poisonous and unsafe environment by levying taxes on

sugared beverages and fast foods, though the effectiveness of such measurements is currently unknown, there is a strong movement toward government involvement in several countries (Brownel, 2009).

Much attention on the popular media in several countries has been on obesity, but there is no objective information on the effect of these messages on the public. In some communities, public health surveillance and screening for childhood obesity has been implemented. In the United States US, the first state to pass legislation in 2003 for mandatory BMI assessments of children in public schools with annual reporting to parents was Arkansas. This approach has subsequently been followed in thirteen other states (Justus et al., 2007, Nihiser, 2009). An annual National Child Measurement Programme was introduced in 2005, in the UK for *surveillance* of two school year groups. The British government introduced legislation in 2007 to give parents the results of their child's measurements. Evidence to date is unclear as to whether surveillance or screening of childhood obesity will be valuable in its prevention.

## 2.9 Conceptual Frame Work: The precede proceed model

The conceptual framework that was adopted for this study was the "PRECEDE-PROCEED" Model as was postulated by Green, Kreuter, and associates (1974). "PRECEDE-PROCEED" is not a theory but a planning model. It offers a framework for identifying intervention strategies to address these factors but it does not predict or explain factors linked to the outcomes of interest. A road map for designing health education and health promotion programs can be gotten from PRECEDE-PROCEED. It guides planners through a process that starts with desired outcomes and works backwards to identify a mix of strategies for achieving objectives. Because the model views health behavior as influenced by both individual and environmental forces, it has two distinct parts: an "educational diagnosis" (PRECEDE) and an "ecological diagnosis" (PROCEED). The PRECEDE acronym stands for Predisposing, Reinforcing, Enabling Constructs in Educational/ Environmental Diagnosis and Evaluation. Developed in the 1970s, this component of the model posits that an educational diagnosis is needed to design a health promotion intervention, just as a medical diagnosis is needed to design a treatment plan. PROCEED stands for Policy, Regulatory, and Organizational Constructs in Educational and Environmental Development. This element was added to the framework later, in 1991, to take into account the impact of environmental factors on health. Together, these two components of the model help practitioners plan programs that exemplify an ecological perspective. Only the precede aspect of this framework will be employed for the diagnosis of the research problem.

Behavior is shaped by predisposing, reinforcing, and enabling factors. The three types of influencing factors include:

**Predisposing factors**, it provide a reason for behavior through motivation. It includes knowledge, attitudes, cultural beliefs, Age, Values, Perceptions, Religion and readiness to change. These are the antecedents to behaviour that provides the rationale for the behaviour. They refer to those intrinsic factors that are unique to the research participants and make them liable of eating fast food. Most students especially the primary school pupils may not have enough knowledge and good perception about the relevance of healthy eating to healthy living. Predisposing factors have the potential to influence the decisions people take over their health and their given health behaviour. They do this by encouraging the behaviour or by inhibiting the behaviour from occurring.

**Enabling factors**, factors such as available resources, supportive policies, assistance, and services enable persons to act on their predispositions;. These are also antecedent to behaviour. They influence the realization of motives, aspirations, and decisions of an individual. They are environment bound factor which enable action for or against healthy eating. These include skills, parent financial earnings, education level, financial resources, time, accessible markets, food price, and ability to make food purchase, government policies and class room schedule.

**Reinforcing factors**, after a behavior has been initiated, it comes to play.; by providing continuing rewards or incentives encourages repetition or persistence behaviour. Social support, praise, reassurance, and symptom relief might all be considered reinforcing factors. These comprises of the feedback or influence of the significant order or people that influence the continuance or discontinuance of a particular behaviour. Examples of these factors include peer pressure, siblings, co-students, peer- groups, social support group, social media and mass media. They are also factors that subsequent to behaviour, provides perpetual rewards or incentives for the behaviour and contributes to its persistence or extraction.

#### **Application of precede – proceed model**

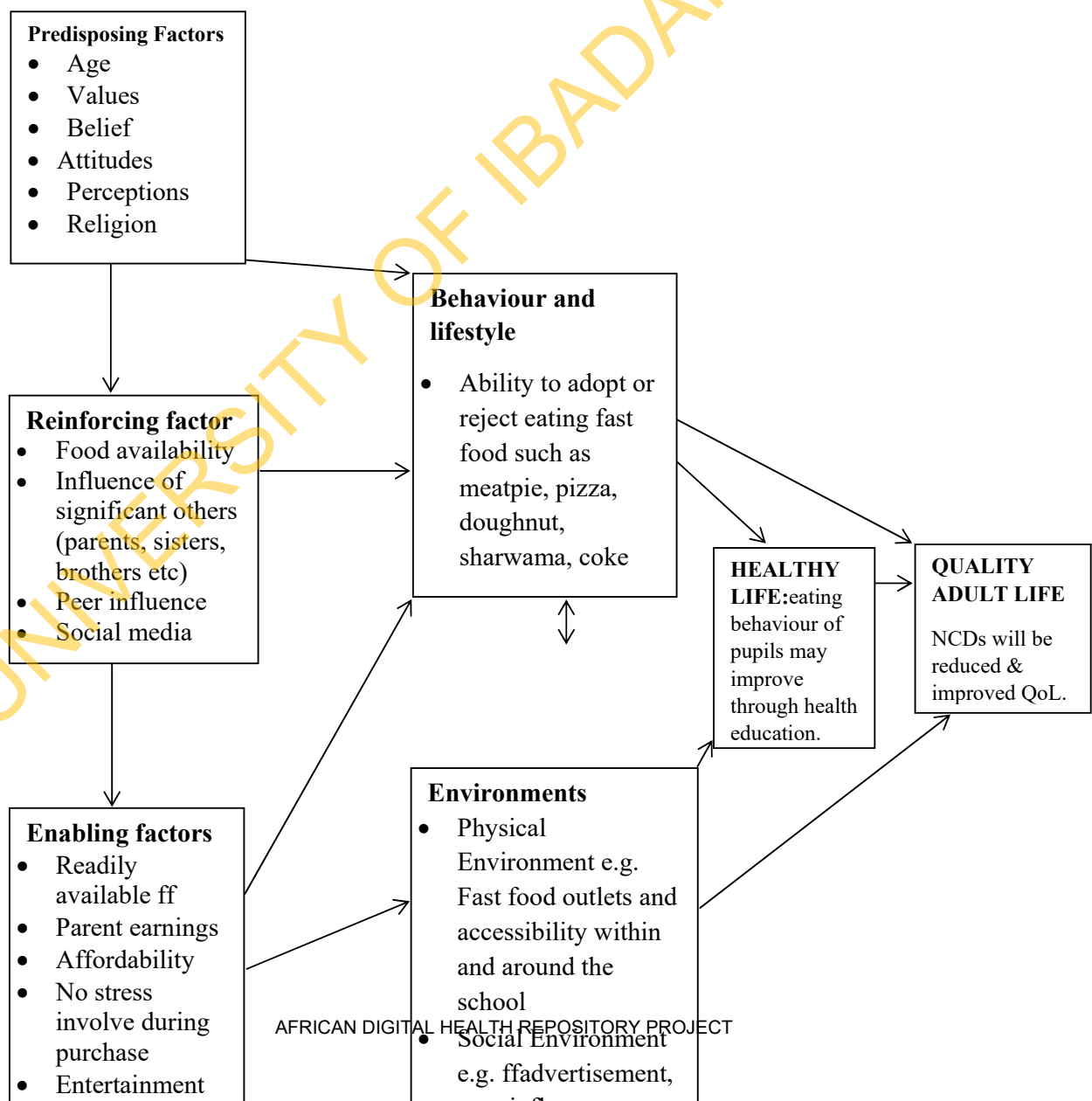
**Predisposing factors**: this is the socio demographic characteristics of the pupils such as sex, age, religion, class, and who they reside with. It also constitutes their level of knowledge, attitude, values and perception of fast food consumption. These factors are cogent characteristics of these individuals and they may or not enable them to access fast food outlets.

**Enabling factors**: factors such as available resources, supportive policies, assistance, and services may enable pupils to act on their predispositions.

**Reinforcing factors:** These are factors that subsequent to behaviour, provides perpetual rewards or incentives for the behaviour and contributes to its persistence or extraction. Examples of these factors include peer pressure, siblings, co-pupils, social media and mass media.

**Behaviour and lifestyle:** this is the perceived result of practicing fast food consumption. It could either be perceived as positive or negative effect. This will also influence their level of fast food consumption.

**Environment:** environmental factors such as access to fast food outlets within and around the school environment can increase school children fast food consumption behaviour, peer influence, information on various fast food snacks all have a dynamic effect to fast food consumption of learners.





## **Fig 1. Diagram illustrating Precede – Proceed Model**

**Adopted from Green, Kreuter and associates (1974)**

### **CHAPTER THREE**

#### **METHODOLOGY**

##### **3.1 Study Design**

Descriptive cross-sectional study design was used for this study with the appropriate instruments rightly suited to achieve the research objectives. The study assessed access of fast food outlets to schools and consumption behaviour among private primary school pupils in Ibadan north local government area.

##### **3.2 Description of the Study Area**

Ibadan North Local Government is one of the Local Government in Oyo State and was created by the Federal Military Government of Nigeria on 27<sup>th</sup> September, 1991. This Local Government was carved out of the defunct Ibadan Municipal Government along with others. The Local Government area covers between Beere round about through Oke -Are to Mokola, Oke Itunu and Ijokodo. Beere round about to Gate, Idi -Ape to Bashorun and up to Lagos/Ibadan expressway, Secretariat, Bodija, University of Ibadan and Agbowo. The Secretariat of the Local Government is presently and temporarily accommodated at Quarter 87 at Government reserved area at Agodi but the headquarters of the Local Government is Bodija. Ibadan North Local Government is bounded by other Local Governments. In the North, it is bounded by Akinyele Local Government Council. In the West by Ido Local Government Council and bounded in the East by Ibadan North East and largely Local Government respectively. Ibadan North Local Government



Area is located approximately on longitude 8°5' East of the Greenwich meridian and latitude 7°23' North of equator. According to the 2006 population census (provision result); It has a proportion of 306,763. The male population is given as 153,039 and female population as 153,756 (source Employers Reference NumberERN – (National Bureau of Statistics). Majority of the people who live in the local government area are in the private sector, they are mainly traders and artisans while a good number of their workers are civil servants. It is an urban centre with sixty-four public primary schools and 173 government approved private primary schools (source from Ibadan North Local Government Ministry of Education). This study was carried out in Ibadan north local government council area, which is made up of twelve wards. This study area was selected because it is a middle high-income area and one that is highly developed and also has a high proportion of fast food outlets.

### **3.3 Study Site**

The site for the study were selected private primary schools located in the urban of Ibadan north local government area. There were identification and stratification of the 12 wards into two (2) region by level of development which is urban and sub-urban. An urban area is the region surrounding a city. Most inhabitants of urban areas have non-agricultural jobs. Urban areas are very developed with human structures such as houses, schools, fast food outlets, good roads and bridges. A suburban is a community that generally has populated areas of greater density than a rural department but not as dense as an urban community. 6 wards in the urban area was selected for study by simple random sampling.

### **3.4 Study Population**

The population in this study consisted of pupils of private primary schools in class 4 – 6 and age 8-14years in Ibadan North Local government, Oyo state, Nigeria.

### **3.5. Inclusion criteria**

The study involved pupils who attended private primary schools and of the ages of 8 – 14 years in the selected private primary schools within the urban areas in Ibadan North Local Government and who consented to the study.

### **3.6 Exclusion criteria**

Private Primary school pupils of ages 8 -14 years who refused to partake in the study of their own volition and also all public primary school pupils.

### 3.7 Sample size

The sample size (n) was determined by using Lwanga and Lemeshow (1991) sample size formula:

$$n = \frac{Z^2 p(1-p)}{d^2}$$

where n= minimum sample size required

Z=confidence limit of survey at 95% (1.96)

P= Assumed prevalence of fast food consumption 50%

d = absolute deviation from true value (degree of accuracy) = 0.05 (5%)

$$n = \frac{1.96^2 \times 0.5 \times (1-0.5)}{0.05^2} = 384.16$$

Therefore, the minimum sample size (n) 384.16 of respondents was recruited, after which the non-response rate was calculated and the result shown below;

A non – response rate of 10% of 384.16(384.16 x10) divided 100 = 38.42

The sample size was increased to 422 to account for the non response rate.

### 3.8 Sampling Technique

A multistage sampling technique was adopted to select respondents for this study. This consisted of 6 stages. The different stages are explained as follows;

**Stage 1:** There was identification of the 12 wards in Ibadan north local government area which was stratified into two areas according to development which is urban and sub-urban.

**Stage 2:** Purposive sampling was used to select 6 wards in the urban area.

**Stage 3:** Proportionate sampling was used to determine the number of schools to be selected, that is 6% of the total number of government approved private primary schools in the wards. Purposive sampling was used to select 12 schools out of 192 government approved private schools which was obtained from the Local Inspector of Education.

**Stage 4:** Proportionate sampling was adopted to determine the number of pupils in primary 4, 5 and 6 in each of the selected private primary school. See (Table 3.1)

**Stage 5:** Proportionate sampling was used to select respondents across the selected classes of primary 4, 5 and 6 based on the sample size gotten in stage 4. The size of respondents in each school was divided into 2 for schools that stopped at primary 5 and into 3 for schools with primary 6 to enable equal respondents from both primary 4, 5 and 6.

**Stage 6:** In each selected class, systematic sampling was employed to select participants using the class register. The first person on the register was selected, the next two was skipped to get the second participant. Respondents that consented were picked and those that did not were replaced. Schools that refused to release their register were requested by the researcher to select equal number of male and female that consented to the study. More females were selected for schools that have more female than male and vice versa .

**Table 3.1 List of private primary schools selected for the study**

School category	Name of schools	Total no in pry 4,5 &6	Sample size determination	Number of respondents
<b>Private schools</b>	Ebenezer Nur/Pry school, Okeitunu. Ward 7	65	$\frac{65}{656} \times 422$	41
	Divine lifter Nur/Pry School, Okeitunu ward 7	8	$\frac{8}{656} \times 422$	5
	God's mercy Nur/Pry school, Sango. Ward 8	46	$\frac{46}{656} \times 422$	30
	Temilade Nur/Pry, Ijokodo. Ward 8	29	$\frac{29}{656} \times 422$	19

Cenfex Nur/Pry school, Mokola. Ward 9	47	$\frac{47}{656} \times 422$	30
Aunty Vic Schools, Mokola Ward 9	18	$\frac{18}{656} \times 422$	11
Toddly Tots Bodija. Ward 10	15	$\frac{15}{656} \times 422$	10
Rosegate nur/pry school. Awolowo Av, Bodija. Ward 10	25	$\frac{25}{656} \times 422$	16
Baptist Nur/Pry school, University of Ibadan. Ward 11	78	$\frac{78}{656} \times 422$	50
U.I staff Nur/Pry school, University of Ibadan. Ward 11	300	$\frac{300}{656} \times 422$	193
Adeyemi Memorial Private school.Agricolastr;Agbowo. Ward 12	6	$\frac{6}{656} \times 422$	4
Abiodun Metro Nur/Pry Sch. Barika, Agbowo area Ibadan. Ward 12	19	$\frac{20}{656} \times 422$	12
<b>Total</b>	656		421

### **3.9 Instrument for data collection**

Interviewer administered, semi structure questionnaire was used to collect data (Appendix I). The instrument contained six sections which was labelled A-F and a total of 50 questions. The first section (A) explored socio-demographic characteristics of respondents. Section B assessed the level of fast food knowledge of the respondents on fast food consumption where an 8-point knowledge scale was developed. Section C assessed the level of nutritional knowledge of the respondents on fast food consumption where a 5-point knowledge scale was developed. Section D helped to elicit data on access factor and fast food eating habit where a 3-point access factor was developed. Questions on consumption behaviour was labelled Section E where a 7-point consumption questions was developed. Questions on perception and fast food consumption of the respondents was contained in section F with an 18-point scale. The questionnaire was written in English language.

#### **3.1.0 Validity of Instrument**

This is the ability of an instrument to measure what the investigator wants to measure. Several measures were taken to ensure that the instrument was valid. Validity of the questionnaire contents was achieved through consultation of relevant literatures and adherence to the study objectives. The draft was subjected to independent peer review and expert review by the research supervisor where the content and structure of the instrument was critically examined. Necessary corrections were effected to ensure structure and content validity. The instrument was drafted in English language (Appendix 1). Findings from the pre-test was used to make necessary corrections to ensure relevance, appropriateness and adequacy of the items in the instrument.

### **3.1.1 Reliability of Instrument**

The instrument were pretested among 42 pupils in the Lords Nursery and Primary School Oke Ado (Sc 1) and the Front Runner Nursery and Primary School Oke Ado Ibadan (Sc 2), in Ibadan South West LGA. The local government has similar characteristics with Ibadan north LGA. The cronbach's Alpha correlation coefficient of the Statistical Package for Social Sciences (SPSS) was used to analyse the pre-test data and to determine the reliability. A reliability coefficient of 0.7 was obtained. This was interpreted as reliable because the correlation coefficient was greater than the average correlation coefficient of 0.5. After the pre-test, questions in some sections of the questionnaire were changed to prevent repetition while some questions were modified to enable the respondents provide detailed information and to prevent ambiguities.

### **3.1.2 Ethical consideration**

Ethical approval for this study was obtained from the Oyo State Ethical Review Committee. Participantsvolunteer were ensured based on the consent form endorsed before the study. Special care was taken to ensure that there was no false compensation or inducement as a means of recruitment or as a way of keeping the study participants in the study. Informed consent was sought to protect the right and dignity of the study participants. However, participants were given equal opportunity to give and withdraw their consent freely on or from participating during the study. Confidentiality of each of participant was maximally maintained during and after the collection of his or her data or information.

### **3.1.3 Data collection techniques**

Data collection was carried out within a period of three weeks for the study and this took place in October, 2018. Visits were made to some selected schools in company of three research assistants who are also post graduate students with knowledge of data collection but were also retrained by the researcher before they were deployed to the field for data collection. They were trained on the objectives of the study, understanding of the instrument for data collection, building rapport with the pupils, interviewing skills, and the ethical issues involve in research prior to the time of data collection. The instrument and how they were used in the data are explained below. The study participants were interviewed at a time considered convenient for them by their school authorities. The data collection process involved the following steps:

1. Visit and permission from the local inspector of education in Ibadan north local government area. This was done by the researcher prior to the commencement of the research. The introductory letter from the department was acknowledged, permission was granted to carry on with the research.
2. Identification of wards and selected schools in the chosen wards by the interviewers.
3. Visit and permission from headteachers of the schools was also gotten
4. The respondents were selected based on the inclusion criteria and wards based on the stratification earlier described
5. Parental informed consent was gotten from parents of the participants through sending of letters and asking them to tick yes if they wanted their child/ward to participate.
6. Only pupils that their parents/guardian ticked yes were used for the study. Letter of assent was also given to the participants to seek their consent after explaining to them the purpose, benefits and ethical consideration guiding the study.
7. The respondents of the study were those who consented to participate.

The questionnaire was administered in English by the interviewer since the respondents were between the ages of 8 – 14 years and above and attended private primary schools. A total of 421 questionnaires were administered to the participants over a period of 3 weeks. Whenever the respondents needed clarification about the questions, the researcher and her research assistants explained to the understanding of the pupils. However, only 413 questionnaires were accurately completed. The respondents completed their questionnaire in their classroom during the school hours, under the supervision of the researcher, the research assistants and teachers assigned to assist in the data collection process. Each questionnaire was retrieved immediately after completion and checked thoroughly to ensure completeness and data quality. Observations or errors from the questionnaire were immediately noted and returned to the respondent to effect the change.

#### **3.1.4 Data management, analysis and presentation**

The questionnaires were checked for errors and numbered serially by the researcher for easy identification and recall. Completed questionnaires were sorted, edited and coded with the use of a coding guide. The data obtained from the questionnaires were entered into the computer using SPSS software, version 21. Frequency counts were run to detect missing cases or errors after the data entry and data cleaning was carried out. Certain responses were merged and recoded by the researcher to prevent ambiguity and repetition of data. Analysis was carried out using descriptive and inferential statistics including frequency distribution and Chi square. Relationships between

the variables and categories were analyzed using the chi-square at  $P < 0.05$  level of confidence. Outcomes of the data analysed were presented in tables.

### **3.1.5 Limitation of Study**

The study focused on the assess of fast food outlets to schools and consumption behaviours among private primary school pupils that consented to the study.

## **CHAPTER FOUR**

### **RESULT**

**The results are presented in this chapter. It consists of eight sections**

- Socio – demographic characteristics
- Knowledge about fast food
- Knowledge about nutrition
- Access of fast food snack sops in schools
- Access of fast food shops/outlets outside the school
- Respondents fast food consumption behaviour
- Perception of respondents on fast food
- Hypotheses testing

#### **4.1 Respondent's Socio-demographic characteristics**

Looking at the results in table 4.1, about 37.3% of the total respondents were in primary four, and (38.3%) in primary five while (24.5%) were in primary six. The age of the respondents ranged from 8 – 14 years with a mean age of  $8.5 \pm 0.89$  years and over half of the respondents were females. Many (82.2%) of the respondents were Christians and about three quarter (75.3%) of the respondents were Yoruba (Table 4.1)



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Variables	Frequency	Percentage (%)
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<b>Class</b>			
	Pry 4	154	37.3
	Pry 5	158	38.3
	Pry 6	101	24.5
<b>Age (Years)</b>			
	8	140	33.9
	9	167	40.4
	10	90	21.8
	11	13	3.1
	12	2	0.5
	14	1	0.2
<b>Gender</b>			
	Male	196	47.5
	Female	217	52.5
<b>Religion</b>			
	Christianity	340	82.3
	Islam	70	16.9
	Traditional	3	0.7
<b>Ethnicity</b>			
	Yoruba	311	75.3
	Igbo	59	14.3
	Hausa	5	1.2
	Others	38	9.2

**Table 4.1 Socio demographic characteristics of respondents (N=413)**

Mean age  $8.5 \pm 0.9$

\*\*others – Ethnic group: Edo, cross river, Benue, Delta, Kogi –

**Table 4.2 Age and pocket money category of respondents**

Age (grouped) in years		
<b>8 – 10</b>	<b>396</b>	<b>95.6</b>
<b>11 – 14</b>	<b>17</b>	<b>4.1</b>
Pocket money		
<b>0 – 50</b>	315	76.3
<b>&gt;50 – 100</b>	65	15.7
<b>&gt;100</b>	33	8.0

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#### **4.2 Respondents knowledge about fast food**

Most of the respondents, (74.8%) had heard about fast food while (25.2%) of the respondents that chose 'No' admitted not to have heard of fast food. Also, (42.6%) of the respondents in Table 4.4 defined fast food as snacks when asked what is fast food while (26.2%) defined fast food as food you buy outside, another (0.2%) of the respondents defined it as when you order a food and you see the food fast. In Table 4.3, three hundred and seventeen (76.8%) of the respondents admitted that foods bought outside the home is fast food while 23.2% said 'No'. About three hundred and ninety (94.4%) of the respondents in Table 4.2 attested that pizza, meat pie, doughnut, puff puff are examples of snacks sold in a fast food shop while 5.6% chose 'No'.

About (48.2%) of the respondents in Table 4.3 reported yes that fast foods like egg roll and pizza provide the body with good nutrient while the others do not know. Also, two hundred and thirty four (56.7%) of the respondents in Table 4.3 said no when asked if fast foods like puff-puff and doughnut are healthy food while 27.1% of the respondents said yes others 16.2% said they do not know. Knowledge score for fast food was calculated using an 8-point knowledge scale. Knowledge about what is fast food had a total score of 2 points because it required definition. Definition that were appropriately stated had a score of 2, incomplete definition scored 1 and the wrong responses scored 0. Knowledge about naming a fast food shop and giving an example of food/snacks sold in a fast food shop has a score of 1 respectively and the wrong responses 0. The scores were categorised into 3 poor (0 - 3), fair (>3 - 6) and good knowledge (>6 - 9).

#### **4.3 Respondents knowledge of nutrition**

About the knowledge of nutrition, more than half (51.3%) of the respondents said yes when asked can eating fast foods regularly make you fat? While 34.4% of the respondents said no and others 14.3% do not know. Majority 92.5% of the respondents have the knowledge that sweet drinks like coke and fanta contain a lot of sugar while others do not. While 86.9% of the respondents in Table 4.3 said yes when ask if they think snacks like doughnut and puff puff contains excess oil others said no and don't know. Also, in Table 4.3, 87.4% of the respondents reported yes when asked if drinking 100% fruit juice is more healthy and beneficial than drinking coke while 6.1% said no, others 6.5% reported don't know. Majority (80.6%) of the respondents in Table 4.7 know that apple gives vitamin to the body while 11.1% said it is plantain chips that gives vitamin to the body. Knowledge score for nutrition was calculated using a 5 point scale.

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**Table 4.3 Knowledge of Fast Food and Nutrition - (N=413)**

Questions	Yes	%	No	%
Have you heard of fast food?	309	74.8	104	25.2
Are foods bought outside the home fast food?	317	76.8	96	23.2
Are pizza, meat pie, doughnut puff puff examples of snacks?	390	94.4	23	5.6
Do fast foods like egg roll and pizza provide the body with good nutrient?	199	48.2	214	51.8
Are fast foods like puff puff and doughnut healthy food?	112	27.1	301	72.9
Can eating fast foods regularly make you fat?	212	51.3	201	48.7
Does sweet drinks like coke and fanta contain a lot of sugar?	382	92.5	31	7.5
Do you think snacks like doughnut and puff puff contains excess oil?	359	86.9	54	13
Does drinking 100% fruit juice more healthy and beneficial than drinking coke?	361	87.4	52	12.6

**Table 4.4 Views of what is fast food****(N=413)**

<b>Responses</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>When you order a food and you see the food fast</b>	1	0.2
<b>When you eat quickly</b>	40	9.7
<b>It is a swallow able food</b>	5	1.2
<b>Fast food is snacks</b>	176	42.6
<b>Food you buy outside</b>	108	26.2
<b>Food we eat at home</b>	12	2.9
<b>Fast food is rice</b>	17	4.1
<b>Fast food is lite food</b>	29	7.1
<b>Any food</b>	1	0.2
<b>When you are fasting</b>	3	0.7
<b>Food you cook quickly</b>	4	1.0
<b>Don't know</b>	17	4.1

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**Table 4.5 Fast food shop named by respondents****(N=413)**

<b>Responses</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Grocery shop	207	50.1
Fast food companies	58	19.6
Shopping mall	19	4.6
Mini snack shop	18	4.4
Canteen	49	11.8
Fsy	1	0.2
Paris bakery	2	0.5
Food restaurants	20	4.9
Frosty	1	0.2
I don't know	15	3.6

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**Table 4.6****Respondents' examples of food or snack sold in a fast food****(N=413)**

<b>Responses</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Pastries	238	74.7%
Biscuit	7	1.7
Bread	20	4.8
Plantain	3	0.7
Fried rice and chicken	37	8.9
Ice cream	71	17.2
Jollof rice	13	3.1
Sweet	2	0.5
Indomie	1	0.2
Popcorn	9	2.2
Amala	5	1.2
Salad	2	0.5
Pringles	1	0.2
Yoghurt	1	0.2
Moin moin	1	0.2
I don't know	2	0.5

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**Table 4.7**

**Snacks that gives vitamin to the body**

**(N=413)**

<b>Responses</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Puff puff</b>	14	3.4
<b>Apple</b>	333	80.6
<b>Plantain chips</b>	46	11.1
<b>Don't know</b>	20	4.8

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**Table 4.8 Knowledge of fast food category of the respondents****N=413**

Category	Range	Frequency	Percentage(%)
Poor knowledge	0 -3	8	1.9
Fair knowledge	>3 – 5	69	16.7
Good knowledge	>5 - 6	336	81.4

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**Table 4.9 Knowledge of nutrition category of the respondents****N=413**

Category	Range	Frequency	Percentage(%)
Poor knowledge	0 -2	31	7.5
Fair knowledge	>2 - 3	68	16.5
Good knowledge	>3 -6	314	76

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#### 4.4 Access and Proximity to School Snack Shops

Six questions were used to assess the access and proximity to school snack shop from the respondents. Among the respondents, 49.2% reported they bring from home when asked where they usually get their meals and snack when they are in school while 43.8% of the respondents buy from school and 7.0% of the respondents buy from snack shop outside the school. About 14.3% of the respondents have mini snack shops in the school compound, 4.8% of the respondents buy from the tuck shop in the school, another 4.4% of the respondents buy from the kiosk in the school, then 7.3% of the respondents buy from the schools canteen.

Over one third (37.5%) of the respondents when asked how often they visit the snack shop in their school said they can't tell while 41.1% said daily and another 15.1% said twice weekly. Most (72.2%) of the respondents when asked when they visit the snack shop in their school said during break time while 11.9% of the respondents said before assembly.

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**Table 4.10 ACCESS AND PROXIMITY TO SCHOOL SNACK SHOPS (N=413)**

Questions	Responses	Frequency	%
Where meals and snacks are gotten when in school?	bring from home	203	49.2
	Buy from school	181	43.8
	from snack shop outside	29	7.0
where snacks are gotten from school	mini snack shop	57	13.8
	inside the school compound	56	13.5
	outside the school	2	0.5
	canteen	29	7.3
	top shop	20	4.8
	kiosk	18	4.4
where meals and snacks are gotten right after school ends	in my school	54	13.1
	on my way home	18	4.4
	at the road side near the school	87	21
	canteen	76	18.6
	at home	136	32.7
	kiosk	22	5.3
	fast food outlets	4	0.9
	tuck shop	9	2.2
	don't know	7	1.7
Amount of visits to Snack shops	Daily	169	40.9
	twice weekly	61	14.8
	Three times weekly	25	6.1
	Cant tell	158	38.2
If daily, how often?	Once daily	72	17.4
	Twice daily	49	11.9
	More than twice	49	11.9

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Time of visit to	before assembly	49	11.9
school Snack shop	break time	298	72.2
	Never visit	14	3.4
	Closing time	1	0.2
	Don't know	51	12.3

---

Meal or snack bought	Phocus	8	1.9
During visit to snack	Sweet	48	11.6
Shop in school	Biscuit	60	14.5
	Milk	1	0.2
	Pasteries	209	50.4
	Peanut	4	1.0
	Drink	10	2.4
	Plantain chips	5	1.2
	Water	1	0.2
	Cheese	2	0.5
	Yoghurt/icecream	6	1.5
	Kokoro	6	1.5
	Rice	8	1.9
	Popcorn	6	1.5
	nothing	39	9.5

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#### **4.5 Access and Proximity of Fast Food Shops Outside the School**

Majority (82.3%) of the respondents in Table 4.11 reported yes when asked if they have been to fast food shops like Mr. Biggs, tantalizers or KFC before while 15.5% ticked no and 2.2% do not know if they have been there or not. Also, majority of the respondents 72.4% reported yes when asked if there are any nearby fast food shops to their schools while 20.8% ticked no, 6.8% of the respondents do not know if there are fast food shops outside their school.

Also, majority (80.9%) of the respondents when asked who usually take you to Mr. Biggs KFC or tantalizers ticked their parents. In Table 4.11, 42.4% of the respondents ticked I cant tell when asked how many times do you visit any of the fast food shops in a week while 31.0% of the respondents ticked once.

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**Table 4.11 Access and Proximity to Fast Food Shops outside the School (N=413)**

Questions	Yes	%	No	%
Have you been to fast food shops like Mr. Biggs, tantalizers or KFC before?	340	82.3	73	17.7
Are there any nearby fast food shops to your school?	299	72.4	114	27.6
	Responses		Frequency	% Total
Fast food shops close to schools	Snack shop outside my school		38	9.2
	Snack shop inside the school		22	5.3
	Shopping malls		9	2.2
	Fast food outlets		58	12.1
	Canteen		151	36.6
	Restaurants		3	0.8
	Grocery		21	5
Who takes you to Mr. Biggs, KFC or Tantalizers?	Parent		334	80.9
	Aunty		32	7.2
	Uncle		21	5.1
	Friends		3	0.7
	Self		3	0.7
	None		20	4.9

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Number of visits to any			
of the fast food shops in a week	Once	128	31.0
	Twice	104	25.2
	Four times	5	1.2
	Five times	1	0.2
	I cant tell	175	42.4

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Meal or snack bought during visit to snack shop outside the school	Yoghurt	3	0.7
	Ice cream	137	33.2
	Cold drinks	14	3.4
	Snacks	166	40.2
	Rice	55	13.3
	Salad	5	1.5
	Fruits	2	0.5
	Sweets	2	0.5
	Amala & ewedu	2	0.5
	Pop corn	1	0.2
	Don't know	25	6.1

---

Number of times respondents eat fast food in a week	Daily	171	41.4
	Twice weekly	122	29.5
	Thrice weekly	27	6.5
	More than 3 times weekly	76	18.4
	I cant tell	17	4.1

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#### 4.6 Respondents Consumption Behaviour

In Table 4.12, less than half (45.5%) of respondents when asked which of the snacks do they prefer said cakes, 16.2% chose meat pie, 15.5% chose doughnuts while another 12.6% chose egg roll. Less than half (46.5%) of the respondents reported one as the number of snacks they can consume in a day while 24.0% said they can consume 2 of their preferred snacks in a day, two respondents (0.4 %) said they can consume 28 of their preferred snacks in a day.

Among the respondents that were asked which of the snacks did they eat yesterday, 14.0% of the respondents said doughnut, 13.6% of the respondents said biscuit, 12.3% of the respondents said puff puff while 14.0% of the respondents said none. Also, among the respondents that were asked how often do they eat fruits in a week, only 42.1% of the total respondents said daily while 16.2% of the respondents said more than three times in a week. In Table 4.12 where we have question on which of the fruits do you prefer the most 35.6% said apple, 21.3% said mango while 18.2% said pineapple. Most of the respondents 71.2% said yes that they would prefer to eat any of the fruits mentioned in Table 4.12 as snacks instead of meat pie, doughnut and cakes while 28.8% said no. 51.8% of the respondents reported that they took fruits the previous day while 48.2% of respondents said they did not.

Respondents that reported to have taken fruits the previous day when asked to mention how many they took, 23.3% said just one, 15.3% said just two, another 5.1% said three while 1.2% of the respondents said six. Table 4.12 where question on do you enjoy eating beans was asked, almost two third (63.4%) of the respondents said yes while 36.6% of the respondents said no. Also, when asked if they would prefer bean pudding (moi moi), bean cake (akara) as snacks instead of doughnut and puff puff? More than half 59.1% said yes, 31.5% said no while 9.4% of the respondent said they don't know. Among the respondents, 52.5% of the respondents said they would prefer 100% fruit juice, 22.8% said they prefer sweet flavoured can drinks while 3.9% of the respondents said they don't know which one they prefer. Over three quarter (81.6%) of the respondents when asked if they enjoy eating vegetables like carrot, green salad and green vegetables said yes, 15.5% said no while 2.9% of the respondents do not know if they enjoy eating vegetables like carrot, green salad and green vegetables.

**Table 4.12 Fast food consumption behaviour of respondents**

Questions	Responses	Frequency	%	total
Snacks preference	Egg roll	52	12.6	
	Doughnuts	64	15.5	
	Cakes	188	45.5	
	Puff puff	15	3.6	
	Meat pie	67	16.2	
	Pizza	20	4.8	
	Sharwamah	1	0.2	
	Hamburger	1	0.2	
	Gala	1	0.2	
	Fish roll	2	0.5	
	Chin chin	2	0.5	
Amount of snacks consumed in a day.	1– 10	388	93.8	
	11 – 20	2	0.4	
	21 – 30	2	0.4	
	I don't know	19	4.6	
	None	2	0.5	
Snacks consumed the previous day	Pasteries	224	117.1	
	Popcorn	7	1.7	
	Biscuit	56	13.6	
	Sweet	18	4.4	
	Chinchin/chips	22	5.3	
	Freshyo/yoghurt/ice cream	18	4.4	
	Apple	2	0.4	
	Bread	3	0.7	
	Chocolate	1	0.2	
	None	62	15.0	

How often do you eat fruits in a week	Daily	174	42.1	
	Twice weekly	104	25.2	
	3 times weekly	43	10.4	
	More than 3 times in a week	67	16.2	
	I cant tell	19	4.6	
	Never	6	1.5	
Fruits enjoyed the most	Orange	38	0.2	
	Mango	88	21.3	
	Banana	40	9.7	
	Apple	147	35.6	
	Pine apple	75	18.2	
	Pear	20	4.8	
	Straw berry	1	0.2	
	Purple berry	2	0.4	
	Grapes	1	0.2	
	Coconut	1	0.2	
Amount of fruits eaten the previous day	0 -5	210	50.9	
	6 - 10	3	0.7	214
	I cant tell	1	0.2	
Drinks preferred by respondents	100% fruit juice	217	52.5	
	Sweet flavoured can drinks	94	22.8	
	Minerals	55	13.3	
	Chill milo drinks	31	7.5	
	Don't know	16	3.9	
Would you prefer to eat any of the fruits mentioned as snacks instead of meat pie, doughnut and cakes?	Yes	294	71.2	
	No	119	28.8	
Did you eat any fruits	Yes	214	51.8	

yesterday?	No	119	48.2
Do you enjoy eating beans?	Yes	262	63.4
	No	151	36.6
Would you prefer bean pudding (moi moi), bean cake (akara) as snacks instead of doughnut and puff puff?	Yes	244	59.1
	No	130	31.5
	Don't know	39	9.4
Do you enjoy eating vegetables like carrot, green salad and green vegetables?	Yes	337	81.6
	No	64	15.5
	Don't know	12	2.9

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**Table 4.13 Consumption category of the respondents****N=413**

Category	Range	Frequency	Percentage
Unhealthy	0 - 4	299	72.4
Healthy	>4- 7	114	27.6

**\*\*note: 7 questions under the consumption behaviour in the instrument was used for this categorisation**

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#### 4.7 Perception of Respondents to Fast Food

Six questions were used to assess the perception of the respondents towards fast food consumption. About 30.8% of the respondents in Table 4.14 strongly agree that regular eating of fast foods can harm the body while 27.6% of the respondents strongly disagree. About 45.0% strongly disagree that they prefer fast food to home made food while 23.7% of the respondents strongly agree to the question asked. While half (51.1%) of the respondents in table 4.14 strongly disagree that fast foods are better than eating fruits, 15.7% of the respondents strongly agree and 10.7 of the respondents were undecided. Over one quarter (34.6%) of the respondents cannot refuse fast food when given in table 4.14 while about one quarter 29.1% of the respondents can refuse fast food when given and about 10.4% of the respondents were undecided. Less than one quarter (24.7%) of the respondents in table 4.14 strongly disagree that fast food are not harmful to the body, 17.4% were undecided while 31.7% of the respondents strongly agree. One quarter (29.3%) of the respondents strongly agree that Fast foods like pizza, meat pie and egg roll provide good nutrients for the body, 19.9% of the respondents strongly disagree while 20.6% of the respondents were undecided.

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**Table 4.14 Perception about fast food consumption****(N=413)**

<b>Statements</b>	<b>SA</b>	<b>%</b>	<b>A</b>	<b>%</b>	<b>U</b>	<b>%</b>	<b>D</b>	<b>%</b>	<b>SD</b>	<b>%</b>
Regular eating of fast foods can harm the body	127	30.8	50	12.0	85	20.6	37	9.0	114	27.6
I prefer fast food to home made food	98	23.7	65	15.7	16	3.9	48	11.6	186	45.0
Fast foods are better than eating fruits	65	15.7	33	8.0	44	10.7	60	14.4	211	51.1
I can refuse fast food when given	120	29.1	56	13.6	51	12.3	43	10.4	143	34.6
Fast foods are not harmful to the body	131	31.7	73	17.7	72	17.4	35	8.5	102	24.7
Fast foods like pizza, meat pie and egg roll provide good nutrients for the body	121	29.3	78	18.9	85	20.6	47	11.4	82	19.9

**Table 4.15 Perception category of the respondents****N=413**

<b>Category</b>	<b>Range</b>	<b>Frequency</b>	<b>Percentage</b>
Negative perception	0–9	193	46.7
Positive perception	>9–18	220	53.3

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## Hypotheses testing

**Table 4.16**

**Hypothesis 1:** There is no significant association between knowledge of fast food and consumption behaviour of respondents.

Variable		Unhealthy consumption behaviour	%	Healthy consumption behaviour	%	Total	X <sup>2</sup>	df	P-value
Knowledge category	Poor	8		0	100	8	9.311	2	0.010
	Fair	58	84.1	11	15.9	69			
	Good	233	69.3	103	30.7	336			
Total		299	72.4	114	27.6	413			

In table 4.16, respondents with good knowledge of fast food (69.3%) practiced unhealthy consumption behaviour while 84.1% of the respondents with fair knowledge of fast food also practiced unhealthy consumption behaviour. Also, 30.7% of the respondents with good knowledge of fast food practiced healthy consumption behaviour while only 15.9% out of the respondents with fair knowledge practiced healthy consumption behaviour. Majority of the respondents, despite their good and fair knowledge of fast food still practiced unhealthy consumption behaviour while those with poor knowledge also practiced unhealthy consumption behaviour. Therefore, there was a significant relationship between knowledge of fast food and consumption behaviour of respondents, hence, I reject the null hypothesis for this variables.

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**Table 4.17**

**Hypothesis 2:** There is no significant association between perception of pupils and fast food consumption of the respondents.

Variable		Unhealthy consumption behaviour	%	Healthy consumption behaviour	%	Total	X <sup>2</sup>	Df	P-value
Perception category	Negative perception	135	69.9	58	30.1	193	1.087	2	0.297
	Positive perception	164	74.5	56	25.5	220			
Total		299	72.4	114	27.6	413			

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In table 4.17, among the respondents that have negative perception about fast food, 30.1% practiced healthy consumption behaviour while 74.5% of respondents with positive perception about fast food practiced unhealthy consumption behaviour. Therefore, there was no significant relationship between perception category of pupils and fast food consumption of the respondents, hence, I fail to reject the null hypothesis for these variables.

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**Table 4.18**

**Hypothesis 3:** There is no significant association between access of fast food and fast food consumption of the respondents

Variable		Unhealthy consumption behaviour	%	Healthy consumption behaviour	%	Total	X <sup>2</sup>	Df	P- value
Access of fast food.	Bring from home	141	69.5	62	30.5	203	1.860	2	0.395
	Buy from inside the school	137	75.5	44	24.3	181			
	Buy from outside the school	21	71.6	8	28.6	29			
Total		299	72.4	114	27.6	413			

In table 4.18, respondents who bring food from home practiced unhealthy consumption behaviour (69.5%) as much as those that buy both from inside and outside the school environment. This also applied to the respondents that practiced healthy consumption behaviour. Therefore, there was no significant association between access of fast food and consumption behaviour. Thus, I fail to reject the null hypothesis.

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**Table 4.19**

**Hypothesis 4:** there is no significant association between socio-demographics and fast food consumption among the respondents.

Variable		Unhealthy consumption behaviour	%	Healthy consumption behaviour	%	Total	X <sup>2</sup>	Df	P- value
Age	8 - 10	287	72.4	110	27.8	397	0.059	2	1.000
	11 – 14	12	75.0	4	25.0	16			
Total		299	72.4	114	27.6	413			
Pocket money									
	0 – 50	235	74.6	80	25.4	315	3.783	2	0.151
	51-100	44	67.7	21	32.3	65			
	>100	20	60.6	13	39.4	33			
Total		299	72.4	114	27.6	413			

In table 4.19, respondents in the age group of 8 – 10 years (72.4% ) practiced unhealthy consumption behaviour as much as the older respondents between the ages of 11 – 14 years. Therefore, there was no significant relationship between the age group and the consumption behaviour of the respondents. Hence, I fail to reject the null hypothesis of these variables.

Respondents with pocket money 0 -50 naira practiced more unhealthy consumption behaviour as much as respondents with 51 – 100 naira and above. Therefore, there was no significant relationship between the pocket money of the respondents and the consumption behaviour of the respondents. Hence, I fail to reject the null hypothesis of these variables.

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## CHAPTER FIVE

### DISCUSSION, CONCLUSION AND RECOMMENDATIONS

#### **Socio- demographic characteristics and related information of respondents**

According to J. Michael et al, (2006) a beginning point for addressing nutrition in schools is the way it is engaged in the curriculum. An important means of reaching the nation's children and youth with programs and approaches for healthier diet is the school. Majority of the respondents who were 8 and 9 years had good knowledge of food that are healthy and harmful to the body but due to the food environment they find themselves when in school practice unhealthy consumption behaviour. In this study, age did not significantly affect the consumption of fast food among the respondents. This is contrary to a study carried out by (Akabay et al 2007) where "age significantly influenced the frequency of fast food consumption". In this study, respondents with lower pocket money 0 – 50 naira patronise various fast food outlets and consume unhealthy snacks as much as respondents with higher pocket money > 50 naira and above. This is similar to a study conducted in Hyderabad by (Vijaya, 2003), where "children from high socio-economic status preferred fast food to traditional foods better despite their nutritional knowledge because of the food environment they find themselves". Most of the respondents were females and majority of the respondents were in primary five. The proportion of the respondents who practiced Christianity is higher than those who practiced Islam and traditional religion. Over three quarter of the total respondents were from the Yoruba ethnic group, this was because this study was conducted in a Yoruba speaking state.

#### **Knowledge of fast food and nutrition**

Majority of the respondents had heard about fast food and was able to give different definitions of what fast food is from their own perspective. This implies that school environment is a very important learning and building setting for young children. It was also, discovered that only 4.1% of all the respondents do not know what is fast food and didn't even make attempt to try and this knowledge deficit among these group of pupils could make them vulnerable of eating the wrong type of food. In this study, it was observed that 51.3% is aware that excess consumption of fast food can make them fat while 48.7% is not aware. This is similar to a study carried out by (Devi, 2016) where it was revealed that 43.7 % of the respondents had good knowledge and regarding fast food in weight gain 13.3% of the teenagers had moderately adequate knowledge and 0.4% had poor knowledge. Another study carried out by (khongrangiem, Dsouza et al, 2017) revealed that "about 31.87% of the participants had inadequate knowledge,

41.88% of the participants had moderated knowledge and 26.25% of the participants had adequate knowledge about the effect of fast food consumption''.

In this study, only 3.6% of all the respondents were not able to name a fast food outlet and also only 0.2% of all the respondents were not able to give examples of snacks/food/drinks sold in a fast food outlet. This implies that majority of the respondents were able to name a fast food shop and observational learning has a role to play. This is similar to a study carried out by Kumar, Palaha and Kaur, 2013 which revealed that advertisement influences their fast food eating behaviour which is also affiliated to observational learning. Those involve in commercial marketing and the media can also be a key element to have increase awareness and motivation in fast food consumption among respondents in this study. Commercial marketing concepts and techniques are – exchange theory, audience segmentation, consumer orientation, competition, and an integrated marketing mix (Grier and Bryant, 2005). All these are use to promote voluntary behaviour change in specific groups or target audiences based on their sociodemographic, behavioural, and psychological characteristics. defining the target market, determining the marketing mix to meet the needs of the targets is the basic elements that influences a commercial marketing strategy. In this study, it was also discovered that almost all the respondents (92.5%) had good knowledge that sweet drinks like Coke and Fanta contains a lot of sugar and (87.4%) knows that drinking 100% fruit juice is more healthy and beneficial than drinking coke. The nutritional knowledge of the respondents was also tested by asking them to choose from various options, the snack that gives vitamin to the body and it was discovered that (80.6%) of the respondents got it right. This implies that their knowledge of the questions asked on nutrition was due to the fact that they attended schools with good teachers that are imparting these knowledge to them, enlightened and supposedly learnt enough to understand the concept.

### **Access and Proximity to School Snack Shops**

From this study, it was observed that majority of the respondents reported buying their meals and snacks right in their various schools and outside the school environment. This shows that school food services plays an important role in the life of school children therefore ensuring that school food services, including what is offered in school cafeterias, reflect sound nutrition principles, is key. Also, 41% of the respondents said they do visit the snack shop in their schools daily and mostly (72%) during break time. This is similar to a study carried out by (Mariane et al 2012) using 3 countries. About 43.7% of the respondents from Scotland, 7.7% from Canada and 2.6% from US, when asked where they usually get their snacks right after school ends said from the

snack shop in school. Where respondents were asked what do they buy when they visit, almost every one of them mentioned different pastries including sweets and sweet drinks. (Islam and Ullah, 2010) studied the preference of fast food consumers in Dhaka city and revealed that consumers gave more importance to brand reputation followed by nearness to receive and accessibility, similarity of taste with previous experience, cost and quality of food, discount and taste, cleanliness and hygiene, salesmanship and decoration, fat and cholesterol level and self service factors. This shows that there is need for an intervention program in schools and what is being sold in the school. Increasing the availability of fruits and vegetables to children in schools should be a priority and an important means of improving the quality of foods served in schools.

### **Access and proximity of fast food shops outside the school**

In this study, over three quarter of the respondents have been to fast food shops like Mr. Biggs, tantalizers, KFC including other mini snack shops and 72.4% of the respondent ticked yes that they have nearby fast food shops to their schools. This is similar to a study conducted by Davies and (Carpenter, 2009) where they identified Over half (55 percent) of their study population attended schools within a half mile of a fast-food restaurant. Respondents were asked where they usually get their meals and snacks right after school closes, 32.7 reported at home, 18.6 reported canteen, 13.1 and 2.2 reported in my school and tuck shop respectively. This is also similar to a study carried out in Canada by Laura et al 2013 where 15.2% ate their lunch at home, 67.7% ate their lunch at school, 7.4% ate at snack bar/ fast food outlet, another 1.1 ate their lunch in a food retail.

### **Fast food and Consumption behaviour**

Majority of the respondents consumes one or more of the various snacks listed on a daily basis most especially puff puff, biscuit and doughnut but consumes less of fruits and vegetables. This is similar to a study carried out by (Brennan and Carpenter 2009) in their California Healthy Kids Survey where they came up with the conclusion that students with fast food outlets around their schools within one half mile consume less fresh fruits and vegetables. According to (Dixon, Scilly, Wakefield, White, Crawford, 2007), Children consume fast food due to the following reasons taste factor, attractiveness and time factor. Majority of the respondents (71.2%) said they would prefer to eat any of the fruits mentioned as snacks instead of meat pie, doughnut and cakes but only half of the respondents ate fruits the previous day when asked. Another 63.1% said they enjoy eating beans and 59.1% prefer bean pudding (moi moi), bean cake (akara) as snacks instead of doughnut and puff puff. More than half 52.5% of the respondents said they would prefer 100% fruit juice to other drinks and 81.6% of the respondents when asked if they enjoy eating vegetables like carrot, green salad and green vegetables said yes. This implies that

respondents that ate fruits the previous day or on a daily basis have parent/guardian that buys these fruits for them elsewhere because the school environment and their vendors do not sell these fruits.

### **Perception of fast food**

From this study, it was observed that there were varying perception from the respondents on fast food consumption. This is contrary to a study carried out by (Mattsson and Helmersson, 2007) on high school youths' attitudes and perceptions of fast food in Sweden. The study revealed that high-school students, in general, have a clear opinion about the unwholesomeness of regular fast food consumption. These students were aware of both the positive and negative characteristics of fast food yet they still patronize these fast food outlets. In this study, about 30.8% of the respondents strongly agree that regular eating of fast foods can harm the body, 20.6% of the respondents chose undecided while 27.6% strongly disagree. This is not surprising as there is an old saying that goes thus that one man's meat is another man's poison. This implies that what one person values, another may think worthless. This expression originates in antiquity. Whether the Roman poet and philosopher Titus Lucretius Carus (known as Lucretius) coined the expression in the first century BC. His is the oldest known reference: quod ali cibus est allis fuat acre venenum (what is food for one man may be bitter poison to others). By the early 17<sup>th</sup> century the expression is clearly well in use as Jacobean playwright Thomas Middleton write whereby that old moth – eaten proverb is verified, which says, 'one man's meate, is another man's poison (1604). None the less, changing wrong perceptions would be of benefit to respondents that thinks regular eating of fast foods cannot harm the body. Knowledge about the dangers associated with constant fast food consumption could help in taking necessary precautionary measures such as reading leaflet or instructions attached to these snacks or drinks if any and avoiding excess consumption to reduce life threatening situations. Half of the respondents (51.1%) strongly disagree that eating fast foods are better than eating fruits which shows that these respondents have a better nutritional knowledge and value for their health. Only 29.1% of the respondents said they can refuse fast food when given.

### **Implication of findings for health promotion and education**

The result of this study highlights cogent reasons for “planning, implementation and evaluation” of health education on the importance of applying the knowledge of good nutrition in the primary school setting and Nigeria at large. Targeted population for health education should also include the parents, school staff, food sellers in the school premises, media group and

the state or LGA educational board. Appropriate methods to enable the health education include public enlightenment using the mass media, group dialogue, peer educators, counselling and role play. Through health education, the targeted population will understand the concept of fast food consumption, acquire adequate knowledge about fast food and every other information incorporated into fast food consumption.

The use of advocacy is another appropriate strategy to curb what is being sold in fast food outlets of various schools. Advocacy will help to facilitate policy formation relating to regulation of fast food sales, incorporating selling of fruits, vegetables and other foods rich in protein like bean pudding and introducing the harmful effects of eating fast food regularly into the schools curriculum. Parents and staff of schools can also benefit from the Parents -Teachers Association (PTA) meetings where the relevance of their roles both at home and at schools is important in curbing excess consumption of fast food among the children who are in their formative years.

The use of “behavioural Communication Change” (BCC) such as “billboards, posters or banners” within the school premises can also enlighten the pupils about excess consumption of fast food. Media houses can also make jingles and adverts to educate the public about the harmful effects of consuming fast food instead of promoting it. The findings of this study can be used by the state or local government educational board as a training needs assessment to design and develop a training curriculum on the harmful effects of fast food and the importance of avoiding it.

## **Conclusion**

This study explored access of fast food outlets to schools and consumption behaviour among private primary school pupils in Ibadan North LGA. This study revealed that many pupils bought their snacks from the snack shops inside the school and the type of snacks and drinks sold in these shops are high in salt and sugar content. This accessibility might have made majority of these pupils to consumed various snacks and drinks on a daily basis due to availability and affordability. The level of fast food knowledge was high among the respondents. Majority of the respondents perceived that regular fast food consumption can harm the body yet majority of them find it difficult to refuse when offered to them. Also majority of the respondents were influenced by their food environment to buy these snacks and by their parents. Hence, affiliated to the impact of observational learning.

## **Recommendations**

1. It was observed in this study that irrespective of the level of knowledge about the dangers in the regular consumption of fast food majority of the respondents still patronize them due to the food environment they find themselves when in school. Thus, strategies such as advocacy to facilitate policy formation relating to items that should be sold such as fruits, eggs and increasing the price of these unhealthy snacks would be appropriate strategies to reduce the rate of fast food consumption.
2. It was also discovered that various food vendors inside the selected school premises do not sell fruits and half of the respondents said they prefer 100% fruit juice to other sweet can flavour drinks. Hence, the state and local government board should design a program for private school owners to encourage the sale of 100% fruit juice.
3. The sale of foods rich in protein like bean pudding, eggs and other food rich in protein should also be implemented and monitored in the school meal services.
4. Finally, it was discovered that only 0.5% of the respondent that visits the fast food outlets with their significant order buy fruits while majority buy pastries. This shows that their significant order especially parent have a greater influence on them despite their knowledge. Hence, parents should be encouraged through the PTA meeting to teach their children how to make good choice of food when they go outing.



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## APPENDIX I

### ACCESS OF FAST FOOD OUTLETS TO SCHOOLS AND CALORIE INTAKE AMONG PRIVATE PRIMARY SCHOOL PUPILS IN IBADAN NORTH LOCAL GOVERNMENT AREA, OYO STATE, NIGERIA.

Dear Respondents,

Good day, I am a Postgraduate Student of the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan. I am carrying out a research on **Access of Fast food Outlets to Schools and Calorie Intake among Private Primary Schools in Ibadan North Local Government Area.**

The findings from the study will help in the design of programmes and formulation of policies aimed at reducing fast food consumption high in calorie. The survey should only take about 10 minutes to complete, but participation is voluntary and can be discontinued. By participating, you will not experience any risk. If you decide to complete the survey, your identity will be kept strictly confidential and will be used for the purpose of this research only. Please note that your name is not required. Please give honest answer to the questions asked as your maximum cooperation will assist in making this research a success. Thank you for your interest in this study.

Survey identification number..... Interview date.....

Ward ..... School.....

#### SECTION A: SOCIO - DEMOGRAPHIC INFORMATION

Please tick ( ) the appropriate response in the box provided. Only one answer should be chosen.

1. What class are you in? 1. Pry 4{ } 2. Pry 5{ } 3. Pry 6{ }
2. How old are you?..... years old (At last birthday)
3. Are you a boy or a girl? 1. Boy { } 2. Girl { }
4. What is your religion? :1. Christianity { } 2. Islam { } 3. Traditional { } 4. others { }
5. What is your ethnic group? 1. Yoruba { } 2. Igbo { } 3. Hausa { } 4. others { }
6. What is your daily pocket money?.....

## SECTION B: KNOWLEDGE OF FAST FOOD

**Instruction: Please tick only one of the options best known to you**

s/n		Yes	No	Don't know
7.	Have you heard of fast food?			
8.	What is fast food? _____			
9.	Are foods bought outside the home fast food?			
10.	Name a fast food shop? _____			
11.	Name one example of food/snack sold in a fast food shop.			
12.	Are pizza, meat pie, doughnut, puff puff examples of snacks sold in a fast food shop?			
13.	Do fast foods like egg roll and pizza provides the body with good nutrient?			
14.	Are fast foods like puff puff, and doughnut healthy food?			

## SECTION C: KNOWLEDGE OF NUTRITION

**Instruction: Please tick only one of the options best known to you.**

S/N		Yes	No	Don't know
15.	Can eating fast food regularly make you fat?			
16.	Does sweet drinks like coke, Fanta, la casera contain a lot of sugar?			
17.	Do you think snacks like doughnut and puff puff contains excess oil?			
18.	Does drinking 100% fruit juice more healthy and beneficial than drinking coke?			
19.	Which of these snacks gives vitamin to the body? 1. Puff puff 2. Apple 3. Plantain chips 4. Don't know			



**SECTION D: ACCESS AND PROXIMITY TO SCHOOL SNACK SHOPS**

**Instruction: Please tick only one of the options best known to you.**

20. Where do you usually get your meals and snack when you are in school? **A)** Bring from home, **b)** buy from school, **c)** buy from snack shop inside or outside school.

If from school, where?.....

21. Where do you usually get your meals and snack right after school ends?  
.....

22. How often do you visit the snack shop in your school? **A)**Daily **(b)**twice weekly **(c)** 3 times weekly **(d)** can't tell

23. If daily, how many times do you visit the snack shop in your school per day? **A)** Once daily **b)** twice daily **(c)** more than twice **d)** can't say

24. When do you visit the snack shops? **1.** Before assembly ( ) **2.** Break time( ) **3.** Don't know( )

25. What do you buy when you visit the snack shop in your school?  
.....

**ACCESS AND PROXIMITY TO FAST FOOD SHOPS OUTSIDE THE SCHOOL**

26. Have you been to fast food shops like Mr. Biggs, tantalizers or KFC before? **1.** Yes ( ) **2.** No ( ) **3.** Don't know ( )

27. Are there any nearby fast food shops to your school? **1.** Yes ( ) **2.** No ( ) **3.** Don't know ( )

28. If yes, which one? .....

29. Who usually takes you to Mr. Biggs, KFC, Foodco or tantalizers? **1.**Parents( ) **2.**Aunty( ) **3.**Uncle( ) **4.**Friends( ) **5.**Self( )

30. How many times do you visit any of the fast food shops above in a week?**1.**Once ( ) **2.**Twice ( ) **3.**I can't tell( )

31. What do you buy when you visit?.....

32. How many times do you eat fast food in a week? **A)** Daily **(b)** twice weekly **(c)** thrice weekly **(d)** more than three times in a week.

**SECTION E: CONSUMPTION BEHAVIOUR**

**Instruction: please tick only one of the options best known to you.**

33. Which of the snacks do you prefer? **1.** Egg roll **2.** Doughnuts **3.** Cakes, **4.** Puff puff, **5.** Meat pie **6.** others specify.....

34. How many do you eat in a day? ..... (mention)

35. Which one did you eat yesterday? .....
36. How often do you eat fruits in a week? **(Daily), (twice weekly), (3 times weekly), (more than 3 times in a week).**
37. Which of the fruits do you enjoy the most? **1. Orange 2. Mango 3. Banana 4. Apple 5. Pineapple 6.** Others specify.....
38. Would you prefer to eat any of the fruits mentioned as snacks instead of meatpie, doughnut and cakes? **1. Yes ( ) 2. No ( )**
39. Did you eat any fruit yesterday? **1. Yes ( ) 2. No ( )**
40. If yes, how many? .....
41. Do you enjoy eating beans? **1. Yes ( ) 2. No ( )**
42. Would you prefer bean pudding (moi moi), bean cake (Akara) as snacks instead of doughnut and puff puff? **1. Yes ( ) 2. No ( ) 3. Don't know ( )**
43. Which of the following drinks would you choose? **A) 100% fruit juice, b) sweet flavoured can drinks c) minerals (d) chill Milo drink e) don't know**
44. Do you enjoy eating vegetables like carrot, green salad and green vegetables? **1. Yes ( ) 2. No ( ) 3. don't know ( )**

#### SECTION F: PERCEPTION SCALE

**Instruction: Please tick only one of the options that is best known to you.**

S/N		SA	A	U	D	SD
45.	Regular eating of fast foods can harm the body					
46.	<b>I prefer fast food to home made food</b>					
47.	<b>Fast foods are better than eating fruits</b>					
48.	I can refuse fast food when given.					
49.	Fast foods are not harmful to the body					
50.	Fast foods like pizza, meatpie and egg roll provides good nutrients for the body					

**APPENDIX II**  
**ETHICAL APPROVAL LETTER**

TELEGRAMS.....

TELEPHONE.....



**MINISTRY OF HEALTH**  
**DEPARTMENT OF PLANNING, RESEARCH & STATISTICS DIVISION**  
**PRIVATE MAIL BAG NO. 5027, OYO STATE OF NIGERIA**

Your Ref. No. ....

All communications should be addressed to

the Honorable Commissioner quoting

Our Ref. No. AD 13/479/917

21<sup>st</sup> September, 2018

The Principal Investigator,  
Department of Health Promotion and education,  
Faculty of Public Health,  
College of Medicine,  
University of Ibadan,  
Ibadan.

**Attention: Eboh Chioma**

**ETHICS APPROVAL FOR THE IMPLEMENTATION  
OF YOUR RESEARCH PROPOSAL IN OYO STATE**

This is to acknowledge that your Research Proposal titled: "Proximity of Fast Food Outlets To Schools and High Calorie Intake among Private Primary School Pupils in Ibadan North LGA" has been reviewed by the Oyo State Ethics Review Committee.

2. The committee has noted your compliance. In the light of this, I am pleased to convey to you the full approval by the committee for the implementation of the Research Proposal in Oyo State, Nigeria.
3. Please note that the National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations, in line with this, the Committee will monitor closely and follow up the implementation of the research study. However, the Ministry of Health would like to have a copy of the results and conclusions of findings as this will help in policy making in the health sector.
4. Wishing you all the best.

Dr. Abbas Gbolahan

Director, Planning, Research & Statistics

Secretary, Oyo State Research Ethics Review Committee

