



KNOWLEDGE AND PRACTICE OF HYPERTENSION MANAGEMENT AMONG HYPERTENSIVE PATIENTS ATTENDING GENERAL HOSPITAL IN TARABA STATE, NIGERIA

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Abstract

The study assessed the knowledge, attitude and practice of hypertension management among hypertensive patients attending general hospitals in Taraba State, Nigeria. To achieve this purpose, descriptive survey research design was used. The population for this study was twelve thousand, three hundred and twenty (12, 320) hypertensive patients attending general hospitals in Taraba State. The sample size of 373 was selected using multistage sampling procedures of stratified, simple random, proportionate and convenience. The instrument for data collection was structured questionnaire developed by the researcher and it was validated by three (3) experts in the Department of Human Kinetics and Health Education, Ahmadu Bello University Zaria. The Descriptive statistics of frequency and simple percentages were used to analyze the demographic characteristics of the respondents. Inferential statistics of one-sampled t-test and multiple regression analysis were used to test the stated hypotheses at 0.05 level of significance. The result revealed that the knowledge of hypertension management among hypertensive patients attending general hospitals in Taraba State is significant ($t = 145.504$; $p = 0.000$), the practice of hypertension management among hypertensive patients attending general hospitals in Taraba State is not significant ($t = 1.721$; $p = 0.14$) at ($p < 0.05$). Based on the results, the study concluded that the hypertensive patients attending general hospitals in Taraba State have knowledge of hypertension management; have negative practice of hypertension management. Based on the conclusion, the study recommends among others the need for healthcare providers and health educators to take steps aimed at improving patient attitudes, which can significantly impact adherence to hypertension management and overall health and the need for the hypertensive patients to be educated by health educators about lifestyle modifications such as a healthy diet, regular exercise, reducing salt intake, avoiding alcohol and tobacco, and maintaining a healthy weight.

Keywords: Knowledge, practice, hypertension management, patients, hypertensive patients, General Hospital

Introduction

Hypertension has become an important health problem particularly in Nigeria. The burden of hypertension has been on the increase because of the increasing adult population and change in lifestyles of Nigerians. During the last two decades, there has been a rise in the number of prevalence studies regarding hypertension and other non-communicable diseases. In 2011, the prevalence of hypertension was reported to range from 6.2% to 48.9% in males and 10% to 47.3% in females using a BP benchmark of 140/90 mmhg. Poor knowledge about hypertension can lead to poor attitude towards the disease which may directly affect patient's self-care practices towards hypertension. There is a direct relationship between a patient's knowledge and the management of their illnesses. A good knowledge and attitude towards hypertension have been associated with controlled blood pressure, reduced cardiovascular risks, improved medication compliance, reduced morbidity and mortality (Alberti & Zimmet, 2016).

Today, hypertension is a common and a well-known chronic disease associated with significant mortality requiring medical diagnosis, treatment and lifestyle changes. Evidence suggests that patients who are more knowledgeable about hypertension self-care may be more likely to achieve better blood pressure control. Similarly, patients education is an integral component of hypertension care, there remain uncertainties regarding the effectiveness of different methods and modes of education (Clavell, 2015).

According to Clavell (2015) training in self-management is integral to the treatment and prevention, proper management requires patients to be aware of the nature of the disease, its risk factors, its treatment and its complications. Therapeutic patient education is a patient centered approach, focused on patients' needs, resources, values and strategies. It allows patients to improve their knowledge and skills not only concerning their illness but also their treatment. It brings a better quality of life, a greater therapeutic compliance and a reduction in complications.

Hypertension (High Blood Pressure, HBP) is defined as a systolic blood pressure ≥ 140 mmHg and/or a diastolic blood pressure ≥ 90 mm Hg, the use of antihypertensive medication, or being told at least twice by a physician or other health professional that one has HBP (Roger et al., 2012).

According to the World Health Organization (2016), hypertension is a major risk factor for cardiovascular disease (CVD, excluding congenital CVD) as well as renal impairment, peripheral vascular disease, and blindness. Hypertension is estimated to cause 7.5 million deaths worldwide annually, about 12.8% of the total deaths (Mendis, Puska, & Norrving, 2011). In the same report, WHO estimates the prevalence of hypertension in high-income countries as 35% for both genders, while in low, lowermiddle and upper-middle income countries the prevalence is around 40%. Hypertension prevalence estimates from a study in seven Latin-American cities range from 13% to 29%, with an overall prevalence of 18% (Schargrodsky et al., 2018). However, in a recent study developed by the WHO in six middle-income countries around the world (including a Latin American country), the prevalence of hypertension was 37% (Basu & Millett, 2013).

There are various causes of hypertension. The following explain the causes of hypertension:

- a. Many prescription and over-the-counter drugs exacerbate hypertension for examples, corticosteroids and immunosuppressive drugs increased blood pressure in most solid organ transplant recipients. Medication taken for pain and inflammation such as non-steroidal anti-inflammatory drugs and cyclooxygenase-2 inhibitors may raise blood pressure since their anti-prostaglandin properties affect the kidney (Berlowitz et.al. 2011).
- b. Tobacco products (cigarettes, cigars smokeless tobacco contain micotin which temporarily increases blood pressure for about thirty minutes or less. The blood pressure of smokers should be rechecked after thirty minutes if initial readings are used for smoking cessation do not appear to increase blood pressure (Blaney, Boyd & Finger, 2010).
- c. Obesity. Obesity occur or results when energy inputs are greater than energy used.

The increasing prevalence of chronic diseases such as hypertension are creating a public health challenge. The incidence of hypertension is growing among women and adolescents as well as the older adults. Hypertension is also considered the most important modifiable risk factors for coronary heart diseases, stroke, congestive heart disease; end stage renal disease and peripheral vascular diseases. This study observed that most individuals who visited the general hospital in Taraba state were having hypertension. This is a very common observation in many hypertensive patients. Sometimes, slight symptoms that these patients could take care of at home bring them back to the clinic for medical checks.

The questions that readily come to mind are; what do these hypertension patients know about the hypertension? What do they know about the management and control of hypertension? Is there any organized counseling sessions for these patients by health care providers in the hospital? Are people aware of the existence of the generating disease (hypertension) its causes and its effect? Do patients observed the signs and symptoms? Do patients knows that hypertension cut across all ages and not for the elderly as assumed? among others.

Purpose of the study

The purpose of the study was to assess:

1. The knowledge of hypertension management among hypertensive patients attending general hospital in Taraba State.
2. The practice of hypertension management among hypertensive patients attending general hospital in Taraba State.

Research question

1. What is the knowledge of hypertension management among hypertensive patients attending general hospital in Taraba State?
2. Do hypertensive patients attending general hospitals in Taraba State practice hypertension management?

Research hypothesis

1. Knowledge of hypertension management among hypertensive patients attending general hospitals in Taraba State is not significant.

2. The practice of hypertension management among hypertensive patients attending general hospitals in Taraba State is not significant.

Methods and Materials

To achieve the purpose of this study the researchers employed a Descriptive survey research design. According to Nwana (2005), descriptive survey research design focuses on the people and their beliefs, opinions, perception and behaviours. Sunusi (2008) stated that descriptive survey research design is a kind of survey design in which a person is able to find out the feelings of others about something. He added that descriptive survey research design is a systematic description of event in a very factual and accurate manner. This design is suitable for this study since it attempts to assess the knowledge, attitude and practice of hypertension management among hypertensive patient’s attending health care facilities in Taraba State. The population during the time of this study, Twelve Thousand, Three Hundred and Twenty (12, 320) population were recorded (Ministry of Health Taraba State, 2022). Taraba State was stratified into the already existing senatorial district namely; Taraba North, Taraba Central and Taraba South.

Random sampling was used to select one (1) general hospital from each zones in which all the general hospital in each zones was written on separate pieces of paper rolled and put into a container and each time the container was shaken, one of these rolled pieces of paper will be picked and the hospital name which appeared on that picked rolled paper will be written down. The researcher performed this action for each of the three (3) senatorial zones in Taraba State until a total of Three (3) general hospital was picked as seen in the table below:

Table 3.2 Sample Selection

S/N	General Hospital	Population	Sample
1	General Hospital Zing	1,788	127
2	General Hospital Bali	1,588	112
3	General Hospital Takum	1,891	134
Total		5,267	373

Proportionate sampling technique was employed by the researchers to determine the sample size that will be gotten from each of the general hospitals selected for the study. The researchers employed convenience sampling technique. The researcher employed convenience sampling techniques at the General Hospital selected for the study to get the respondents based on their availability to answer the questionnaire.

The instrument for data collection in this study was a researcher’s developed questionnaire. The questionnaire consists four (4) sections A, B, C, and D. Section “A” contain information on demographic characteristic of respondents, Section “B” contain the information on knowledge of hypertension management, Section “C” contain information on attitude of hypertension management, Section “D” contain information on Practice of Hypertension by hypertensive patients. The questionnaire was prepared on four (4) points modified Likert type of scale and the rating score was as follows: Strongly Agreed (SA) 4 points, Agreed (A) 3 points, Disagreed (D) 2 points, Strongly Disagreed (SD) 1 point. The likert scale adopted a scoring decision mean of 2.5 because it is appropriate for determining what an individual believes, perceives or feels about a phenomenon. Any value above decision mean of 2.5 is positive response and any value below decision mean of 2.5 is negative response.

To analyze the data collected from the respondents, the data were subjected to various statistical analyses. The statistical methods that was employed in this research study are both descriptive and inferential. The descriptive analysis was

used to explain the demographic characteristics of the respondents (section A). Research questions were answered using mean and standard deviation. The hypotheses were tested using one sample t-test at 0.05 alpha level of significance; this is with a view to either accept or reject the null hypotheses stated. The analysis was facilitated with the aid of computer aided software of the statistical package for social sciences (SPSS).

Results and Discussion

Table 1: Demographic characteristics of Respondents

VARIABLES	FREQUENCY	PERCENTAGE (%)
Gender		
Male	225	68.4
Female	118	31.6
Total	373	100.0
Age		
Below 30	54	14.5
30 – 35	89	23.9
36 – 40	59	15.8
41 – 45	44	11.8
46 – 50	97	26.0
Above 50	30	8.0
Total	373	100.0
Level of Education		
Primary	29	7.8
SSCE/Grade II	70	18.8
NCE/Diploma	115	30.8
First Degree	74	19.8
Postgraduate Degree	37	9.9
Non-formal Education	48	12.9
Total	373	100.0

Table 4.1 shows the demographic characteristics of the respondents. The table revealed that the majority of the respondents (255) are male accounting for 68.4% of the respondents and the remaining 118 (31.6%) are female. The analysis also revealed that 54 (14.5%) out of 373 respondents were between below 30 years of age, 89 (23.9%) were between 30 – 35 years old, 59 (15.8%) were between 36 – 40 years old, 44 (11.8%) were between 41 – 45 years old, 97 (26.0%) were between 46 – 50 years old, and the remaining 30 (8.0%) were above 40 years old. The analysis of respondents' level of education shows that 29 (7.8%) have primary education, 70 (18.8%) have SSCE/Grade II, 115 (30.8%) have NCE/Diploma, 74 (19.8%) have first degree, 37 (9.9%) have postgraduate degree and the remaining 48 (12.9%) have non-formal education.

Research question 1:

What is the knowledge of hypertension management among hypertensive patients attending general hospital in Taraba State?

Table 4.2: Mean and Standard Deviation on the Knowledge of Hypertension Management among Hypertensive Patients attending General Hospital in Taraba State

S/N	Item	Mean	Std Dev
1.	Accuracy of medication intake is regarded as an important predictor of hypertension management	3.50	0.72
2.	Poor adherence to oral medicine has been consistently associated with hypertension	3.42	0.73
3.	Physical exercise is commonly used in hypertension management	3.39	0.73
4.	The most accurate method of monitoring hypertension is regular checking of blood pressure	3.43	0.75
5.	I take my prescription drugs as advised	3.32	0.77
6.	A hypertensive patient should measure his or her blood pressure regularly	3.30	0.78
7.	The lifestyle modification required for hypertensive patients is to follow nutritional guide only	3.08	0.82
8.	The lifestyle modification required for hypertensive patients is stopping salt consumption	3.43	0.73
9.	The lifestyle modification required for diabetic patients is to avoid smoking	3.18	0.72
10.	The important factors that help in controlling high blood pressure are planned diet and medication	3.23	0.69
11.	A regular exercise regimen will help in obesity control	3.11	0.73
12.	The dietary recommendations given by my doctor can help me manage hypertension	3.03	0.72
13.	I don't know the normal Blood Pressure reading	2.89	0.77
14.	I don't know the complications that may arise if Blood Pressure is not controlled	2.88	0.85
15.	I don't know that excessive alcohol intake is one of the risk factors for developing high BP	2.92	0.92
16.	I don't know the symptoms of hypertension	2.84	0.92
17.	I don't know that regular measurement of BP is necessary for hypertensive patients	2.68	0.89
	Aggregate Mean	3.15	0.78

(Decision Mean – 2.5)

A careful observation of Table 4.2 showed the mean scores of the responses on the knowledge of hypertension management among hypertensive patients attending general hospitals in Taraba State. The responses for each item were computed and item 1 had the highest mean score of 3.50 indicating that the majority of the respondents affirmed that the accuracy of medication intake is regarded as an important predictor in hypertension management. However, the aggregate mean score of

3.15 was obtained which is greater than the benchmark score of 2.5. This implies that hypertensive patients attending general hospitals in Taraba State have knowledge of hypertension management.

Research question 2:

Do hypertensive patients attending general hospitals in Taraba State practice hypertension management?

Table 4.3: Mean and Standard Deviation on the Practice of Hypertension Management among Hypertensive Patients attending General Hospital in Taraba State

S/N	Item	Mean	Std Dev
1.	Am not conscious of the food I eat	2.58	0.83
2.	Hypertensive Patients don't always visit their doctor for medical check-ups.	2.55	0.78
3.	Hypertensive Patients believe in herbs to cure the disease	2.60	0.83
4.	Hypertensive Patients are selective of the type of food they eat.	2.56	0.92
5.	I am conscious of the food I eat.	2.47	0.88
6.	I always visit my doctor for check-ups	2.46	0.90
7.	Hypertensive Patients do not believe in herbs to cure the disease.	2.26	0.94
8.	People with hypertension do not believe in exercise	2.33	0.89
9.	Hypertensive patients still smoke heavily.	2.32	0.91
10.	People with high blood pressure eat more fat	2.21	0.86
11.	Hypertensive patients eat more fruits and vegetables	2.35	0.95
12.	People with hypertension eat less fatty food	2.37	0.93
13.	I take medication regularly to control hypertension.	2.46	0.90
14.	I follow up on my hypertension condition regularly.	2.54	0.88
15.	I avoided adding much salt to my daily diet.	2.56	1.01
16.	I don't do any physical exercise.	2.59	0.95
17.	I don't follow healthy diet (fat-restricted, vegetables and fruit rich).	2.42	0.92
	Aggregate Mean	2.45	0.90

(Decision Mean – 2.5)

A careful observation of Table 4.4 showed the mean scores of the responses on the attitudes towards hypertension management among hypertensive patients attending general hospitals in Taraba State. The responses for each item were computed and item 3 had the highest mean score of 2.60 indicating that the majority of the respondents affirmed that hypertensive patients believe in herbs to cure the disease. However, the aggregate mean score of 2.45 was obtained which is less than the benchmark score of 2.5. This implies that hypertensive patients attending general hospitals in Taraba State do not practise hypertension management.

Hypothesis 1:

Knowledge of hypertension management among hypertensive patients attending general hospitals in Taraba State is not significant

Table 4.4: One-Sample t-test on Knowledge of Hypertension Management among Hypertensive Patients attending General Hospital in Taraba State

Variable	N	Mean	Std. Dev.	Df	t-value	p-value	Decision
Knowledge	373	3.15	0.78	372	145.504	0.000	Rejected
Test Mean	373	2.50	0.00				

Calculated p < 0.05, calculated t-value > 1.972 at df 372

The result of the one-sample t-test statistics in Table 4.8 revealed that the knowledge of hypertension management among hypertensive patients attending general hospitals in Taraba State is significant because the calculated p-value of 0.000 is lower than the 0.05 alpha level and the calculated t-value of 145.504 is higher than the 1.972 critical t-value at 372 degree of freedom (df). Therefore, the null hypothesis which stated that the knowledge of hypertension management among hypertensive patients attending general hospitals in Taraba State is not significant is hereby rejected; this is because the result of study showed that knowledge of hypertension management among hypertensive patients attending general hospitals in Taraba State is significant.

Hypothesis 2:

Research Question Three: Do hypertensive patients attending general hospitals in Taraba State practice hypertension management?

Table 4.5: Mean and Standard Deviation on the Practice of Hypertension Management among Hypertensive Patients attending General Hospital in Taraba State

S/N	Item	Mean	Std Dev
1.	Am not conscious of the food I eat	2.58	0.83
2.	Hypertensive Patients don't always visit their doctor for medical check-ups.	2.55	0.78
3.	Hypertensive Patients believe in herbs to cure the disease	2.60	0.83
4.	Hypertensive Patients are selective of the type of food they eat.	2.56	0.92
5.	I am conscious of the food I eat.	2.47	0.88
6.	I always visit my doctor for check-ups	2.46	0.90
7.	Hypertensive Patients do not believe in herbs to cure the disease.	2.26	0.94
8.	People with hypertension do not believe in exercise	2.33	0.89
9.	Hypertensive patients still smoke heavily.	2.32	0.91
10.	People with high blood pressure eat more fat	2.21	0.86
11.	Hypertensive patients eat more fruits and vegetables	2.35	0.95
12.	People with hypertension eat less fatty food	2.37	0.93
13.	I take medication regularly to control hypertension.	2.46	0.90
14.	I follow up on my hypertension condition regularly.	2.54	0.88
15.	I avoided adding much salt to my daily diet.	2.56	1.01
16.	I don't do any physical exercise.	2.59	0.95
17.	I don't follow healthy diet (fat-restricted, vegetables and fruit rich).	2.42	0.92
Aggregate Mean		2.45	0.90

(Decision Mean – 2.5)

A careful observation of Table 4.4 showed the mean scores of the responses on the attitudes towards hypertension management among hypertensive patients attending general hospitals in Taraba State. The responses for each item were computed and item 3 had the highest mean score of 2.60 indicating that the majority of the respondents affirmed that hypertensive patients believe in herbs to cure the disease. However, the aggregate mean score of 2.45 was obtained which is less than the benchmark score of 2.5. This implies that hypertensive patients attending general hospitals in Taraba State do not practise hypertension management.

Discussion of the Result

Hypothesis one revealed that the knowledge of hypertension management among hypertensive patients attending general hospitals in Taraba State is significant. This is because the calculated p-value of 0.000 is lower than the 0.05 alpha level and the calculated t-value of 145.504 is higher than the 1.972 critical t-value. This means that the hypertensive patients attending general hospitals in Taraba State have knowledge of hypertension management. The finding syncs with Ralapanawa, Bopeththa, Wickramasurendra and Tennakoon (2020) who examined hypertension knowledge, attitude, and practice in adult hypertensive patients at a tertiary care hospital in Sri Lanka. The study reported an overall satisfactory knowledge about complications of hypertension and the importance of adherence to close follow-up. Similarly, in a cross-sectional study from Palestine, Sa'adeh, Darwazeh, Khalil and Zyoud (2018) examined the knowledge, attitudes and practices of hypertensive patients towards prevention and early detection of chronic kidney disease and found higher scores for knowledge of hypertension.

In a related study, Rahman, Alam, Mia, Haque and Islam (2018) studied the knowledge, attitude and practice about hypertension among adult people of selected areas of Bangladesh. The survey revealed the majority of the respondents had a higher knowledge of hypertension. The finding further supports Machaalani, Seifeddine, Ali, Bitar, Briman and Chahine (2022) who examined knowledge, attitude, and practice toward hypertension among hypertensive patients residing in Lebanon and found a fair knowledge of hypertension.

However, the finding antagonizes Ukoha-Kalu, Adibe, Anosike and Ukwe (2020) who conducted a study on Knowledge, attitude and practice towards hypertension among patients receiving care in a Nigerian Hospital. The study found that only one-quarter of the patients had good knowledge of hypertension. Similarly, Chimberengwa and Naidoo (2019) assessed the knowledge, attitudes and practices related to hypertension among residents of a disadvantaged rural community in southern Zimbabwe and found that members of the community had poor knowledge of hypertension. Also, the KAP assessment using a cross-sectional survey of 575 randomly selected hypertension patients from two hospital clinics by Al-Maskari et al. (2013) found that 31% had poor knowledge about hypertension.

Hypothesis two revealed that the practice of hypertension management among hypertensive patients attending general hospitals in Taraba State is not significant. This is because the calculated p-value of 0.14 is greater than the 0.05 alpha level and the calculated t-value of 1.721 is less than the 1.972 critical t-value. This means that the hypertensive patients attending general hospitals in Taraba State do not practise hypertension management. The finding is in line with Ukoha-Kalu et al. (2020) on knowledge, attitude and practice towards hypertension among patients receiving care in a Nigerian Hospital which found that the majority of the patients had poor practice towards hypertension.

In Sri Lanka, Ralapanawa et al. (2020) found poor practice of hypertension as the majority do not adhere to close follow-up. In Bangladesh, Rahman et al. (2018) study revealed the majority of the respondents recorded low levels of practices of hypertension. Similarly in the United Arab Emirates, a KAP assessment among hypertension patients of two hospital clinics found that 57 % had poor practice of hypertension (Al-Maskari et al., 2013). Chimberengwa and Naidoo (2019) assessed the knowledge, attitudes and practices related to hypertension among residents of a disadvantaged rural community in southern Zimbabwe and found that members of the community had poor practices of hypertension.

The finding is against Machaalani et al. (2022) who found an opposite result when examining the knowledge, attitude, and practice toward hypertension among hypertensive patients residing in Lebanon. The study found a fair practice of hypertension. Similarly, Sa'adeh, Darwazeh, Khalil and Zyoud (2018) examined the knowledge, attitudes and practices of hypertensive patients towards the prevention and early detection of chronic kidney disease and found higher scores for the practice of hypertension.

Conclusion

The hypertensive patients attending general hospitals in Taraba State have knowledge of hypertension management.

The hypertensive patients attending general hospitals in Taraba State do not practice hypertension management.

Recommendation

The study recommends that, It is essential to reinforce and build upon this existing knowledge by developing educational programmes to continually update patients on the latest advancements in hypertension management. These programmes should emphasize the importance of regularly seeking information and guidance from healthcare providers to stay informed.

Also, Healthcare providers should take steps to improve patient attitudes, which can significantly impact adherence to hypertension management and overall health. The need to Implement interventions such as counseling, peer support, and motivational interviewing to help patients develop a more positive attitude towards hypertension management.

There is a need for the hospital management to implement patient-centred care plans that emphasize self-management and adherence to medication and lifestyle changes and also provide regular follow-up and support to help patients establish and maintain good practices for hypertension management.

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