



## **Knowledge of Hypertension among Bankers in Enugu-North Senatorial District, Enugu State**

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### **Abstract**

*The study investigated knowledge of hypertension among bankers in Enugu-North Senatorial District, Enugu State, Nigeria. Three research questions and two null-hypotheses guided the study. The cross-sectional research design was used for the study. The population for the study was 686 bankers; and they constitute the study sample because the population was small and manageable. A self-developed questionnaire titled 'Knowledge of Hypertension among Bankers Questionnaire' (KHBQ) was used for data collection. The instrument was validated by five experts, three from the Department of Human Kinetics and Health Education and two from Department of Science Education (Measurement and Evaluation Unit), all in the University of Nigeria, Nsukka. Cronbach's Alpha was utilized to establish the internal consistency of the instrument, which yielded .78. Out of the 686 copies of the questionnaire administered, only 676 copies duly filled out were used for analyses. Frequency and percentage were utilized to answer the research questions, while Chi-square statistics was used to test the null hypotheses at .05 level of significance. The results showed that 65.2 per cent of bankers had moderate level of knowledge. Also, bankers had moderate level of knowledge towards hypertension irrespective of age and gender. There was no significant difference in the level of knowledge toward hypertension among bankers based on age ( $p=.363>.05$ ) and gender ( $p=.919>.05$ ). The authors recommended that health educators and other health professionals should organize health education programme to teach bankers about hypertension in the various banks in order to improve their knowledge.*

**Keywords:** Hypertension, Knowledge, Bankers, Enugu North Senatorial District

### **Introduction**

Hypertension is a major public health issue which raises the risk for heart illness, stroke and death. Globally, 1.28 million adults between ages of 30-79 years are estimated to be suffering from hypertension; and approximately one-third of people affected reside in low to middle income countries (World Health Organization [WHO], 2021). In China, about 70 million persons between ages of 35 and 75 have severe hypertension, making up one in eight of the country's entire population (China Peace Million Persons Project Collaborative Group, 2021). People in Africa countries may not be excluded from this health condition. According to WHO (2016), the prevalence of hypertension is highest in Africa at 45 per cent for adults aged 25 years of age and older. Moreover, hypertension prevalence in West Africa varies from 12 per cent among physically active individuals through 68 per cent among sedentary individuals (Bosu, 2015). The prevalence may also be the same in Nigeria.

In Nigeria, hypertension seems to be a common cardiovascular disease. Vincent et al. (2016) reported that university workers had a substantially smaller range of hypertension prevalence between 12 percent and 36.8 percent respectively. Also, the high prevalence of hypertension in Nigeria was found in Enugu State. Umegbolu and Ogamba (2016) reported that the overall prevalence of hypertension was 21.3 percent; specifically, 20.7 per cent in people aged 18-29 years; 25.9 per cent in people aged 30-40 years; while 24.3 per cent and 20.3 per cent prevalence were reported for males and females respectively. A recent study by Ezeala-Adkaibe et al. (2023) showed an overall prevalence of hypertension (27.6%) which indicated an increase of 6.3 per cent prevalence in less than eight years. Hypertension has defined differently by various authors.

Hypertension also known as high blood pressure is a persistent rise in the blood vessels. Hypertension is a consistent rise in blood pressure at or above 130/80 mmHg (Centers for Disease Control and Prevention [CDC], 2017). The WHO (2022) defined hypertension as a condition that arises when the blood pressure is abnormally high. The WHO further explained that hypertension occurs when the body's smaller blood vessels (the arterioles) narrow, causing the blood to exert excessive pressure against the vessel walls and forcing the heart to work harder to maintain the pressure.

Hypertension is of two types: primary hypertension and secondary hypertension. Primary (essential) hypertension is influenced by some risk factors such as family history, obesity, age, race, lack of exercise, tobacco use or smoking, too much salt consumption, low potassium levels, drinking too much alcohol, stress, certain chronic conditions and pregnancy (Cleveland Clinic, 2024). Poulter et al (2015) reported that about 90–95 per cent of cases of hypertension are as a result of primary hypertension that occurs due to non-specific lifestyle and genetic factors. Further, the authors noted that excessive salt intake, being overweight, smoking, and alcohol use are lifestyle variables that raise the risk of developing primary hypertension. Secondary hypertension is associated with underlying health condition. Rossi et al. (2020) defined secondary hypertension as elevated blood pressure, which occur with an identifiable cause. This type of hypertension occurs in about 5 - 10 per cent of cases of hypertension (Rimoldi et al., 2014). The underlying etiology of this hypertension is known and include kidney diseases, endocrine disorders, pregnancy induced, drugs, raised intracranial pressure and vascular abnormalities (Chrysaidou et al., 2019). Hypertension is influenced through an individual's risky behaviours.

Many risk factors are associated with hypertension. According to WHO (2013) and Abdulaziz et al. (2017), they include genetic or strong family history, increasing age, obesity, smoking/use of tobacco, diabetes mellitus, high salt and saturated fat diet, sedentary lifestyle, stressful work environment, poor sleep and pregnancy. University of Ottawa Heart Institute (UOHI, 2018) noted that age, sex, race, family history and genetic makeup are non-modifiable risk factors, but obesity, excessive salt intake, inactivity or lack of exercise, high fat diet, and tobacco use, alcohol consumption are the modifiable risk factors for Hypertension.

Unless through screening, signs and symptoms of hypertension rare. Hypertension is a chronic medical condition that involves persistently elevated arterial blood pressure, although most people do not have any associated symptoms (Naish & Court, 2014). The WHO (2021) identified symptoms of hypertension to include early morning headaches, nosebleeds, irregular heart rhythms, vision changes, and buzzing in the ears. Premier cardiology consultants (2023) indicated that signs of hypertension include frequent headache, visual disturbance and episodic dizziness. The bankers' level of knowledge depends on early detection of signs and symptoms of hypertension and it related risk factors.

Knowledge is acquisition of information and skills. Bolisani and Bratianu (2018) defined knowledge as any genuine belief, fact, information, and skills gained through

experience and education. Knowledge is defined as the information, facts or entirety of what has been observed, found or learned (Gandi et al., 2018). Knowledge aids individuals to take informed decision that can promote their health through reducing risky behaviours and adopting preventive practices. The quality of knowledge gained by bankers about hypertension could influence their healthy behaviours towards preventing hypertension.

Bankers are persons who perform the financial activities usually transacted in a bank. Bank occupation involves a lot of sitting for extended period of time, having heavy workload, little time for breaks and consuming a lot of highly processed foods (Muhammad & Philip, 2019). Nigeria's banking sector is the centre of the nation's economic activity and appears to be competitive. Almost all day is spent sitting or standing by bankers in the banking halls, including cashiers, customer cares representatives, office assistants, and other staff members. Henson et al. (2013) noted that one of the main risk factors of hypertension is sedentary lifestyle. Enough attention appears not to have been to bankers' health issues, especially as it relates to hypertension. As bankers' works are sedentary in nature and high levels of mental stress are experienced; they are more likely to develop diseases including hypertension (Brahmankar & Prabhu, 2017). Knowledge of hypertension by bankers would surely affect their health behaviour.

This study was anchored on health belief model. Health-belief model (HBM) was propounded by Rosenstock and colleague in the 1950's. The model explains that for individuals to adopt any health actions they should understand the need of adopting such actions. It has six constructs which include perceived susceptibility, perceived severity, perceived barrier, perceived benefits, cues to action and self-efficacy. Knowledge of health matters can propel bankers to adopt healthy actions. Socio-demographic variables of age and gender in relation with knowledge of hypertension among bankers were investigated in this study.

Age can have some degree of influence on knowledge of hypertension among bankers. Buang et al. (2019) reported that as the age increases, the knowledge, attitude and practice of the subjects towards hypertension also increases. Those who are younger had lower level of knowledge on hypertension compared to the older subjects. It is believed that as one ages, one learns more health matters and is exposed to more situations that may cause health problems including hypertension. Gender may be one of the factors that influence individual's knowledge of hypertension. The WHO (2023) defined gender as the traits of women, men, girls and boys that are socially constructed. Everett and Zajacova (2016) reported that there was a low level of hypertension awareness among younger women; that is, 32 per cent of hypertensive women were aware of their status while lower men have 25 per cent awareness of their status. Age and gender of the bankers could influence the level of knowledge of hypertension in Enugu-North Senatorial District.

The study was conducted in Enugu-North Senatorial District, which is made up of six local government areas: Igbo-Etiti, Igbo-Eze North, Igbo-Eze South, Nsukka, Udenu and Uzo-Uwani. The senatorial district is situated in the Northern part of Enugu State. The district is home to several bank branches, each employing large numbers of workers. Bankers' time is largely occupied by banking tasks, leaving them with little or no time for rest, physical activity, blood pressure check and other stress-related activities that can put them at risk for hypertension. However, from available data presented initially, the rate of hypertension in Enugu State is on increase. Bankers' exposure to sedentary lifestyles seems to make them more susceptible to ailments, such as hypertension. A survey conducted in Owerri, Imo State showed that bankers had good knowledge of the condition (Diwe et al., 2015). So, good knowledge of hypertension may result to healthy actions toward prevention of hypertension among bankers otherwise; sensitization programme will be required for improvement. This



creates a gap to assess the level of knowledge of hypertension among bankers in Enugu-North Senatorial District, Enugu State.

### **Purpose of the Study**

The purpose of the study was to investigate level of knowledge of hypertension among bankers in Enugu North Senatorial District, Enugu State. Specifically, the study determined the:

1. level of knowledge of hypertension among bankers in Enugu North Senatorial District;
2. level of knowledge of hypertension among bankers in Enugu North Senatorial District based on age; and
3. level of knowledge of hypertension among bankers in Enugu North Senatorial District based on gender.

### **Research Questions**

The following research questions guided the study.

1. What is the level of knowledge of hypertension among bankers in Enugu North Senatorial District, Enugu State?
2. What is the level of knowledge of hypertension among bankers in Enugu-North Senatorial District, Enugu State based on age?
3. What is the level of knowledge of hypertension among bankers in Enugu-North Senatorial District, Enugu State based on gender?

### **Hypotheses**

The following null hypotheses guided the study and were tested at .05 level of significance.

1. There is no significant difference in the level of knowledge of hypertension among bankers based on age.
2. There is no significant difference in the level of knowledge of hypertension among bankers based on gender.

### **Methods and Materials**

The cross-sectional research design was adopted for study. The study consisted of 686 bankers in commercial banks in Enugu-North Senatorial District of Enugu State. Banks in Enugu-North Senatorial District are 29 in number with 686 male and female bankers (Branch Bank Managers in Enugu Senatorial District, 2023). Six hundred and eighty-six (686) bankers were included as participants in the study because the population was small and manageable: there was no sampling.

A 15-item, self-developed designed questionnaire titled 'Knowledge of Hypertension among Bankers Questionnaire' (KHBQ) was used for data collection. KHBQ was validated by five experts in the Department of Human Kinetics and Health Education, University of Nigeria, Nsukka. The reliability of the instrument was established using Cronbach's Alpha, a reliability coefficient of .78 was realized. A letter of introduction was obtained from the Head, Department of Human Kinetics and Health Education, University of Nigeria, Nsukka was presented to the bank managers of various banks drawn for the study. The researchers handed over the questionnaires of each branch to a person who administered and collected back the questionnaires. Some hours were given to enable the bankers respond to the questionnaires and collect the responses. Out of the 686 copies administered, only 676 copies

(return rate: 98.5%) were returned and analyzed in Statistical Package for Social Sciences version 20. Frequency and percentage were used to analyze and answer the research questions, while Pearson Chi-square test was used to test the hypotheses. A bench mark of 0-49% (low level of knowledge), 50 – 69% (moderate level of knowledge) and 70-100% (High level of knowledge) by Osian et al. (2020) was utilized to determine level of knowledge.

### Results

**Table 1: Frequency and Percentage Analysis of Level of knowledge of Hypertension among Bankers in Enugu-North Senatorial District (n=676)**

S/N	Items	Correct f (%)	Incorrect f (%)
<b>Correct responses about Hypertension Knowledge</b>			
1.	Hypertension is the persistent raised levels of BP above 140/90 mmHg	341 (50.4)	335 (49.6)
2.	Regular physical activities/exercise is not a risk factor for hypertension	145 (21.4)	531 (78.6)
3.	Risk factors of hypertension is classified into modifiable and modifiable factors	349(51.6)	327 (48.4)
4.	Excessive alcohol intake can lead to hypertension	563 (83.3)	113 (16.1)
5.	Often headache is a sign and symptom of hypertension	404 (59.8)	272 (40.2)
6.	Signs and symptoms of hypertension are asymptomatic	62 (9.2)	614 (90.8)
7.	Stiffness of neck is not a sign and symptom of hypertension	352 (52.1)	324 (49.7)
8.	Hypertension is a preventable disease	525 (77.7)	151 (22.3)
9.	Reduction in excessive salt consumption will help in prevention of hypertension	469 (69.4)	207 (30.6)
10.	Modification of lifestyle is the most effective way of preventing hypertension	533 (86.2)	93 (13.8)
11.	Diet control, regular physical exercise and drug therapy are the control therapy of hypertension	350 (51.8)	326 (48.2)
12.	Decrease salt intake is the nutritional control therapy of hypertension	351 (51.9)	325 (48.1)
13.	Endometriosis is not the target organ damage of hypertension	486 (71.9)	190 (28.1)
14.	Blood pressure measurement is a hypertension diagnostic method	559 (82.7)	117 (17.3)
15.	Those who engage in physical activities are not at higher risk of hypertension	407 (60.2)	269 (39.8)
<b>Overall Percentage (%)</b>		<b>65.2</b>	<b>34.8</b>

**Note:** 0-49% = low level (LL), 50-69%= moderate level (ML), 70-100% = high level (HL), f = frequency, % = percentage and HTN = hypertension.

Table 1 shows that overall 65.2% per cent of bankers had moderate level of knowledge of hypertension in Enugu-North senatorial district.

**Table 2: Frequency and Percentage Responses on Level of Bankers knowledge of Hypertension based on age (n=676)**

S/N	Items	<30yrs(n=320)	30-44yrs(n=274)	45+yrs(n=82)
<b>Correct responses about Hypertension</b>		<b>Correct</b>	<b>Correct</b>	<b>Correct</b>





	<b>Knowledge</b>	<b>f (%)</b>	<b>f (%)</b>	<b>f (%)</b>
1.	Hypertension is the persistent raised levels of BP above 140/90 mmHg	137 (42.8)	153 (55.8)	51(62.2)
2.	Regular physical activities/exercise is not a risk factor for hypertension	79 (24.7)	241 (75.3)	15 (18.3)
3.	Risk factors of hypertension is classified into modifiable and modifiable factors	153 (47.8)	149 (54.4)	47 (57.3)
4.	Excessive alcohol intake can lead to hypertension	263 (82.2)	235 (85.8)	65(79.3)
5.	Often headache is a sign and symptom of hypertension	195 (60.9)	165 (60.2)	44(53.7)
6.	Signs and symptoms of hypertension are asymptomatic	31 (9.7)	25 (9.1)	6(7.3)
7.	Stiffness of neck is not a sign and symptom of hypertension	154 (48.1)	155 (56.6)	43(52.4)
8.	Hypertension is a preventable disease	245 (76.6)	214 (78.1)	66 (22.3)
9.	Reduction in excessive salt consumption will help in prevention of hypertension	205 (64.1)	212 (77.4)	52(63.4)
10.	Modification of lifestyle is the most effective way of preventing hypertension	279 (87.2)	236 (86.1)	68 (82.9)
11.	Diet control, regular physical exercise and drug therapy are the control therapy of hypertension	168 (52.5)	140 (51.1)	42(51.2)
12.	Decrease salt intake is the nutritional control therapy of hypertension	164 (51.3)	145 (52.9)	42(51.2)
13.	Endometriosis is not the target organ damage of hypertension	239 (74.7)	201 (73.4)	46(28.1)
14.	Blood pressure measurement is a hypertension diagnostic method	243 (75.9)	243 (88.7)	73(89.0)
15.	Those who engage in physical activities are not at higher risk of hypertension	191 (59.7)	172 (62.8)	44 (53.7)
	<b>Overall Percentage (%)</b>	<b>62.5</b>	<b>67.9</b>	<b>67.1</b>

Table 2 shows that overall, bankers had moderate knowledge of hypertension with bankers aged 30-44 years having the highest knowledge of Hypertension (67.9%), followed by those aged 45 years and above (67.1%) while those aged less than 30 years have the least knowledge on Hypertension (62.5%).

**Table 3: Frequency and Percentage Responses on Level of Bankers knowledge of Hypertension based on Gender (n=676)**

<b>S/N</b>	<b>Items</b>	<b>Male(n=306)</b>	<b>Female (n=370)</b>
	<b>Correct responses about Hypertension Knowledge</b>	<b>Correct</b>	<b>Correct</b>
		<b>f (%)</b>	<b>F (%)</b>
1.	Hypertension is the persistent raised levels of BP above 140/90 mmHg	153 (50.0)	188 (50.8)
2.	Regular physical activities/exercise is not a risk factor for hypertension	64 (20.9)	81 (21.9)
3.	Risk factors of hypertension is classified into modifiable and modifiable factors	147 (48.0)	202 (54.6)
4.	Excessive alcohol intake can lead to hypertension	247 (80.7)	316 (85.4)

5.	Often headache is a sign and symptom of hypertension	171 (55.9)	233 (63.0)
6.	Signs and symptoms of hypertension are asymptomatic	36 (11.8)	26 (7.0)
7.	Stiffness of neck is not a sign and symptom of hypertension	156 (51.0)	196 (53.0)
8.	Hypertension is a preventable disease	238 (77.8)	287 (77.6)
9.	Reduction in excessive salt consumption will help in prevention of hypertension	223 (72.9)	246 (66.5)
10.	Modification of lifestyle is the most effective way of preventing hypertension	263 (85.9)	320 (86.5)
11.	Diet control, regular physical exercise and drug therapy are the control therapy of hypertension	149 (48.7)	201 (54.3)
12.	Decrease salt intake is the nutritional control therapy of hypertension	171 (51.9)	180 (48.6)
13.	Endometriosis is not the target organ damage of hypertension	219 (71.6)	267 (72.6)
14.	Blood pressure measurement is a hypertension diagnostic method	253 (82.7)	306 (82.7)
15.	Those who engage in physical activities are not at higher risk of hypertension	176 (57.5)	231 (62.4)
	<b>Overall Percentage (%)</b>	<b>65.0</b>	<b>65.4</b>

Table 3 shows that overall both male (65.0%) and female (65.4%) respondents had moderate level of knowledge of hypertension in Enugu-North senatorial district with females having slightly more knowledge of Hypertension than the males.

**Table 4: Chi-Square ( $\chi^2$ ) Analysis Testing the level of knowledge of Hypertension among Bankers based on Age (n=676)**

Age (Years)	N	Correct O(E)	Incorrect O(E)	$\chi^2$	df	p-value	Dec.
<30	320	200(208.8)	120(111.2)	2.025 <sup>a</sup>			
30-44	274	1866(178.8)	88(95.3)		2	.363	NS
45+	82	55(53.5)	27(28.5)				

**Key:** HTN=hypertension, NS=not significant, S=significant, Dec=decision,  $\chi^2$ =chi-square, df=degree of freedom, O=observed frequency and E=expected frequency.

Table 4 shows the calculated chi-square value and corresponding p-value for hypothesis of no significant difference in the level of knowledge of hypertension by bankers in Enugu-North senatorial district based on age ( $\chi^2=2.025$ ;  $p=.363$ ). Since the p-value was greater than .05 level of significance; the null hypothesis was therefore not rejected. This implies that there was no significant difference in the level of knowledge of the respondents based on age.

**Table 5: Chi-Square ( $\chi^2$ ) Analysis Testing the level of knowledge of Hypertension among Bankers based on gender (n=676)**

Gender	N	Correct O(E)	Incorrect O(E)	$\chi^2$	df	p-value	Dec.
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Male	306	199(199.6)	107(106.4)	.010 <sup>a</sup>		
Female	370	186(178.8)	88(95.3)		1 .919	NS

Table 5 shows the calculated chi-square value and corresponding p-value for hypothesis of no significant difference in the level of knowledge of hypertension by bankers in Enugu-North senatorial district based on gender ( $\chi^2=.010$ ;  $p=.919$ ). Since the p-value was greater than .05 level of significance; the null hypothesis was therefore not rejected. This implies that there was no significant difference in the level of knowledge of the respondents based on gender.

### Discussion

Findings in Table 1 showed that bankers in Enugu-North senatorial district, Enugu State possessed moderate level of correct knowledge of hypertension. The finding was not expected. It is expected that bankers should have high level of knowledge. This is because bankers might have been educated and their level of education can improve their level of knowledge on health matters including hypertension. The finding is in agreement with the report of Ogunyemi (2021) that respondents had relatively good level of knowledge and preventive practice of hypertension. However, the result contrasted with the finding of Rahman et al. (2018) that majority of the respondents had higher knowledge and positive attitude towards hypertension but low level of practices. Mgbahurike and Lelesi (2019) reported that knowledge level of the respondents on hypertension was high, with moderate attitude but poor perception. The implication of the finding is that there is need to sensitize the population on asymptomatic nature of hypertension and organize health talks for more understanding.

Findings in Table 2 that bankers had moderate level of knowledge of hypertension based on gender. This finding is not expected because age group of 45 years and above and 30-44 years bankers should have high level of knowledge. It is believed that the more someone add years to life, the more exposed and knowledge he or she gain towards health issues such as hypertension. The finding agrees with that of Onyekwere et al. (2013) findings who reported that the respondents aged 56-65years and above had moderate level of knowledge of hypertension. However, the finding contrast with that of Buang et al (2019) who reported that as the age increases, the knowledge, attitude and preventive practice of the subjects to hypertension also increase and the younger subjects had lower level of knowledge compared to the older subjects. The implication of the finding that all bankers should take informed decision concerning healthy practices irrespective of their age.

Furthermore, findings from hypotheses tested indicated that there was no significant difference in the level of knowledge of hypertension based on age. These implied that level of knowledge towards hypertension did not differ among bankers of different age groups. The result is surprising, because the more aged respondents are expected to have more knowledge than others. The findings agree with that of Buang et al. (2019) who reported that knowledge, attitude and practice regarding hypertension were associated with age but not with gender, educational level, employment status and family history. The implication of the finding is that health talk and seminar concerning hypertension can be planned for all population regardless of their age groups. This is because bankers had moderate level of knowledge irrespective of their age, so exposure on knowledge need to be improved.

Findings in Table 3 that bankers had moderate level of knowledge of hypertension based on gender. This finding is expected because gender should not determine the level of knowledge of the bankers. This finding also agrees with Olusegun et al. (2011) study that





reported that the respondent's knowledge of hypertension was better in women than in men (59.3% versus 40.7%). However, the finding contrasts with that of Ikpeama et al. (2016) that the male respondents revealed highest (42%) knowledge than female (1%).

Again, findings from hypotheses tested indicated that there was no significant difference in the level of knowledge of hypertension based on gender. These implied that level of knowledge towards hypertension did not differ among bankers of different gender. The result is surprising; female bankers are expected to have more knowledge than others because female utilize healthcare service more than male. The findings agree with that of Rashidi et al. (2018) who reported that there was no significant difference in the level of knowledge, attitude and preventive practice of hypertension between male and female but level of education was significantly related. The implication of the finding is that the health educators should continue dissemination health information regardless of gender in order to give them chance of adopting healthy practices.

### Conclusion

The findings have shown that knowledge of hypertension among bankers in Enugu-North Senatorial District, Enugu State is moderate. Age and gender are not important factors considered in acquisition of hypertension knowledge among bankers. There should be continuous awareness creation about health check especially blood pressure examination by health educators and other health professionals to increase the knowledge of Hypertension among bankers. The ministries of health in Enugu State should occasionally offer mobile blood pressure screening services to bankers who should receive them at least once a month. Also, health educators and other health professionals should organize health education programme to teach bankers especially those in advanced age about hypertension in the various banks in order to improve their knowledge.

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