Influence of Socio-Demographic Variables on Knowledge of Pregnancy Induced Hypertension among Pregnant Women in Ekiti State Nigeria

ABSTRACT

Aim: This study was conducted to assess knowledge of pregnancy induced hypertension among pregnant women in Ekiti state and to determine the influence of socio-demographic variables on their knowledge.

Study Design: Descriptive research design was adopted in this study

Place and Duration of Study: Study was conducted in selected health facilities within the three senatorial districts in Ekiti State between January and August 2016.

Methodology: Three hundred pregnant women were randomly selected from six health facilities within the three senatorial districts of Ekiti State. Data was collected using a 16-item self structured questionnaire. Data collected were subjected to analysis using SPSS version 16. Demographics were analysed using frequency counts and percentages while inferential statistics of linear regression was used to determine the influence of socio-demographic variables on knowledge at 0.05 level of significance.

Results: 56.6% of the pregnant women had good knowledge and all the socio-demographic variables tested jointly contributed to the pregnant women's knowledge ($R=.348$, $R^2 = .121$, $F(4, 295) = 6.85$, $p < .05$). Source of information had the highest contribution on respondents' knowledge of pregnancy induced hypertension (($\beta = .33$, $t(295) = 5.46$, $p < .05$).

Conclusion: Health education intervention to improve the knowledge of pregnancy induced hypertension among pregnant women in Ekiti State is required.

Keywords: Knowledge, pregnancy, hypertension, pregnant women, age

1.INTRODUCTION

The period of pregnancy is the most delicate period in the lifetime of women of child bearing age. It is a period often characterised by conditions that pose serious threats to the life of both the pregnant women and their intending babies. Over 585 000 women worldwide die annually from childbirth complications with 99% of such deaths occurring in the developing countries[1]. One of such medical conditions that pose serious threat to the life and health of pregnant women is pregnancy induced hypertension (PIH).

PIH is a complication that results in the development of hypertension after about twenty weeks of gestation in a woman who had previously been normotensive [2]. It is often characterised by blood pressure reading higher than 140/90 mm Hg, oedema [3], protein in

the urine, severe headaches, blurry vision, spots in the eyes, severe pain over the stomach, under the ribs and decrease in the amount of urine [4]. PIH is a major cause of maternal and perinatal morbidity and mortality in developing countries including Nigeria [5, 6]. PIH alone contributes about 15% of the total death throughout the world [1] and it is one of the causes of pre-term delivery [7]. It has also been reported that PIH can lead to long-term health problems like chronic hypertension, kidney failure, or nervous system disorders.

Several studies have reported prevalent rates of PIH in different parts of Nigeria. One of such researches reported a prevalence of 20.8% of gestational hypertension in Benin City [8] another reported prevalence of eclampsia as 6.3% [9] while another reported that pre-eclampsia ranges from 1.8% to 16.7% in developing countries [10]. Several risk factors have been associated with pregnancy induced hypertension. These include carrying the first pregnancy especially after 20th to 24th weeks of gestation, not having adequate knowledge of the condition and how it can be prevented [3], genetic factor like having a female relative with PIH, carrying multiple birth, having kidney disease before pregnancy being a teenager and being over 40 years[11] .

To reduce the prevalence of PIH, knowledge of signs and symptoms, predisposing factors and preventive measures is highly essential. This will give room for early recognition and prompt management. Maternal mortality can be prevented by early recognition of complications and proper treatment [12]. If women should have a good knowledge of the sign and symptoms of the pregnancy induce hypertension through antenatal health talk, conferences and workshops a good number of them will immediately go to the hospital without delay for prompt attention [3].

Review of literature seems to suggest that previous studies on PIH have somewhat been centred on assessment of prevalence and resultant effect. Only few attempts have been made in previous studies to assess knowledge of PIH and factors associated with this knowledge among pregnant women in Nigeria especially those in Ekiti State. This study therefore aimed to fill this gap.

The objective of conducting this study, was to assess the knowledge of pregnant women in Ekiti State on pregnancy induced hypertension and to determine the influence of socio-demographic variables on their knowledge.

2. MATERIALS AND METHODS

2.1 Study Participants and Procedure

The study adopted was a descriptive study designed to assess knowledge of pregnancy induced hypertension and also to determine factors influencing this knowledge among pregnant women in Ekiti State, Nigeria.

The participants for this study consisted of 300 pregnant women (15-40 years) selected randomly from six health facilities within the three senatorial districts in Ekiti State. First, a town each was randomly selected from the three senatorial district in Ekiti State (Ado-Ekiti

(central), Ido-Ekiti (North) and Ijan Ekiti (South). From each of the selected towns, two health facilities were selected (one basic health facility and one secondary health facility) to make a total of six health facilities. Fifty pregnant women were then selected from each of the health facilities to make a total of three hundred pregnant women.

Relevant data for this study were obtained with the use of self structured questionnaire The questionnaire consists of two sections. Section 1 elicit information on socio-demographic variables of respondents (age, religion, parity, prior information and source of information) while section 2 consists of items related to knowledge of PIH. The questionnaire was of two versions (English and local language) and was administered with the aid of trained research assistants. Permission was obtained from the head of the health facilities prior to the administration of the questionnaire and only the pregnant women who consented to participate in the study formed the respondents for the study. The data was collected between April and June 2016.

The questionnaire for data collection in this study consists of 18 items with a dichotomous response format of 'Yes or No'. The items include 5 items on knowledge of health effect of PIH, 2 items on knowledge of signs and symptoms, 4 items on knowledge of preventive measures and 7 items on knowledge of predisposing factors to PIH. Respondents were requested to indicate their knowledge or otherwise of each item by either ticking 'Yes' (2) or 'No' (1). The range of score for the items is 18-36. The mean score was 32.34 and standard deviation was 3.87. Respondents with scores below 28 (Mean-SD) were categorised as having poor knowledge, those with scores between 28 and 32 were categorised as having fair knowledge while those having 33 and above (Mean+ SD) were categorised as having good knowledge respectively.

2.2 Statistical Analysis

Data were analysed using SPSS version 16. Descriptive statistics of frequency counts and percentages were used to analyse demographic variables while inferential statistics of t-Test for a variable with two groups, Kruskall-Wallis test for more than two groups and simple linear regression were used to determine the influence of socio-demographic variables on knowledge of PIH at 0.05 alpha level.

3.RESULTS AND DISCUSSION

3.1 Demographic Characteristics of Respondents

Table 1 shows the percentage distribution of respondents. Respondents between 15-19 years constitute less than 10% of the sample size, those of the traditional religion constitute 7%, those having less than three children 57.3%, those with prior information on PIH 85.3% and those with multiple sources of information, 18%.

3.2 Differences in Knowledge of PIH among Respondents

Statistical analysis shows that respondents between 15 and 19 years have non statistically significant higher knowledge score than other age groups, those of the traditional religion have statistically significant higher knowledge score than those in the other religion, respondents with prior information about PIH have statistically significant higher score of knowledge of PIH than those without prior knowledge while those having more than one source of information on PIH have statistically significant higher knowledge score than those with single source (Table 1).

3.3 Percentage Distribution of Respondents' Knowledge of PIH

Table 2 presents the percentage distribution of respondents with respect to their knowledge of PIH. Except for the knowledge of signs and symptoms where only less than 50% of the respondents had good knowledge, a good percentage of the respondents displayed good knowledge of PIH.

3.4 Respondents' Level of Knowledge of PIH

Categorising the level of knowledge of respondents, just a little above 50% (56.6%) have good knowledge of PIH (Table 3).

3.5 Contribution of Socio-demographic Variables on Respondents' Knowledge of PIH

Analysis of the joint contribution of the socio-demographic variables on knowledge, presented in Table 4 shows that all the variables jointly influenced knowledge of PIH among respondents (R^2=.121) indicating that 12.1% of variance in knowledge of PIH presented among respondents was accounted for by all the socio-demographic attributes tested. However, of all the socio-demographic variables, source of information had the highest and statistically significant contribution (β=.33) as presented in Table 5. Findings of this study further revealed that statistically significant difference exist in knowledge of PIH among respondents based on their source of information (Table 6). Respondents with multiple sources of information (combination of sources for example, hospital and health talk, research and hospital, hospital and radio and so on) had the highest mean score on knowledge of PIH as shown in Table 7.

148 **Table 1: Differences in knowledge of PIH based on socio-demographic attributes**

Variables	Freq	%	Knowledge of PIH			
			Median	Min.	Max.	Mean rank
Overall respondents	300	100	33	18	36	
Age (years)						
15-19	25	8.3	35	25	36	174.94
20-29	112	37.3	33	18	36	139.50
30-39	110	36.7	32.5	19	36	138.35
>40	53	17.7	36	25	36	149.35
Religion						
Christianity	198	66.0	33	18	36	144.44
Islam	81	27.0	34	22	36	150.83
Traditional	21	7.0	36	15	36	206.36*
Parity						
0-2	172	57.3	33	18	36	148.59
3-4	103	34.4	34	19	36	147.84
>4	25	8.3	35	27	36	174.58
Prior information about PIH						
Yes	255	85.0				33.03*
No	45	15.0				28.42
Source of information						
Hospital	121	41.7	33	25	36	111.58
Radio	31	10.3	33	26	36	123.61
Television	30	10.0	31.5	26	36	103.45
Church/Mosque	12	4.0	28.5	22	36	57.75
Research	4	1.3	33.5	33	36	138.88
Multiple sources	54	18.0	36	30	36	199.35*

149 * Significant difference ($p<0.05$)

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151 **Table 2: Percentage distribution of knowledge of PIH among respondents (N=300)**

S/N	Item	Yes (%)	No (%)
1	PIH can lead to miscarriage	250 (83.3)	50 (16.7)
2	PIH can lead to death of pregnant women	261(87.0)	39 (13.0)
3	PIH can lead to convulsion in pregnant women	238 (79.3)	62 (20.7)

4	PIH can lead to death of the foetus	248 (82.7)	52 (17.3)
5	PIH can lead to fainting in pregnancy	244 (81.3)	56(18.7)
6	Regular attendance of antenatal clinic can prevent PIH	259 (86.3)	41(13.7)
7	Lodging complains can reduce complications of PIH	255 (85.0)	45(15.0)
8	Early booking for antenatal can lead to early detection	258 (86.0)	42 (14.0)
9	Checking blood pressure regularly can prevent risk	254 (84.7)	46 (15.3)
10	Excessive weight gain in pregnancy can lead to PIH	237 (79.0)	63 (21.0)
11	PIH can be inherited	218 (72.7)	82 (27.3)
12	Diabetes mellitus can cause PIH	234 (78.0)	66 (22.0)
13	Disease of the kidney can cause PIH	223 (74.3)	77 (25.7)
14	Stress can predispose to PIH	237 (79.0)	63 (21.0)
15	High intake of salt can increase the risk of having PIH	236 (78.7)	64 (21.3)
16	Smoking in pregnancy can lead to PIH	230 (73.7)	70 (27.3)
17	Presence of protein in urine in pregnancy is sign of PIH	100 (33.3)	200 (66.7)
18	Severe frontal headache in pregnancy is a sign of PIH	69 (23.0)	231 (77.0)

Table 3: Level of knowledge of PIH among respondents

Level of knowledge	Freq	%
Poor	35	11.7
Fair	95	31.7
Good	170	56.6

Table 4. Joint contribution of socio-demographic variables on knowledge of PIH

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	p-value
1	.348[a]	.121	.103	3.05344	6.852	.000

a.predictors (constant) age, rel, parity, prior information, source of information

Table 5: Independent contribution of socio-demographics on knowledge of PIH

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
(Constant)	26.802	3.615		7.413	.000
age	-.185	.220	-.057	-.844	.400
religion	.126	.314	.024	.399	.690
parity	.000	.332	.000	.000	1.000
Prior information	2.568	1.776	.086	1.446	.149
Source of information	.535	.098	.330	5.462	.000

Dependent Variable: knowledge of PIH

Table 6: Differences in knowledge of PIH based on source of information

ANOVA

Source of information

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	687.650	5	137.530	17.522	.000
Within Groups	1962.209	250	7.849		
Total	2649.859	255			

Table 7: Post hoc analysis on differences in knowledge based source of information

Source of information	N	Hospital	Radio	Television	Health talk	Research	Multiple sources	Mean
Hospital	125				*		*	32.47
Radio	31				*		*	32.71
Television	30						*	31.80
Health talk in Church/Mosque	12	*	*				*	29.00
Personal research	4							34.00
Multiple sources	54	*	*	*	*			35.76

3.6 Discussion

Findings of this study, that over 50% of the respondents have good knowledge about PIH, is similar to that reported by previous studies [3,13]. However considering the enormous impact of PIH on maternal and child health, and the need for every woman of reproductive age to be aware of signs and symptoms, predisposing factors and other factors associated with PIH it can be observed that the level of knowledge reported in this study is not high enough. Effort is therefore required to be directed towards health education intervention to improve the knowledge of PIH especially that of signs and symptoms of PIH among women of reproductive age in Ekiti State.

The findings that source of information contributed highly significantly to the knowledge of PIH of respondents, is worthy of note. How and where people get information about a thing matters a lot in determining the content, authenticity and adequacy of such information. In this study respondents with multiple sources of information have higher score of knowledge of PIH than those with single source of information. This is an indication that various avenues like mass media, hospital setting, print media, religious organizations among others need to be adopted in passing across information regarding PIH in order to ensure that people get adequate knowledge.

4. CONCLUSION

Based on the findings of this study, it can be concluded that the level of knowledge of pregnant women in Ekiti State on pregnancy induced hypertension is just a little above average and this knowledge was greatly influenced by their source of information on the condition. Health care providers should mount intervention strategies using multiple measures to facilitate improvement in knowledge of pregnancy induced hypertension among pregnant women.

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