

Research Article

# Knowledge, attitude and practice towards hypertension among patients receiving care in a Nigerian Hospital

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## Abstract

**Background:** Poor knowledge about hypertension can lead to poor attitude towards the disease which may directly affect patients self-care practices towards hypertension.

**Objective:** This study aimed to assess the knowledge, attitude and practice towards hypertension of hypertensive patients receiving care in Kogi state Specialist hospital, Lokoja, Kogi state Nigeria.

**Methods:** This was a cross sectional study conducted among Hypertensive patients receiving care in the Kogi State Specialist Hospital in Lokoja, Kogi state. All hypertensive patients visiting the Kogi State Specialist Hospital during the period of study and have given consent were allowed to participate in the study. A well designed questionnaire was used to collect patients soci-demographic and clinical variables. Also, a validated questionnaire was used to assess patients Knowledge, attitude and practice towards hypertension. Data were analysed using the Statistical Package for Social Sciences (SPSS for windows, Version 16.0. SPSS Inc. 2007. Chicago, USA) software. Continuous data were presented as mean  $\pm$  standard deviation while categorical data were presented as percentages and frequencies. Chi square and correlation test was also used to examine association between the variables in the data collected.

**Results:** A majority of the patients were aged 46-55 years 89 (27.5%), while almost half of the patients were males 161 (54.6%). About half of the patients 141 (43.5%) were selfemployed while a majority of the patients had at least a tertiary education 173 (53.4%). Only 4 (1.2%) of the patients reported that they had no formal education. About 60% of the patients reported to have had hypertension for 6-10 years while only 170 (57.4%) of the patients reported not to have any family history of hypertension. Also, only half of the patients 164 (50.6%) had their blood pressure controlled. Only one quarter of the patients had good knowledge and attitude towards hypertension. Also, only 4 (1.3%) patients had a good practice towards hypertension. There is a significant positive correlation between knowledge and attitude ( $r = 0.287, p < 0.001$ ). Also, there is a fair positive correlation between Knowledge and practice ( $r = 0.254, p = < 0.05$ ), while there was no correlation between attitude and practice.

**Conclusion:** There was an acceptable level of Knowledge and attitude towards hypertension while these patients had a poor practice of hypertension self-care activities. Keywords: Hypertension; Knowledge, attitude, Practice.

## Introduction

In Nigeria, hypertension has become an important health problem. The burden of hypertension has been on the increase because of the increasing adult population and change in lifestyles of Nigerians [1]. During the last two decades, there

has been a rise in the number of prevalence studies regarding hypertension and other non-communicable diseases [2]. 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 [3]. The overall crude prevalence was reported to be 2.1% to 47.2% (95%CI)

### More Information

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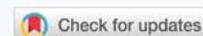
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**Keywords:** Hypertension; Knowledge; Attitude; Practice





in Nigerian adults aged 18 years and above. Studies also have shown a higher prevalence in urban areas (17.5% to 51.6%) compared to rural areas (4.6% to 43%) [4]. There has been a continuous and steady increase in the incidence and prevalence of hypertension around the world [5]. Presently, over 1.5 billion people are affected with high blood pressure worldwide [6].

Poor knowledge about hypertension can lead to poor attitude towards the disease which may directly affect patients self-care practices towards hypertension [7]. 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 [8].

### Objective

This study aimed to assess the Knowledge, attitude and practice towards hypertension among hypertensive patients receiving care in a Nigerian hospital.

### Methods

#### Study design

This was a cross sectional study conducted among Hypertensive patients receiving care in the Kogi State Specialist Hospital in Lokoja, Kogi state. The study was carried over a period of one month (July 3, 2019- August 3, 2019) to ascertain the patients Knowledge about hypertension. Outcome measures were Blood pressure, Body mass Index and Knowledge about hypertension.

#### Study setting

The Kogi state specialist hospital is the one of secondary health institution in Kogi State and it is located in the heart of the state capital, Lokoja. The hospital serves as a referral centre for all the primary health facilities in the state, as well as neighbouring states. It is a 150 bedded hospital. Kogi State is the 24<sup>th</sup> largest State in Nigeria with a population of 3,314,043 as at 2006 national census and a projected population in 2017 estimated to be 4,252,665. It is among the six North Central States of Nigeria. It has 21 local government areas. Lokoja is located at a geographic coordinates of latitude 7.8°N, 6.74°E and 55 meters above sea level. It has a maximum temperature of 39.6°C between the months of October to May with a relative humidity of 60% and annual rainfall of about 1000meters. Lokoja has a total population of 196,643 people as at the last 2006 national census. The main ethnic groups are Igala, Ebira and Yoruba.

**Ethical Clearance:** Ethical clearance was obtained from the Health and research ethics committee of the hospital. Also, written and oral consent were obtained from the patients before participating in the study.

**Eligibility criteria:** All hypertensive patients visiting the Kogi State Specialist Hospital during the period of study and have given consent were allowed to participate in the study.

The exclusion criteria were:

- Comorbid conditions like renal dysfunction, peptic ulcer, hepatic disorder.
- Mental incompetence
- Pregnancy
- In-patients hypertensive patients

**Sample size selection:** All the hypertensive patients who met the eligibility criteria were included in the study.

**Data collection:** A profoma was designed to collect the socio-demographic and clinical characteristics like the blood pressure, weight (in Kilograms) and height (in meters).

#### Data collection instruments

A well designed demographic questionnaire: This was carefully designed by the researchers. It consists of 16 questions. 10 questions were on the demographic characteristics of the patients like gender, weight, marital status, education, employment, religion, income per month, religion, smoking status and alcohol consumption while 6 questions were on the health status of the patient like duration of illness (months), Number of medical condition, present medical conditions, number of antihypertensives, emergency hospitalisation in the past four week and self-rated health. Knowledge about hypertension was assessed using an 8- item question with questions about hypertension, risk factors, treatment, symptoms and complications. Attitude and practice towards hypertension was assessed using three and four questions respectively with questions on regular measurement of blood profile, health eating, exercise, compliance to treatment and maintain normal body weight.

#### Data analysis

The data cleaning was conducted in Microsoft excel after which information were exported and analyzed using the Statistical Package for Social Sciences (SPSS for windows, Version 16.0. SPSS Inc. 2007. Chicago, USA) software. Continuous data were presented as mean  $\pm$  standard deviation while categorical data were presented as percentages and frequencies. Chi square and t-test was also used to examine association between the variables in the data collected.

### Results

From table 1, a majority of the patients were aged 46-55 years 89 (27.5%), while almost half of the patients were males 161 (54.6%). about half of the patients 141 (43.5%) were self-employed while a majority of the patients had at least a tertiary education 173 (53.4%). Only 4 (1.2%) of the patients reported that they had no formal education. About 60% of the patients reported to have had hypertension for 6-10 years while only 170 (57.4%) of the patients reported not to



have any family history of hypertension. Also, only half of the patients 164 (50.6%) had their blood pressure controlled with the remaining half having an uncontrolled blood pressure. A majority of the patients 287 (88.6%) were obese having a body mass index >30 kg/m<sup>2</sup> (Table 1).

From table 2, less than half of the patients 121 (37.3%) were able to answer correctly the definition of hypertension. A good number of the patients 212 (65.4%) knew that uncontrolled blood pressure was dangerous to their health but only 53 (16.4%) knew that lowering high blood pressure could improve someone's health. Less than half of the patients 98 (30.2%) neither knew what the two numbers reported for blood pressure were nor what be the normal blood pressure levels (Table 2).

From table 3, only one quarter of the patients had good knowledge and attitude towards hypertension. Also, only 4 (1.3%) patients had a good practice towards hypertension.

From table 4, there is a significant positive correlation between knowledge and attitude ( $r = 0.287, p < 0.001$ ). Also, there is a fair positive correlation between Knowledge and practice ( $r = 0.254, p < 0.05$ ). Meanwhile, there is no correlation between attitude and practice (Table 5).

**Table 1:** Socio demographic characteristics of patients.

Socio demographic	Frequency	Percentage
Age		
18-25	4	1.2
26-35	35	10.8
36-45	81	25.0
46-55	89	27.5
56-65	81	25.0
>65	18	5.6
Gender		
Male	161	54.6
Female	147	45.4
Occupation		
Civil servant	127	39.2
Self employed	141	43.5
Unemployed	36	11.1
Retired	4	1.2
Educational qualification		
No formal education	4	1.2
Primary	19	5.9
Secondary	112	34.6
Tertiary	173	53.4
Duration of hypertension		
1-5	32	9.9
6-10	194	59.9
11-15	69	21.3
>15	13	4.0
Family history of hypertension		
Yes	138	42.6
No	170	57.4
Control of hypertension*		
Controlled	164	50.6
Uncontrolled	144	49.4
BMI**		
Overweight	21	11.4
Obese	287	88.6

\*SBP <140 mm Hg, DBP <90 mm Hg (JNC 8 guideline).

**Table 2:** Knowledge about hypertension (N = 308).

Questions (correct answer)	n (%)
What does the term hypertension mean? (high blood pressure)	121 (37.3)
How dangerous is hypertension to your health? (extremely)	212 (65.4)
Would lowering high blood pressure improve a person's health? (yes)	53 (16.4)
What do the two numbers reported for blood pressure mean? _____ and ____ (systolic and diastolic)	98 (30.2)
What should normal blood pressure levels be? (<140/<90 mm Hg)	98 (30.2)
What measures are important? (top and bottom)	119 (36.7)
Can people do things to lower their blood pressure? (yes)	145 (44.8)
Can lowering blood pressure even a little bit improve health? (yes)	145 (44.8)

**Table 3:** KAP Scores Of Hypertensive Patients (N = 308).

KAP	Poor n (%)	Fair n (%)	Good n (%)
Knowledge	38 (12.3)	189 (61.4)	81 (26.3)
Attitude	15 (4.9)	215 (69.8)	78 (25.3)
Practice	59 (19.2)	245 (79.5)	4 (1.3)

**Table 4:** Correlation between Knowledge, attitude and practice towards hypertension.

Variable	r	p - value
Knowledge and attitude	0.287	< 0.001*
Knowledge and practice	0.254	< 0.001*
Attitude and practice	0.128	0.184

\*p significant at < 0.05.

**Table 5:** Comparison of Total scores of Knowledge, Attitude and Practice towards Hypertension with Socio-demographic Variables<sup>a</sup>. (N = 308).

	Knowledge scores		Attitude scores		Practice scores	
	Mean (SD)	p - value	Mean (SD)	p - value	Mean (SD)	p - value
Age						
26-35	74.5 (5.83)	0.017*	35.2 (5.02)	0.091	27.2 (3.21)	0.034*
36-45	74.8 (6.01)		35.6 (5.23)		27.4 (2.71)	
46-55	73.7 (6.03)		34.9 (5.66)		27.5 (3.02)	
56-65	73.4 (5.65)		35.3 (5.86)		27.6 (2.91)	
>65	73.5 (5.91)		35.2 (4.32)		27.2 (3.01)	
Gender						
Male	74.8 (5.98)	0.241	34.6 (5.68)	0.122	28.1 (3.21)	0.336
Female	74.4 (6.02)		35.1 (5.32)		27.9 (2.54)	
Education						
No formal	73.1 (5.78)	0.035*	34.2 (4.82)	0.018*	27.1 (2.02)	0.095
Primary	73.8 (5.89)		34.9 (5.20)		27.5 (3.12)	
Secondary	74.5 (6.01)		35.6 (5.62)		27.3 (3.42)	
Tertiary	74.5 (6.02)		35.8 (4.91)			
Duration of Hypertension						
5-10	74.8 (6.01)	0.012*	35.8 (5.11)	0.084	27.4 (2.62)	0.896
11-15	73.7 (6.03)		36.2 (5.03)		28.4 (2.45)	
>15	73.4 (5.65)		34.6 (5.46)		27.2 (2.81)	
Family History of Hypertension						
Yes	74.5 (6.41)	0.049*	36.2 (4.97)	0.042*	28.5 (2.42)	0.002*
No	74.6 (6.18)		34.8 (5.23)		27.5 (2.31)	

<sup>a</sup>Independent t - test; \*p - significant at < 0.05.

There were significant differences in the knowledge scores and practice scores among the different age groups while there was no significant difference in the attitude scores among the age group. There were no statistical difference in the knowledge, attitude and practice scores among the males and females. However, there were significant differences in the knowledge and attitude scores between those that had a formal education and those that had no formal education. There was a significant difference in the knowledge scores



between those that have had hypertension for less than 10 years and those that have had hypertension for more than 10 years. Those that had a family history of hypertension had a significant difference in their knowledge, attitude and practice scores when compared with those that do not have a family history of hypertension.

## Discussion

In this study, there were more males than females. This is consistent with several studies that have shown that more men use the health care facilities as their female counterparts could be busy with home keeping and house chores [9]. Only half of the population had their blood pressure controlled while the other half had uncontrolled blood pressure. This is similar to a study by Dickson et al where more than half of the patient under study had their blood pressure uncontrolled [10]. Majority of the patients were knowledgeable about the meaning of hypertension but only few knew the importance of improving their systolic blood pressure. Majority of the patients did not know that SBP is important in blood pressure control. Increased recognition of the SBP has been identified as one of the major public health and medical challenges in the management of hypertension. Only a few of the patients in this study knew that poorly treated hypertension could lead to complications like stroke, kidney failure, brain damage and/or even blindness. There was a strong positive correlation between knowledge and attitude scores and also Knowledge and practice scores. A recent study also showed that there is a strong positive correlation between patients knowledge about hypertension and their attitude towards the disease state [3]. Studies have also shown that poor knowledge about hypertension can lead to poor lifestyle practices that may hinder blood pressure control

From the study, younger patients had a better knowledge and attitude scores when compared to the older patients and this was statistically significant. However, the older patients had a better mean attitude score than the younger patients. This also explains why mean knowledge scores increased with an increase in the duration a patient had been hypertensive.

Patients who had obtained a tertiary education had better mean knowledge scores than patient who had only a primary school education. This is expected as tertiary education can increase the level of exposure and learning of these patients.

Interestingly, patients who had a family history of hypertension had better mean knowledge, attitude and practice scores than those who do not have a family history of hypertension. This could be because having a relative or close family member with an illness increases one's curiosity towards that same illness. In this study, there was a strong association between duration of hypertension and mean knowledge scores. This could be as a result of constant counselling over the years as they visit a health care facility.

Uncontrolled high blood pressure among Nigerians has been attributed to increased consumption of salty foods and fat, reduced intake of fruits and vegetables and lack of physical activity [11].

## Conclusion

There was an acceptable level of knowledge and attitude towards hypertension among the study participants. However, practice of hypertension self care activities seems to be poor. There is a need for an educational intervention to improve practice of self care activities as this will help improve blood pressure control.

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