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ABSUMSAJ

THE KNOWLEDGE, ATTITUDE, AND PREVALENCE OF HYPERTENSION AMONG AUTOMOBILE WORKERS IN ABA, ABIA STATE

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ABSTRACT

INTRODUCTION

Hypertension is a chronic medical condition in which the blood pressure in the arteries is elevated. It is one of the most common worldwide diseases affecting humans and is a major risk factor for stroke, myocardial infarction, vascular disease and chronic kidney disease.

METHODS AND MATERIAL

This is analytical cross sectional study on the knowledge, attitude and prevalence of hypertension among automobile workers in Aba, Abia state. It was conducted using a self administered questionnaire; collated data was analyzed using statistical package for social science (SPSS) version 20 and discussion subsequently done. Several studies and research have been done in relation to this topic and results compared and contrasted.

RESULTS

A sample size of 281 automobile workers was used for the study. Majority (25.6%) of the respondent were within 26-30 years. Most of them were married (54.8%), 44.8% were single and 0.4% widowed. Majority of the respondents (95.4%) were Ibos. Also, 96.1% were Christians and 80.1% attained secondary level of education. Majority (94.6%) of them are from monogamous family. Those that have heard of hypertension are 85.1%. Majority of them (66.5%) did not know the normal blood pressure, 33.5% know what it is while 89.3% know the complications of hypertension. Most of the respondents (76.5%) agreed that regular blood pressure check helps manage hypertension, 78.3% agreed that antihypertensive drugs help control hypertension, majority (71.5%) also agreed that stress significantly affects blood pressure level and 64.8% agreed that diet and regular exercise helps control hypertension.

Also, statistically significant association was found between Alcohol status and Ethnicity, Religion and Number of children.

CONCLUSION

There is a high prevalence of diastolic hypertension among automobile workers, their attitude towards regular blood pressure checking in the management of hypertension is poor and they prefer to be ignorant of their blood pressure level.

INTRODUCTION

Hypertension, also known as high blood pressure, is one of the most common non communicable diseases affecting a large percentage of adult individual worldwide. It is a global public health challenge. Hypertension is a chronic medical condition in which the blood pressure in the arteries is elevated. Hypertension is one of the most common worldwide diseases affecting humans and it is a major risk factor for stroke, myocardial infarction, vascular disease and chronic kidney disease.[1] Hypertension is a common condition in which the long-term force of the blood against the artery walls is high enough that it may eventually cause health problems, such as heart disease.

Hypertension is defined as the elevated sustained systolic blood pressure of 140mmHg or more, or a diastolic pressure of 90mmHg or more.[2] Diagnosis is made by accurately measuring the patient's blood pressure, performing a focused medical history and physical examination, and obtaining result in a routine laboratory.[3]

The risk factors for hypertension include behavioral risk factors, socioeconomic risk factors and metabolic risk factors.[4] The behavioral risk factors include consumption of food containing too much salt and fat, and not eating enough fruits and vegetables; harmful levels of alcohol use; physical inactivity and lack of exercise; and poor stress management. These behavioural risk factors are highly influenced by peoples working and living conditions. The socioeconomic risk factors include globalization; urbanization; ageing; income; education; and housing. The metabolic risk factors include obesity; diabetes; and raised blood lipids. Other factors include genetic factors; malformation of blood vessels; and preeclampsia

Blood pressure is a product of cardiac output (the amount of blood pumped by the heart) and peripheral resistance (the amount of resistance to blood flow in the arteries). High blood pressure may be due to elevated cardiac output, normal peripheral resistance; normal cardiac output, elevated peripheral resistance; elevated cardiac output and peripheral resistance.

Peripheral resistance is determined by small arterioles, not by the large arteries or capillaries, because the walls of the small arterioles contain smooth muscle cells which respond to sympathetic nerve stimulation. The sympathetic nervous system is important in the regulation of blood pressure

responses, over a short term, to stressful situations and physical exercise. The Renin-angiotensin-aldosterone system too has a major role in the control of blood pressure.

It is also worthy of note that this menace; hypertension, has no specific/notable signs and symptoms (except for headaches and body weakness) and as such, can remain undetected. One can have high blood pressure for years without any symptoms. Even without symptoms, damage to the heart and blood vessels continue and can be detected. Uncontrolled high blood pressure increases your risk of serious health problems, including heart attack and stroke.[1]

According to American Heart Association (AHA), hypertension affects approximately 86 million adults (≥20 years) in the United States. It is a major risk for stroke, myocardial infarction, vascular disease and chronic kidney disease.

The World Health Organization (WHO) estimates that more than 30 million people in African present with hypertension.[5] The WHO also predicts that if the condition is not curbed by 2020, three quarters of all deaths in Africa could be attributable to hypertension.[5]

Globally, cardiovascular diseases account for approximately 17 million deaths a year, nearly one-third of the total.[6] Of these, complications of hypertension account for 9.4 million deaths worldwide every year.[7] Hypertension is responsible for at least 45% of deaths due to heart disease, and 51% of deaths due to stroke.[6]

According to a study carried out in Nepal, there is the need for awareness raising interventions and prior training to work for raising the awareness on occupational safety and health among the workers, with an aim of promoting the health and well-being of the workers.[8] The prevalence of hypertension among workers in ECOWAS Member States is quite high.[9] A significant proportion of the disease is undiagnosed, severe, and complicated. While better than that of the general population, the awareness, the treatment, and the control of the disease is low. Workers have little knowledge of the disease, and they infrequently undergo a medical check-up. Occupational health programs should aim to improve the general awareness of workers, promote healthy behaviour, screen for the risk factors, and institute integrated control of non-communicable diseases.[9] The clustering of risk factors, co-morbidities, and general low awareness warrant an integrated and multisectoral approach. Also, models for workplace health programmes aiming to improve cardiovascular health should be extended to the informal sector workers.[9]

This persistent high blood pressure is a major risk factor for the development of cardiovascular diseases (like coronary heart disease, stroke, heart failure, atrial fibrillation, peripheral vascular disease), vision loss, chronic kidney disease and dementia. All these reduce the life expectancy of any individual.

In a study conducted on hypertension knowledge among non-academic employees of the Niger Delta University, Bayelsa State, Nigeria, knowledge assessment was performed using 9 items adapted from Oliveria et al 2004. The items (eight positives and one negative) were scored in a 5-point likert scale ranging from 'strongly agree' to 'strongly disagree'. The sum score for knowledge varying from 1 to 45 was used to compute percentage knowledge score. Thereafter, the variable was categorized into adequate knowledge (≥60%) and inadequate knowledge (<60%). Few studies have been conducted on the knowledge of the etiology and management of hypertension among workers. In one of such studies carried out on Hypertension knowledge among non-academic employees of Niger Delta University, Bayelsa State, Nigeria, hypertension was caused by undue thinking, stress, or worries and 65% did not know it required long treatment.[10] According to a study conducted on the knowledge and perception of stroke amongst hospital workers in Abeokuta, Nigeria, 89% correctly identified hypertension as a risk factor for stroke while 15% attributed it to evil spirits or the will of God.[11] However, 29% of the workers (of whom nearly a quarter were clinical workers) could not identify the brain as the organ affected. While 61% preferred hospital treatment, 13% preferred spiritual treatment. Higher levels of education, and being a clinical worker were significantly associated with adequate knowledge of stroke.[11]

Similarly, senior and junior staff of the University of Calabar, Nigeria had poor knowledge of the risk factors of ischemic heart disease.[12] Only 6-42% knew obesity and sedentary lifestyle, and oral contraceptives were risk factors for ischemic heart disease. In another study on the diagnostic approach and treatment of hypertension in healthcare workers in Abidjan's district (Ivory Coast), 40% considered hypertension as a leading non-communicable disease cause of death; even less knew about heart attack, diabetes, or cancer as leading cause of deaths.[13] There were sometimes a disconnection between the perception and the reality of being overweight or obese. According to a study on the blood pressure and body mass index among Jos University Teaching Hospital staff, whereas 72% of health workers in a university teaching hospital were found to be overweight or obese, only 27% perceived themselves to be overweight.[14]

In a study conducted on the awareness, knowledge, and attitude of older Americans about high blood pressure, most respondents (68%) indicated that high blood pressure was not at all a serious health concern; most of them reported having a normal blood pressure.[15] Their lack of concern is consistent with the finding that only 14% of those who reported their blood pressure to be normal believed they were likely to ever develop high blood pressure.[15] 68% patients agree that exercise can be beneficial in reducing hypertension, 42% think that regular checking of blood pressure is important, and 32% think that regular use of medication is beneficial for controlling hypertension.[16] Regarding perceptions of patients toward diet modification, the study results show that most of the patients disagree that healthy diet alone is effective in the control of hypertension. They feel they eat healthy diet, fruits could only help them to control hypertension. More than half of them agree that they enjoy low fat meal, try to eat vegetables daily, eat their food with little or no salt, and try to decrease their intake of animal products and saturated fat. According to a study on the knowledge and perceptions related to hypertension, lifestyle , behavior modifications and challenges facing hypertensive patients, some patients considered that the cost of some types of diet is a barrier to modifying their usual meal due to limited resources for them.[17]

In a study carried out in Nepal among automobile repair artisans, a little more than half of the study population had income of up to five minimum wages, but yet did not have the habit of measuring their blood pressure.[8] It was verified that little more than half (58.9%) of the study population did not practice regular physical activity, less than a quarter (22.6%) were currently doing, and 18.5% stopped. Of those who practiced physical activity, soccer was the most cited, followed by gymnastics. The frequency of activities was slightly less than half to 1-2 times per week.[8]

According to another study, most of the participants agreed that one should know his/her blood pressure, blood sugar level, serum cholesterol level and one should maintain normal body weight and should do regular exercise.[18] They were also aware that healthy lifestyle could prevent cardiovascular disease.[18] However, majority of the participants were not practicing healthy lifestyle.

Also, in another study, while 58.8% (141) of the study population possessed good knowledge of their antihypertensive drugs, only 32.1% (77) of the study population showed good compliance to medications.[19] The majority of our hypertensive patients still have a poor knowledge of their disease with a significant negative impact on compliance with medications.[19]

According to the World Health Organization, an estimated 36 million of the 57 million worldwide deaths were due to non-communicable diseases. These diseases included primary cardiovascular diseases, cancers and diabetes. This also included approximately 9 million deaths before the age of 60 with nearly 80% of these deaths occurring in developing countries.[20] Hypertension had a prevalence of 26.4% of the worldwide adult population in 2000 (26.6% in men and 26.1% in women). The total number of hypertensive adults was 972 million: 333million were in more economically developed countries, and 639 million were in less economically developed countries.[21]

Furthermore, hypertension is one of the leading causes of premature death worldwide, accounting for 7.6million deaths in 2001.[22] The number of adults with hypertension in 2025 was predicted to increase by 60% to a total of 1.56billion adults.[21]

Hypertension is the most common chronic disease with sudden onset, and it is called the 'silent killer' because it progressively and permanently damages organs. Hypertension is as common in Turkey as it is worldwide.[24] The Turkish hypertension prevalence study found that the prevalence of hypertension was 31.8% (27.5% in men and 36.1% in women). In adults aged 18 years and above, only 40.7% were aware of their disease and 31.1% were on antihypertensive treatment. A review of the prevalence among adults from 1990-2009 showed combined prevalence of 22% and range from a minimum of 12.4% to a maximum of 34.8%.[24] According to data from the 2004 National burden of disease study, controlling high blood pressure in adults aged 30years and above would prevent death in 20.4% of men and 30.8% of women.[25]

In a study carried out in Nigeria, an overall hypertension prevalence of 28.9% was estimated, with a prevalence of 29.5% among men and 25.0% among women.[26] A prevalence of 30.6% and 26.4% was estimated among urban and rural dwellers, respectively.[26] About 20.8million cases of hypertension in Nigeria was estimated among people aged at least 20 years in 2010, with a projected increase to 39.1million cases among the same population in 2030.[26]

In a similar study conducted in southwest Nigeria, an overall crude prevalence of 21% was estimated in the respondent population, 16% of which were already on treatment with medicines.[27]

Although more than 80% of the global burden of cardiovascular disease occurs in low-income and middle-income countries, knowledge of the importance of risk factors is largely derived from developed countries. Therefore, the effect of such factors on the risk of coronary heart diseases in most regions of the world is unknown.[28] Hypertension is a leading risk factor for coronary, cerebral

and renal disease. The prevalence of hypertension increases with advancing age to the point where more than half of people aged 60-69 years old and approximately three-fourth of those aged ≥ 70 years are affected in the united states.[29] However, the burden of the disease among younger populations in developing countries is unknown and maybe considerable.[30]

The economic development and changes in lifestyle and diet may explain the high prevalence of hypertension whereas, urbanization was not found to be correlated with hypertension in contrast to data from other developing countries.[31]

Older age, male gender, being unmarried, being overweight or obese, hypercholesterolemia, lower education and diabetes but not living in urban areas were associated with prevalence of hypertension. Similarly all these variables were associated with Pre-hypertension except educational level, marriage and dwelling in an urban or rural residential area.

Unawareness was found to be associated with male gender, younger age and lower education. More obese, centrally obese and diabetic patients were aware of their hypertension compared with normal subjects.[32]

METHODOLOGY

This chapter discusses the study area, population and design, in addition to sample and sampling technique, instrument, method of data collection and analysis. Information was collected on the knowledge, attitude, prevalence, and risk factors of hypertension among the automobile workers.

The sample size was determined using the fomula; $N = (Z^2PQ)/D^2$ which gave us 254.92. Hence, the minimum sample size was adjusted to 255. Accounting for loss to Attrition, 10% of 255 gives us 26.

The sampling technique used was the simple random technique, where automobile mechanics of all socio economic classes and ages were randomly selected and questionnaires duly administered. Data was collected using questionnaires which were both self-administered and interviewer- administered, depending on the literacy level of the individual. The questionnaires were mixed, comprising both open-ended and close-ended questions. Data was analyzed using Statistical Package for Social Science (SPSS) software. Data generated were summarized using tables and Frequency distribution of various variables. Descriptive analysis was done by calculating relevant means and standard deviation for quantitative

variables (age, number of children) while qualitative variables (including gender, highest level of education) were analyzed using proportions.

RESULT

A total of 281 questionnaires were distributed to the study participants and all were recovered giving a 100% recovery and the findings are presented below in tables.

TABLE 1: SOCIO-DEMOGRAPHIC DATA OF RESPONDENTS

VARIABLE	FREQUENCY (N=281)	PERCENTAGE (%)
Age (in years)		
≤25	59	21.0
26-40	**167**	**59.4**
>40	55	19.6
Marital status		
Single	126	44.8
Married	**154**	**54.8**
Widowed	1	0.4
Ethnicity		
Igbo	**268**	**95.4**
Yoruba	7	2.5
Hausa	2	0.7
Other	4	1.4
Religion		
Christianity	**270**	**96.1**
Islam	6	2.1
Traditional	4	1.4
Others	1	0.4
Educational status		
None	7	2.5
Primary	41	14.6
Secondary	**225**	**80.1**

Tertiary	8	2.8
Family type	**n=204**	
Monogamous	193	94.6
Polygamous	11	5.4
Number of Children	**n= 206**	
None	35	17.0
1 - 3	**109**	**52.0**
>3	64	31.0

In table 1, 59 (21%) respondents were aged <25 years, 167 (59.4%) were aged within 26-40years, while 55(19.6%) were aged >40years. One hundred and fifty-four (54.8%) respondents were married while 126 (44.8%) respondents were single, with only 1(0.4%) respondent being widowed. Most respondents 268 (95.4%) were Ibos. Two hundred and seventy (96.1%) respondents were Christians, 6 (2.1%) were Muslims, 4 (1.4%) were traditionalists while only 1 (0.4%) did not practice any of the above religions. Only 8 (2.8%) had tertiary education, 225 (80.1%) had secondary education while 7 (2.5%) had no formal education. Majority 193 (94.6%) respondents were from a monogamous family setting while 11 (5.4) were from polygamous family setting, 35 (17%) respondents had no children, 109 (52%) have 1-3 children while 64 (31%) had >3 children.

TABLE 2: KNOWLEDGE OF HYPERTENSION

VARIABLE	FREQUENCY (N=281)	PERCENTAGE (%)
Have you heard of hypertension before ?		
Yes	**239**	**85.1***
No	42	14.9
What do you understand by hypertension?		
When you are tensed up	16	5.7
When you have headache	20	7.1
Increase in blood pressure	**165**	**58.7**

I don't know	80	28.5
How did you get to know about it?	**n= 239** **164**	**68.6***
Friends & Family	44	39.0
Mass Media	14	5.9
Medical Outreach	17	7.1
Hospital Outreach		
Do you know the normal blood pressure?		
Yes	94	33.5
No	**187**	**66.5***
Do you know the complications of hypertension? *		
Yes	30	10.7
No	**251**	**89.3***

On the knowledge of hypertension among automobile workers, 239(85.1%) respondents have heard of hypertension before while 42(14.9) have not. Sixteen (5.7%) respondents understand it as 'being tensed up', 'headache' 20(7.1%), 'increase in blood pressure' 165(58.7%), 'I don't know' 80(28.5%). One hundred and sixty-four (68.6%) respondents heard of hypertension from their family and friends, 44 (39.0%) heard of it from the mass media, 14 (5.9%) heard of it from medical outreach, while 17 (7.1%) heard of it from a hospital visit. Those that know the normal blood pressure are 94(33.5%), while those that do not know the normal blood pressure are 187(66.5%). Those that have the knowledge of the complication of hypertension are 30(10.7%), while those that do not have the knowledge are 251(89.3%).

TABLE 3: THE ATTITUDE TOWARDS HYPERTENSION

VARIABLE	**FREQUENCY (N=281)**	**PERCENTAGE (%)**

Regular blood pressure check helps manage hypertension		
Agree	**215**	**76.5***
Indifferent	53	18.9
Disagree	13	4.6
Antihypertensive drugs control hypertension		
Agree	**220**	**78.3***
Indifferent	55	19.6
Disagree	6	2.1
Stress significantly affects blood pressure level		
Agree	**201**	**71.5***
Indifferent	62	22.1
Disagree	18	6.4
Diet and regular exercise helps control hypertension		
Agree	**182**	**64.8***
Indifferent	85	30.2
Disagree	14	5.0

In table 3, only 215(76.5%) respondents admitted that regular blood pressure checks helps manage hypertension, while 53(18.9%) are indifferent and 13(4.6%), disagree to this. Also 220(78.3%) respondents agreed that antihypertensive drugs can be used to control hypertension while 55(19.6%) are indifferent and 6(2.1%) do not agree to this. Two hundred and one (71.5%) respondents agreed that stress significantly affects blood pressure level while 62(22.1%) are indifferent and 18(6.4%) disagree to this. One hundred and eighty-two (64.8%) respondents agreed that diet and regular exercise help to control hypertension, 85(30.2%) are indifferent while 14(5%) disagree to this.

TABLE 4: THE PREVALENCE OF HYPERTENSION

SYSTOLIC BLOOD PRESSURE

VARIABLE	FREQUENCY (N=281)	PERCENTAGE (%)
<140mmHg	240	85.4
≥140mmHg	41	14.6

DIASTOLIC BLOOD PRESSURE

VARIABLE	FREQUENCY (N=281)	PERCENTAGE (%)
<90mmHg	133	47.4
≥90mmHg	148	52.7

In table 4, 240 (85.4) respondents had systolic blood pressure of <140mmHg while 41 (14.6) had systolic blood pressure of ≥140mmHg. Also, 133 (47.4) respondents had diastolic blood pressure of <90mmHg while 148 (52.7) had diastolic blood pressure of ≥90mmHg.

TABLE 5: ASSESSMENT OF RISK FACTORS OF HYPERTENSION

VARIABLE	FREQUENCY (N=281)	PERCENTAGE (%)
Do you Smoke?		
Yes	13	4.6
Yes, Occasionally	31	11.1
Not at all	**237**	**84.3***
Have you smoked at least 100 Cigarettes in your lifetime?		
Yes	15	5.3
No	**263**	**93.6***
Uncertain	3	1.1
How often do you take Alcohol?		
Daily	31	11.0
Occasionally	**199**	**70.9***
Not at all	51	18.1
Is any of your family member hypertensive?		
Yes	44	15.7
No	**237**	**84.3***

In table 5, 237 (84.3%) respondents do not smoke while about 31 (11%) smoke occasionally and 13(4.6%) of the respondents smoke daily. Also, about 15(5.3%) respondents have smoked at least 100 cigarettes in their lifetime, while 3(1.1%) are uncertain and 263(93.6%) have not smoked at least 100 cigarettes in their lifetime. In terms of alcohol consumption, majority take alcohol occasionally 199(70.9%), 31(11.0%) take alcohol daily and 51(18.1%) do not take alcohol at all. The results also showed a positive family history of hypertension amongst first and second degree relatives in 44(15.7%) respondents while 237(84.3%) respondents do not have any family history of hypertension.

TABLE 6: SOCIAL HABITS RECATEGORISED

Social habits (Smoking and Alcohol Consumption) were re-categorized as follows;

Social Habit	FREQUENCY (N=240)	PERCENTAGE (%)
Smoking		
Smokers	**44**	**15.7**
Non-smokers	**237**	**84.3**
Alcohol Consumption		
Alcohol consumers	**237**	**81.9**
Non-alcohol consumers	**51**	**18.1**

TABLE 7: TEST OF ASSOCIATION BETWEEN SOCIO-DEMOGRAPHICS AND SMOKING

VARIABLES	ALCOHOL CONSUMERS N=44 (%)	NON-ALCOHOL CONSUMERS N=237 (%)	χ^2	p-value
Age				
≤25	6 (10.2)	53 (89.8)	9.396	0.094
26-30	8 (11.1)	64 (88.9)		
31-35	11 (19.6)	45 (80.4)		
36-40	11 (28.2)	28 (71.8)		
41-45	3 (9.4)	29 (90.6)		
>45	5 (21.7)	18 (78.3)		
Marital Status				
Single	14 (11.1)	112 (88.9)	3.862	0.145
Married	30 (19.5)	124 (80.5)		
Widowed	0 (0.0)	1 (100.0)		
Ethnicity				
Igbo	41 (15.3)	227 (84.7)	1.546	0.672
Yoruba	2(28.6)	5 (71.4)		
Hausa	0 (0.0)	2 (100.0)		
Others	1 (25.0)	3 (75.0)		

Religion				
Christianity	41 (15.2)	229 (84.8)	3.808	0.283
Islam	1 (16.7)	5 (83.3)		
Traditional	2 (50.0)	2 (50.0)		
Others	0 (0.0)	1 (100.0)		
Educational Status				
None	2 (28.6)	5 (71.4)	5.088	0.165
Primary	10 (24.4)	31 (75.6)		
Secondary	32 (14.2)	193 (85.8)		
Tertiary	0 (0.0)	8 (100.0)		
Family Type				
Monogamous	36 (18.7)	157 (81.3)	0.003	0.969
Polygamous	2 (18.2)	9 (81.8)		
Number of Children				
None	7 (20.0)	28 (80.0)	3.823	0.701
1	3 (21.4)	11 (78.6)		
2	9 (20.9)	34 (79.1)		
3	8 (16.0)	42 (84.0)		
4	7 (22.6)	24 (77.4)		
5	1 (4.8)	20 (95.2)		
>5	3 (25.0)	9 (75.0)		

Table 7 shows cross tabulation of sociodemographic characteristics and smoking. No statistically significant association was found between smoking status and sociodemographic characteristics.

TABLE 8: TEST OF ASSOCIATION BETWEEN SOCIO-DEMOGRAPHICS AND ALCOHOL CONSUMPTION

VARIABLES	ALCOHOL CONSUMERS N=230 (%)	NON-CONSUMERS N=51 (%)	χ^2	p-value
Age				
≤25	42 (71.2)	17 (28.8)	7.293	0.200
26-30	61 (84.7)	11 (15.3)		
31-35	48 (85.7)	8 (14.3)		
36-40	31 (79.5)	8 (20.5)		
41-45	29 (90.6)	3 (9.4)		
>45	19 (82.6)	4 (17.4)		
Marital Status				
Single	100 (79.4)	26 (20.6)	1.126	0.569
Married	129 (83.8)	25 (16.2)		
Widowed	1 (100.0)	0 (0.0)		
Ethnicity				
Igbo	225 (84.0)	43 (16.0)	19.715	**0.0002****
Yoruba	3(42.9)	4 (57.1)		
Hausa	0 (0.0)	2 (100.0)		
Others	2 (0.0)	2 (0.0)		
Religion				
Christianity	224 (83.0)	46 (17.0)	15.129	**0.002***
Islam	2 (33.3)	4 (66.7)		
Traditional	4 (100.0)	0 (0.0)		
Others	0 (0.0)	1 (100.0)		
Educational Status				
None	4 (57.1)	3 (42.9)	5.992	0.112
Primary	32 (78.0)	9 (22.0)		
Secondary	189 (84.0)	36 (16.0)		
Tertiary	5 (62.5)	3 (37.5)		
Family Type				

Monogamous	155 (80.3)	38 (19.7)	0.756	0.385
Polygamous	10 (90.9)	1 (9.1)		
Number of Children				
None	24 (68.6)	11 (31.4)	13.034	**0.042***
1	12 (85.7)	2 (14.3)		
2	36 (83.7)	7 (16.3)		
3	46 (92.0)	4 (8.0)		
4	26 (83.9)	5 (16.1)		
5	15 (71.4)	6 (28.6)		
>5	7 (58.3)	5 (41.7)		

*** Statistically Significant**

Table 8 shows cross tabulation of sociodemographic characteristics and smoking. Statistically significant association was found between Alcohol status and Ethnicity, Religion and Number of children.

DISCUSSION

This study was done to assess the prevalence of hypertension among automobile workers in Aba, Abia State. Hypertension is defined as the elevated sustained systolic blood pressure of 140mmHg or more, or a diastolic pressure of 90mmHg or more.[2] It is a global public health challenge. The results of the data analysis are discussed below.

Majority (80.4%) of the respondents were aged ≤40years and this is similar to a study conducted among automobile repair artisans in Nepal where 76.8% of respondents were aged <35years[7]. This reveals that the occupation of respondents in our study is done by the productive age group (the working population) of the country and as such, their health is paramount. Also, the percentage of illiterates in this study (2.5%) is low and this is similar to the study carried out in Nepal were the percentage of illiterates was found to be 6.8% [8] . In this study, a greater percentage (80.1%) of respondents have had secondary school

education unlike in a study carried out among automobile workers in India were only about 43% of respondents had secondary school education [8, 33].

The level of education among these automobile workers plays a key role in the explanation of the varying levels of knowledge exhibited. In this study, the knowledge of the complication of hypertension are 10.7% while those that do not have the knowledge are 89.3% and this finding is similar to a study done in Abidjans district (Ivory coast) where 40% considered hypertension as a leading cause of non-communicable disease and even less knew about heart attack, diabetes, or cancer as leading causes of deaths.[13] In contrast with our finding too is that gotten from a study conducted among hospital workers in Abeokuta, Nigeria where 89% correctly identified hypertension as a risk factor for stroke. Also important is the fact that a great majority (89.3%) of respondents in our study had no knowledge of the complications of hypertension. This could be explained by the very low percentage (2.8%) of respondents that had tertiary education.

In this survey on the attitude, 64.8% of the respondent agreed that regular exercise helps to control hypertension and this finding is similar to a study conducted among older Americans where 68% of patients agree that exercise can be beneficial in reducing hypertension [16].
Also, 76.5% respondent agreed that regular blood pressure checks helps manage hypertension and this study is in contrast with a study conducted among older Americans where 42% think that regular checking of the blood pressure is important in controlling hypertension [16].
Furthermore, 78.3% agreed that use of antihypertensive drugs helps in the control of hypertension and this is in contrast with a study conducted among older Americans where 32% think regular use of medication is beneficial for controlling hypertension [16].
In this survey, majority (25.6%) of the respondent population were between the ages 26-30 years old and many of ages < 25 year old and majority (52.7%) of the respondents had elevated diastolic blood pressure of >90mmHg. This shows that the prevalence of elevated diastolic blood pressure among the respondent population of automobile workers in aba is high. This finding is supported by a similar study carried out in Nigeria where about 20.8 million cases of hypertension in Nigeria was estimated among people aged at least 20 years in 2010 with a projected increase to 39.1million. In a similar study conducted in southeast Nigeria, an overall crude prevalence of 21% was estimated in the respondent population, 16% of which were already on treatment with medicines.[27]; while in this study, just a small number of the respondents

were already on anti-hypertensive medications or have taken antihypertensive medication before. Unawareness was found to be associated with male gender, younger age and lower education [32]. This description constitutes the majority of the respondent population in this study.

The economic development and changes in the lifestyle and diet may explain the high prevalence of hypertension, whereas, urbanization was not found to be correlated with hypertension in contrast to data from other developing countries [31]. In this study, majority of the respondent population of automobile workers in aba are in the low socio-economic demography, their lifestyle patter shows high alcohol consumption (70.9%) and a relatively low tobacco consumption (smoking); 84.3% of the respondents do not smoke at all. However, 4.6% of the respondents smoke daily and about 5.3% have smoked at least 100 cigarettes in their lifetime. These lifestyle or habits can predispose one to hypertension and its sequel like cardiovascular, renal diseases. Hypertension is the leading risk factor for coronary, cerebral, and renal disease [29].

CONCLUSION

Hypertension is a "silent killer" disease with high morbidity and mortality rate.
According to the findings in this study, although majority of the respondent have knowledge of hypertension, but this knowledge is poor and many don't have any knowledge at all 80 (28.5%).
The attitude towards regular blood pressure checking in the management of hypertension among automobile workers is poor and many want to remain ignorant of their blood pressure level.
Regular use of medications among known hypertensives is poor and needs to be improved.

RECOMMENDATION

The following are recommended after the analysis of the collated data:

1) General public health enlightenment programs by health workers should be organized.
2) There should be provision of opportunities for regular B.P check at primary health care centers as this will aid the diagnosis and treatment monitoring of hypertension.
3) There should also be public health education on the need to rest well, eat a balanced diet and exercise regularly.
4) Proper and regular use of anti hypertensive drugs among known hypertensives will help reduce morbidity and mortality rates of hypertension crisis.

5) The public should be provided with health insurance schemes e.g. Abia State Social Health Insurance Scheme.

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