



Food Consumption Pattern and Nutritional Status of Bank Workers, in Ilaro, Ogun State

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Abstract

Malnutrition which is described as an imbalance in dietary intake occurs when a person has too much or too little food or essential nutrients. Bank workers have very tight schedules at the workplace which could affect their food habits and nutritional status. This study becomes necessary to assess the frequency of food consumption and nutritional status of bank workers within Ilaro town. It is a descriptive and cross-sectional study involving 200 respondents selected from bank employees in the Ilaro Area of Ogun State using a multi-stage sampling procedure. A semi-structured questionnaire was administered to acquire information on socio-demographic and socio-economic characteristics while Food Frequency Questionnaire (FFQ) was used to obtain information on the pattern of food consumption among respondents. Height and weight were measured and were used to determine the Body Mass Index of respondents while SPSS v.20.0 was used for data analysis. The majority of the respondents 35.0% were between 41-60 years old and were male, 78.0%, were from Yoruba 74.0%, 60.5% practised Christian religion and 52.5% received ₦101,000 to ₦150,000 as their estimated monthly allowance. The prevalence of Body Mass Index for overweight, normal, obese and underweight were 26.0%, 44.5%, 15.5%, and 13.0% respectively. Mean weight and height for males were 60.86±14.04 and 1.59±0.082 while females' mean weight and height of 61.84±15.98 and 1.58±0.067 respectively. The food consumption pattern shows that the majority of the respondents consumed cereal-based food, junk and seasonal roots and tubers products, except for gari and sweets which were consumed by more than 35% of the respondents daily. Statistically, there was a significant association between BMI and the socio-demographic characteristics (age and number of children) of the respondents. The analysis of the foods consumed by the respondents also reflected high consumption of starchy convenience foods and junk among the respondents. The study recommends the need for the spread of the knowledge of basic concepts about healthy feeding among bank workers

Keywords: Bank catering, food frequency, malnutrition, consumption pattern, nutritional status.

Citation

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Introduction

Malnutrition occurs when a person's diet does not provide enough nutrients or appropriate nutrient requirements for optimal nutrition (Bernstein, 2022). It is also referred to as an imbalance in dietary intake

which occurs when a person has too much (or too little) food or essential nutrients. A malnourished individual may lack vitamins, minerals and other essential constituents that their body needs to function. Bad nutrition knowledge and poor eating behaviors



may have a harmful effect on health and increase healthcare costs. Also, a person's occupation can influence his or her nutritional awareness and daily food consumption. The banking sector performs a vital function in the sustainability of a nation's economy. Due to the recent banking reform, banks in Nigeria have been more effective and have improved their various services. The characteristics inherent to the job lead this population of workers to develop sedentary behavior. Bank workers spend most of their working time sitting and are exposed to a stressful environment as a result of the goals to be met and the responsibility related to handling large amounts of money (Da Silva *et al.*, 2012). Diet is one further aspect that deserves consideration, as literature shows that bank employees have poor dietary habits characterized by high consumption of refined carbohydrates and fat and low intake of fruits and vegetables (Eze *et al.*, 2016). Bank workers (such as cashiers) are prone to a sedentary lifestyle (Maduabum *et al.*, 2015), which results in low-calorie dissipation than active individuals. Low calories with fewer grams of protein, carbohydrates and fat may be essentially needed for their daily activity. Robinson *et al.* (2009) stated that individuals who fail to consume sufficient nutrients could experience fatigue and an inability to actively engage in their work.

Apart from the sedentary lifestyle and lack of physical activity, software-prone professionals, like bankers, are more inclined to junk foods and carbonated soft drinks (De Iralasurat, 2013). A combination of the foregoing sedentary lifestyle and dietary habits and sedentary behavior results in a high frequency of being over-weight (obesity among bank employees and excess abdominal fat in particular), which is known as a significant risk factor for countless ailments and significantly associated with a higher frequency of cardiovascular disease (Airani *et al.*, 2016). However, it is worth noting the changes in the food consumption pattern of bank workers which are closely linked to the nutritional transition, since a decline in the nutritional quality of foods (in relation to high energy density

products consumption) leads to body weight (Soares, 2014). For Bankers, many have regular food habits, but they sit in one place for hours (Umesh, 2012).

Furthermore, a person's occupation can influence his or her nutritional awareness and daily food consumption. Maduabum (2015) stated that it is a common practice for bank workers to leave their homes between 4.00 am and 5.00 am daily to arrive at their workplace on time. However, they are compelled to eat what is available in and around their workplaces. Carbohydrate-rich foods and drinks are mostly sold in many of these canteens. Moyses *et al.* (2007), reported that bank workers consume foods low in protein, calcium, iron, and riboflavin, compared to recommended daily allowance. Due to their work schedule, bank workers' activity level is low at the workplace leading to a sedentary lifestyle (Maduabum, 2015) and those who engage in such lifestyles burn fewer total calories.

It is, therefore, necessary that this study is carried out to assess the food consumption pattern and nutritional status of bank workers in Ilaro, Ogun State, Nigeria. The results of this study will provide information on the food consumption practices and nutritional status of bank workers. It will also provide the necessary foundation for intervention programmes for improving physical activities and form evidence for further studies while bringing about policies that will optimize workplace nutritional practices and improve nutritional literacy among bank workers.

Materials and Methods

A cross-sectional and descriptive study that involved bank workers in Ilaro. Ilaro is a town in Ogun State, Nigeria which is the headquarter of the Yewa South Local Government, (also known as YEWALAND). It replaced the Egbado Division of a part of the former Western State of Nigeria that later became Ogun State.

Sampling Technique

Population size

A known population of four hundred (400) staff work in the banks contacted for this study. These included ad-hoc and contract staff who engaged in various activities within the bank.

Sample size

Two hundred (200) bank workers were randomly contacted for this study. Banks include contacted include, Wema Bank, Access Bank, Polaris Bank and Union Bank respectively. Therefore, the Taro Yamane formula (Yamane, 1967) was used to determine the sample size.

$$n = \frac{N}{1 + N * (e)^2}$$

(Taro Yamane 1967)

Where N= Population size (400)

n = Sample size

e = Margin of error (0.05)

$$n = \frac{400}{1 + 400*(0.05)^2}$$

n = 200

Data collection

A well-structured questionnaire was administered to bank workers within Ilaro which included;

Section A: Socio-demographics (Age, sex, ethnic group, religion, number of children) and socio-economic (Monthly income) characteristics of respondents.

Section B: Food Frequency Questionnaire (FFQ) that has all the food groups.

Section C: Anthropometric measurement was carried out by measuring weight, height, and BMI (kg/m²). Bathroom scales (Saca) were used to measure body

weight, which was expressed in kilograms (kg). Height/size was measured using a height gauge with the subject standing barefoot which was expressed in meters. BMI, which corresponds to the respondent's weight divided by the square of the height (kg/m²) were used to classify underweight (BMI <18.5kg/m²), normal weight, (BMI =18.5 and <25.0kg/m²), overweight (BMI =25.0 and <30.0kg/m²) and obesity (BM = 30.0kg/m²) according to World Health Organization.

Data Analysis

Data collected were analyzed with the Statistical Package for Social Sciences (SPSS) version 20. Results were represented using descriptive statistics (Percentages, Frequency, mean values and standard deviation) while Chi-square was used to establish the association between socioeconomic status and Body Mass Index (BMI).

Results and Discussion

Table 1 shows the socio-demographic and socio-economic characteristics variables of the respondents. They include age, gender, religion, ethnic group, educational level, marital status, family structure, types of family, job description, number of children, and estimated monthly income. Male respondents constituted the highest percentage (78.0%) while Female constituted (22.0%). Respondents' ages were between, < 20 years with percentage (11.5%), 21-40 years (28.5%), >60 (25.0) and 41-60years old respondents had highest percentage (35.0%). Also, (12.5%) were Hausa, (13.5%) were Igbo, and the majority were Yoruba (74.0%). Also, the table shows the educational level of banker workers with primary school holders at a percentage (of 8.5%), SSCE holders at (35.0%) with ND/HND having the highest percentage of (56.5%). It showed the marital status as the majority are single (80.0%), married (14.5%) and divorced (5.5%). The results of the family structure also showed monogamy (50.0%) and polygamy (50.0%). Almost all the family types were nuclear (86.5%), while (13.5%) were extended. The majority



of bank workers were junior staff (74.0%), (26.0%) were senior staff. Also, the no of children was 1-2

children (28.5%), 3-5 children (35.0%), > 5 children (25.0%) while none children (11.5%).

Table 1: Socio-demographic and socio-economic characteristics of the bank workers

Variables	Frequency (N)	Percentage (%)
Age (years):		
<20	23	11.5
21-40	57	28.5
41-60	70	35
>60	50	25
Total	200	100
Gender:		
Male	156	78
Female	44	22
Total	200	100
Religion:		
Christian	121	60.5
Islam	79	39.5
Total	200	100
Ethnic group:		
Yoruba	148	74
Igbo	27	13.5
Hausa	25	12.5
Total	200	100
Educational Level		
Primary	17	8.5
SSCE	70	35
ND/HND	113	56.5
Total	200	100
Marital Status:		
Single	160	80
Married	29	14.5
Divorced	11	5.5
Total	200	100
Family Structure:		

Variables	Frequency (N)	Percentage (%)
Monogamy	100	50
Polygamy	100	50
Total	200	100
Types of family:		
Nuclear	173	86.5
Extended	27	13.5
Total	200	100
Job description:		
Junior Staff	148	74
Senior Staff	52	26
Total	200	100
Number of Children:		
None	23	11.5
1-2 Children	57	28.5
3-5 Children	70	35
> 5	50	25
Total	200	100

Fig 1 shows the information on the Body Mass Index (BMI) of respondents. Below half of the respondents were found to be of normal weight (44.5%),

underweight (14.0%), overweight (26.0%), and obese (15.5%).

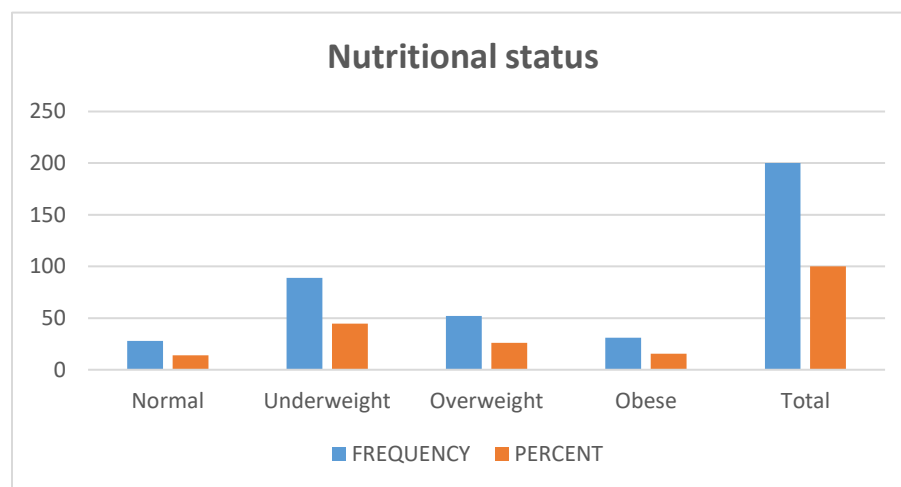


Fig 1: Information on the nutritional status of the respondents

Table 2 shows the mean weight and height of the respondents by age. It reveals that males have a mean weight and height of 60.86 ± 14.04 and 1.59 ± 0.082

respectively. Also, the female respondents have a mean weight and height of 61.84 ± 15.98 and 1.58 ± 0.067 .

Table 2: Anthropometric measurement of the respondents

Variable	Weight	Height	p-value
Gender			
Male	60.86 ± 14.04	1.59 ± 0.082	0.002*
Female	61.84 ± 15.98	1.58 ± 0.067	0.001*

The Frequency of food consumption of respondents

The figures below show the frequency of food consumption by the respondents. Figure 2 shows the consumption of cereal-based food. The majority consumed white rice, custard and bread. Cereal foods are majorly for breakfast in most African homes for those who can afford them. Fig 3 shows the consumption of roots and tubers. Above half consumed boiled yam, a lot of them consumed Fufu 4-6 times daily, averagely they consume Eba 4-6 times weekly. Fig 4 shows the consumption of milk and milk products. The majority of the respondents rarely take cheese, butter consumption is low while the consumption of powdered milk is moderate. Fig 4 shows the consumption of meat and meat products.

Most of the respondents took turkey 1-3 times weekly, fish was consumed more 4-6 times daily while the majority of them consumed egg 4-6 times weekly. Fig 5 shows the consumption of legumes, nuts and seeds. The majority consumed boiled beans and groundnut. Palm oil was consumed every day and akara was consumed rarely. Fig 6 shows the consumption of fruits and vegetables. They rarely consumed lettuce and guava. Fig 7 shows the consumption of leafy vegetables, pumpkin was eaten more. The majority of the respondents consumed ewedu, and amarantus frequently while they rarely consumed pumpkin and spinach. Figure 8 shows the frequency of consumption of beverages. Fig 9 shows the consumption of sweets. The majority consumed chocolate, sugar/honey in their meals while few consumed candies.

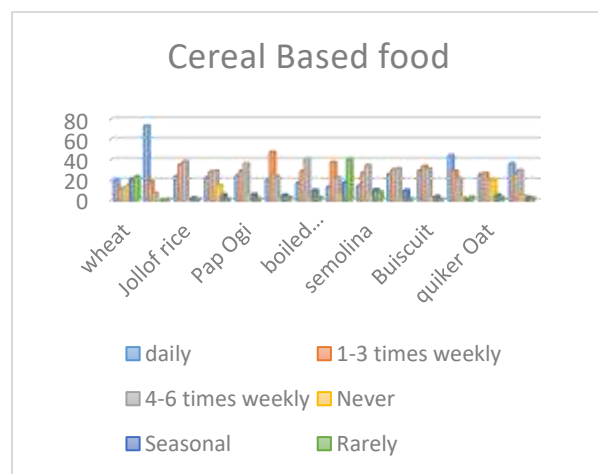


Fig 2: Frequency of consumption of cereal-based foods

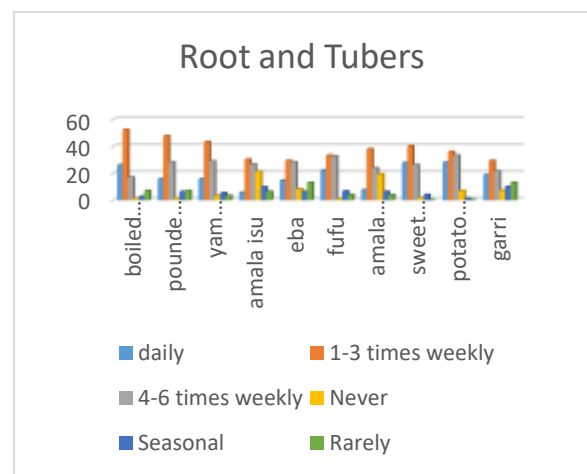


Fig 3: Frequency of consumption of roots and tubers

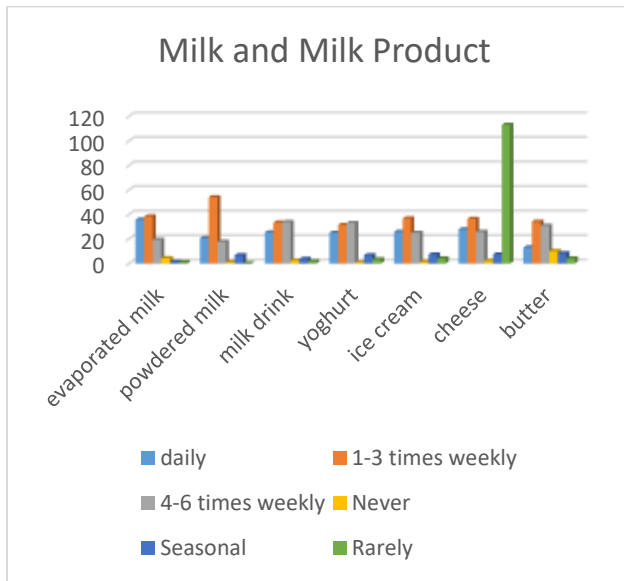


Fig 4: Frequency of consumption of milk and milk product

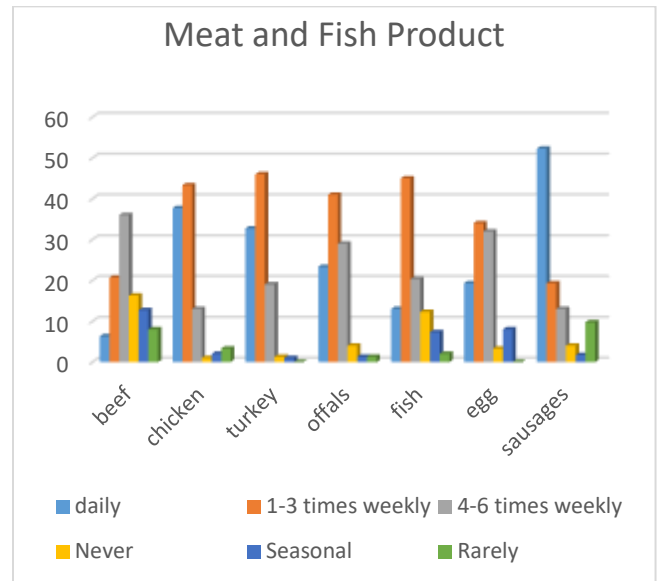


Fig 5: Frequency of consumption of meat and meat product

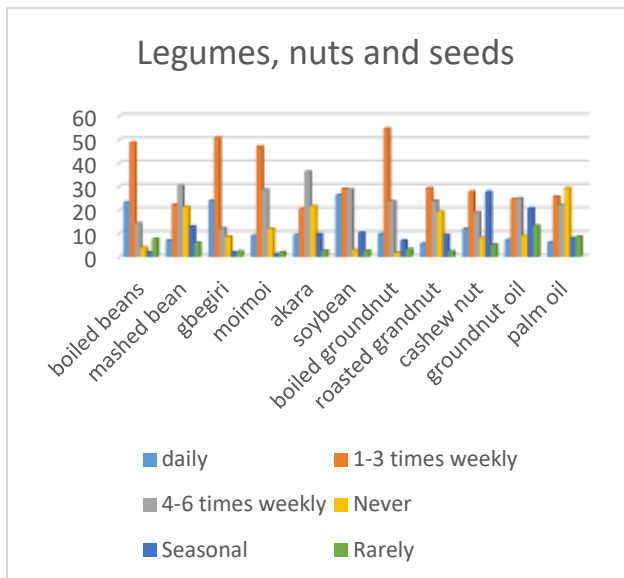


Fig 6: Frequency of consumption of legumes, nuts and seeds

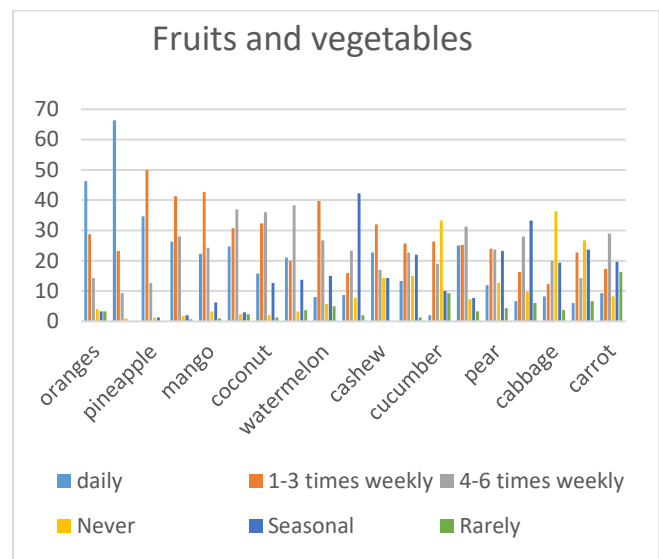


Fig 7: Frequency of consumption of fruits and vegetables

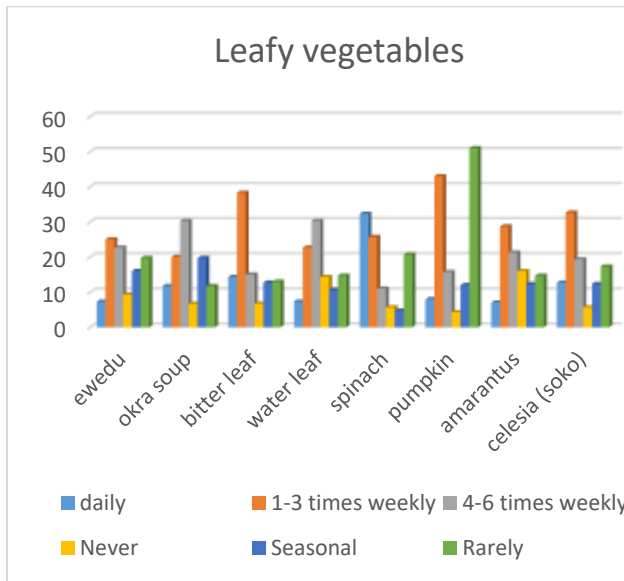


Fig 8: Frequency of consumption of leafy vegetables

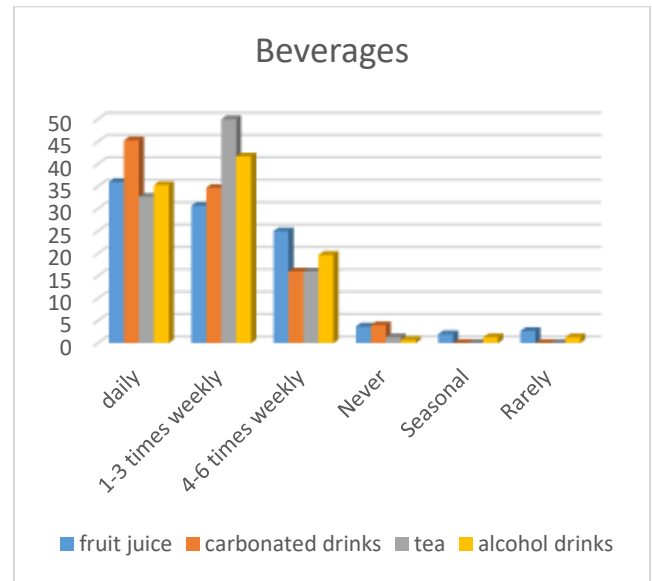


Fig 9: Frequency of consumption of beverages

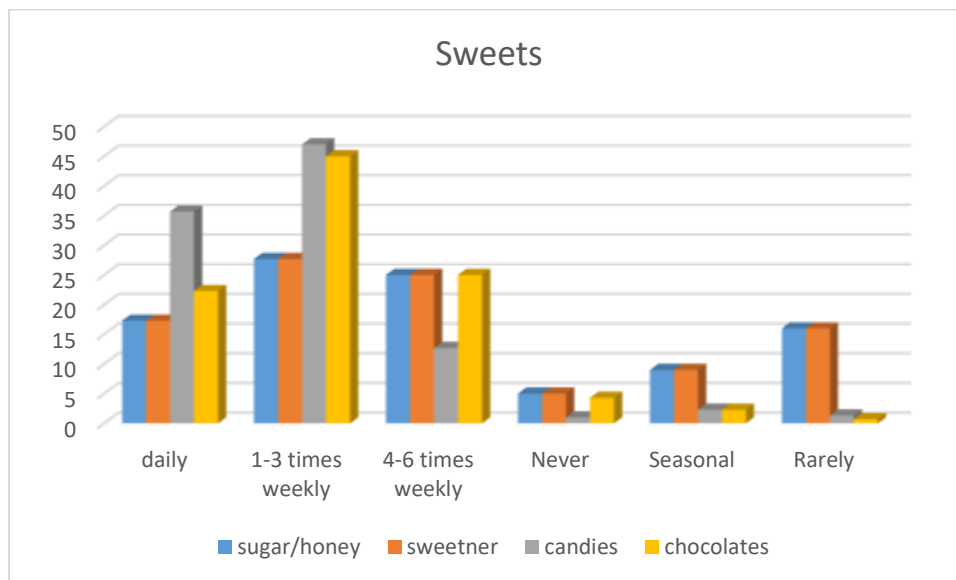


Fig 10: Frequency of consumption of sweets

Association of Body Mass Index and Socio-demographic Characteristics

Table 3 shows an association between the Body Mass Index and the socio-demographic characteristics of the respondents. It can be concluded that the result

revealed a significant association ($P < 0.05$) between BMI and other socio-demographic characteristics (Age and Number of children) while there is no significant difference with other variables.

Table 3: Association of BMI and Socio-demographic characteristics

Variables	Body Mass Index				χ^2	p-value
	Underweight	Normal	Overweight	Obese		
Age (years)						
<20	1(0.5)	10(5.0)	8(4.0)	4(2.0)	24.95	0.003*
21 – 40	4(2.0)	27(13.5)	18(9.0)	8(4.0)		
41 – 60	7(3.5)	29(14.5)	18(9.0)	16(8.0)		
> 60	16(8.0)	23(11.5)	8(4.0)	3(1.5)		
Religion						
Christian	19(9.5)	51(25.5)	32(16.0)	19(9.5)	1.046	0.790
Islam	9(4.5)	38(19.0)	20(10.0)	12(6.0)		
Ethnic group						
Yoruba	22(11.0)	63(31.5)	40(20.0)	23(11.5)	5.493	0.482
Igbo	5(2.5)	15(7.5)	4(2.0)	3(1.5)		
Hausa	1(0.5)	11(5.5)	8(4.0)	5(2.5)		
Number of children						
None	1(0.5)	10(5.0)	8(4.0)	4(2.0)	24.849	0.003*
1-2	4(2.0)	27(13.5)	18(9.5)	8(4.0)		

*Statistically significant at $p < 0.05$ *

Discussion

The major purpose of the study is to assess the food consumption pattern and nutritional status of bank workers in Ilaro, Ogun state. The respondents between 41-60 years of age accounted for 35.0% of the sample population. The majority within this category indicates that the staff and workforce of bank workers in this area are middle age while a few 11.5% are between <20 years of age. Female respondents were reported to be 22.0% while Males were higher with 78.0%. The majority 74.0% were Yoruba while 13.5% were Igbo and 12.5% were Hausa. This is possible because the research was conducted in southwestern Nigeria and it is to the work of (Ajewole *et al.*, 2017). Also, 11.0% earned an annual income of ₦51,000-₦100,000 naira

only and 11.5% earned ₦50,000 while 52.5% earned above ₦101,000-₦150,000 naira. It could be observed the pay for bank workers in this area is high.

The socio-demographic and occupational characteristics of the analyzed sample are similar to those described in the study by Hirani *et al.* with bank employees in India; most were male and white and their average age was 40 years old. Most participants had completed graduate education, worked 8 hours/day and had worked more than 10 years for their current employer. Bank employees represent one of the categories of workers with poor lifestyles as a function of the stressful nature of their work routine, which results in considerable physical exhaustion and leads them to avoid physical activity and adopt a high-



calorie diet as compensation. All these aspects contribute to making them gain weight, with consequent impairment of their quality of life.

Maxwell & Frankenberger (1992) stated that nutritional status was affected by food consumption. The frequency of food consumption by the bank workers was not too encouraging. They consumed mostly carbohydrates, carbonated drinks, and more legumes over protein from animal sources. This could be attributed to more workload making them have low socio-economic status. Excessive consumption of chocolate and other sweets characterized the diet of bank workers in this study. Also, high consumption of beverages such as tea and carbonated drinks was recorded, while the type of alcoholic beverage consumed was not recorded, alcohol consumption was very high. The high rate of beverage intake could be attributed to a tight work schedule that gives little or no time to eat healthy meals rather consuming beverages. Also, the majority of the respondents consumed more starchy food such as yam, white rice, garri and high energy-dense snacks as their main meal. The result of this study is similar to the work of Oguntona (2013), who stated that snacks account for 25% to 33% of the daily energy intake of bank workers. Also, Awoyemi *et al.*, (2010) reported that fast food consumption and patronizing food vendors and bank canteens close to the workplace are common eating practices among bank workers.

The nutritional status of respondents in the study showed 44.5% were normal, 14.0% were underweight, 26.0% were overweight, and 15.5% were obese. The result of the anthropometric data mean weight ($27.25 \pm 7.53\text{kg}$ and $28.67 \pm 6.67\text{kg}$) and mean height ($1.35 \pm 14.21\text{cm}$ and $(1.36 \pm 1.36\text{cm})$) for the male and female respectively was the same as that obtained by height and weight for male and female in this study was similar to that obtained by Fawole *et al.*, (2005), Nwokoro *et al.*, 2006).

Conclusion

The findings of this study show that the prevalence of overweight and obesity among the respondents was low compared to other studies. The analysis of the foods consumed by the respondents also reflected high consumption of starchy staples, convenience foods, sugary snacks and carbonated drinks among the respondents. Furthermore, there is a low intake of milk products, fruits and vegetables among the respondents

Recommendation

Nutrition education is necessary to enlighten all bank workers on the need for an adequate diet at all times. Bank workers should not skip meals and increase the frequency of consumption of a protein-based diet to meet their energy and nutrient requirements. Nutritionists and health practitioners should carry out more sensitization on the implication of obesity and overweight and go for regular medical checkups.

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