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Knowledge of Predisposing Factors and Control Measures of Hypertension in Pregnancy Among Women of Child Bearing Age in Ngor-Okpala Local Government Area of IMO State.

[1]E. J. Ibeagha (Ph.D.) and [2]Chinonye, Hope Akalawu

[1,2]Department of Human Kinetics and Health Education, Nnamdi Azikiwe University, Awka
ej.ibeagha@unizik.edu.ng

ABSTRACT

The study investigated the knowledge of predisposing factors and control measures of hypertension in pregnancy among women of child bearing age in Ngor-Okpala LGA of Imo State. Five research questions and one null-hypothesis guided the study. The descriptive survey research design was used for the study. The population for the study was seventy one thousand three hundred and eighty four women of childbearing age. Two hundred women of child bearing age was the sample for the study. A three sectioned researcher designed questionnaire was the instrument for data collection. The instrument was validated by three experts one from the Department of Measurement and Evaluation, and two from the Department of Human Kinetics and Health Education, Nnamdi Azikiwe University Awka. Cronbach Alpha method coefficient was utilized to establish the internal consistency of the instrument and had a reliability index of .78, Percentages, mean, standard deviation and Okafor's (1977) modified version of Ashur's criteria for describing level of knowledge were utilized for answering research questions. Chi-square statistics were used to test the hypotheses, hypotheses were verified at 0.05 level of significant. The results of the study showed that women of childbearing age (WCBA) had high level of knowledge regarding the concept of predisposing factors of hypertension in pregnancy (KPFHP) and moderate level of knowledge regarding the concept of control measures of hypertension in pregnancy. (KCMHP). Based on the findings, recommendations among others were made. Government and voluntary health agencies should sponsor intensive enlightenment on hypertension among women especially during pregnancy.

Introduction

Recently, the mold of disease has changed from communicable to non- communicable disease due to industrialization or modernization. Hypertension has become a global health challenge of all ages, the burden is rapidly increasing affecting more female than male and African continent seems to be the most affected region in the world, (De-Graft, 2010). Hypertension causes one in every eight deaths worldwide, making it the third leading killer disease in the world. It is also estimated that about one billion adult the world over, had hypertension in the year positive intervention program is not made (Ejike, Ezeanyika and Ugwu 2010).

Hypertension is define as blood pressure higher than 140 over 90mmHg (millimeters of mercury) this means the systolic reading is over 140mmHg and the diastolic reading is over 90mmHg (WHO 2017). Blood pressure is the force of blood pushing against the walls of arteries as it flows through them . Arteries are the blood vessels that carry oxygenated blood from the heart to the body's tissues. As blood flows through the arteries it pushed against the artery walls, the more pressure the blood exerts on the artery walls, the higher the blood pressure will be. The size of the arteries also affects the blood pressure. When the muscular walls of arteries are relaxed, dilated, the pressure of the blood flowing through them is lower than when the artery walls is narrow or constrict. Blood pressure is highest when the heart beat to push blood into the arteries. When the heart relax to fill with blood again, the pressure is at its lowest point. Blood pressure when the heart beats is called systolic pressure, while blood pressure when the heart is at rest is called diastolic pressure (Markus, 2016).

Hypertension can be classified according to its cause; primary or essential hypertension and secondary or non-essential hypertension. In primary hypertension the cause is idiopathic, that is the cause is unknown. Hereditary is thought to be a factor while in secondary hypertension a specific cause can be pin pointed. Some of the signs and symptoms of hypertension are: nervousness irritability, easy fatigues, dizziness, insomnia and headache (Williams 2000). It prevalence have been found to be higher among women than in men, and among pregnant women than non pregnant ones. (Akinlua, Meakin, Umar and Freemantle, 2015). 10% of all pregnancies, worldwide are complicated by hypertension

Hypertension in pregnancy is defined as blood pressure readings of a pregnant woman that is greater than 140/90mmHg, taken after a period of rest on two occasions (Robert, Nicholls, 2019). Hypertensions in pregnancy are classified into four categories, chronic hypertension, Preeclampsia, Preeclampsia superimposed and Gestational hypertension. Some of the sign and symptoms include; constant headache, edema, (swelling), sudden weight gain, poor vision, pain around the stomach etc. It complication associated with premature delivery, intra- uterine growth retardation, abruption placentae, and intra-uterine death, as well as maternal morbidity and mortality globally. It is estimated that 9.1%of maternal deaths in Africa are due to hypertensive disorders

of pregnancy. In Nigeria however, it is estimated that 5-10% of pregnancies are complicated by hypertensive disorders in pregnancy and it results in more admissions in the antenatal period than any other disorder (Azubuike 2014).Studies has shown a high prevalence rate of hypertension in Imo State especially among the rural dwellers than the urban dwellers. In spite of all the effort of various organizations towards reducing it prevalence rate, yet hypertension in pregnancy remain global health challenges among women of child bearing age. The woman of child bearing age according to World Health Organization (2013) is a woman between the ages of 15 to 49 years.

According to Hornby (2001) knowledge is defined as a familiarity, awareness, or understanding of something such as facts, information, description or skills which can be acquired through experience or education by perceiving, discovering or learning. However, knowledge in this study is define as all understanding and familiarity gained by experience that will enable women of childbearing age to recognize the predisposing factors as well as recognizing and using the control measures of hypertension.

In the other hand, predisposing factor to disease is a substance, event, characteristic or condition that contributes to the disease onset (Hamburg and Russell 2000). However, in this study Predisposing factors are identified factors, characteristics or a behavior which exposes an individual to the risk of developing a disease. A predisposing factor in health terms usually means something which becomes a risk to the health of an individual, such as tobacco smoking, inactivity, excessive alcohol consumption, high salt intake, pregnancy, age and genetic factor which increases the chances of disease occurrence in an individual.

Furthermore, Control measures is defined as all measures that limit the progression of a disease at any stage of its course (Starfied, Hyde, Gervas 2007). Control measure in this study is refers to as procedures that can cause a reduction in the incidence, prevalence, morbidity or mortality of hypertension. The following measures are helpful in controlling increasing risk of hypertension. Eat less salt, eat more fruit and vegetables, keep active, take any hypertension medication you have been given, early treatment of any contributing causes such as kidney problem or obesity is important. So many variables may impinge on knowledge of hypertension. Literature shows that studies on knowledge of hypertension examined socio-demographic factors of age, race, level of education, parity, gender, income, location, occupation and marital status. However the present study is concerned with demographic factors of age, level of education and parity. Hypertension is a common, important and major global public health problem today. Hypertension in pregnancy complicate up to 10% pregnancies worldwide and are increasing with the rising of cardio-metabolic diseases in younger women and represent a significant cause of maternal and prenatal morbidity and mortality worldwide. Notwithstanding, the World Health Organization (WHO) on the World Health Day 2013 called for intensified efforts to prevent and control hypertension especially among procreative women. They campaign to encourage women to measure their blood pressure regularly. In Nigeria, the government through the hospitals and community health centers diagnose and educate people especially women on hypertension. The media, churches, community women meetings like August Meeting and NGOs are not left out; through their various channels of communication, they educate the women on the dangers of hypertension and the importance of regular medical checkup.

In spite of all these efforts, hypertension is still one of the leading causes of morbidity and mortality among women of child bearing age. This motivated the researcher towards ascertaining the knowledge of predisposing factors and control measures of hypertension among women of child bearing age in Ngor- Okpala Local Government Area of Imo State.

Purpose of the Study

The purpose of this study is to ascertain the knowledge of predisposing factors and control measures of hypertension in pregnancy among women of child bearing age (WCBA) in Ngor-Okpala L.G.A of Imo State. Specifically, this study would like to ascertain the level of knowledge of;

1. Predisposing factors of hypertension in pregnancy among WCBA in Ngor- Okpala L.G.A.
2. Control measures of hypertension in pregnancy among WCBA in Ngor- Okpala L.G.A of Imo State.
3. Predisposing factors of hypertension in pregnancy among WCBA in Ngor-Okpala L.G.A based on their ages
4. Predisposing factors of hypertension in pregnancy among WCBA based on their levels of education.
5. Predisposing factors of hypertension in pregnancy among WCBA based on parity.

Research Questions

The following research questions were formulated to guide the study.

1. What is the level of knowledge of predisposing factors to hypertension in pregnancy among WCBA in Ngor-Okpala L.G.A.?
2. What is the level of knowledge of the control measures of hypertension in pregnancy among WCBA in Ngor-Okpala L.G.A.?
3. What is the level of knowledge of predisposing factors to hypertension in pregnancy among WCBA in Ngor-Okpala based on their age?
4. What is the level of knowledge of predisposing factors to hypertension in pregnancy among WCBA in Ngor-Okpala L.G.A based on their level of education?

5. What is the level of knowledge of predisposing factors to hypertension in pregnancy among WCBA in Ngor-Okpala L.G.A based on parity?

Hypotheses

1. There is no significant difference between the mean score of knowledge of predisposing factor and control measures of hypertension among WCBA in Ngor-Okpala L.G.A.

Methods

The design for the study was descriptive survey design. The target population for the study consisted of seventy one thousand, three hundred and eighty four (71,384) women of child bearing age (WCBA) in the 22 existing villages in Ngor-Okpala Local Government Area of Imo state (Bureau for statistics, 2006, Owerri Imo State). The total sample size for this study was 200 women of childbearing age. Multi-stage sampling procedure was adopted to draw samples for this study. Data collected was analyzed using frequency and percentage to answer the research questions, while inferential statistics of (chi-square) was used to test the hypotheses.

RESULTS AND DISCUSSION

Research question 1

What is the level of knowledge of predisposing factors to hypertension in pregnancy among WCBA?

Table 1: Level of knowledge of WCBA regarding the concept of predisposing factors to hypertension in pregnancy

(n=198)

Dimension	N	$\bar{x}$	SD	Percentage
KPFHP	198	64.87	42.06	65%

KPFHP (knowledge of predisposing factors of hypertension in pregnancy)

KCMHP (Knowledge of control measures of hypertension in pregnancy)

Note, the principle rule of measuring knowledge in this study was that knowledge score of less than 20%=very low, 21-39%=low, 40-59%=moderate, 60-79%=high, 80 and above=very high.

Data in table 1 above shows 65% percentage which fell between the ranges of 60-70%. This implies that the level of knowledge of WCBA regarding predisposing factor to hypertension in pregnancy was high.

Research question 2

What is the level of knowledge of control measures of hypertension in pregnancy among WCBA?

(n=198)

Table 2: Level of knowledge of WCBA regarding control measures of hypertension in pregnancy

Dimension	N	$\bar{x}$	SD	Percentage
Knowledge of control measures	198	41.15	49.65	57%

Data in table 2 show a percentage score of 57 this implies that the level of knowledge of WCBA regarding control measures of hypertension in pregnancy was moderate.

Research Question 3

What is the level of knowledge of predisposing factors to hypertension in pregnancy among WCBA based on their age?

Table 3: Level of knowledge of predisposing factors of WCBA regarding hypertension in pregnancy based on their age

	(n = 26)			(n = 74)			(n = 98)		
Dimension	18 – 30years		Percentage	31 – 35years		Percentage	36-45 years		Percentage
	X	SD		X	SD		X	SD	
KPFHP	49. 23	7.27	55%	67. 66	2.01	78%	48.66	15.60	58%

Data in table 3 shows that WCBA aged 18-30 and 36-45yrs possessed moderate level of knowledge of predisposing factor of hypertension in pregnancy with a 49.23 and 48.66 respectively as their mean score and percentage scores of 55 and 58 respectively while 31-35yrs possessed high level of knowledge with the mean score of 67.66 and a percentage of 78. The standard deviation value which ranged from 2.01 to 15.60 shows that there is much variation in their levels of knowledge.

Research Question 4

What is the level of knowledge of predisposing factors to hypertension in pregnancy among WCBA based on their level of education

Table 4: Level of knowledge of predisposing factors of WCBA regarding hypertension in pregnancy based on their level of education

N.FE- Non formal education

P.E- Primary education

S.ED-Secondary education

T.ED- Tertiary education

(n = 10)	(n = 25)			(n = 98)			(n=65)					
Dimension	N.F.E		%	P.E		%	S.Ed		%	T.ED		%
	X	SD		X	SD		X	SD		X	SD	
KPFHP	34.4	7.589	38%	44.56	15.304	52%	44.73		59%	72	7.681	78%
						3.508						

The above the shows that the mean score and percentage of WCBA on predisposing factors of hypertension in pregnancy with tertiary education 72 and 78% respectively which was higher than those with secondary (44-73, 59%) and primary education (44.56, 52%) showing a moderate level of knowledge. However, those with no formal education possessed low level of knowledge with the mean score of 34.4 and a percentage of 38.

This implies that WCBA with tertiary education possessed high level of knowledge of predisposing factors of hypertension in pregnancy while those with secondary, primary and non formal education possessed moderate and low level of knowledge of the concept respectively.

Research Question 5

What is the level of knowledge of predisposing factors to hypertension in pregnancy among WCBA based on parity?

Table 5: Level of knowledge of predisposing factors of WCBA regarding hypertension in pregnancy based on parity

(n = 20)			(n = 84)			(n = 98)		
Dimension	None		%	1 -2children		%	2 and above	%
	X	SD		X	SD		X SD	
KPFHP	25.45	3.455	32	55.880	5.004	58	53.38 4.474	57

Data in table 5 shows that the mean score of WCBA with none children was 25.45 with a percentage 32 while those with 1-2 and 2 and above children shows the means score of 55.88 and 53.38 and the percentage of 58 and 57 respectively. This shows that WCBA who had no children possessed lower knowledge of predisposing factors of hypertension in pregnancy while those with children possessed moderate knowledge of the concept. Their standard deviation value ranged from 3.44 to 5.00.

Hypothesis 1

There will be no significant difference between the mean score of knowledge of predisposing factor and control measures of hypertension among WCBA.

Table 6: Data testing the hypothesis are contain from table 1and 2.

Result of chi-square analysis testing the hypothesis no significant difference between the mean score of knowledge of predisposing factor and control measures of hypertension among WCBA (n=198)

Dimensions	**Of**	**Ef**	**Of –Ef**	**$(Of –Ef)^2$**	**$(Of –Ef)^2$/ EF**	**x-cal**	**df 0.05**	**x^2crit.**
KPFHP	64.87	53	11.87	140.897	2.658	5.305	2	3.841
KCMHP	41.15	53	-11.85	14.423	2.649			
					E = 5.307			

The table 6 above shows that the calculated x^2 value which is 5.307 is > the χ^2 critical value which is 3.841 at 0.05level of significant and 2 degree of freedom, we therefore reject the null hypothesis of no significant difference between the knowledge of predisposing factor and control measures of hypertension in pregnancy among WCBA.

Discussion of Findings

The findings of the study revealed that the women of childbearing age had high level of knowledge regarding the concept of predisposing factors of hypertension in pregnancy and moderate level of knowledge regarding the concept of control measures of hypertension in pregnancy. The findings of this study lend credence to the study of Zhang, Minimin, et al (2008) who studied the Knowledge, awareness, behavior and control of hypertension the study reported high level of knowledge of hypertension and moderate level of control measures. There is also a significant different in the mean score

of various age brackets of women of child bearing age in their levels of knowledge of predisposing factors and control measures of hypertension in pregnancy, the younger and older women possessed moderate level of knowledge of the concept while the middle age (31-35) had high level of knowledge.

The standard deviation value which ranged from 2.01 to 15.60 shows that there is much variation in their levels of knowledge. Women of childbearing age with tertiary education possessed high level of knowledge of predisposing factors of hypertension in pregnancy while those with secondary, primary and non formal education possessed moderate and low level of knowledge of the concept respectively. This is possible because of higher exposure to knowledge through education. The findings also supported the findings of the study conducted by BMC (2019) on the knowledge of hypertension and its associated factors among pregnant women; they found higher level of education to be independently associated with adequate knowledge of hypertension in pregnancy among women. The result indicated that the level of knowledge and attitude of pregnant women increased significantly after education. Women who had no children possessed lower knowledge of predisposing factors of hypertension in pregnancy while those with children possessed moderate knowledge of the concept. Their standard deviation value ranged from 3.445 to 5.004.And also the study revealed a significant difference in their mean score ,the findings of the study also supported the findings of Fatemeh, Sabet, and Hamid (2006) they conducted a study on the knowledge of the pregnancy induced hypertension, they reported that knowledge of hypertension shows a statistically significant correlation with the frequency of pregnancy, number of delivery and age.

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