

The Prevalence of Obesity, Overweight and Hypertension among Market Women in Rural Areas

¹Folahan O. O. ²Adebiyi A. T.

1 Nutrition and Dietetics Department, College of Health Technology, Ilese, Ogun State.

2 Nutrition and Dietetics Department, Federal Polytechnic, Ilaro, Ogun State

Abstract: Obesity is rapidly becoming a prominent disease in, developing countries hence, this study assessed the prevalence of obesity and overweight among market women in three rural areas. A total of 1140 market women were randomly sample from three major markets of these villages. Questionnaire was used to obtain socio-demographic information while anthropometric indices were obtained using standard procedure. However, only 100 valid questionnaire were analysed. The result showed that 12% of the respondents were overweight, 25% were mildly obese, while 14% and 9% were moderately and severely obese respectively. Also, assessment of their waist hip ratio showed that 78% of them were centrally obese. The study also showed that 13.1% and 6.1% of them were mildly and moderately hypertensive. Therefore, there is need for enlightenment program for rural women on obesity and the associated risk of cardiovascular diseases.

Key words: Obesity, Hypertension, Market women, Nutritional status

I. Introduction

Obesity is a medical condition in which excess body fat has accumulated to the extent that it may have an adverse effect on health leading to reduced life expectancy and or increased health problems. It is also defined as a body mass index equal or greater than 30kg/m^2 . Overweight can be defined as a body mass index (BMI) equal to or more than 25kg/m^2 (1). Obesity is rapidly becoming a prominent disease in, developing countries like Nigeria, due to the increase westernization of societies and change in the lifestyle. The cause of obesity is said to be multifactorial with a combination of genetic an environmental factors (2). In 2008, 35% of adults aged 20 plus were overweight (BMI > 25kg/m^2) 34% of men and 35% of women, in 2008, 10% of men and 14% of women in the world were obese (BMI > 30kg/m^2) compared with 5% of men and 8% of women in 1980. It was projected that more than 700 million adults worldwide will be obese by 2015 (3). Most market women in urban areas are ignorant of their sedentary life style. They sit in their shops, eat foods that are highly rich in fat and sugar and also in-between meals food consumption are common features.

The market women spend a total of 16hours on domestic and market activities, predominantly sedentary activities. This is a form of the market place as an occupational environment that predisposes individual to obesity, mainly due to sedentariness and enhanced access to food. WHO findings in 2005 (1) shows that there is a global shift in diet towards increased intake of energy dense foods that are high in fat and sugar but low in vitamins, minerals and other Micronutrients. Hence, this study assessed the incidence of obesity and overweight among market women in the rural areas.

II. Methodology

This study was carried out between April 2013 and September 2013 in three rural areas in Ondo State. Three major rural market were randomly sampled and simple random sampling method was used to enlist market women for study. Prior to the survey, approval to embark on the project was sought the heads of the market groups and informed consent of the participating respondents were obtained. Data on anthropometric measurements were collected using standard procedures. The data was analysed to generate frequencies, means and percentages using statistical package for social sciences (SPSS). Nutritional status was also evaluated from the anthropometric indices.

III. Results

Table 1

The below shows that 50%, 30%, and 20% of the respondents were in “shasha” market, Oba-Ile market and Ilu-Abo market respectively.

Table 1 Market distribution

MARKETS	NO	%
“Shasha” market	50	50
Oba-Ile market	30	30
Ilu-Abo market	20	20
TOTAL	100	100

The table below shows that the head of household occupation percentage in which farming has the highest percentage of (30%) and fishermen being the lowest at (20%). The main energy source of the respondents showed that (39%) were supplied with rural electricity compared with (4%) with no electricity. Also, the main source of water was 64% as compared with (5%) pond and spring water source. The respondent's primary method of disposal was refuse dump with (48%) while (19%) uses city service. The market women adopted bush with (35%) as their main type of toilet as compared with VIP latrine with (3%).

Table 2 Demographic information of the respondent

Occupation of the head of Household	NO	%
Farming	30	30
Trading	16	16
Civil servant	23	23
Artisan	21	21
Fisherman	2	2
Hunting	3	3
Others	5	5
Total	100	100
Primary source of water	NO	%
Pond/ Lake	5	5
Spring/ River	5	5
Well	64	64
Bore Hole	14	14
Pipe Borne	12	12
Total	100	100
Method of Waste Disposal		
Bush	33	33
Refuse Disposal	48	48
City Service	19	19
Total	100	100
Energy source	NO	%
No Electricity	4	4
Personal Generator	33	33
Rural Electricity	39	39
Power Holding company	24	24
Total	100	100
Main Type of Toilet	NO	%
Bush	35	35
Pit Latrine	31	31
VIP Latrine	3	3
Water System	31	31
Total	100	100

The table below shows the mean± standard deviation of anthropometric in which hip circumference has the highest mean± standard deviation with 101.30±17.12 and waist hip ratio being the lowest with 0.84± 0.10

Table 3 Anthropometric Assessment

Anthropometric parameters	Means +SD
Weight (kg)	74.91 ± 16.249
Height (m)	1.59 ± 0.78
MUAC (cm)	31.84 ± 9.07
Waist circumference (cm)	85.08 ± 16.09
Hip circumference (cm)	101.3 ± 17.12
BMI (kg/m ²)	29.91 ± 7.16
Waist HIP Ratio	0.84 ± 0.10

The table below shows the nutritional status of the respondents according to BMI, 21% of the respondents were overweight and 48% were obese.

Table 4: Nutritional status

Nutritional status	NO	%
Underweight	1	1
Normal weight	30	30
Overweight	21	21
Mildly obese	25	25
Moderately obese	14	14
Severely obese	9	9
Total	100	100

The table below shows the nutritional status of the respondents according to waist hip ratio in which central obesity has the highest percentage with 78.8% and normal being the lowest at 21.2%

Table 5 Waist-Hip Ratio

Waist Hip Ratio	NO	%
Normal	21	21.2
Centrally obese	78	78.8
Total	100	100

The table below shows the blood pressure range percentage of the respondents in which normal BP has the highest percentage with 79.8% and hypotension being the lowest at 1%

Table 5: Blood Pressure Range

Blood Pressure Range	No	%
Hypotension	1	1.023
Normal BP	79	79.8
Low grade Hypertension	13	13.1
Moderate grade Hypertension	6	6.1
Total	99	100

IV. Discussion

The anthropometric assessments showed most of the women were overweight and obese (21% and 48% respectively), which made them have more than the normal or desirable BMI. This result agreed with the findings of (5,6) which reported high prevalence of overweight and obesity in their studies (10% and 21% respectively). But disagreed with the findings of a study on Nutritional status of women of reproductive age in rural Bangladesh where most of the women were found to fall within the normal range of BMI (7) The prevalence of overweight and obesity among market women may be as a result of high fatty street food , sugar and starchy food from vendors, which is contributing to increasing prevalence of obesity and overweight. This result agreed with the work of (8) who reported that most of the market women sit I their shops, eat food that are highly rich in fat and sugars and also in high calorie diet.

The study showed that 19% of the respondents were hypertensive, this is because hypertension is more common in obese than normal weight. This study agreed with earlier studies (9, 8) that reported that hypertension is approximately three times more common in obese than normal weight person). This relationship maybe cause- and –effect in that when weight increases, so does blood pressure (10).

V. Conclusion

Sedentary life style and eating habit of the market women play major role in their level of overweight and obesity, however, most the market women are ignorant of their sedentary life style and eating habit.

VI. Recommendation

Wellness programs emphasising the importance of life style changed in dietary habit and physical activity should be organised for market women.

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