

## Assessment of the Socio-Demographic Characteristics and Body Mass Index of Male Traders in Community Markets.

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**Abstract:** There have been a lot of focus on the nutritional status women and other vulnerable groups such that adult men seemed to have been neglected. Unfortunately, these are bread winners and providers of their households and they play a very important role in ensuring the food security in households. This study investigated the socio-demographic characteristics and Body Mass Index of male traders in community market. A total of 150 traders who are males and gave their informed consent to participate were recruited into the study. A semi-structured questionnaire was used to collect information on socioeconomic and demographic characteristics and data on anthropometric measurements using standard procedures. The result showed that only 9.4% of the respondents had tertiary education while 39.9% and 42.8% completed primary and secondary education respectively. More than half (53.2%) made less than ₦10000 daily, 21.3% and 14.9% respectively made between ₦10000-₦19999 and ₦20000-₦29999. Majority of them admitted that their relatives are responsible for food purchase (69.3%) and meal preparation (63.5%). Body mass index showed that 19.9% were overweight while 24.7% were centrally obese. Also, 9.7% were on routine medication, 3.3% and 6.7% had been diagnosed to be diabetic and hypertensive respectively. The study revealed an increase in the risk of chronic disease among this population evident by overweight and central obesity among the respondents.

**Keywords:** Market, Traders, Male, Income

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### I. Introduction

The roles of men in the social and economic development of the society cannot be overemphasized. Their input is crucial to their children's intellectual competence, social, behavioural, and psychological well-being (Leishman and Daizel, 2003). It includes decisiveness, understanding of rights and responsibilities, being selfless, family values, integrity and esteem (Alfredo, 1997). Certain special attributes are ascribed to men these include: Strength and vigour, boldness and courage, (Virtue & virile 2009). They are seen to engage in some heavy labour and some have chosen carriers in the market places (Silberschmidt, 1999). There have been a lot of focus on the nutritional status women and other vulnerable groups such that adult men seemed to have been neglected. Unfortunately, these are bread winners and providers of their households and they play a very important role in ensuring the food security in households.

Also, being a trader in the market is an occupation that have been with us for a long time. Market traders are a vital part of the agricultural and economic value chain that bridge the gap between farmers or manufacturers and the consumers. This occupation involves transacting business on one spot and traders are either doing their job standing in one position or sitting down all day. This will sure have great influence on energy expenditure and may be a great contributor to sedentary life style because some of these traders do not get to exercise their bodies all day long. Food consumption pattern on the other hand is defined as the habitual consumption of specific food items, the quantity, quality and their combination in dishes meal (Krebb-Smith, 2015). This pattern can be varied depending on the availability of such food staples, seasonal variations, economic factor, cultural and religious dynamics (Whitney and Rolfes 1999). The conduciveness of the place of work for culinary activities is also major factor in determining dietary pattern. In the markets, most traders depend on food vendors to buy food to eat while on the job. Moreover, studies on human nutrition have shown that worldwide nutrition transition has taken place in which people have shifted from traditional staples that may sometimes require culinary expertise to more affluent food consumption pattern in which most time are processed and ready to eat (FAO, 2003, Grigg, 1995, Popkin, 2002). There have been little focus on food consumption pattern of adult men since they are seen to be independent and responsible for taking care of others, studies have not paid so much attention on the food behaviour of this group of individuals. Also, most men have a busy lifestyle that influences their food consumption and nutritional status and those who have chosen career in trading in the community markets are not an exception. Therefore, this study investigated the socio-demographic characteristics and food consumption of male traders in community market.

## II. Methodology

The study was carried out in Owo, one of the major towns in Ondo State. The two major markets namely: Oba market and Ikoko market were used as the site of the study. A total of 138 traders who are males and gave their informed consent to participate were recruited into the study. A semi-structured questionnaire was used to collect information on socioeconomic and demographic characteristics, the questionnaire also assessed food handling practices of the respondents. Data on anthropometric measurements was collected using standard procedures. Weight was measured with a bathroom weighing scale and calibrated to the nearest 1kg, height meter was used to measure the height of the respondents and calibrated to the nearest 0.1cm (Gibson, 2007). Waist and hip circumference were measured using a non-elastic tape rule, Body Mass Index and waist-hip ratio were calculated as  $\text{weight/height}^2$  ( $\text{kg/m}^2$ ) and classified according to WHO (2000).

## III. Results

Data was collected from one hundred and fifty respondents on their educational status and income category. Table 1 shows that 42.8% of the respondents had SSCE while 2.9% had HND/BSC also, 53.2% of the respondents fell within the income category of ₦<10000 while 1.4% of the respondents fell within the income category of ₦40000-49999.

**Table 1:** Education and income level of respondents

	N	%
<b>Educational status</b>		
Primary school completed	55	39.9
Junior secondary completed	11	8.0
Senior secondary completed	59	42.8
OND/NCE	9	6.5
HND/BSC	4	2.9
Total	138	100.0
<b>Income</b>		
₦<10000	75	53.2
₦10000-19999	30	21.3
₦20000-29999	21	14.9
₦30000-39999	9	6.4
₦40000-49999	2	1.4
₦>50000	4	2.8
Total	141	100.0

Table 2 shows that 62.5% of respondents used pit latrine while 2.1% use VIP latrine, 45.1% of the respondents used well while 2.8% used spring water as source of drinking water. The study further shows that 61.7% used refuse dump as a means of waste disposal while 12.5% had access to city service and incinerator as a means of waste disposal. Majority (77%) of the respondents had access to PHCN as a source of electricity while 0.7% had no access to electricity.

**Table 2** Demographic characteristics of respondents

	N	%
<b>Type of toilet</b>		
Bush	5	3.5
Pit latrine	90	62.5
VIP latrine	3	2.1
Water system	46	31.9
Total	144	100.0
<b>Source of drinking water</b>		
Spring/river	4	2.8
Well	65	45.1
Borehole	19	13.2
Rain	7	4.9
Tap	49	34.0
Total	144	100.0
<b>Method of refuse disposal</b>		
Bush	19	13.2
Refuse dump	88	61.7
Incinerator	19	12.5
City service	18	12.5
Total	144	100.0
<b>Energy source</b>		
No electricity	1	0.7
Personal generator	29	20.1

Rural electricity	3	2.1
Phcn	111	77.1
Total	144	100.0

Table 3 shows that four in every five of the respondents had someone living with them while 17.2% does not have anybody living with them. About two third of the respondents had someone doing the shopping (relatives) while 13.1% does the purchase by themselves, 63.5% of the respondents have someone cooking for themselves while 10.7% does the cooking by the selves and 59.9% of the respondents eat alone.

**Table 3** Food handling practices of the respondents

Presence of dependent	No	%
Yes	120	82.8
No	25	17.2
Total	145	100.0
<b>Purchase of food stuff</b>		
Self	18	13.1
Relatives	95	69.3
Food vendor	24	17.5
Total	137	100.0
<b>Responsibility of food preparation</b>		
Self	16	11.7
Relatives	87	63.5
Food vendor	34	24.8
Total	137	100.0
<b>Do you eat alone</b>		
Yes	76	55.9
No	60	44.1
Total	136	100.0

Table 3 shows that majority 79.5% of the respondents falls within the normal body mass index while 0.7% of the respondents fall above the normal body mass index (mildly obese). Also 75.3% of the respondents fall within the normal waist hip ratio while 24.7% fall within the centrally obese waist hip ratio.

**Table 4** Body composition of the respondents

	N	%
<b>Body mass index</b>		
Normal	116	79.5
Overweight	29	19.9
Mildly obese	1	0.7
Total	146	100.0
<b>Waist hip ratio</b>		
Normal	110	75.3
Centrally obese	36	24.7
Total	146	100.0

The health information as perceived by the respondents shows that 91.0% of the respondents do not have chronic illness while 9.0% have chronic illness. Only 6.7% of market men had hypertension while 3.3% had diabetes. Majority 95.8% of respondents do not suffer from dental challenge while 4.2% suffers from dental challenge. Also, 90.0% of respondents were not on any routine medication while 7.0% of market men were on routine medication. And 89.7% of the respondents did not have any medicine that interferes with their food while only 10.3% of the market men have food that interferes with their food.

**Table 5** Perceived health information of the respondents

	N	%
<b>Chronic illness</b>		
Yes	13	9.0
No	132	91.0
Total	145	100.0
<b>If yes specify</b>		
Hypertension	10	6.7
Diabetes	5	3.3
Total	15	10.0
<b>Dental challenge</b>		
Yes	6	4.2
No	138	95.8
Total	144	100.0

<b>Routine medication</b>		
Yes	14	9.7
No	130	90.3
Total	144	100.0
<b>Medicine interfere</b>		
Yes	15	10.3
No	130	89.7
Total	145	100.0

The table 6 shows that all that earned ₦40,000-₦49,999 fall within the normal body mass index, while 50.0% of those market men that earn ₦>50,000 were overweight. Also, majority (88.9%) of the respondents with ND/NCE had a normal BMI while 1.8% of those with PRY education were obese.

**Table 6:** Relationship between income, education and BMI

	Normal		Overweight		Obese		Total		χ	Sig.
	N	%	N	%	N	%	N	%		
Income										
₦<10000	60	80.0	14	18.7	1	1.3	75	100	41.573	0.005
₦10000-19999	26	86.7	4	13.3	0	0	30	100		
₦20000-29999	15	71.4	6	28.6	0	0.0	21	100		
₦30000-39999	8	88.9	1	11.1	0	0.0	9	100		
₦40000-49999	2	100.0	0	0.0	0	0.0	2	100		
₦>50000	2	50.0	2	50.0	0	0.0	4	100		
Educational Level									36.616	0.019
PRY	41	74.5	13	23.6	1	1.8	55	100		
JSS	8	72.7	3	27.3	0	0.0	11	100		
SSCE	51	86.4	8	13.6	0	0.0	59	100		
ND/NCE	8	88.9	1	11.1	0	0.0	9	100		
HND/BSC	3	75.0	1	25.0	0	0.0	4	100		
TOTAL	111	80.4	26	18.8	1	0.7	138	100		

Table 7 shows that 88.0% of the market men that earn ₦<10000 had normal waist hip ratio, while 52.4% of the market men that earn ₦20000-29999 were centrally obese. Also, all the respondents with HND/BSC fell within the normal Waist Hip ratio while 55.6% of those with ND/NCE were centrally obese.

**Table 7:** Relationship between income, education and WHR

Income	Normal		Central obesity		Total		χ	Sig.
	No	%	No	%	No	%		
₦<10,000	66	88.0	9	12.0	75	100.0	39.587	0.001
₦10,000-19999	21	70.0	9	30.0	30	100.0		
₦20,000-29999	10	47.6	11	52.4	21	100.0		
₦30000-39999	7	77.8	2	22.2	9	100.0		
₦40000-49999	1	50.0	1	50.0	2	100.0		
₦>50000	3	75.0	1	25.0	4	100.0		
Education Level							29.423	0.014
PRY	46	83.6	9	16.4	55	100		
JSS	8	72.7	3	27.3	11	100		
SSCE	45	76.3	14	23.7	59	100		
ND/NCE	4	44.4	5	55.6	9	100		
HND/BSC	4	100	0	0.0	4	100		
TOTAL	107	77.5	31	22.5	138	100		

#### IV. Discussion

The study revealed that respondents' level of education had implication on nutritional status. One possible reason for this may be because the more educated an individual is, the more his exposure and the ability to understand nutritional facts and information on healthy feeding patterns. The association between BMI and educational level was in line with other studies (Roos et al, 2001, Sobal 2005) that showed that 'High educational level (social class) may mediate association between 'masculinity' and food. Education was used as an indicator of socio-economic status low educational level may influence obesity related behaviour such as diet & physical activity, which may be caused by lack of knowledge (Ball & Crawford 2005).

Also, nutritional status was influenced by their income level, market men earning ₦20,000 - ₦29999 were found to be centrally obese. Two possible reason may be due to the fact that market men who earn low income use their earnings to purchase food since most of them believe solely that the reason they trade and earn money is to feed well. Also, change in behavioural pattern was in agreement with previous studies that showed that obesity could be attributed to urban culture and change in behavioural pattern such as western lifestyle, diet and more sedentary jobs (Amira et al, 2011 ). While those with higher income used their income to purchase luxuries, improve their goods, assist their families. The study also revealed that 24% of respondents purchase their food from food vendors two possible reasons for this may be related to their busy lifestyle which is due to their being in the market early and going back home very late and absence of dependent.

## V. Conclusion

The study has provided information on food consumption pattern, lifestyle and body mass index of market men. The total combination of market men food consumption pattern, lifestyle showed significant association with BMI from the study, majority of them have the normal nutritional status.

## VI. Recommendation

It is recommended that nutritionist and dieticians should develop a proactive approach to managing the looming epidemic of overweight and obesity among market men. Food vendors should be enlightened in the preparation of nutritious foods to promote healthy living among market men.

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