



**ASSESSMENT OF RISK
FACTORS AND
PREVENTIVE MEASURES
OF HYPERTENSION
AMONG ADULTS IN MINNA
METROPOLIS, NIGER STATE, NIGERIA**

**LAMI, GIRMACHE DARANGI¹; ABDULKADIR
NASIRU²; AISHATU MAIKUDI³; & DR. S. A.
APARA⁴**

*College of Nursing Sciences, School of Midwifery
Minna^(1, 3). Department of Geography, Federal
University of Technology, Minna Niger State².
Faculty of Education and Arts, Ibrahim Badamasi
Babangida University Lapai, Niger State⁴*

Abstract

The study was conducted to ascertain the risk factors and preventive measures of hypertension among adults in Minna Metropolis, Niger State, Nigeria. Expo-factor research design was used for the study. The population for the study was 5073 while the sample size for the study was three hundred and sixty five (365) adults. Questionnaire was used to obtain data. The instrument was validated by five experts and the reliability index of 0.86 was determined using test-retest method. Frequency counts, simple percentages mean and t-test statistics were used for data analysis. The results

of the study showed that the respondents were aware of the risk factors of hypertension because the mean scores for all items were above the

KEYWORDS:

Awareness,
hypertension, Risk
Factors, Preventive
Measures

decision rule of 2.50 mean score. The result also showed that the respondents were aware of the preventive measures of hypertension because the mean scores for all items were above the decision rule of 2.50 mean score. The result showed that the respondents were aware of the preventive

measures of hypertension because the mean scores for all items were above the decision rule of 2.50 mean score. Based on the findings of this study, it was concluded that adults had moderate level of awareness regarding the signs and symptoms of hypertension; they also had high level of awareness regarding the risk factors of hypertension and high level of awareness regarding the preventive measures of hypertension. Among other recommendations made were: Government and voluntary health agencies should sponsor intensive enlightenment campaign through print and electronic media in order to sustain the knowledge level of adults on hypertension and its complications.

INTRODUCTION

Hypertension has become a major universal health problem that has been identified as the most leading risk factor for cardiovascular morbidity and mortality in the world. It increases hardening of the arteries, thus predisposing individuals to heart diseases, peripheral vascular diseases, stroke, heart failure and kidney failure. Hypertension is one of the commonest non-communicable diseases in the world and all races are affected with variable prevalence. Research has shown that hypertension has caused a lot of damages to human life because it has produced disruptions in health, disability and death in the adult population worldwide (WHO, 2013).

Ejike, Ezeanyika and Ugwu (2010) stated that hypertension causes one in every eight deaths worldwide, making it the third leading killer disease in the world. In sub-Saharan Africa, it is the most rapidly rising cardiovascular disease and affecting over 20 million people (Kadiri, 2005). In Nigeria, hypertension has become the commonest non-communicable disease with over 4.3 million Nigerians above the age of fifteen years classified as being hypertensive (WHO, 2013).

Risk factors are defined by Lothar, Gottfried and Heide (2011) as individual characteristics which affect the person's chances of developing a particular disease or group of diseases within a defined future time period. According to Lucas and Gilles (2003), risk factor is anything that has been identified as increasing an individual's chances of getting a disease or developing a

condition. They will be considered to be at risk of developing hypertension, those with habits or characteristics which increase the likelihood of developing hypertension. Risk factors in this study, refers to the characteristics, conditions or behaviours such as excess salt intake and smoking which increase the probability of hypertension to occur (Zuleat, 2007). When risk factors are related to hypertension, they are known as risk factors of hypertension. Risk factors of hypertension are of two types: those ones that can be changed and those that cannot be changed. The risk factors that can be changed are obesity, excess salt intake, smoking, environmental stress, oral contraceptives, sedentary lifestyle, elevated levels of plasma lipids and unregulated secretion of aldosterone. Risk factors that cannot be changed are genetic predisposition, age and gender (Siyad, 2011). Adults should have adequate awareness of the risk factors to be able to prevent hypertension. Preventive measures are interventions directed to avert the emergence of specific disease, reducing their incidence and prevalence in population. It is expected that adults should practice healthy lifestyles such as regular exercise, maintaining weight at 15 percent or less of desirable weight, management of stress, moderation of alcohol consumption, avoidance of tobacco smoking, increase intake of fruits and vegetables, increase intake of low-fat dairy products and reduction of excessive salt intake to prevent hypertension and improve optimum well-being. Adults should have basic awareness of these healthy lifestyle behaviours while growing up through health education to be able to prevent cardiovascular diseases such as hypertension.

The fact that hypertension as a medical problem has become a major source of sudden death among adults in Nigeria. It has therefore become a major concern for medical practitioners, researchers and counselling psychologists. Government and individuals have mounted radio programmes, workshops and other enlightenment activities on this problem to minimize the effect in the society however; there is dearth of research study on this problem. Thus, this paper aimed at assessing the risk factors and preventive measures of hypertension among adults in Minna Metropolis, Niger State.

Materials and Methods

The data collection was collected by the researcher with the support of two research assistants in all the areas. A letter of authority was obtained from the department to introduce the researcher to all the areas that would be visited. In each area the researcher took time to explain the purpose of the study and how the questionnaire would be answered and on how to respond to the items of the questionnaire. The questionnaires were collected back immediately.

The following scoring guidelines was used to score the responses of the participants based on a four point adapted likert-type scale: Strongly Agree responses represented four (4) points, Agree responses represented three (3) points, Disagree two (2) points and Strongly Disagree represented one (1) point. Responses of strongly agree and agree were merged together and disagree and strongly disagree were also be merged together and the decision rule was 2.50.

The sample size consisted of 365 subjects, who were from secondary schools, maternity centre of the primary health care and local government secretariat workers. A multistage sampling technique was adopted in chosen the sample. The demographic data collected were analyzed using frequency count and percentage. Frequency count, percentage and mean were used to answer the research questions while t-test was used to test the hypotheses formulated.

Results and Discussion

From the result of the descriptive statistics in Table 1, it can be observed that the respondents were aware of the risk factors of hypertension in Table below because the mean scores for all items were above the decision rule of 2.50 mean score.

Table 1: Showing descriptive statistics of the responses of respondents on risk factors of Hypertension

S/N	Items on Factors That can cause High Blood Pressure	Yes	No	Total	Mean (x)
1	Excess weight gain	267 (73.15%)	98 (26.85%)	365 (100%)	3.11

2	Excessive alcohol consumption	320 (87.67%)	45 (12.33%)	365 (100%)	3.48
3	Smoking	350 (95.89%)	15 (4.11%)	365 (100%)	3.88
4	Excessive salt intake	230 (63.02%)	135 (36.98%)	365 (100%)	3.00
5	Sedentary lifestyle	250 (68.49%)	115 (31.51%)	365 (100%)	3.09

From the result of the descriptive statistics in Table 2, it can be observed that the respondents were aware of the preventive measures of hypertension in Table 2 below because the mean scores for all items were above the decision rule of 2.50 mean score.

Table 2: Showing descriptive statistics of the responses of respondents on preventive measures of Hypertension

S/N	Items on Preventive Measures of Hypertension	Yes	No	Total	Mean (x)
1	Change of life style	356 (97.53%)	9 (2.47%)	365 (100%)	3.91
2	Avoiding excessive alcohol intake	330 (90.41%)	35 (9.59%)	365 (100%)	3.56
3	Avoiding excessive salt intake	330 (90.41%)	35 (9.59%)	365 (100%)	3.56
4	Going for regular medical check-up	360 (98.63%)	5 (1.37%)	365 (100%)	3.93
5	Moderating sedentary lifestyle	342 (93.69%)	23 (6.30%)	365 (100%)	3.76
6	Avoiding smoking	250 (68.49%)	115 (31.51%)	365 (100%)	3.09

7	Regular exercise		230 (63.02%)	135 (36.98%)	365 (100%)	3.00
---	------------------	--	-----------------	-----------------	---------------	------

From the result of the descriptive statistics in Table 2, it can be observed that the respondents were aware of the preventive measures of hypertension in Table 2 below because the mean scores for all items were above the decision rule of 2.50 mean score.

Hypothesis 1: There is no significant difference in the level of awareness of risk factors of hypertension possessed by adults between age 21 – 30 and 31 and above in Minna Metropolis of Niger State.

Table 3: t-test of difference in the level of awareness of risk factors of hypertension based on age.

<i>Age Range</i>	<i>N</i>	<i>Df</i>	\bar{X}	<i>S.D</i>	<i>t-cal.</i>	<i>t-cri.</i>	<i>Significance level</i>
<i>21- 30 years</i>	200		48.38	18.75	0.906	0.365	0.05
<i>31 years and above</i>	165	365	50.23	20.19			

Table 3 showed the t-test of difference between the awareness of risk factors of hypertension in minna metropolis based on age category. The table showed that the t-calculated value of 0.906 is greater than t-critical value of 0.365. Hence, the hypothesis was rejected.

Hypothesis 2: There is no significant difference in the level of awareness of risk factors of hypertension possessed by male and female in Minna metropolis of Niger state

Table 4: t-test of difference in the level of awareness regarding to risk factors based on gender

<i>Risk Factor</i>	<i>N</i>	<i>Df</i>	\bar{X}	<i>S.D</i>	<i>t-cal.</i>	<i>t-cri.</i>	<i>Significance level</i>
<i>Male</i>	195	365	49.43	13.335	3.714	1.607	0.05
<i>Female</i>	170		62.67	11.782			

Table 4 showed the t-test of difference between the awareness of risk factors of hypertension of male and female in Minna metropolis. The table showed that the t-calculated value of 3.714 is greater than t-critical value of 1.607. Hence, the hypothesis was rejected. This implies that male and female adults do not have the same level of awareness regarding the risk factors of hypertension.

Hypothesis 3: There is no significant difference in the level of awareness of preventive measures of hypertension possessed by adults between age 21 – 30 and 31 years and above in Minna Metropolis of Niger state

Table 5: t-test of difference in the level of awareness of preventive measures based age category.

<i>Age Range</i>	<i>N</i>	<i>Df</i>	\bar{X}	<i>S.D</i>	<i>t-cal.</i>	<i>t-cri.</i>	<i>Significance level</i>
21- 30 years	200		48.38	18.75	0.906	0.365	0.05
31 years and above	165	365	50.23	20.19			

Table 5 showed the t-test of difference of the awareness of preventive measures of hypertension in Minna metropolis based on age category. The table showed that the t-calculated value of 0.906 is greater than t-critical value of 0.365. Hence, the hypothesis was rejected. This implies that all adults do not have the same level of awareness regarding the preventive measures of hypertension.

Hypothesis 4: There is no significant difference in the level of awareness of preventive measures of hypertension possessed by male and female in Minna metropolis of Niger state

Table 6: t-test of difference in the level of awareness of preventive measures based on Gender

Gender	N	Df	\bar{X}	S.D	t-cal.	t-cri.	Significance level
Male	170		49.43	13.335	3.714	1.607	0.05
Female	195	365	62.67	11.782			

Table 6 showed the t-test of difference between the awareness preventive measures of hypertension of male and female in Minna metropolis. The table showed that the t-calculated value of 3.714 is greater than t-critical value of 1.607. Hence, the hypothesis was rejected. This implies that levels of awareness of preventive measures are higher with female than male.

Conclusions

Based on the findings of this study, it was concluded that adults had high level of awareness regarding the risk factors of hypertension and high level of awareness regarding the preventive measures of hypertension. Female adults' awareness of knowledge was high for sign and symptoms and also the risk factors and preventive measures while that of males were moderate for the same dimensions.

References

- Ejike, C. C., Ezeanyika, L. U. & Ugwu, C.E. (2010). Variations in the prevalence point of prehypertension in a Nigeria school – going adolescent population living in Auchi, Nigeria. *BMC Pediatrics*, 10 (13), 1471 – 2431.
- Kadiri, O. (2005). Blood pressure, hypertension and correlates in urbanized workers in Ibadan, Nigeria. A revisit. *Journal of Human hypertension*, 13 (7), 23-27.
- Lothar, P., Gottfried, Y. and Heide, P. I. (2011). Non-emergent hypertension. *Emergmed clin North America*, (13), 1009-1010.
- Lucas, C. and Gilles, F. (2003). Characteristics, risk factors and treatment practices of known adult hypertensive patients in Saudi Arabia: *International Journal of Hypertension*, 10 (2), 4061-4075.
- Siyad, T. (2011). Explaining management of hypertension. Retrieved on 5/5/2019 from www.researchgate.com
- World Health Organization (2013). Cardiovascular scenario in Nigeria: *WHO News letter*, 11(1), 11-16.
- Zuleat, M.O. (2007). The incidence of hypertension among a select population of adults in the Niger Delta region of Nigeria. College of health Sciences, University of Port Harcourt, Nigeria. *Journals of Human Hypertension*, 38 (5), 947-949.