

Assessment of Overweight and High Blood Pressure among Individuals in Out- Patient Clinic in a Specialist Hospital

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Abstract: High blood pressure and obesity have been proven to be one of the leading causes of high morbidity and mortality around the world. This study assessed the occurrence of overweight and high blood pressure among individual in out-patient clinic in a specialist hospital in Nigeria. A total of 121 patients (40 males and 81 females) who gave their informed consent were recruited into the study from the out-patient clinic, pre-tested semi , structured questionnaire was used to obtain demographic information of the respondents. The blood pressure of each patient was obtained and anthropometric measurements were done using standard procedures, the data was then analyzed. The result showed that majority (33.1%) of them was traders while 19.8% were civil servants. 21.5% earn above 50,000 naira monthly. Their nutritional status showed that 24.8% were overweight while, 16.5%, 8.3% and 5.8% were mildly obese, moderately obese and morbidly obese respectively. Sex and nutritional status were found to significantly affect blood pressure at $P < 0.05$. Therefore, there is need for health and nutrition campaign to enlighten the populace on how to reduce the risk of hypertension and obesity for a healthy active life.

Key words: Overweight, Obesity, Blood pressure, Nutritional status

I. Introduction

Blood pressure is a continuously distributed variable in the population and is a dynamic physiological function that varies with each heart beat(1). The term blood pressure means the force exerted by the blood against any unit area of the vessel wall (2). Hypertension or high blood pressure sometimes called arterial hypertension is a chronic medical condition in which the blood pressure in the arteries is elevated. Blood pressure is summarized by two measurements, systolic and diastolic which depend on whether the heart muscle is contracting (systolic) or relaxed between beat (diastolic). This equals the maximum and minimum pressure respectively. Normal blood pressure at rest is within the range of 100 – 140 mmHg systolic (top reading) and 60 – 90 mmHg diastolic (bottom reading). High blood pressure is said to be present if it is often at or above 140/90mmHg.

High blood pressure, or hypertension has no symptoms, and is often called the silent killer because it can undetected for years until a fatal heart attack or stroke occurs. (3). Hypertension is caused by numerous factors such as genes, age, alcohol intake, excessive intake of salt, overweight, obesity and a sedentary lifestyle. It have been observed that overweight could be a major factor in determining the increase rate of coronary heart disease by its influence on blood pressure (4).

Obesity has a potential detrimental effect on blood pressure and increases cardiovascular events. Body mass index has been traditionally promulgated by the World Health Organization (WHO) as a useful epidemiological measure of obesity. Obesity is a medical condition in which excess body fat has accumulated to that it may have a negative effect on health, leading to reduce life expectancy and/or increased health problems (5,6). Hence, this study assessed obesity and high blood pressure prevalence among patients attending outpatient clinic in state specialist hospital

II. Methodology

The study was conducted in state specialist hospital. This study was focus on subjects aged 40 years and above. A total of 121 respondent that came for clinic during the period of data collection were recruited into the study. Prior to the survey- approval to embark on the project was obtained from the management of state specialist hospital Akure and informed consents of the subjects were also obtained. Pre-tested semi – structured questionnaire was used for data collection and this was sectionalized follows demographic and socioeconomic data and anthropometric information. Data on anthropometric measurement and blood pressure was collected using standard procedures (7). The data obtained was statistically analyzed using descriptive and inferential techniques for qualitative data analysis. Correlations were utilized to determine the relationship between the anthropometric indicator and blood pressure indicators and the level of significance was taken as $P < 0.05$ and all statistical analysis were done using statistical package for social science (SPSS) version 17.

III. Result

Table 1 showed that 33.1% were males and 66.9% were females. Subject's occupation showed that 12.4% were bankers and 3.3% were drivers, it was also found out that 19.8% were civil servant and 33.1% were trader and 12.4% were artisan. 19% were farmers.

Table 1: Demographic Status

Variables	Frequency	Valid percent
Sex		
Male	40	33.1
Female	81	66.9
Total	121	100
Occupation		
Farming	14	11.6
Trading	40	33.1
Civil servant	24	19.8
Artisan	15	12.4
Driver	4	3.3
Banker	15	12.4
Total	121	100.0

Table 2 shows that 14% of the subject earned amount less than ₦10000 per month and only 21.5% earned above ₦50000.

Table 2 Income Levels

Variables	Frequency	Percentage
Head of house hold		
<10000	12	9.9
100000-19999	18	14.9
20000-29999	26	21.5
30000-39999	16	13.2
400000-49999	23	19.0
>50000	26	21.5
Total	121	100.0

Table 3 shows that the prevalence of underweight was 1.7% while overweight, mild obesity, moderate obesity, and severe obesity were respectively 24.8% ,16.5%,8.3% and 5.8%

Table 3 Nutritional status

Nutritional status	Frequency	%
Underweight	2	1.7
Normal	52	43.0
Overweight	30	24.8
Mildly obese	20	16.5
Moderately obese	10	8.3
Morbidly/Severe obese	7	5.8
Total	121	100.0

Table 4 shows that more female were more hypertensive (38.8%) than the males (12.5%)

Table 4 Relationship between sex and hypertension

Sex	Normal Bp		Low grade		Moderate	
	No	%	No	%	No	%
Male	27	67.5	8	20	5	12.5
Female	39	48.1	13	16.0	31	38.8

P value = 0.02

Table 5 shows the relationship between nutritional status and hypertension, 57.1% of those morbidly obese had moderate hypertension while 23.3% and 30.0% of those overweight had low grade and moderate grade hypertension respectively

Table 5 Relationship between nutritional status and hypertension

Nutritional status	Normal		Low grade		Moderate grade		Total	
	No	%	No	%	No	%	No	%
Underweight	2	100.0	0	0.0	0	0.0	2	100.0
Normal	36	69.2	3	5.8	13	25.0	52	100.0
Overweight	14	46.7	7	23.3	9	30.0	30	100.0
Moderately obese	10	50.0	4	20.0	6	30.0	20	100.0
Mildly obese	3	30.0	5	50.0	2	30.0	10	100.0
Morbidly obese	3	42.9	0	0.0	4	57.1	7	100.0

P value = 0.04

IV. Discussion

This study revealed that hypertension was more prevalent among the females than the males. This can also be attributed to the fact that female are more affected by hypertension the risk factors abounded with hypertension may be because this group is prone to obesity or overweight, Sedentary lifestyle, family history, Age physiological changes in the body which is as a result of menopause, stress Excessive salt intake, low fibre intake which can accelerate the risk of hypertension (8). These contain the statement put forward by Turkani et al (2006) (9) which identified obesity has a potential detrimental effect on blood pressure and connote by heart disease. Obesity is essentially a disorder of energy balance by an excess body fat. It is chronic and often associated with a range of metabolic abnormalities and degenerative diseases. This complex condition of multifactorial origin is considered to be scourge of modern affluent societies both in developed and under developing countries. But a good dietary pattern can helps to stabilized blood pressure and obesity and eliminate symptoms (9). Moreover, the result showed that sex and nutritional status were also found to be associated with high blood pressure because, more females were found to be more hypertensive than their male counterpart. This may be due to the fact that majority of the female respondent were overweight and were menopausal women.

V. Conclusion

This study revealed that the prevalence of obesity and high blood pressure were very high among the respondents. various factors can be attributed to this, among which eating habits, food consumption and lack of exercise .

VI. Recommendation

There is need to encourage moderate and simple physical activities and discourage sedentary lifestyle. This will help to reduce unnecessary weight gain and improve health and nutritional status.

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