Knowledge And Prevalence Of Risk Factors For Hypertension Among Workers In The Banking Industry In Benin-City, Edo State, Nigeria.

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Abstract

Hypertension is one of the chronic non- communicable conditions in the developing countries. The banking industry, which is very demanding of its workforce, as evidenced by its long banking hours, with little physical activity could predispose bank workers to developing hypertension. The focus of this study is therefore to determine the knowledge and prevalence of risk factors of hypertension among workers in the banking industry in Benin- City, Edo- State, Nigeria.

This cross-sectional study was carried out among workers in the banking industry in Benin –City, Edo – State, Nigeria. A simple random sampling method was used for the selection of eight banks. All the workers in the eight banks were included in the study. A total of 192 questionnaires was retrieved and analysed.

Results: The prevalence of hypertension among bank workers was 17.7%. Ninety- three (48.4%) of the respondents had a correct knowledge of hypertension while 138 (70.8%) of them had a good knowledge about the complications of hypertension. One hundred and twenty five (65.1%) respondents had good knowledge about risk factors of hypertension. Eighty- five (44.3%) of the respondents, and 30(15.6%) of the respondents took alcohol and smoked respectively. Fifteen (7.8%) of the respondents were obese. More males than females consumed alcohol, smoked and added extra salt to food. This difference was found to be statistically significant for only alcohol and smoking. Sixty–two (32.3%) of the respondents added extra salt to their food while, 173 (90.1%) of the respondents believed their work was stressful. About half of the respondents (50.9%) worked for more than 8hrs per day, while 75% of them worked 6 days per week.

Conclusion: This study has shown that a significant number of bank workers had hypertension. There was also a high prevalence of the risk factors of hypertension among the study population despite their good knowledge about these risk factors and the complications of hypertension. Therefore, there is need for rigorous health education on risk factors avoidance and reduction among bank workers.

Key words: Hypertension, Knowledge, Prevalence, Risk factors.

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Introduction

The pattern of health and disease in many developing countries has changed significantly in the past few decades[1]. These changes have resulted from the effects of social, economic and technological developments as well as from specific public health and population programmes[1].

As malnutrition, communicable diseases and problems associated with pregnancy and childbirth come under control, chronic non- communicable diseases replace them as the dominant public health problems. Hypertension is one of the chronic non- communicable conditions that is assuming public health importance in the developing countries. It is the commonest cardiovascular disorder in the world especially among the black race and major risk factors for cardiovascular morbidity and mortality[2]. It is projected that death and disability from coronary heart disease and cardiovascular disease are now increasing so quickly in this part of the world that they will rank as first and fourth respectively among the causes of the global burden of disease by 2020[3].

High blood pressure according to the World Health Organization- International Society of Hypertension (WHO- ISH) guidelines includes both hypertension (defined as 140/90 mmHg or above) and high normal (between 130/85- 140/90mmHg). The guidelines acknowledge that high normal blood pressure also poses a threat to health[3]. In 90- 95% of hypertensives, no particular cause can be identified. Such patients are diagnosed to have primary or essential hypertension[4]. On the other hand 5- 10% of patients with hypertension have secondary hypertension which means that the causes of this type of hypertension are known.

The World Health Organisation through its expert committee on hypertension control revealed that hypertension affects about 20% of the adult population in most countries and accounts for 20-50% of all deaths[2]. In Nigeria following a nationwide survey, between 1990 and 1992, carried out by expert committee on non-communicable disease (NCD), a prevalence of hypertension was found to be 11.1% in males and 11.2% in females[5]. Okojie and co- workers reported a prevalence of 14.6%[6] and 34.7%[7] among market women and executives respectively in Benin City, while Oviasu found a

prevalence of 5.9% in a rural community in Mid – Western Nigeria[8].

A number of risk factors have been identified as aggravating hypertension. These include obesity, tobacco, excessive alcohol, stress, lack of exercise and salt intake[9,10]. Occupation has an influence on man's state of health, being either positive or negative. As far back as the early part of the 18th century, Bernadino Ramazzini set into motion a drive for the recognition of the role of occupation in the dynamics of health and disease[11].

The banking industry, which is very demanding of its workforce, as evidenced by its long banking hours, with little physical activity could predispose bank workers to developing hypertension. The focus of this study is therefore to determine the knowledge and prevalence of risk factors of hypertension among workers in banking industry in Benin City, Edo- State.

Based on the findings of the study relevant recommendations will be made to authorities to ensure work condition, which will reduce the exposure of their workforce to risk of hypertension.

Materials and Methods

The study took place between August 2002 and December 2002 among workers in the banking industry in Benin – City, which is made up of 3 local government areas. It is the state capital and the commercial nerve centre of Edo State and thus has a large compliment of banks. The study design was cross- sectional.

A simple random sampling method was used for selection of banks. A sampling frame of all the banks in Benin – City was prepared and 8 banks were selected from 32 banks using ballot system. Using a prevalence of 11.2%,[5] the required sample size was 153.

A structured questionnaire was used to collect information on demographic data, knowledge, prevalence of risk factors of hypertension, and knowledge of complication of hypertension. Some dummy questions were included in the section on the knowledge about individual risk factors of hypertension such as excessive sleep and drinking too much water. This is to ensure that the options provided were not too leading. The questionnaire were self – administered and was pretested in a community bank which was also located in Benin – City but not part of the sampling frame.

The blood pressure, weight and height of subjects were measured. The sphygmomanometers, weighing scales and meter rule used were all standardised. The blood pressure was measured using Accoson mercury sphygmomanometer. It was measured while at work. For accuracy of measurement the following steps were adopted.[11] The worker was rested for at least 5 minutes in a sitting position with the arm rested on a table such that the middle of the right arm was about the level of the heart. Any clothing was removed from the arm. The cuff was inflated, palpating the radial artery and the inflation was continued until 20 – 30 mmHg above the disappearance of the radial pulse. The stethoscope diaphragm was placed over the brachial artery in the ante cubital fossa and the cuff deflated, allowing the mercury to fall gradually, about 2mmHg per second. The first sound (korotkoff 1) was taken as the systolic blood pressure and the extinction of all sounds (korotkoff 5) as the diastolic blood pressure. Blood pressure was recorded to the nearest 2 mmHg.

Two blood pressure readings were taken at an interval of 15 minutes and the mean of the two readings taken as the individual's blood pressure measurement.

The height was measured with a measuring tape, the subject standing erect without shoes and the back against a wall. Head coverings were removed. This was recorded in meters to two decimal points, that is, to 1cm level of accuracy. Parallex effect in height measurement was avoided by fitting the measuring tape with a sliding head- piece at right angles to the upright, which was lowered onto the subject's head.[12]

The body weight was measured with a simple bathroom scale with light clothes and without shoes. This was recorded in kilograms to one decimal point. Scale adjustment error in weight measurement was avoided by adjusting the pointer to zero with a knob or screw in the weighing scale before placing and weighing each subject. Also the scale was placed on a firm horizontal surface. The zero was checked each day and the calibration assessed by reference to an individual of known weight.

Body mass index (BMI) was calculated using the formula: Weight (Kg) divided by Height^2 (m^2) and classified thus.[13]

	BMI (kg/m^2)
Underweight	< 18.50
Normal – weight	18.50 – 24.99
Over- weight	25.00- 29.99
Obesity	≥ 30

Smokers included those who smoked regularly and at least one cigarette on the average during the previous 30 days. Non –smokers included lifetime abstainers and occasional smokers[14].

Alcohol consumption: This was calculated in units per week[15]. One unit of alcohol = ½ bottle of beer = 1 glass of wine = 1 shot of gin or whisky.[7]

If answer to the question do you frequently add extra salt to your food after it has been cooked is "yes" the respondents' salt intake is assumed to be positive and if answer is "No" the subject's salt intake is assumed to be negative.

Correct knowledge of what hypertension is included those who responded that hypertension is increase in blood pressure.

Knowledge of the complication of hypertension was assessed using a scale of 0- 7, where every correct option ticked by the respondents carried one mark, and a wrong option carried no mark, the knowledge was subsequently graded as follows 0 – 2 = poor knowledge, 3 – 4 = fair knowledge, 5 – 7 = good knowledge.

For the knowledge of the risk factors a scale of 0-8 was used and graded as follows; 0-3 = poor knowledge, 4- 5 = fair knowledge and 6 –8 good knowledge.

Of the 200 bankers who were given questionnaire 192 returned their questionnaire giving a response rate of 96%. The respondents were informed that their responses would be in strict confidence, hence eligibility to participate in the study was based on the respondents' willingness to take part.

Results

A total of 192 bank workers in Benin- City were involved in the study. The mean age of the workers was 33.32±7.98. (Table 1**)**

There were more males (66.7%) than females (33.3%) in the study (Table 1). One hundred and twenty – four respondents (64.6%) were junior staff while 68 (35.4%) were senior staff.

The prevalence of hypertension in this study population was 34 (17.7%), 28(14.6%) of the respondents knew they had hypertension, while 158 (82.3%) knew they were not hypertensives. Six (3.1%) of the respondents were discovered to have hypertension on screening.

On the knowledge of hypertension, 93 (48.4%) of the respondents had a correct knowledge of hypertension, 77 (40.1%) had incorrect knowledge of hypertension, while 22(11.5%) did not know the meaning of hypertension. Sixty-five (33.9%) of them said hypertension was curable, 105 (54.7%) said it was not curable, while 22 (11.4%) of the workers did not know if hypertension was curable or not.

One hundred and thirty- six (70.8%) respondents had a good knowledge of the complications of hypertension while 35 (18.2%) had a fair knowledge and 21 (11.0%) had poor knowledge about complications of hypertension (Table 2). Ninety- six (75%) of the male respondents had good knowledge of the complications of hypertension while 40 (62.5%) of the female respondents had good knowledge of the complications of hypertension. (Table 3).

One hundred and twenty – five (65.1%) respondents had good knowledge, 43 (22.4%) had fair knowledge, while 24 (12.5%) had poor knowledge about risk factors of hypertension (Table 2). Eighty- seven (68%) of the male respondents and 38 (59.4%) of the female respondents had good knowledge of risk factors of hypertension. (Table 3) Forty – Six (67.7%) of the senior staff and 79 (63.7%) of the junior staff had a good knowledge of the risk factors of hypertension. (Table 3)

Eighty – five (44.3%) of the respondents admitted that they took alcohol, while 30(15.6%) of the bank workers smoked. Using BMI classification for obesity, 15 (7.8%) of the respondents were obese. Sixty- two (32.3%) respondents add extra salt to their food while 173 (90.1%) of the respondents believed their work was stressful. About half of the respondents 113 (50.9%) worked for more than 8hrs per day and 144 (75.0%) worked 6 days per week (Table 4).

Table 1: Demographic characteristics of respondents

N =192

Demographic characteristics	No	%	
Age (years)			
21- 30	96	50%	Mean age = 33.32± 7.98
31- 40	66	34.4%	
41- 50	25	13%	
51- 60	5	2.6%	
Sex			
Male	128	66.7%	
Female	64	33.3%	
Religion			
Christian	157	81.8%	
Moslem	35	18.2%	
Cadre			
Junior staff	124	64.6%	
Senior staff	68	35.4%	

Table 2: Knowledge of bankers on risks factors and complications of hypertension.

N = 192

Knowledge	Good knowledge	Fair knowledge	Poor knowledge
Knowledge on complication of hypertension	136 (70.8%)	35 (18.2%)	21 (11.0%)
Knowledge on risk factors of hypertension	125 (65.1%)	43 (22.4%)	24 (12.5%)

Table 3: Association of knowledge of risk factors, complication and demographic factors.

N = 192

Knowledge of risk factors	Demographic factors		Total
Knowledge of risk factors	Male (%)	Female (%)	
Good knowledge	87 (68%)	38 (59.4%)	125 (65.1%)
Fair knowledge	26 (20.3%)	17 (26.6%)	43 (22.4%)
Poor knowledge	15 (11.7%)	9 (14.0%)	24 (12.5%)
Total	128 (100%)	64 (100%)	192 (100%)
	$X^2 = 1.416$; df = 2; P= 0.493 Not significant.		
Knowledge of risk factors	Senior staff	Junior Staff	
Good knowledge	46 (67.7%)	79 ((63.7%)	125 (65.1%)
Fair knowledge	12 (17.6%)	31 (25.0%)	43 (22.4%)
Poor knowledge	10 (14.7%)	14 (11.3%)	24 (12.5%)
Total	68 (100%)	124 (100%)	192 (100%)
	$X^2 = 1.57$; df = 2; P = 0.455 Not significant.		
Knowledge of complications	Male (%)	Female (%)	Total
Good knowledge	96 (75.0%)	40 (62.5%)	136 (70.8%)
Fair knowledge	19 (14.8%)	16 (25.0%)	35 (18.2%)
Poor Knowledge	13 (10.2%)	8 (12.5%)	21 (10.9%)
Total	128 (100%)	64 (100%)	192 (100%)
	$X^2 = 3.57$; df = 2; P = 0.168 Not significant.		

Table 4: Prevalence of risk factors of hypertension among respondent

N=192

Risk factors	Frequency	%
Alcohol consumption		
No alcohol consumption	107	55.7%
Occasionally	17	8.9%
> 2 units/day	30	15.6%
< 2 units/day	38	19.8%
Smoking		
Yes	30	15.6%
No	162	84.4%
Presence of stress		
Yes	173	90.1%
No	19	9.9%
Working hours/day		
8 hours	79	41.1%
> 8 hours	113	58.9%
No of working days/week		
5	40	20.8%
6	144	75.0%
7	8	4.2%
Addition of extra salt to food		
Yes	62	32.3%
No	130	67.7%
Body mass index (BMI)		
Underweight (< 18.5)	4	2.1%
Normal (18.0 - 24.99)	101	52.6%
Overweight (25.0 - 29.99)	72	37.5%
Obesity (> 30)	15	7.8%

Table 5: Relationship between risk factors of hypertension and demographic factors.

Risk factors	Demographic factors		Total
Alcohol consumption	Male (%)	Female (%)	
Yes	69 (53.9%)	16 (25.0%)	85 (44.3%)
No	59 (46.1%)	48 (75.0%)	107 (55.7%)
	X^2 = 14.45; df = 1 ; P = 0.000 (Significant)		
Smoking	Male (%)	Female (%)	
Yes	27 (21.1%)	3 (4.7%)	30 (15.6%)
No	101 (78.9%)	61 (95.3%)	162 (84.4%)
Total	128 (100%)	64 (100%)	192 (100%)
	X^2 = 8.71; df = 1 ; P = 0.003 (Significant)		
Obese	Seniors	Juniors	
Yes	9 (13.2%)	6 (4.8%)	15 (7.8%)
No	59 (86.8%)	118 (95.2%)	177 (92.2%)
Total	68 (100%)	124 (100%)	192 (100%)
	X^2 = 4.299 ; df = 1 ; P= 0.038 (Significant)		
Addition of extra salt to food	Males (%)	Females(%)	
Yes	42 (32.8%)	20 (31.3%)	62 (32.3%)
No	86 (67.2%)	44 (68.7%)	130 (67.7%)
Total	128 (100%)	64 (100%)	192 (100%)
	X^2 = 0.048; df = 1: P = .827 (Not significant)		

More male respondents (53.9%) took alcohol than female (25%) and this difference was found to be statistically significant (X^2 = 14.45; df = 1 P= 0.000) Table 5. More males (21.1%) than females (4.7%) smoked. This difference was also found to be statistically significant. (X^2 = 8.71; df = 1: P< 0.003). More of the senior staff (13.2%) were found to be obese than the junior staff, (48%) and this difference was found to be statistically significant (X^2= 4.299; df = 1: P< 0.038). (Table 5) More males added extra salt to their food. This difference was not found to be statistically significant. (X^2= 0.048; df =1; P= 0.827).

Discussion

The bank workers were relatively young as 162 (84.4%) were between the ages of 21 and 40 years.

The prevalence of hypertension among the respondents was 17.7%. This is higher than the prevalence of hypertension (14.6%) found among market women[6] but much lower than that found among executives (34.7%) in Benin- City.[7]The prevalence of hypertension among the bank workers was also higher than the prevalence of 9.8% reported in the National Survey in 1992.[5]

The knowledge about hypertension (that is, hypertension is an increase in blood pressure) was observed to be poor as only 48.4% of the workers had a correct knowledge. This finding is similar to the finding of Isah and co-workers where 50% of their study population had a correct knowledge of hypertension.[16] A significant percentage of them (33.9%) said that hypertension is curable, while 11.4% of them did not know if hypertension is curable or not. This further buttresses their poor knowledge of hypertension.

The knowledge on complication of hypertension was high as 70.8% of them had correct knowledge of complications of hypertension, while 18.2% of them had fair knowledge of the complications. This is contrary to the findings of a study in Udo community in Edo-State.[17] More of the males (75.0%) had a good knowledge of the complication of hypertension than the females (62.5%) although this was not found to be statistically significant.

Over half of the respondents (65.1%) had a good knowledge about the risk factors of hypertension. More males (68%) had a good knowledge of risk factors of hypertension than females (59.4%). This difference was not found to be statistically significant (X^2 = 1.416; df = 2: P = 0.493). This is at variance with a study in Udo Community in Edo- State Nigeria where the knowledge of the risk factors of hypertension was found to be significantly higher in the males (P < 0.05)[17]. More of the senior staff had good knowledge about risk factors of hypertension than junior staff. This difference was again not significant (X^2= 1.57; df = 2: P = 0.455).

More males than females consumed alcohol, smoked and added extra salt to food and this was statistically significant for only alcohol and smoking. (Table 5) The prevalence of obesity in the study was found to be 7.8%. This is higher than the findings of a study in Udo Community in Edo –State, Nigeria (5.6%),[17] but slightly lower than that reported by Okojie et al (8.4%) among senior executives.[7] The prevalence of alcohol consumption among bank workers (44.3%) was found to be similar to the findings of a study in Udo Community in Edo – State (41.7%).[17] The prevalence of smoking among the

respondents was 15.6%. This is similar to the findings of the study in Udo Community in Edo State, Nigeria[17] but, higher than that reported (8.9%) by the National survey on Non – communicable diseases.[9] This higher prevalence of alcohol consumption among the bank workers may be as a result of job stress as a majority (90.1%) of the respondents admitted that they have stress at their job.

In conclusion, this study has shown that there is a high prevalence of the risk factors of hypertension among the study population despite their good knowledge about these risk factors and the complications of hypertension.

Therefore, there is a need for rigorous health education on risk factors avoidance and reduction among bank workers.

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