

Knowledge and Exposure to Risk Factors of Systemic Hypertension among Adult Residents of Ihiagwa, Southeastern Nigeria

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ABSTRACT

Systemic hypertension can be associated with increased risk of strokes, heart attacks, atherosclerosis, kidney failure, and cerebral hemorrhage. This research was a cross-sectional descriptive study carried out to determine the knowledge and exposure to risk factors of systemic hypertension by resident adults of Ihiagwa community, Southeastern Nigeria. The simple random sampling technique was adopted to choose participants for the study. The residents that gave an informed consent to be part of the study were assembled at town halls and were interviewed using a well-structured questionnaire. An electronic sphygmomanometer was used to measure the blood pressure of the subjects. A total of 400 subjects comprising 134 (33.5%) males and 266 (66.5%) females were used for this study. Results showed that two hundred and twenty (55.0%) subjects had a high blood pressure while 140 (45.0%) had a normal blood pressure. On the question of hearing any information on hypertension, 148 (37.0%) said yes and 252 (63.0%) said no; 176 (44.0%) had knowledge of hypertension, 224 (56.0%) had no knowledge of hypertension; the level of knowledge of hypertension was high among 66 (16.5%) subjects, medium among 28 (7.0%) subjects and low among 306 (76.5%) subjects; 140 (35.0%) subjects attained primary education, 180 (45.0%) attained secondary education, and 80 (20.0%) attained tertiary education. Also 260 (65.0%) subjects responded "yes" to alcohol intake while 140 (35.0%) responded "no"; 218 (54.5%) said "yes" to tobacco smoking and 182 (45.5%) said "no". In conclusion, there was a

poor level of knowledge of hypertension and a high exposure to the risk factors of hypertension among adult residents of Ihiagwa community, Southeastern Nigeria. Adequate health promotion and an improvement of the socioeconomic conditions of people in the rural communities were recommended toward the prevention of systemic hypertension.

Keywords: Hypertension, Knowledge, Risk factors, Exposure, Blood Pressure

INTRODUCTION

Systemic hypertension is high blood pressure in the systemic arteries. ^[1] These are the vessels that carry blood from the heart to the body's tissues other than the lungs. High systemic blood pressure is usually caused by the constriction of the arterioles. This increases the peripheral resistance to blood flow, which increases the heart's workload and raises arterial pressure. ^[2] Blood Pressure is measured at its highest (systolic) and lowest (diastolic) levels. Normal systolic pressure depends on a person's age, but a maximum normal adult reading is around 140 mmHg and the upper limit for normal diastolic blood pressure is around 90 mmHg. ^[2] The term Pulse Pressure refers to the difference between the systolic and diastolic pressures. Systemic hypertension that is caused by another condition or disease is referred to as secondary. For example, high blood pressure may be caused by a narrowing of the aorta, by kidney disease that involves a

narrowing of the renal artery, or by certain endocrine disorders. [3] Systemic hypertension has no obvious symptoms of its own and may not be recognized until complications arise. Both high diastolic and systolic blood pressure are associated with increased risk of strokes, heart attacks (myocardial infarction, involving the death of some heart muscle tissue), atherosclerosis, kidney failure, and cerebral hemorrhage. [4] Risk factors for systemic hypertension include age, sex, genetic factors, ethnicity, obesity, alcohol intake and stress. [4]

Systemic Hypertension is a common risk factor for cardiovascular disease and a serious global health issue. It is the most powerful predictor of mortality in high-income and low-income countries. [5] Hypertension is an emerging public health problem in Sub Saharan Africa and urbanization is considered to favor its emergence. [6] Essential or primary hypertension, the world's leading risk factor for global disease burden, is expected to cause more than half of the estimated 17 million deaths per year resulting from cardiovascular disease worldwide. [7] Hypertension is a major controllable risk factor for heart disease and stroke, the first and third-leading causes of death among adults in the United States. [8] Untreated and uncontrolled hypertension leads to structural and functional abnormalities of cardiovascular system, which ultimately harm the vital organs of body, e.g., heart, kidneys, brain. [9] Some epidemiological studies [10-12] showed that the prevalence of hypertension has significantly increased among children and adolescents in recent years, and hypertension have affected 20 to 30% of the population worldwide.

In the past, the control and prevention of communicable diseases were emphasized, but, recently, attention has shifted to the control and prevention of non-communicable diseases, including stroke, hypertension, and coronary artery disease at the national level in view of the rising incidence of these diseases. [13] Once

regarded a problem only in high-income countries, hypertension is currently a global problem increasing the risk for cardiovascular diseases in both wealthy and poor nations. [6] Diagnosis is based on a pattern of high pressure readings rather than on a single occurrence. Primary systemic hypertension cannot be cured, but it can usually be controlled with medications and lifestyle adjustments. Medications such as beta blockers and calcium channel blockers (which relax the blood vessels) may be of help in lowering systemic blood pressure. Other medications that may be prescribed include anticoagulants (blood thinners) and diuretics (to reduce fluid retention and get rid of excess salt). Often, the best results are obtained from a combination of medications. A low salt diet and exercise program may be of help in controlling hypertension. [2] The objective of this study is to investigate the level of knowledge and exposure to the risk factors of systemic hypertension by adult residents of Ihiagwa, a rural community located in Southeastern Nigeria.

MATERIALS AND METHODS

This study was a cross-sectional descriptive study carried out in Ihiagwa, Imo state, Nigeria. The simple random sampling technique was adopted to choose participants for the study. The residents that gave an informed consent to be part of the study were assembled at town halls and were interviewed using a well-structured questionnaire. An electronic sphygmomanometer was used to measure the blood pressure of the subjects. Data was collected and uploaded into the Statistical Package for Social Sciences (SPSS version 17). Descriptive statistics was used for analysis of data.

RESULTS

A total of 400 subjects comprising 134 (33.5%) males and 266 (66.5%) females were used for this study. The subjects were all above 50 years. Table 1 showed that 12 (3%) were single, 334 (83.5%) were married and 54 (13.5%) were widows; 112 (28.0%)

were teachers, 176 (44.0%) were traders and 112 (28.0%) were farmers; 60 (15.0%) earned a high income, 166 (41.5%) earned a medium income and 174 (43.5%) earned a low income. Table 2 showed the level of knowledge of hypertension by the subjects. On the question of hearing any information on hypertension, 148 (37.0%) said “yes” and 252 (63.0%) said “no”; 176 (44.0%) had knowledge of hypertension, 224 (56.0%) had no knowledge of hypertension; the level of knowledge of hypertension was high among 66 (16.5%) subjects, medium among 28 (7.0%) subjects and low among 306 (76.5%) subjects; 140 (35.0%) subjects attained primary education, 180 (45.0%) attained secondary education, and 80 (20.0%) attained tertiary education. Table 3 showed the response of the subjects to exposure to risk factors of hypertension. The table showed that 260 (65.0%) responded “yes” to alcohol intake while 140 (35.0%) responded “no”; 218 (54.5%) said “yes” to tobacco smoking and 182 (45.5%) said “no”. In response to salt intake, 226 (56.5%) said “always”, 116 (29.0%) said “sometimes” and 58 (14.5%) said “rarely”; 102 (25.5%) subjects exercised once a month, 54 (13.5%) exercised twice a month and 244 (61.0%) did not exercise at all; 224 (56.0%) had a family history of hypertension while 176 (44.0%) did not. The level of exposure to the risk factors of hypertension was shown in Table 4.

Table 1: Socio Demographic characteristics of Respondents

Gender	n	%
Male	134	33.5
Female	266	66.5
Age		
50-60	124	31.0
61-70	174	43.5
71-80	76	19.0
Above 80	26	6.5
Marital Status		
Single	12	3.0
Married	334	83.5
Widowed	54	13.5
Occupation		
Teacher	112	28.0
Trader	176	44.0
Farmer	112	28.0
Level of Annual Income (₦)		
High (>1,000,000)	60	15.0
Medium (500,000)	166	41.5
Low (<200,000)	174	43.5

Table 2: Level of Knowledge of Hypertension

Reference Point	n	%
Heard of any Information on Hypertension		
Yes	148	37.0
No	252	63.0
Knowledge on Hypertension		
Yes	176	44.0
No	224	56.0
Attended any Health Program on Hypertension		
Yes	84	21.0
No	316	79.0
Level of Knowledge of Hypertension		
High	66	16.5
Medium	28	7.0
Low	306	76.5
Level of Educational Attainment		
Primary level	140	35.0
Secondary level	180	45.0
Tertiary level	80	20.0

Table 3: Exposure to Risk Factors of Hypertension

Alcohol	n	%
Yes	260	65.0
No	140	35.0
Tobacco Smoking		
Yes	218	54.5
No	182	45.5
Salt Intake in Food		
Always	226	56.5
Sometimes	116	29.0
Rarely	58	14.5
Exercise		
Once a month	102	25.5
Twice a month	54	13.5
Never	244	61.0
Family History		
Yes	224	56.0
No	176	44.0

The table showed that 220 (55.0%) had a high blood pressure while 140 (45.0%) had a normal blood pressure; 94 (23.5%) engaged in physical exercise while 306 (76.5%) did not; 192 (48.0%) ate mostly foods containing fats, 86 (21.5%) ate carbohydrates, 80 (20.0%) ate mostly proteins and 42 (10.5%) ate more of fruits.

Table 4: Level of Exposure to Risk Factors

Reference Point	Frequency	Percent
Blood Pressure of Subjects		
High	220	55.0
Normal	140	45.0
Engaging in Physical Exercise		
Yes	94	23.5
No	306	76.5
Class of Meal Eaten Most		
Fats	192	48.0
Carbohydrates	86	21.5
Proteins	80	20.0
Fruits	42	10.5

DISCUSSION

The level of knowledge among the adults in Ihiagwa community was found to be very low as shown in Table 2. Being a rural community, the level of education of the elderly was not very impressive as most of them stopped at primary or secondary education. This could account for the low level of knowledge of hypertension. Azuamah et al. [14] studied the occurrence of Hypertension and Diabetes Mellitus in rural communities of Southeast Nigeria and also found a low level of knowledge and awareness of hypertension. Table 4 showed the level of exposure to risk factors and the distribution of hypertension. A high percentage of the adults had a high blood pressure. This high level in the distribution of hypertension was also found in studies [15-17] conducted in other rural communities of Southeast Nigeria. A lot of factors can be found to be responsible for the high level of hypertension in rural areas of Nigeria. The level of stress and tension is high in the communities. This could be attributed to poverty, as many of the people cannot afford to put three square meals on the table. They cannot afford to live in a descent accommodation and they cannot afford the basic necessities of life. A good number of the elderly are pensioners who cry that they are being owed arrears of their pension. This has brought a lot of misery and frustration to them as they have no other means of sustaining themselves. Many complained that their children were unemployed and thus could not support themselves. They were still living under their parents' roof without jobs when they should be gainfully employed at their age. Azuamah et al. [18] discovered in their study that the death of loved ones in a family, unemployment and poverty was a great source of anxiety which aggravated the high blood pressure among rural dwellers.

Some of the women were widows who carry the burden of the entire family on their head without the support of any family member. They have to work tirelessly to be able to feed their family and train the children in

school. Also, high levels of insecurity in the communities where robberies and kidnappings occurred have had people living in fear for the life of themselves and their loved ones. The lack of adequate health care including health care facilities and health workers has left a lot of people with serious health problems that were not attended to. The lifestyle and feeding habits of the people especially the consumption of alcohol, lack of physical exercise, smoking and consumption of high levels of cholesterol were also part of the causative factors found in this study. Various studies [19-21] corroborated these risk factors and advocated a healthy lifestyle with a healthy nutrition as preventive measures for high blood pressure.

In conclusion, there was a poor level of knowledge of hypertension and a high exposure to the risk factors of hypertension among adult residents of Ihiagwa community, Southeastern Nigeria. Lack of exercise, alcohol intake, low income levels and poor diet were some of the stressors toward a high blood pressure among the residents. Adequate health promotion and an improvement of the socioeconomic conditions of people in the rural communities were recommended toward the prevention of systemic hypertension.

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