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Effect of Educational Program on the Knowledge of Nurses Caring for Women with Eclampsia and Pre Eclampsia

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Abstract: **Hypertensive disorders of pregnancy (PIH) is an important cause of severe morbidity, long term disability and death among both mothers and their babies. The aim of this study is to assess the effect of educational program on the knoweldge of nurses caring for women with eclampsia and pre eclampsia. Methods, Research design: Quasi - Experimental design (Pre and posttest). The study sample consisted of 160 nurses who worked in Obestetric and Gynecology department at Menoufia University Hospital and Shebin El Koom Teaching Hospital in the period from August 2018 till January 2019. The tool of this study were structured interviewing questionnaire which included socio-demographic data and a questionnaire was used to evaluate nurses' Knowledge about pre-eclampsia and eclampsia, (pre and posttest). The validity of the tool was ascertained by a group of jurors experts who reviewed the tool for content validity. The reliability of the tool was assessed through testing their internal consistency. The main findings, There was a highly statistical significant difference between pre and posttest regarding nurses' knowledge about preeclampsia and eclampsia. Conclusion, it's important to improve nurses' knowledge regarding preeclampsia and eclampsia. Recommendation, Continuous educational program to improve nurses' knowledge regarding care of preeclampsia and eclampsia.**

Keywords: **Preeclampsia, Eclampsia, Nurses' knowledge, Clinical practice guidelines.**

1. INTRODUCTION

Hypertensive disorders of pregnancy affect about 10% of all pregnant women around the world. In Africa and Asia, nearly one tenth of all maternal deaths are associated with hypertensive disorders of pregnancy as pre-eclampsia and eclampsia (Duley, 2009; Steegers, von Dadelszen, Duvekot, Pijnenborg, 2010).

Preeclampsia is a disorder that occurs only during pregnancy and the postpartum period. It is a rapidly progressive condition characterized by high blood pressure and the presence of albumin in the urine. Swelling, sudden weight gain, headaches and changes in vision are important symptoms; however, some women with rapidly advancing disease report few symptoms. preeclampsia occurs after20 weeks gestation (in the late 2nd or 3rd trimesters or middle to late pregnancy), though it can occur earlier (Preeclampsia foundation, 2011).

Eclampsia, which is considered a complication of severe preeclampsia, is commonly defined as new onset of grand mal seizure activity and/or unexplained coma during pregnancy or postpartum in a woman with signs or symptoms of preeclampsia (Warrington, 2015). Eclampsia affects about 1 in every 200 women with preeclampsia (Macon and Leonard,

2015). It typically occurs during or after the 20th week of gestation or in the postpartum period. About 80% of eclamptic seizures occurring intrapartum or within the first 48 hours following delivery. Rare cases have been reported before 20 weeks' gestation or as late as 23 days' postpartum (Michael, 2015).

Nursing management of pre eclampsia is Monitor for and promote the resolution of complications such as: Monitor vital signs and FHR. Minimize external stimuli. promote rest and relaxation. Measure and record urine output, protein level, and specific gravity. Assess for edema of face, arms, hands, legs, ankles, and feet. Also assess for pulmonary edema. Weigh the client daily. Assess deep tendon reflexes every 4 hours. Assess for placental separation, headache and visual disturbance, epigastric pain, and altered level of consciousness (Antipuesto, 2010).

Provide treatment as prescribed that mild preeclampsia treatment consists of bed rest in left lateral recumbent position, balanced diet with moderate to high protein and low to moderate sodium, and administration of magnesium sulfate. Severe preeclampsia treatment consists of complete bed rest, balanced diet with high protein and low to moderate sodium, administration of sulfate, fluid and electrolyte replacements. Also administration of sedative hypertensives such as diazepam or phenobarbital or an anticonvulsant such as phenytoin are necessary (Nordqvist, 2015).

Significance of the study:

Preeclampsia and other hypertensive disorders of pregnancy remain a leading cause of maternal and infant illness and death. Globally, by conservative estimates, these disorders are responsible for 76,000 maternal and 500,000 infant deaths every year. In the United States, preeclampsia affects one in every 12 pregnancies, and its incidence has increased by 25 percent during the past two decades (Preeclampsia Foundation, 2014).

The majority of deaths due to pre-eclampsia and eclampsia can be avoidable through the provision of timely and effective care to the women presenting with these complications. Optimizing health care to prevent and treat women with hypertensive disorders is a necessary step towards achieving the goals. (WHO, 2011 and Campbell, Graham, 2012.)

Unfortunately, there is no nursing specialist caring for women with pre eclampsia and eclampsia and also there is no special units in Menoufia governorate caring for these women. The researcher selected this study to evaluate the effect of educational program on the Knowledge of nurses caring for women with eclampsia and pre eclampsia

Aim of the Study:

The aim of the current study is to Evaluate the effect of educational program on the knowledge of nurses caring for women with eclampsia and pre eclampsia.

Research Hypotheses:

The nurses who will receive educational program for caring of pre eclampsia will have higher score of knowledge than pretest.

The nurses who will receive educational program for caring of eclampsia will have higher score of knowledge than pretest.

2. METHODS

Research design:

A quasi-experimental design (Pre and post test).

Setting:

The present study was conducted at Obstetrics and Gynecological department of Menoufia University Hospital and Shebin El-Koom Teaching Hospital. These settings were selected because of the high flow rate of pre eclampsia and Eclampsia cases who attended from different surrounding cities and villages which are near to Shebin Elkoom city. The university and teaching hospital provide free services to public clients and care for women during pregnancy and labor, as well as for infertility and gynecological problems, in addition to family planning services.

Sampling:

A purposive sample of all nurses working at Obstetrics and Gynecological ward and operating rooms (160 nurses). The total sample size (160) nurses were took from the above mentioned Hospitals (85 nurses was selected from Menoufia University Hospital and 75 nurses from Shebin El-Kom Teaching Hospital.)

Instrument:

A specialized designed self structured questionnaire was developed based on the review of currently related literature and used by the researcher to collect the necessary data about the study subjects. It comprised two main parts:-

Part I: Socio-demographic characteristics including: name, age, level of education, residence, phone number, occupation, years of experience and training courses attended.

Part II: a questionnaire was used to evaluate nurses Knowledge about pre-eclampsia and eclampsia: it was adapted by the researcher from the relevant literature. It consisted of 10 questions related to pre-eclampsia and eclampsia which used to assess level of nurses's knowledge about pre-eclampsia and eclampsia which includes definition, causes, signs and symptoms, complications, management as well as nursing interventions in pre and posttest.

Scoring:

Ten knowledge questions were determined according to the literature and coded accordingly. Each question item of knowledge was given a score; correct & complete answer took (2), correct & incomplete answer took (1), while incorrect & don't know took (0).

Validity and reliability

For validity purposes, the researchers conducted an extensive literature review and developed the questionnaire from the previously used instruments and reviewing pertinent studies. Instruments were designed by the researchers and validated by three experts (two lecturer in Maternal and Newborn Health Nursing and one expert has doctorate degree in Obstetric Medicine) for content accuracy and internal validity. Test-retest reliability was used to estimate reliability.

Administrative Approvals:

An official letter was taken from Dean, Faculty of nursing, Menoufia University and directed to Directors of the study settings. An official permission was obtained to carry out the study from the directors of the above mentioned settings. Also, the approval of the Ethical Committee of the Faculty of Nursing, Monoufia University was obtained.

Pilot study

A pilot study conducted to test the feasibility, applicability and understandability of the tools. It was conducted on 10%of the total sample (16 nurses) according to the selection criteria. All women participated in the pilot study excluded from the study sample to assure the stability of the results and make the necessary modifications.

Ethical Consideration:

An approval of the committee of the research committee in the faculty of nursing, Menoufia University was obtained on 22/12/2015. Approaches to ensuring ethics were considered in the study regarding confidentiality and informed consent. Confidentiality was achieved by the use of closed sheets with the names of the participants replaced by numbers. All participating nurses were informed that the information they provided during the study would be kept confidential and used only for statistical purpose and after finishing the study, the findings would be presented as a group data with no personal participant's information remained.

Study field work:

The current study was carried out on four phases:

1) Preparatory phase:

An extensive review related to the study area was done including electronic dissertations, available books, articles and periodicals. A review of literature to formulate knowledge base relevant to the study area was also done. A written

permission from the institutional authority of the two hospitals was obtained before conducting the study. The researcher was constructed and prepared of the different data collection instrument, in addition to seeking managerial arrangement to carry out the study.

2) Data collection phase:

The data were collected over a period of 6 months from beginning of August 2018 to end of January 2019. During the initial contact (1st session), the researcher greeted the nurses, introduced herself and explained the purpose of the research in order to obtain their acceptance and recruited in this research as well as to gain their cooperation. After taking verbal agreement from the nurses. they were given the instrument 1 and 2 to fulfill the data related to socio-demographic characteristics; their general knowledge about preeclampsia and eclampsia. This session consumed about 2hour.

3) Implementation phase:

During the second session a booklet containing total knowledge about pre eclampsia and eclampsia was given to the nurses to facilitate explanation of knowledge they needed. The researcher explained total knowledge of pre eclampsia and eclampsia to the nurses. which include: definition, causes, signs and symptoms and complications of preeclampsia and eclampsia.

At the end of the sessions, each nurse was given booklet about pre eclampsia and eclampsia.

4) Evaluation phase:

During the 3rd session: A posttest was done after giving booklet to assess the effect of educational program on nurse's knowledge caring for women with pre eclampsia and eclampsia.

Statistical Analysis:

Data analysis

Data was coded and transformed into specially designed form to be suitable for computer entry process. Data was entered and analyzed by using SPSS (Statistical Package for Social Science) statistical package version 22. Graphics were done using Excel program. Quantitative data were expressed as mean & standard deviation (X ±SD) and analyzed by applying paired t-test for comparison of the same group on pre and posttest and Anova test for comparison of the same group on pre, posttest and follow-up test. Qualitative data were expressed as number and percentage (No & %).It was and analyzed by using chi-square test (X^2) for 2X2 table, For comparison between the quantitative data at interval for the different groups, Kruskal Wallis Test was used and for two different groups, Mann-Whitney U Test was used. Pearson correlation was used for explaining relationship between normally distributed quantitative variable. The level of significance was set at ≤ 0.05.

3. RESULTS

Table (1): Socio - demographic Characteristics of the Study Nurses

Variables	The study participants (No.=160)	%
Marital status:		
- Single	60	37.5%
- Married	100	62.5%
Educational level:		
- Secondary School Nursing	70	43.8%
- Technical Institute of Nursing	20	12.5%
- Faculty of Nursing	70	43.8%
Years of Experience:		
- 1- < 5 years	82	51.3%
- 5-11 years	30	18.8%
- More than 11 years	48	30.0%

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Working department: - Obstetric and gynecological department - Obstetric and gynecological theater room	 88 72	 55.0% 45.0%
Attendance of training courses of preeclampsia: - Yes - No	 14 146	 8.8% 91.3%
Did you deal with preeclampsia: - Yes - No	 106 54	 66.3% 33.8%

Table (1): shows the socio-demographic characteristics of the study nurses. It shows that 62.5% of the study nurses were married. Nearly 43.8% of the study nurses had bachelor degree in nursing and secondary school nursing. About 55% of the study nurses worked in the theater room of obstetrics and gynecology. Where as the majority of them (91.3%) did not attend the training courses about care of preeclampsia and eclampsia. Regarding dealing with preeclampsia (66.3%) of the study nurses dealt with cases had preeclampsia and eclampsia.

Table (2): Knowledge of the Study Nurses Regarding Preeclampsia (Pre and Post Intervention) (N=160).

Variables	**Knowledge of the study nurses about Preeclampsia (pre and post intervention)**				**X^2**	**P.value**
	Pre		Post			
	No.	%	No.	%		
Definition of preeclampsia: - Incorrect - Correct and incomplete - Correct and complete	 44 116 0	 27.5% 72.5% 0.0%	 4 13 143	 2.5% 8.1% 89.4%	258.57	<.001
Signs and symptoms of preeclampsia: - Incorrect - Correct and incomplete - Correct and complete	 38 122 0	 23.8% 76.3% 0.0%	 3 14 143	 1.9% 8.8% 89.4%	258.64	<.001
Complications of preeclampsia: - Incorrect - Correct and incomplete - Correct and complete	 54 106 0	 33.8% 66.3% 0.0%	 7 10 143	 4.4% 6.3% 89.4%	258.66	<.001
How to deal with preeclampsia: - Incorrect - Correct and incomplete - Correct and complete	 52 108 0	 32.5% 67.5% 0.0%	 4 72 84	 2.5% 45.0% 52.5%	132.34	<.001
Nursing management of preeclampsia: - Incorrect - Correct and incomplete - Correct and complete	 52 108 0	 32.5% 67.5% 0.0%	 4 57 99	 2.5% 35.6% 61.9%	155.90	<.001

Table (2): Shows knowledge of the study nurses regarding preeclampsia (pre and post intervention). It revealed that there was a highly statistically significant difference between the study nurses' pre and post intervention regarding their knowledge about preeclampsia, where (P value < 0.001).

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Table (3): Knowledge of the Study Nurses Regarding eclampsia (Pre Intervention and Post Intervention) (N=160).

Variables	Knowledge of the study nurses about eclampsia (pre and post intervention)				X^2	P –value
	Pre		Post			
	No.	%	No.	%		
Definition of eclampsia:					258.77	<0.001
- Incorrect	50	31.3%	7	4.4%		
- Correct and incomplete	110	68.8%	10	6.3%		
- Correct and complete	0	0.0%	143	89.4%		
Signs and symptoms of eclampsia:					128.33	<0.001
- Incorrect	39	24.4%	3	1.9%		
- Correct and incomplete	74	46.3%	11	6.9%		
- Correct and complete	47	29.4%	146	91.3%		
Complications of eclampsia:					221.68	<0.001
- Incorrect	100	62.5%	10	6.3%		
- Correct and incomplete	50	31.3%	7	4.4%		
- Correct and complete	10	6.3%	143	89.4%		
How to deal with eclampsia:					155.90	<0.001
- Incorrect	52	32.5%	4	2.5%		
- Correct and incomplete	108	67.5%	57	35.6%		
- Correct and complete	0	0.0%	99	61.9%		
Nursing management of eclampsia:					154.13	<.0.001
- Incorrect	48	30.0%	4	2.5%		
- Correct and incomplete	112	70.0%	57	35.6%		
- Correct and complete	0	0.0%	99	61.9%		

Table (3): Shows knowledge of the study nurses regarding eclampsia (pre intervention and post intervention). It revealed that there was a highly statistically significant difference between the study nurses' pre and post intervention regarding their knowledge about eclampsia, where (P value < 0.001).

Table (4): The Mean Total Knowledge Score of the Study Nurses about Preeclampsia and Eclampsia (Pre Intervention and Post Intervention).

Variables	The mean total knowledge score of the study nurses (pre & post intervention)		t test	p-value
	Pre	Post		
Total knowledge score - Mean ± SD	**17.06 ±4.1**	**27.45 ±4.2**	**-22.615-**	**<.001**

Table (4): Shows the mean total knowledge score of the study nurses about preeclampsia and eclampsia (pre intervention and post intervention). It revealed that there was a highly statistical significant difference between the study nurses (pre and post intervention) regarding their total knowledge about preeclampsia and eclampsia as the total knowledge score of preeclampsia increased post intervention (27.45±4.2) than pre intervention (17.06 ±4.1).

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Figure (1): Total Knowledge Score of the Study Nurses about Preeclampsia and Eclampsia (Pre and Post Intervention).

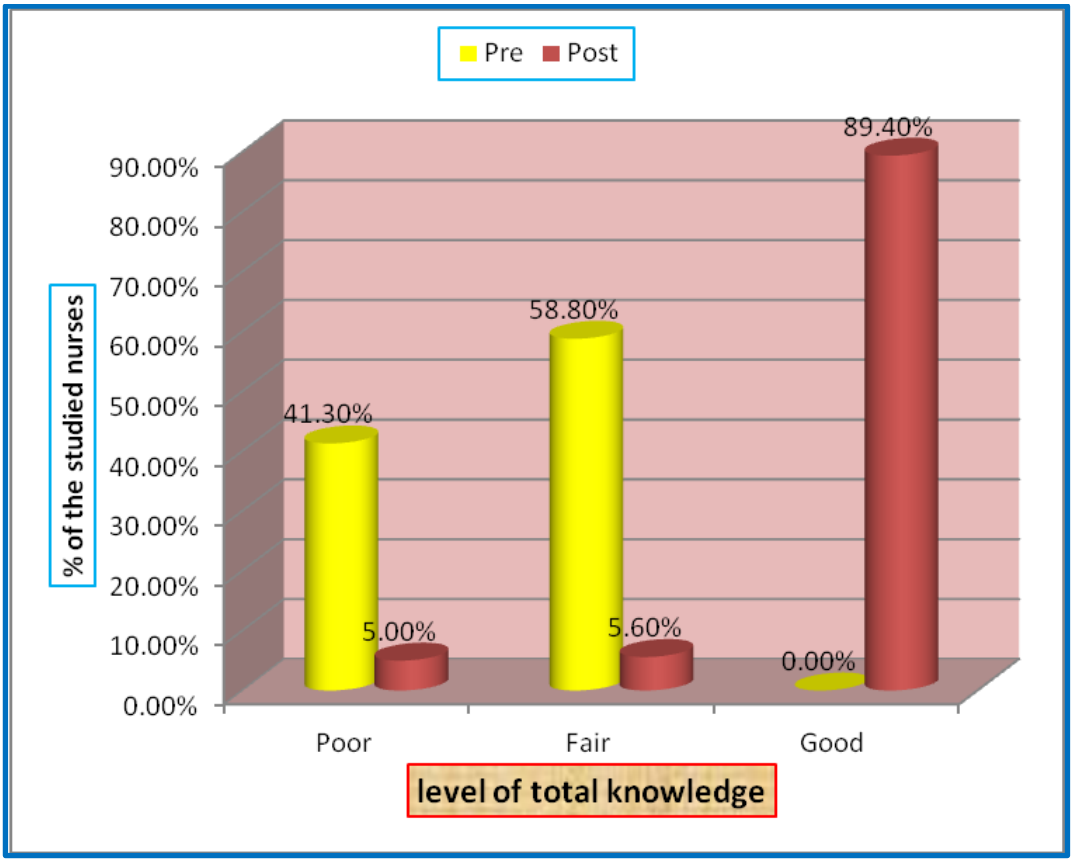

Figure (1): Shows the total knowledge score of the study nurses about preeclampsia and eclampsia. It revealed that the majority of the study nurses 89.40% had good knowledge post intervention, while about more than half of them 58.80% had fair knowledge pre intervention.

Table (5): knowledge of the study nurses about *diagnosing preeclampsia and eclampsia* pre and post intervention.

Variables	Pre (n=160)		Post (n=160)		X^2	P -value
	No	%	No	%		
Diagnosis of preeclampsia don't know know	78 82	48.8% 51.3%	4 156	2.5% 97.5%	$\chi^2$1= 73. 81	P1=.000
Diagnosis of preeclampsia when patient have chronic hypertention don't know know	70 90	43.8% 56.3%	5 155	3.1% 96.9%	$\chi^2$1=81.02	P1 =.000
Diagnosis of sever preeclampsia when the following signs present : headache, protinurea. sever hypertention don't know Know	74 86	46.3% 53.8%	4 156	2.5% 97.5%	$\chi^2$1= 86.90	P1=.000

$\chi^2$1& P1: comparison between pre and post intervention.

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Table (5): knowledge of educational program of the study nurses regarding diagnosing preeclampsia and eclampsia (pre intervention and post intervention). It reflected that there was a highly statistical significant difference between pre and post intervention regarding their knowledge about the diagnosis of preeclampsia and eclampsia, where (p <0.001).

Table (6): Mean scores of total knowledge of the studied nurses on pre and post intervention in relation to their level of education.

level of education	Nursing school	Technical institute	Bachelor of nursing	Kruskal Wallis Test	*p-value*
	Mean ± SD	Mean ± SD	Mean ± SD		
Total knowledge score					
Pre	15.68 ± 4.2	18.50 ±1.5	18.0286 ± 4.1	8.94	011
Post	25.35 ± 5.1	27.28 ± 4.6	28.21 ± 2.9	5.788	.055

Table (6): Shows the mean scores of total knowledge about preeclampsia and eclampsia of the study nurses in relation to their level of education (pre intervention, post intervention). It reveals that there was a highly statistical significant difference regarding total knowledge about preeclampsia and eclampsia of the study nurses in relation to their level of education pre intervention, where (P value <0.001). As the nurses who had faculty of nursing had increased the mean scores of total knowledge than those who had secondary school of nursing or technical institute of nursing. There was no statistical significant difference regarding total knowledge score in relation to their level of education post intervention, where (P value >0.05).

Table (7): Mean scores of total knowledge of the studied nurses on pre and post intervention in relation to their working department.

working department	obstetric and gynecological ward	obestetric and gynecological operation room	Mann-whitney Test	*p-value*
	Mean ± SD	Mean ± SD		
Total knowledge score				
Pre	17.25 ±3.8	16.83 ±4.4	1.267	.205
Post	27.47 ±4.0	27.41 ±4.2	.385	.700

Table (7): Shows Mean scores of total knowledge of the studied nurses on pre, post and follow-up intervention in relation to their working department. It reveals that there was no statistical significant difference between pre intervention and post intervention regarding the nurses' knowledge caring of women with preeclampsia and eclampsia in relation to their working department, where (P value >0.05).

Table (8): Mean scores of knowledge of the studied nurses on pre and post intervention in relation to their years of experience

years of experience	1-5 years	5-11 years	more than 11 years	Kruskal Wallis Test	*p-value*
	Mean ± SD	Mean ± SD	Mean ± SD		
Total knowledge score					
Pre	14.43 ±4.2	19.20 ±1.6	20.21 ±1.4	72.99	.000
Post	27.12 ±4.6	26.96 ±4.6	28.31 ±2.5	1.317	.518

Table (8): shows the Mean scores of knowledge of the studied nurses on pre and post intervention in relation to their years of experience. It reveals that there was a highly statistical significant difference regarding total knowledge score in relation to their years of experience pre intervention, where (p value <0.001).

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4. DISCUSSION

Based on the findings of the present study; the discussion is presented in the following sequence: 1-General findings included socio-demographic characteristics, level of education and training courses attendance by the nurses. 2- Findings that are related to knowledge of the study nurses about preeclampsia and eclampsia.

The present study was carried out on a purposive sample of all nurses (160 nurses). The percentage of nursing school graduates was the same as Bachelor graduate nurses and was less than half of the study participants while the lowest percent (an eighth) had technical institute of nursing. This finding might be because of nurses' choice to their level of education. This result comes in contrast with the study of Chowdhury, Khatun, Mohammad, (2017) who had studied nurse's knowledge regarding management of eclampsia at selected private hospital in Bangladesh and stated that more than half of the study participants had bachelor in nursing and less than one third had diplome.

Concerning years of experience of the study nurses, more than half of the nurses experienced less than five years. This was come in agreement with the study findings of Siddig, (2017) who had studied Nurse's knowledge Regarding Care of Pre eclamptic Patient in Alribat Hospital Khartoum and found that more than half of the study nurses had less than 5 years of experience. This finding may be interpreted as the nurses were promoted to another high job.

Regarding attendance of the training courses, the present study showed that there was only an eighth of the study nurses attended training courses about preeclampsia and eclampsia which is in the same line with Mohamady and Elkheshen, (2017) who conducted a study at Helwan general hospital, Egypt about Efficacy of Self Instructional Guide on Knowledge Regarding Care of Pre-Eclampsia Women among Staff Nurses and stated that the majority of nurses not received training courses. This is rationalized to the lack of training courses related to preeclampsia and eclampsia.

This study showed that more than half of the study nurses dealt with the patients with preeclampsia and eclampsia which is in consistent with Mousa, Ali, and El Adawy, (2013) who studied Updating Nurses' knowledge about Preeclamptic Patients' Care by Using a Poster in Minia Maternal and Child University Hospital, Egypt who reported that the majority of nurses deal with preeclamptic patients. This is because the high flow rate of preeclampsia and eclampsia at these hospitals.

Concerning the nurses' knowledge about preeclampsia, the present study finding showed that the majority of nurses had a correct and complete answer post intervention than before. This is rationalized to the interest of nurses to gain information about preeclampsia. This come in harmony with the study of Mohamed, Ahmed and Helmy (2017) who studied the impact of tailored intensive educational program upon preeclampsia on nurses' knowledge at Beni-Suef city, Egypt, who found that nurses knowledge improved posttest than pretest.

Regarding nurses' knowledge about eclampsia, this study showed that there was highly statistical difference between studied nurses in pre and post intervention regarding knowledge about eclampsia. This come in harmony with the study of Saber and Emam (2018) who studied the effect of nursing program on improving nurses' knowledge and skills regarding care of eclamptic women at Beni – Suef, Egypt, who stated that the nurses' knowledge about eclampsia improved in posttest than before. This is interpreted to nurses' interest to know more information about eclampsia.

The present study showed that the mean level of knowledge of the studied nurses increased than before intervention. This is rationalized to the importance of continuous educational program to nurses. The study finding is inconsistent with a study conducted by Mohamad and Elkheshen, (2017) who studied the Efficacy of Self Instructional Guide on Knowledge and Practices Regarding Care of Pre-Eclampsia Women among Staff Nurses at Helwan general hospital, Egypt and is supported by DiptiShukla, (2016) Who had A Study to Assess the Effectiveness of Self Instructional Guide on Knowledge Regarding the Selected Care of Pre-Eclampsia Patient among Nurses in Selected Hospitals of Vidarbha Region. Both studies reported an increase of the mean level of nurses knowledge post intervention than before.

Concerning the total knowledge score of the study nurses about preeclampsia and eclampsia, the present study findings revealed that the level of total knowledge of the studied nurses about preeclampsia improved from poor and fair to good knowledge after intervention. This is rationalized to the nurses were interested in gaining information about preeclampsia and eclampsia. This finding come in agreement with Mohamad, and Elkheshen, (2017) who studied the Efficacy of Self Instructional Guide on Knowledge and Practices Regarding Care of Pre-Eclampsia Women among Staff Nurses at

Helwan general hospital, Egypt, who reported that level of knowledge of nurses improved from poor (47%) and average (40%) to good(85%) after intervention.

The present study findings revealed that there was statistical significant difference between the studied nurses regarding nurses diagnosis of preeclampsia and eclampsia in the post intervention than before which is in harmony with the study of El Bahy, Mohamed, Salam, and Nasr, (2013) who conducted a study at Port Said hospital, Egypt to investigate the Effect of Educational Program for Nurses about Pregnancy Induced Hypertension on their Knowledge in Port Said Hospitals and reported that there was statistical significant difference between the nurses about nurses diagnosis of pregnancy induced hypertension in the post intervention than before. This is interpreted to the good nurses' assessment of the patients post intervention than before.

In relation to level of education, the present study findings revealed that the mean score of total knowledge of the studied nurses who had bachelor in nursing increased than nurses who had nursing school. This is interpreted that the more the nurses are educated the more their level promoted. This comes in constant with the study of Elmenshawy, khidr and Hassan (2016) who investigate evidence based nursing practice in preeclmpsia among pregnant women at Mansoura University, Egypt and reported that the mean of knowledge increase with nurses who had bachelor than who had nursing school.

In relation to years of experience, the present study findings revealed that the mean score of total knowledge of the studied nurses increased in relation to their years of experience. This is in constant with the study of Abd Alhafez, Ahmed and Mohamed (2018) who study the effect of international need teaching program for maternity nurses on improving their knowledge about preeclampsia management at Assuit university hospital and El Eman general hospital, Assuit, Egypt. And also was supported by El Bahy, Mohamed, Salam and Nasr (2013) who study the effect of educational program for nurses about pregnancy induced hypertension on their knowledge in Port Said hospitals. Both studies indicated that there was a significance association between nurses' level of knowledge and years of experience. This result because that nurses who work for long time had more skills and updated faster than others.

5. CONCLUSION

According to the finding of the present study, it can be concluded that there was a highly statistical significant difference after intervention than before regarding nurses' knowledge about preeclampsia and eclampsia. This supported the first and second study hypotheses.

In addition, the quality of care for pregnant women during pregnancy, including a sound of knowledge base, the present study concluded that it is important to improve nurses' knowledge regarding care of women with preeclampsia and eclampsia.

6. RECOMMENDATIONS

Based on the findings of the present study, the following recommendations are suggested:

1. Continuous educational program to improve nurses' knowledge regarding care of preeclampsia and eclampsia.
2. Further recommendations:

- Prepare special unit for preeclamptic and eclamptic women with its trained nurses.

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