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*Research Article*

# Modifiable Risk Factors for Overweight and Obesity among Traders in Abeokuta South Local Government Area, Ogun State

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**ABSTRACT**

The market place as an occupational environment can predispose to obesity, mainly due to sedentary nature and enhanced access to food. This study was designed to determine the prevalence and risk factors of overweight and obesity among traders in Abeokuta South Local Government Area, Ogun State, Nigeria. A descriptive cross-sectional research design involving 210 (60.3%) males and 140 (39.7%) females randomly selected from three markets (Panseke, Kuto and Asero markets) was conducted using a systematic random sampling method. A validated semi-structured questionnaire was used to assess their personal and socio-economic characteristics, alcohol consumption, smoking habits and physical activity levels. Nutrient intake was assessed using a validated 24hr Dietary Recall questionnaire. Body Mass Index (BMI) was derived from height and weight measurements; Waist and hip circumference was taken to assess abdominal obesity. The nutrient intake was analyzed using the adapted Total Diet Allowance (TDA) for windows. Data was analyzed using the Statistical Package for Social Sciences (SPSS), version 20. Based on BMI, the prevalence of overweight and obesity was 24% and 3.7% respectively. About 39.4% of the respondents had abdominal obesity. The prevalence of general obesity was significantly higher among females than males (p=0.000). Over one-third (41.4%) of the respondent have low physical activity level. About 14.9% of the respondents smoke cigarrete and more than one-third (35.1%) consume alcohol. More than half (58.6%) of the males and 89.7% of the females had excess calorie intake in the past 24 hours. A significant association was observed between BMI and smoking pattern but there was no significant association between BMI, physical activity and alcohol consumption pattern. Carbohydrate, protein and fat were consumed above the recommended dietary allowance, while respondents had inadequate intake of micro-nutrients, as well as fiber. Obesity is of public health concern, therefore, sensitization focused on lifestyle modification and proper dietary choices should be considered.

**Keywords:** *Traders, alcohol consumption, physical activity, obesity, dietary habits*

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## INTRODUCTION

In Africa, despite the high prevalence of under nutrition, the prevalence of overweight and obesity is increasing at an alarming rate (Olatubosun et al, 2011; WHO, 2008). Non-communicable diseases have overtaken communicable diseases as the leading cause of morbidity and mortality in Nigeria, among which includes obesity (Sanu *et al.*, 2010). Lokuruka (2013) defined obesity as a "disease condition in which excessive fat is present in the body such that it has a devastating effect on the body". Although genes predispose an individual to obesity, however, several factors such as changes in diet, cigarette smoking, alcohol consumption, inadequate exercise, urbanization and globalization of food markets have been reported to be responsible for its rising epidemics (Oladapo *et al.*, 2010; Doku and Neupane, 2015). Overweight and obesity are the fifth leading risk for global deaths (WHO, 2015). Besides the social and psychological burden independently associated with obesity, it further poses significant risk leading to chronic health conditions, thus, increasing the overall disease burden (Akralo-Anthony *et al.*, 2014). According to WHO (2015), more than one-third (44%) of the diabetes burden, 23% of ischemic heart disease burden, and between 7 and 41% of certain cancer incidence are attributed to overweight and obesity. At least 2.8millions adults die each year because of being overweight or obese (WHO, 2015).

The work environment and lifestyle behaviors has been reported by Aladeniyi *et al.,* (2017) as a contributor to obesity epidemic. The market place as a work and social environment, which serve as a meeting place for the distribution of goods, especially food items, represents the souls of every community in Nigeria, and can predispose to obesity, mainly due to physical inactivity, enhanced access too food and the nature of business carried out by the traders. These influences both eating habits and lifestyle, which may eventually affect traders' nutritional status (Ngowu *et al.,* 2012; Wordu and Akusu, 2018). It is said to be a factor in obesity and other disorders, primarily heart disease, and as developing countries adopt western cultures, more individuals are becoming sedentary and the burden on the health system is increasing dramatically (Jeanne, 2017).

On the other hand, physical inactivity, smoking and alcohol consumption have negative consequences on body composition parameters (Lovro *et al.,* 2017), these factors are however modifiable lifestyle factors that may increase the development of obesity and aforementioned chronic diseases (Addo *et al.,* 2009). Assessing the risk factors for overweight and obesity among market traders in Abeokuta South LGA can serve as a basis for initiating nutrition and health education programs for the adoption of healthy lifestyles among traders.

## MATERIALS AND METHODS

**Study design:**
A descriptive cross-sectional research design was adopted for this study.

**Participants:**
Participants included traders both men and women aged 30 years and above randomly selected from three (3) markets (Panseke, Kuto and Asero markets) using simple random sampling technique. List of stalls in the market was used to constitute the sampling frame, and the selection of stalls was done using a systemic sampling technique. A sampling interval of three was chosen.

A total of 350 respondents were selected based on 28.1% prevalence of overweight and obesity reported by Awosan et al., (2014).

**Methodology:**
A semi-structures questionnaire was used to collect information for the study. Personal and socio-economic information obtained include age, gender, marital status, tribe, household type, religion educational status and monthly income.

A standardized questionnaire consisting of alcohol consumption and smoking habit was used to obtain information on the lifestyle (Awosan et al., 2014). Physical activity level was assessed using the adapted World Health Organization Global Physical Activity Questionnaire (WHO, 2010).

Overweight and Obesity was assessed using Body Mass Index (BMI) and Waist Circumference (WC); anthropometric measurement of weight, height and waist circumference were obtained. Body weights was taken using digital bathroom scale, the readings taken to the nearest 0.1kg. each subject was made to stand erect on the scale with light clothing and without shoes. An object with a known weight was used to standardize the scale readings. Heights was measured using the Stadiometer to the nearest 0.1cm. subjects were made to erect with bare foot and eyes directed straight ahead. Weight and height measurements were used to calculate Body Mass Index, which was used to classify subjects according to the World Health Organization (WHO) guidelines (2008).

Waist and hip circumference (in centimeters) were measured using a flexible, non-stretchable tape measure. Waist circumference at the midpoint between the lower rib border and the iliac crest at the end of the expiration while participants were standing upright and hip circumference along the widest portion of the hips. Subjects were classified based on the WHO guidelines (WHO, 2008)

Nutrient intake was assessed using a validated 24 hours' dietary recall (Silangwe, 2012), the data was analyzed using the adapted Total Dietary Allowance (TDA) for windows. The nutrient was classified using their percentage RDA into low intake (<60%), adequate intake (60-80%) and high intake; above 80% (Schaetzel, 2012).

**Data analysis:**
All data were analyzed using the Statistical Package for Social Sciences (SPSS) version 20.0. Frequencies and descriptive statistics of concerned variables were reported. Chi-Square was used to test for significant associations between dependent and explanatory variables.

## RESULTS

Table 1 shows the socio-economic and demographic characteristics of the respondents. A total of three hundred and fifty (350) traders participated in this study. Respondents were made up of 210 (60.0%) males and 140 (40.0%) females. About two-third (66.3%) are within the age bracket of 30 – 39 years, more than half (61.1%) were married, over three-quarter (80.9%) were from the nuclear household and 54.3% had secondary education. More than half (61.7%) of the respondents were Christians, approximately 90% were Yoruba and majority (90.3%) earn above ₦20,000 monthly.

Table 2 revealed the BMI classification of the respondents, the prevalence of overweight and obesity in this study were 24.0% and 3.7% respectively. The prevalence of overweight and obesity were 24.3% and 3.3% among the males; 23.6% and 4.3% among the females respectively. Based on WHR, the overall prevalence of abdominal obesity was 39.4%. Although there was no significant difference (p=0.431) in the BMI between the male and female respondents, abdominal obesity was significantly higher among the female traders. About 41.4% of the respondents engaged in low physical activities and 22.0% had high physical activity levels. It was also observed that the male respondents were significantly more active than the female (p=0.01)

In Table 3, about 14.9% of the respondent smoke cigarette, 11.1% have smoked at least 100 cigarettes in their lifetime, 8% have used marijuana in their lifetime. About 11.1% inhale external smoke very often, while only 3.4% rarely inhale external smoke.

**Table 1:**
Socio – economic and demographic characteristics of the respondents

| Parameters | Frequency (N) | Percentages (%) |
|---|---|---|
| **Age** | | |
| 30-39 | 232 | 66.3 |
| 40-49 | 84 | 24.0 |
| 50-59 | 23 | 6.6 |
| 60-69 | 11 | 3.1 |
| **Gender** | | |
| Male | 210 | 60.0 |
| Female | 140 | 40.0 |
| **Marital Status** | | |
| Single | 132 | 37.7 |
| Married | 214 | 61.1 |
| Divorced | 3 | 0.9 |
| Separated | 1 | 0.3 |
| Household Type | | |
| **Nuclear** | 283 | 80.9 |
| **Extended** | 67 | 19.1 |
| **Educational Level** | | |
| Primary | 131 | 36.7 |
| Secondary | 187 | 54.3 |
| Tertiary | 21 | 5.9 |
| Post Graduate | 11 | 3.1 |
| **Religion** | | |
| Christianity | 216 | 61.7 |
| Islam | 133 | 38.0 |
| Traditional | 1 | 0.3 |
| **Tribe** | | |
| Yoruba | 315 | 90.0 |
| Igbo | 32 | 9.1 |
| Hausa | 3 | 0.9 |
| **Monthly Income** | | |
| Below ₦12,500 | 9 | 2.6 |
| ₦12,500-₦20,000 | 25 | 7.1 |
| Above ₦20,000 | 316 | 90.3 |

The minimum age at which respondents first smoked is 14 years while the average age of the respondents smoking tobacco products was 25.7±5.6 years. The average number of cigarettes smoked per day was 4.19 ± 4.07. More than one-third (35.1%) of the respondents consume alcohol. Among the respondents that consume alcohol, 47.9% rarely consume light beer, while 0.8% consume light beer 2-3 times a week. The result shows that 52.8% of the respondent rarely consume palm wine, 42.3% consume palm wine once a week, while 1.6% of the respondent consume palm wine 2-3 times in a week. Also, 50.4% rarely consume red wine, 44.7% consume red wine once in a week, while 4.9% drink red wine daily. The result also shows that 53.7% consume liquor once a week, about 43.7% rarely consume liquor, while 2.4% consume liquor once a day. The minimum age at which respondents first consumed alcohol is 14 years while the average age of respondents consuming alcohol was 25.0±5.4 years.

**Table 2:**
Anthropometric characteristics and Physical Activity Level of respondents

| Parameters | Males N (%) | Females N (%) | Total N (%) | P-value |
|---|---|---|---|---|
| **BMI** | | | | |
| **Underweight** | 7(3.3%) | - | 7 (2%) | 0.431 |
| **Normal weight** | 145 (69.1%) | 101 (72.1%) | 246(70.3%) | |
| **Overweight** | 51 (24.3%) | 33 (23.6%) | 84 (24%) | |
| **Obese** | 7 (3.3%%) | 6 (4.3%) | 13 (3.7%) | |
| **Total** | 210 (60%) | 140 (40%) | 350 (100%) | |
| **Waist Hip Ratio** | | | | |
| **Low risk** | 191 (91%) | 21 (15%) | 212 (60.6%) | 0.000* |
| **Moderate risk** | 17 (8.1%) | 67 (47.9%) | 84 (24%) | |
| **High risk** | 2 (0.9%) | 52 (37.14%) | 54 (15.4%) | |
| **Total** | 210 (60%) | 140 (40%) | 350 (100%) | |
| **Waist Circumference** | | | | |
| **Not at risk** | 210 (100) | 117 (83.6) | 327 (93.4) | 0.000* |
| **At risk** | 0 (0) | 23 (16.4) | 23 (6.6) | |
| **Total** | 210 (60%) | 140 (40%) | 350 (100%) | |
| **Physical Activity Level** | | | | |
| **Low level** | 91(43.3) | 54(38.6) | 145(41.4) | 0.01 |
| **Moderate level** | 68(32.4) | 60(42.9) | 128(36.6) | |
| **High level** | 51(24.3) | 26(18.5) | 77(22) | |
| **Total** | 210(60) | 140(40) | 350(100) | |

Table 4 shows the nutrient intake of respondents. The median energy intake of both male and female respondents was 2153 kcal and 2198 kcal respectively. The median intake of carbohydrate, proteins and fats consumed were 367g, 84g and 37g respectively, while the median intake of vitamin C, calcium, sodium and potassium were 51mg, 316mg, 1160mg and 1603mg respectively. More than half (58.6%) and 89.7% of the male and female respondents respectively had excess calorie intake. About 96.6% and 94.9% of the male and female respondents respectively had excess intake of carbohydrate. However, more than half (67.2%; 66.7%) of the male and female respondents had low intake of fiber while 96.6% of the male and 89.7% of the female respondents had low intake of calcium respectively. Table 5 shows the association between smoking habit, alcohol consumption physical activity and body mass index of the respondents. A significant association was observed between BMI and smoking pattern (p = 0.000) of the respondents. However, there was no significant association between BMI and physical activity (p=0.565) and alcohol consumption pattern(p=0.308).

**Table 3:**
Alcohol and Smoking habits of the Respondents

| Variables | Frequency | Percentage | Variables | Frequency | Percentage |
|---|---|---|---|---|---|
| **Frequency of alcohol consumption** | | | **Smoking habit** | | |
| Never drank alcohol in lifetime | 227 | 64.9 | Smoke daily | 6 | 1.7 |
| Within the past 24 days | 37 | 10.6 | Smoke daily, but I have cut down | 5 | 1.4 |
| 1 – 6 days | 68 | 19.4 | Smoke once a while | 37 | 10.6 |
| 1 – 4 weeks ago | 18 | 5.1 | Use to smoke, but I quit less than 6 months ago | 4 | 1.2 |
| **Frequency of light beer consumption** | | | Have never smoked | 298 | 85.1 |
| Rarely | 59 | 47.9 | **Smoked at least 100 cigarettes** | | |
| 1/week | 32 | 26.0 | No | 19 | 2.9 |
| 2 – 3/week | 1 | 0.8 | Yes | 39 | 11.1 |
| 1/day | 29 | 23.6 | Don't know | 2 | 0.6 |
| 2+/day | 2 | 1.6 | Not sure | 1 | 0.3 |
| | | | Never smoked | 298 | 85.1 |
| **Frequency of regular beer consumption** | | | **Marijuana use** | | |
| Rarely | 35 | 28.5 | Smoke daily | 3 | 0.9 |
| 1/week | 45 | 36.6 | Smoke daily, but I have cut down | 5 | 14 |
| 2 – 3/week | 27 | 22.0 | Smoke once a while | 16 | 4.6 |
| 1/day | 14 | 11.4 | Use to smoke, but I quit less than 6 | 4 | 1.1 |
| 2+/day | 2 | 1.6 | months ago | 24 | 6.9 |
| | | | Have never smoked | 298 | 85.1 |
| **Frequency of palm wine consumption** | | | **People you live with that smoke tobacco products** | | |
| Rarely | 65 | 52.8 | None | 10 | 2.9 |
| 1/week | 52 | 42.3 | Don't know | 42 | 12.0 |
| 2-3 weeks | 2 | 1.6 | never smoked | 298 | 85.1 |
| 1/day | 4 | 3.3 | | | |
| | | | **Is smoking allowed in your home?** | | |
| **Frequency of red wine consumption** | | | Allowed | 3 | 0.9 |
| Rarely | | | Never allowed | 38 | 10.9 |
| 1/week | 62 | 50.4 | Allowed only at sometimes in some | 6 | 1.7 |
| 1/day | 55 | 44.7 | places | 5 | 1.4 |
| | 6 | 4.9 | Dot know never smoked | 298 | 85.1 |
| **Frequency of drink liquor, white rum or mixed drinks** | | | | | |
| Rarely | | | **Inhaling external smoke** | | |
| 1/week | 53 | 43.1 | Very often | 39 | 11.2 |
| 1/day | 66 | 53.7 | Rarely | 12 | 3.4 |
| 2+/day | 3 | 2.4 | Don't know | 1 | 0.3 |
| | 1 | 0.8 | never smoked | 298 | 85.1 |
| Minimum age at first alcohol consumption | (n=123) | 14years | Minimum age at first smoking | (n=52) | 14 years |
| Average age of respondents consuming alcohol | (n=123) | Mean±SD 25.0±5.4 | Average age of respondents consuming alcohol | (n=52) | Mean±SD 25.7±5.6 |

## DISCUSSION

Obesity is characterized by excess adiposity, which is often seen as excess body weight. However, the real measurement of adiposity remains challenging (Bogin and Varela-Silva, 2012). This study showed a high prevalence of overweight and abdominal obesity among traders in Abeokuta South Local Government. Previous study conducted by Ngowu et al., (2012) reported the prevalence of overweight among healthy adults living in Aba, Abia State, to be 30%. Similar studies also revealed a high prevalence of overweight among traders in Lagos state, Sokoto and Ijebu-Ode (Odugbemi et al., 2012, Awosan et al., 2014, Oladoyinbo et al., 2015). The 3.7% prevalence of obesity observed in this study is however lower than 12.3%, 28.1% and 26.7% prevalence reported by Odugbemi et al., (2012), Awosan et al., (2014), and Oladoyinbo et al., (2015) respectively. Amole et al (2011) reported 33.8% abdominal obesity among adults in Ogbomoso, Nigeria which is similar to the results of this study.

**Table 4:**
Nutrient intake of Respondents

| | Male | | | | Female | | | |
|---|---|---|---|---|---|---|---|---|
| **Nutrients** | **Median Intake** | **Low Intake N (%)** | **Moderate Intake N (%)** | **Excess Intake N (%)** | **Median Intake** | **Low Intake N (%)** | **Moderate Intake N (%)** | **Excess Intake N (%)** |
| Calorie (kcal) | 2126.9 | 6 (10.3%) | 18 (31%) | 34 (58.6%) | 2184 | 4(10.3%) | - | 29(89.7%) |
| Protein (g) | 80.4 | - | 2 (3.4%) | 56 (96.6%) | 102.06 | - | 2 (5.1%) | 37(94.9%) |
| Carbohydrate (g) | 363.3 | - | 4 (6.9%) | 54 (93.1%) | 359.1 | - | 4(10.3%} | 35(89.7%) |
| Fiber (g) | 11.2 | 39 (67.2%) | 12 (20.7%) | 7 (12.1%) | 12.1 | 26 (66.7%) | 11 (28.2%) | 2(15.1%) |
| Fat (g) | 34.1 | 43 (74.1%) | 4 (6.9%) | 10 (17.2%) | 36.1 | 31 (79.5%) | 4 (10.3%) | 4 (10.3%) |
| Vitamin C (mg) | 15.3 | 24 (41.4%) | 3 (5.2%) | 9 (15.5%) | 29.4 | 22 (56.4%) | 3(7.7%) | 5 (12.8%) |
| Calcium (mg) | 450.4 | 56 (96.6%) | 1 (1.7%) | 1 (1.7%) | 387.2 | 35 (89.7%) | 2 (5.1%) | 2 (5.1%) |
| Sodium (mg) | 1020.8 | 36 (62.1%) | 15 (25.9%) | 7 (12.1%) | 1174.4 | 24 (61.5%) | 12 (30.8%) | 3 (7.7%) |
| Potassium (mg) | 1207.8 | 45 (77.6%) | 4 (6.9%) | 9 (15.5%) | 1345.3 | 29 (74.4%) | 3 (7.7%) | 7 (17.9%) |
| Zinc (mg) | 14.1 | 5 (8.6%) | 6 (10.3%) | 16 (26.6%) | 15.2 | 2 (5.1%) | 3 (7.7%) | 34(87.2%) |
| Iron (mg) | 18.8 | 16 (27.6%) | 5 (8.6%) | 37 (63.8%) | 17.9 | 9 (23.9%) | 1 (2.6%) | 29(74.4%) |

**Table 5:**
Association between smoking habit, alcohol consumption Physical activity and body mass index of the respondents

| | Body Mass Index Classification | | | | | | |
|---|---|---|---|---|---|---|---|
| **Variables** | **Underweight F (%)** | **Normal F (%)** | **Overweight F (%)** | **Obese F (%)** | **Total F (%)** | **$\chi^2$** | **P-value** |
| **Smoking habit** | | | | | | | |
| Smoked daily | 2 (33.3) | 4 (66.7) | 0 (0.0) | 0 (0.0) | 6 (1.7) | | |
| Smoked daily but cut down | 0 (0.0) | 3 (60.0) | 2 (40.0) | 0 (0.0) | 5 (1.4) | | |
| Smoked once a while | 0 (0) | 26 (70.3) | 10 (27.0) | 1 (0.7) | 37 (10.6) | 34.933 | 0.000 |
| Quit <6 months ago | 0 (0) | 4 (100) | 0 (0.0) | 0 (0) | 4 (1.1) | | |
| Never smoked | 5 (1.7) | 209 (70.1) | 72 (24.2) | 12 (4.0) | 298 (85.1) | | |
| **Total** | 7 (2) | 246 (70.3) | 84 (24.0) | 13 (3.7) | 350 (100.0) | | |
| **Alcohol Consumption** | | | | | | | |
| Never | 4 (1.8) | 152 (67) | 59 (26) | 12 (5.2) | 227 (64.9) | | |
| Within 24 days | 2 (5.4) | 28 (75.7) | 7 (18.9) | 0 (0.0) | 37 (10.6) | | |
| 1-6 days ago | 1 (1.5) | 52 (76.5) | 15 (22.1) | 0 (0.0) | 68 (19.4) | 10.547 | 0.308 |
| 1-4 weeks ago | 0 (0.0) | 14 (77.8) | 3 (16.7) | 1 (0.9) | 18 (5.1) | | |
| **Total** | 7 (2) | 246 (70.3) | 84 (24) | 13 (3.7) | 350(100.0) | | |
| **Physical Activity** | | | | | | | |
| Low | 4 (57.1 | 99 (40.2) | 37 (44.0) | 4 (30.8) | 144 (41.1) | | |
| Moderate | 1 (14.3) | 94 (38.2) | 31 (36.9) | 3 (23.1) | 129 (36.9) | | |
| High | 2 (28.6) | 53 (21.5) | 16 (19.0) | 6 (46.2) | 77 (22.0) | 0.331 | 0.565 |
| **Total** | 7 (2) | 246 (70.3) | 84 (24.0) | 13 (3.7) | 350 (100) | | |

Oladoyinbo et al (2015) and Amole et al (2011) reported that abdominal obesity was significantly higher among women than men and same trend was observed in this study. Eyitayo et al., (2017) found an association between abdominal obesity and other cardio-metabolic diseases such as diabetes and hypertension, as well as total mortality.

Ojo et al., (2011) reported that overweight and obesity might also be attributed to inadequate physical activity and sedentary lifestyle. The result of this study indicated that more

than one-third (41.4%) of the respondents engaged in low physical activities. Odugbemi et al., (2012), also reported a high prevalence of physical inactivity (92.0%) among traders in Lagos State. Similarly, about half (50.2%) of traders in Sokoto Central Market live a sedentary lifestyle (Awosan et al., 2014).

Substance use disorders (such as alcohol consumption and smoking) have been found to be related to obesity and its comorbidities (Adeniyi et al., 2015). A high prevalence of current cigarette smoking (14.9%) and alcohol consumption (35.1%) was recorded among the respondents in this study compared to the prevalence of smoking cigarette (5.2%) and alcohol consumption (10.8%) among the traders of Sokoto Central Market, Northern Nigeria (Awosan et al., 2014). However, Osinubi et al., (2015) reported that among Motor Park Workers in Sagamu, Southwest Nigeria 20.6% smoked and 57.9% consumes alcohol in a study to determine the prevalence of obesity and its comorbidities

Gradual accumulation of excess calories in the body is known to predispose one to obesity (WHO, 2013). The recommended dietary allowance (RDA) according to WHO (2003) for calorie, protein, carbohydrates and fat were 2300kcal, 50g, 275g and 78g respectively. The result of this study indicated that the mean daily calorie, protein and carbohydrates intake of both the male and female respondents were higher than the recommended dietary allowance. A similar study also reported a high consumption of calories and macronutrients (Barker et al., 2015). In a study to examine the influence of academic examinations on energy and nutrient intake among male university students, Barker et al., (2015) reported a mean daily fat intake of 36.1g and this study recorded a mean daily intake of 34.1g among the male and 36.1g among the female traders. Ijarotimi and Keshinro (2008) reported that the mean protein, carbohydrates and fat intake among hypertensive patients in Ondo State was 93.1g, 315.4g and 42.9g respectively.

The intake of micronutrients is substantially low among respondents in this present study, as most of the respondent consume below the recommended dietary allowance. Ijarotimi and Keshinro (2008) also reported a low intake of vitamin C, calcium and potassium with a mean intake of 90.5mg, 268.2mg and 294.4mg respectively among hypertensive patients in Ondo state.

This study showed that greater proportion of the traders consumed excess calories and macronutrients, but low intake of fiber and micronutrients than the recommended dietary allowance, and this may play an important role in the rise of general and abdominal obesity in the population. This may be particularly true with large shift from traditional diets to more westernized diets which are characterized by high fat, high cholesterol, low micronutrients and low fiber contents (Omueme and Omueme, 2010) which is becoming common place in most developing countries. Research has demonstrated that fiber intake protects against common chronic diseases in adults, including obesity, diabetes and cardiovascular diseases (Anderson et al., 2009).

Overweight, general and abdominal obesity among traders in Abeokuta South Local Government Area, are of public health concern.

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