

Perceived impacts of pre-eclampsia and eclampsia on health of pregnant mothers being attended to at a general hospital in Southwest, Nigeria

Abstract

The study focused on the Perceived impacts of pre-eclampsia and eclampsia on health of pregnant women attending Federal Teaching Hospital Ido-Ekiti, Ekiti state. It assessed the knowledge of pregnant mothers on the impact of Pre-eclampsia and eclampsia on pregnancy, it also identified the factors responsible for prevalence of pre-eclampsia and eclampsia among pregnant mothers. Furthermore, it assesses the level of perception of pregnant mothers on pre-eclampsia and eclampsia. The relationship between level of education and knowledge of pre-eclampsia, and eclampsia as well as the relationship between level of education and perceived effect of eclampsia were assessed.

A cross-sectional descriptive design was employed using a semi structured questionnaire to gather information from 100 women with at least one child. An accidental sampling procedure was employed, and data was collected using interviewer administered questionnaire. Analysis of data was done using appropriate descriptive and inferential statistical techniques. The results of the study revealed that about 47% of the respondents are of age 20 to 30 years while 46% are of age 31 to 40 years and 7% are of age 41 years and above. Also, 85% of the respondents were married while 15% were single. 80% of the respondents had tertiary education, 16% had secondary while 4% had primary education. All of the respondents were Christians. 52% of them were Primip, 11% had two children, 16% had 3 children while 8% had 4 and 13% had 5 children. 65% of the respondents had good knowledge of Pre-eclampsia and Eclampsia, while 35% had poor knowledge. 59% of the respondents submitted that Obesity is a factor influencing the prevalence of Pre-eclampsia and eclampsia. More than 50% of the respondents chose each of Chronic hypertension, previous history of pre-eclampsia as influencing factor. However, 65% of the respondents disagreed that Physical exercise during pregnancy is a factor. Also, 64% submitted they do not know if Having sex during pregnancy can be a factor influencing the prevalence of Pre-eclampsia and eclampsia. 31% of the respondents had good perception of effect of Pre-eclampsia and Eclampsia on mothers, while 69% had poor perception. 64% of the respondents had good perception of effect of Pre-eclampsia and Eclampsia on babies, while 36% had poor perception. there is no significant relationship between level of education and knowledge of pre-eclampsia and eclampsia as chi square is greater than 0.05.

There is no significant relationship between level of education and perception of pregnant mothers on effect of Pre-eclampsia and Eclampsia on mothers as chi square is greater than 0.05. there is no significant relationship between level of education and perception of pregnant mothers on effect of Pre-eclampsia and Eclampsia on babies as chi square is greater than 0.05.

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Introduction

Pre-eclampsia (PE) is a disorder of pregnancy characterized by high blood pressure and a large amount of protein in the urine.¹ The disorder usually occurs in the third trimester of pregnancy and gets worse over time.² PE is a great challenge to obstetricians because its cause is unknown, its pathophysiology is complex and incompletely understood, its diagnosis may be difficult to determine, there are no effective treatments, and antenatal care involves a difficult balance between the risks for women to continue pregnancy and those for the baby's early birth.³

In severe disease there may be red blood cell breakdown, a low blood platelet count, impaired liver function, kidney dysfunction, swelling, shortness of breath due to fluid in the lungs, or visual disturbances.⁴ Furthermore, there is increased risk for long-term cardiovascular disease.⁵ Preeclampsia increases the risk of poor outcomes for both the mother and the baby. If left untreated, it may result in seizures at which point it is known as Eclampsia.² Among the hypertensive disorders that complicate pregnancy, pre-eclampsia

and eclampsia stand out as major causes of maternal and perinatal mortality and morbidity. The majority of deaths due to pre-eclampsia and eclampsia are avoidable through the provision of timely and effective care to the women presenting with these complications.⁶

Even in developed countries, Eclampsia affects 0.56 per 1000 pregnant women and almost 10–30 times as many women in low-income countries as in developed countries.⁴

Research methodology

Research design, setting and target population

A descriptive design was adopted in this research study to assess the perceived health effects of preeclampsia and eclampsia on pregnant mothers with their babies. It was conducted at Federal Teaching Hospital, located in Ido-Ekiti, Ido – Osi local government in Ekiti State. It was formerly a general hospital until 2002 when it was converted to Federal Medical Centre which was later upgraded to Federal Teaching Hospital. It is a federal government institution offering health care to every member of the community and also

serves as a referral centre. There are several units in this hospital in which obstetrics and gynecology department is among. The antenatal clinic holds twice a week, Tuesdays and Thursdays from 8am till 2pm. Target population for this study are pregnant mothers attending this clinic.

Sampling technique and sample size determination

The sampling method used was accidental sampling method which means that the researcher used a most readily available client at the clinic. Hundred clients were selected during three visits to the clinic. The sample size which sum up to 92 was determined using Taro Yamane's formula but to cater for questionnaires that were not returned or loss, the sample size was increased to 100.

Instrumentation for data collection

The data for this study was obtained using well-constructed questionnaire which has four sections. Section A includes demographic information of the respondents, section B includes awareness about pre-eclampsia and eclampsia, section C asked information of the respondents' knowledge about the risk factors contributing to pre-eclampsia and eclampsia. Section D assesses the knowledge of the respondents on the health effect of pre-eclampsia and eclampsia on the mother and their babies.

Procedure for data collection

A preliminary visit was made to Federal Teaching Hospital, Ido-Ekiti, to obtain ethical clearance. Permission to carry out the study was obtained from the head of Nursing services of the hospital. Since the method of sample collection was accidental sampling method, client met during three successions of antenatal clinic were selected and their consent gained before giving the questionnaire.

Data analysis

The data were analyzed using SPSS statistical package for social sciences (version 17). This gave descriptive statistic of the data variables; provide relevant tables and other pertinent statistical calculation.

Ethical consideration

Written permission to obtain data was collected from department and it was presented to the ethical committee at Federal Teaching Hospital Ido-Ekiti to seek the approval to carry out the research. Respondents consent was obtained before conducting the research and every piece of information kept confidential and anonymous to the public.

Results

From the Table 1, 47% of the respondents are of age 20 to 30 years while 46% are of age 31 to 40 years and 7% are of age 41 years and above. Also, 85% of the respondents were married while 15% were single. 80% of the respondents had tertiary education, 16% had secondary while 4% had primary education. All the respondents were Christians. 52% of them were Primipara, 11% had two children, 16% had three children while 8% had four children and 13% had five children.

Table 1 Socio-demographic profile of respondents

Variable	Frequency n=100	Percentage (%)
Age of respondents		
20 to 30	47	47
31 to 40	46	46
41 and above	7	7
Marital status		
Single	15	15
Married	85	85

Table Continued....

Variable	Frequency n=100	Percentage (%)
Divorced	0	0
Level of education		
No formal education	4	4
Primary	0	0
Secondary	16	16
Tertiary	80	80
Religion		
Christianity	100	100
Muslim	0	0
Traditional	0	0
Parity		
1	52	52
2	11	11
3	16	16
4	8	8
5	13	13

In determining the knowledge of respondents on Pre-eclampsia and Eclampsia, ten questions were asked each with 3 options; those that chose right were awarded 2 marks per question, while those that answered wrongly were given 1 and 0 marks for each question. Therefore, the highest possible mark was '20' and the lowest possible mark was '0'.

From the Table 2, 65% of the respondents had good knowledge of Pre-eclampsia and Eclampsia, while 35% had poor knowledge.

Table 2 Knowledge of pre-eclampsia and eclampsia

	Frequency	Percent
Poor knowledge	35	35
Good knowledge	65	65
Total	100	100

From the Table 3, 59% of the respondents submitted that Obesity is a factor influencing the prevalence of Pre-eclampsia and eclampsia. More than 50% of the respondents chose each of Chronic hypertension, previous history of Pre-eclampsia. However, 65% of the respondents disagreed that Physical exercise during pregnancy is a factor. Also 64% submitted they do not know if having sex during pregnancy can be a factor influencing the prevalence of Pre-eclampsia and eclampsia.

Table 3 Factors influencing prevalence of pre-eclampsia and eclampsia

Factors influencing prevalence of pre-eclampsia and eclampsia	True (Yes)	False (No)	I don't know
Null parity	23	39	38
Multiple gestation	35	45	20
Drinking a lot of water	14	49	37
Too much sleeping	23	46	31
Obesity	59	34	7
Previous history of pre-eclampsia	53	36	11
Chronic hypertension	58	27	15
Advanced maternal age (greater than 35 years)	44	36	20
Previously donation of kidney	32	47	21
Having sex during pregnancy	6	30	64
Physical exercise during pregnancy	6	65	29

In determining the level of perception of pregnant mothers on impact of Pre-eclampsia and Eclampsia on mothers, six questions were asked each with 3 options; those that chose right were awarded 2 marks per question, while those that answered wrongly were given 1 and 0 marks for each question. Therefore, the highest possible mark was '12' and the lowest possible mark was '0'.

From this Table 4, 31% of the respondents had good perception of impact of Pre-eclampsia and Eclampsia on mothers, while 69% had poor perception.

Table 4 Perception of impact of pre-eclampsia & eclampsia on mothers

Perceived impact of pre-eclampsia & eclampsia on mothers	Frequency	Percent
Poor perception	69	69
Good perception	31	31
Total	100	100

In deciding the level of perception of pregnant mothers on impact of Pre-eclampsia and Eclampsia on babies five questions were asked each with 3 options; those that chose right were awarded 2 marks per question, while those that answered wrongly were given 1 and

0 marks for each question. Therefore, the highest possible mark was '10' and the lowest possible mark was '0'

From this Table 5, 64% of the respondents had good perception of impact of Pre-eclampsia and Eclampsia on babies, while 36% had poor perception.

Table 5 Perceived impact of pre-eclampsia & eclampsia on baby

Perceived impact of pre-eclampsia & eclampsia on baby	Frequency	Percent
Poor perception	36	36
Good perception	64	64
Total	100	100

From the Table 6, there is no significant relationship between level of education and knowledge of pre-eclampsia and eclampsia as chi square is greater than 0.05.

From this Table 7, there is no significant relationship between level of education and perception of pregnant mothers on impact of Pre-eclampsia and Eclampsia on mothers as chi square is greater than 0.05.

Table 6 Level of education versus knowledge of pre-eclampsia and eclampsia

Level of education	Knowledge of pre-eclampsia and eclampsia			P-value	df	X ²
	Poor knowledge	Good knowledge	Total			
No formal education	0	4	4	3.791	2	0.15
Secondary	8	8	8			
Tertiary	27	53	88			
Total	35	65	100			

Table 7 Level of education versus perception of pregnant mothers on impact of pre-eclampsia and eclampsia on mothers

Level of education	Perception of impact on mothers		Total	P-value	df	X ²
	Poor perception	Good perception				
No formal education	4	0	4	2.349	2	0.309
Secondary	12	4	16			
Tertiary	53	27	80			
Total	69	31	100			

From Table 8, there is no significant relationship between level of education and perception of pregnant mothers on impact of Pre-

eclampsia and Eclampsia on babies as chi square is greater than 0.05.

Table 8 Level of education versus perception of pregnant mothers on impact of pre-eclampsia and clampsia on babies

Level of education	Perception of impact on baby		Total	P-value	df	X ²
	Poor perception	Good perception				
No formal education	0	4	4	3.646	2	0.162
Secondary	4	12	16			
Tertiary	32	48	80			
Total	36	64	100			

Discussion

The demographic data shows that majority of the respondent, 47% were within the age range of 20 to 30 years, 46% were within age range 31 to 40 years while others were above 41years. Also, all the respondents were Christian, in which 85% were married and the rest were single. 80% of them had tertiary education while 16% had secondary education, only 4% had no formal education at all. In relation to parity, 52% of them were Primp, 11% had two children,

16% had three children while 8% had four children and 13% had five children.

Assessment of the respondents' knowledge about pre-eclampsia and eclampsia, as shown in Table 2, revealed that 65% of the respondents had good knowledge while 35% had poor knowledge. In considering the possible factors that can influence the prevalence of pre-eclampsia and eclampsia, in reference to table 3 discovered it that, 59% of the respondents submitted that Obesity is an influencing factor and more than 50% of the respondents chose each of Chronic

hypertension, previous history of Pre-eclampsia as influencing factors. However, 65% of the respondents disagreed that Physical exercise during pregnancy is a factor. Also 64% submitted that, they do not know if having sex during pregnancy can be a factor influencing the prevalence of Pre-eclampsia and eclampsia. This is in accordance with the work of Arulkumaran and Lightstone⁴, which identified Obesity, Chronic hypertension, and previous history of pre-eclampsia as factors influencing the prevalence of Pre-eclampsia and eclampsia among others.

In examining the perception of the respondents on the impact of pre-eclampsia and eclampsia on mothers, questions were asked and scored, as seen in table 4, 31% of the respondents had good perception of impact of Pre-eclampsia and Eclampsia on mothers, while 69% had poor perception. Also, in line with this, the perception of the respondents on the impact of pre-eclampsia and eclampsia on their babies were evaluated, as shown in table 5, 64% of the respondents had good perception of impact of Pre-eclampsia and Eclampsia on babies, while 36% had poor perception. This is in accordance with Osungbade and Ige⁷, the aetiology of pre-eclampsia remains a mystery; the cause and disease pathways are not fully understood. Also, El-Nafaty and Omotara⁸, submitted that there is a gap in knowledge regarding the effect of Pre-eclampsia and eclampsia in Nigeria where Pre-eclampsia is believed to be caused by spirits.⁹

In analyzing the level of education and the knowledge of pregnant mother on the impacts of Pre-eclampsia and eclampsia, as revealed in Table 6 shows that there is no significant relationship between level of education and knowledge of pre-eclampsia and eclampsia as chi square is greater than 0.05. Also, Table 7 shows that there is no significant difference between level of education and perception of pregnant mothers on impact of Pre-eclampsia and Eclampsia on mothers as chi square is greater than 0.05. In conclusion, reference to Table 8, there is no significant difference between level of education and perception of pregnant mothers on impact of Pre-eclampsia and Eclampsia on babies as chi square is greater than 0.05. Moreover, in the work of Derakhshan, Shadzi and Behjatian³, there was also no significant correlation between knowledge and perception of pregnant women with gravity, parity, and maternal age.

Conclusion

In synopsis, the result of the study shows that the women in the study are aware of eclampsia and pre-eclampsia and its predisposing factors. However, they had poor perception of the effect of Eclampsia and Pre-eclampsia on mothers even on their babies. This can be due to lack of enough information on the cause, course and outcome of

pre-eclampsia and eclampsia by mothers. It was also discovered that level of education does not affect their knowledge and perception of Eclampsia and Pre-eclampsia. This might be because there is little or nothing in curriculum of schools that teach safe motherhood.

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Conflicts of interest

The authors declared that there are no conflicts of interest.

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