

Emergency Obstetric Protocol and its Effect on Practices of Interns Nursing Students

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Abstract

Background: obstetric emergencies are life threatening medical condition that occurs during pregnancy, labor, or the postpartum period. Moreover, internships offer carefully planned, monitored work experience which allow the opportunity to apply knowledge and skills in a professional setting.

Study Aim: to evaluate the effect of emergency obstetric protocol on the practices of interns nursing students.

Methodology: A quasi experimental study conducted in technical institute of nursing faculty of nursing and in emergency department, intensive care unit and labor unit of maternity hospital Ain- Shams University. A convenient sample of one hundred of all female interns nursing students in the technical institute of nursing faculty of nursing Ain- Shams University from period (October 2019 to March 2020). Tools of data collection: Obstetric triage observational checklist used for assessment of intern nurses' practices related to triage of obstetric emergencies cases and observational checklist tool for assessment of intern nurses' practices related nursing management of common obstetrics emergencies pre and post protocol implementation.

Results: Showed statistically significant improvements in intern nurses' practical skills related to triage process and nursing care of common obstetric emergencies immediately post intervention and in follow up phase.

Conclusion: Implementing emergency obstetric protocol had a positive effect on the practices of interns nursing students.

Keywords: Emergency Obstetric Protocol, Practices, Interns Nursing Students.

Introduction

Obstetric emergencies are life threatening medical condition that occurs during pregnancy, labor, or the postpartum period. Every day around the world, approximately 830 women die from preventable causes related to pregnancy and childbirth⁽¹⁾.

Additionally, there are a variety of obstetric emergencies that can threaten the well-being of both mother and child as, ectopic or tubal pregnancy, abruptio placenta, placenta previa, severe preeclampsia & eclampsia or pregnancy induced hypertension, premature rupture of membranes, amniotic fluid embolism, inversion or rupture of uterus, placenta

accreta, prolapsed umbilical cord, shoulder dystocia, postpartum hemorrhage, obstetric shock and postpartum infection⁽¹⁾.

The triage process for women with common obstetric emergencies requires gathering relevant patient information, performing a focused assessment, determining an acuity level, and prioritizing the needs of the women seeking emergency care, all in a time-sensitive manner. Accuracy in problem identification is a crucial component of clinical decision making, especially in the triage encounter, and requires the nurse to establish boundaries of physiological and psychological stability as well as predict the potential trajectory of the patient's condition⁽²⁾.

Meanwhile, reducing maternal mortality is a major public health concern and arrived at the top of the health and development agendas and also one of Millennium Development Goals. So, multiple strategies are required to reduce the maternal mortality, one of these strategies is to make emergency obstetric care acceptable, accessible, and available to women and their families⁽³⁾.

Also, creating protocols regarding obstetric emergencies including triage process are very important to provide the highest quality less cost efficient nursing care and increase satisfaction of clients. Moreover, nurse interns should be highly knowledgeable and well-trained caregivers for the overall safety and wellbeing of women. Building knowledge and practical skills are considered as a powerful tool for performance improvement and to maintain the efficiency of any health care organization⁽⁴⁾.

Meanwhile, the mission of nursing education is to produce qualified nurses with the requisite knowledge, attitudes and skills. Moreover, internships offer carefully planned, monitored work experience which allow students the opportunity to apply their knowledge and skills in a professional setting⁽⁵⁾.

Also, interns can earn academic credits from their college. During this period nurse interns should acquire the values, attitudes, increases confidence in knowledge and assessment skills, improves clinical skills, decision making, clinical judgment and critical thinking⁽⁶⁾.

Materials and Method:

Research design: A quasi- experimental design was utilized to conduct this study.

Setting: The study was conducted in study classes, teaching rooms and in lab of the technical institute of nursing faculty of nursing Ain- Shams University and in emergency unit, intensive care unit and labor unit of maternity hospital Ain- Shams University

Subject:

Type of sample and size: Convenient sample was obtained. All female interns nursing students (100) in the technical institute of nursing, faculty of nursing Ain-Shams University in the period from (October 2019 to March 2020).

Tools of Data Collection: Frist Tool: Obstetric triage observational checklist. The researcher developed tool after reviewing the current related literature. It

consists of nine sentences and it was used to assess intern nurse's practical skills for triage common obstetrics emergencies pre & post- interve

Scoring System: The checklist items was scored (3) for done each step correctly while (2) score was given for done incomplete correctly and (1) score for incorrect or not done. The scores of total practice were considered as $\geq 60\%$ competent practice and $< 60\%$ incompetent practice.

Second Tool: Observational checklist developed by researcher after reviewing the current related literature. It consisted of nursing procedures and techniques for clinical practice based on published evidence for management of obstetric emergencies. The observational checklist used to assess and evaluate practical skills of interns nursing students regarding nursing management of obstetric emergencies pre & immediately post intervention and in follow up phase.

Scoring System: The total practice was scored as $\geq 60\%$ was considered **competent practice** while total practice scored as $< 60\%$ was considered **incompetent practice**. Each item in the checklist was scored as complete correct practice scored as (3), incomplete correct practice scored as (2) and incorrect practice or not done scored as (1).

Data Analysis: The appropriate statistical method and tests were used. Data were analyzed using Statistical Program for Social Science (SPSS) version 21.0. The following tests were done: Chi-square (X²) test, Pearson Correlation (R) and Alpha cronbach reliability analysis of used tools.

Results

Table (1): Distribution of studied intern nurses according to their general characteristic study sample (N=100)

Items	No.	S%
Age:		
Mean \pm SD	20.3 \pm .48	
Range	20-21 years	
Residence:		
Urban.	50	50.0
Rural.	50	50.0
Marital status:		
Single.	94	94.0
Married	6	6.0

Items	No.	S%
Training programs about emergency obstetric care:		
Yes.	23	23.0
No.	77	77.0
Previous experience about emergency obstetric care:		
Yes.	18	18.0
No.	82	82.0

Table (1): Shows that the age of intern nurse ranged from 20 to 21 years with mean of (20.3years). It also shows that (94%) of them were single. In addition (18.0 %) of studied intern nurses had work experience. Moreover (23%) of them were attended training course.

Figure (1): Percentage distribution of the studied intern nurses according to their total practice scores related to obstetric triage pre and post protocol intervention (n= 100).

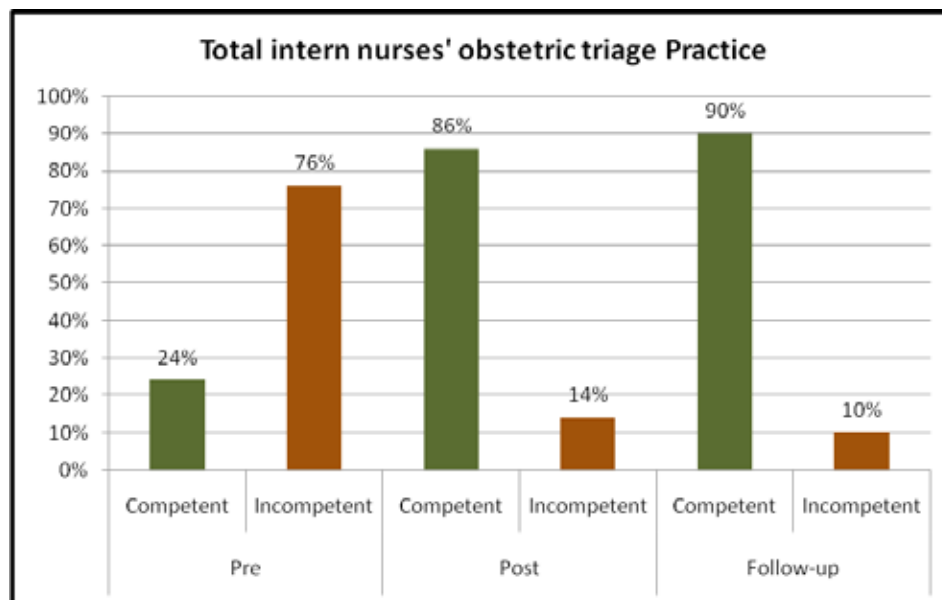


Figure (1): Illustrates that (76%) of studied intern nurses had incompetent practice related to obstetric triage before protocol implementation. While, immediately post and follow up of protocol implementation, competent practice reached to (86%, 90%) respectively.

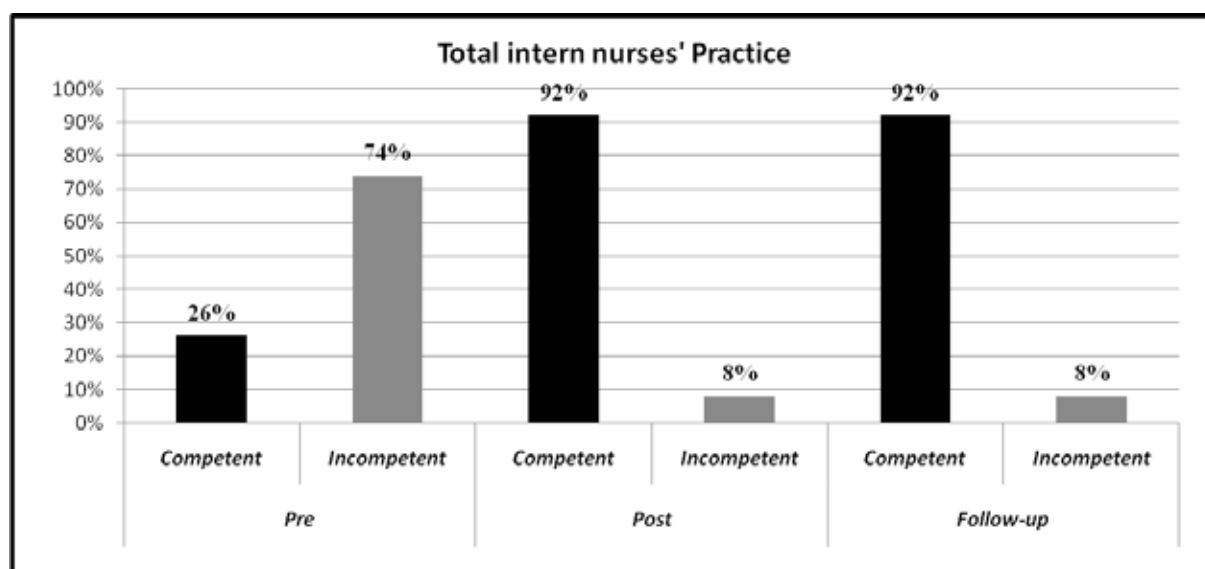


Figure (2): Percentage distribution of the studied intern nurses according to their total practice scores related to emergency obstetric care pre and post protocol intervention (n= 100).

This figure demonstrates that (74%) of studied intern nurses had incompetent practice regarding obstetric emergencies pre implementation of the protocol.

However, (92%) had competent practice immediately post and follow up implementation of the protocol.

Table (2): Relation between studied intern nurses' practice related to obstetric triage, emergency obstetric and their qualifications post emergency obstetric protocol (n=100).

Intern nurses' qualifications	Intern nurses' practice of obstetric triage post intervention						x2	p-value	Intern nurses' practice of obstetric emergencies Post intervention						x2	p-value
	Done correct		Done incomplete Correct		Done incorrect				Done correct		Done incomplete Correct		Done incorrect			
	N	%	N	%	N	%			N	%	N	%	N	%		
Previous experience about emergency obstetric care:																
Yes	17	96.0	1	4.0	0	0.0	17.58	< 0.05*	16	93.0	1	5.0	1	2.0	16.18	< 0.05*
No	49	60.0	26	31.0	7	9.0			48	59.0	34	41.0	0	0.0		
Training course about emergency obstetric care:																
Yes	21	91.0	2	9.0	0	0.0	16.723	< 0.05*	22	97.0	1	3.0	0.0	0.0	17.20	< 0.05*
No	41	54.0	34	44.0	2	2.0			48	62.0	28	36.0	1	2.0		

P < 0.05 significant (S) *

This table shows that there was statistically significance differences relation between intern nurses' practice related to obstetric triage, practice related to emergency obstetric post intervention and their qualifications (previous experience & and training program).

Discussion

Regarding practice of obstetric triage; results of the present study revealed that, nearly three quarters of the studied intern nurses had incompetent practice regarding obstetric triage before protocols implementation. Moreover, the present study revealed improvement in intern nurses' practice of obstetric triage as the majority of studied intern nurses had competent practice related to obstetric triage after protocol implementation and at follow up slightly increase.

The result pre protocol implementation could be explained by intern nurses lack of knowledge regarding triage cases with obstetric emergencies, lack of training courses and workshop about emergency obstetric skills and obstetric triage that affect on their practice.

So this incompetent level of practice before intervention showed the importance of continuous education, teaching protocols and regular updating clinical courses for intern nurses and importance of

internship program and focusing on weak points during training to promote knowledge and practice. Therefore, it is important and essential that intern nurses should be well trained and educated on obstetric emergencies and obstetric triage as they have the vital role to play as nurses are primary anchorperson in emergency department and should have proper decision making then begin the initial assessment, triage then offer nursing management of such cases.

This result agrees with⁽⁷⁾ who study effect of triage education on nurses' performance in Diverse in emergency department of obstetrics and pediatric gavernate hospital in Beni Suef, who stated that the studied nurses' practices related to triage improved throughout the education guideline implementation phases as most of them don't practice triaging before the guideline implementation. Then this deficient practice greatly improved to reach the majority of them had correct practice immediately after program implementation and at their follow up evaluation.

Also, in accordance with current study findings⁽⁸⁾ who conducted study of assessment of staff nurse's knowledge and performance regarding triage in emergency department of Nasr institute hospital, who mentioned that more than three-quarters of nurses had inadequate performance regarding triage before intervention.

In the researcher point of view, this similarity may be attributed to lack of nurses' knowledge which reflected on their performance and lack of qualifications

Furthermore, on investigating practical skills of intern nurses during caring of obstetrics emergencies cases, results of the present study revealed that slightly less than three quarters of the studied intern nurses had incompetent practice regarding management of obstetric emergencies before protocol implementation. Meanwhile, after implementation of the protocol the most of them had competent practice related to obstetrical emergencies.

These above findings are consistent with⁽³⁾ who illustrated that slightly more than three quarter of nurses had unsatisfactory practices toward emergency obstetrics care before intervention of the nursing management protocol related to EMOC. Meanwhile, after intervention the most of them had satisfactory practices regarding obstetric emergencies.

The current study findings were also in accordance with⁽⁹⁾ who mentioned that there was a relation between the availability of guidelines for the management of obstetric emergencies and the higher competency among primary healthcare workers in Mali.

Furthermore, this result is supported by⁽¹⁰⁾ who indicated that regular training of nursing personnel will improve and enhance quality of health care, who made mixed-method study in fourteen Bangladesh government healthcare facilities.

Additionally, this result agrees with⁽¹¹⁾ who studied the effect of educational program for nurses about pregnancy induced hypertension on their knowledge and practice in Port Said hospitals, who founded that the majority of nurses before training had incorrect practice regarding EMOC and improved post training.

Also, the present study finding showed that there was significant improvement in practice related to EMOC post intervention compared to pre-intervention. The finding of the current study was in agreement with⁽⁸⁾ who studied the effect of maternity nursing logbook on internship students' skills at woman's health hospital, Assiut Governorate and stated that there was significant difference between pre and post training related the total score of internship nursing student's practical skills.

Additionally, this result was consistent with⁽³⁾ who

found that there was significant improvement of nurses' practice after protocols application compared to before it.

Also, results of the present study revealed that there was statistically significant difference between studied intern nurses' total practices score related to obstetric triage, EMOC, and their qualifications post intervention.

The current study findings confirmed by⁽⁷⁾ who studied assessment of cardiotocography versus intermittent auscultation of fetal heart on admission to labor ward for assessment of fetal wellbeing, who found that there was a highly statistically significant relation between nurses' performance & their qualifications.

The current study findings confirmed by a study done by⁽³⁾ who found that there was positive statistically significant correlation between practices related to obstetric emergencies after nursing management protocol and years of experience.

Additionally, this was similar with the finding of with⁽¹²⁾ who reported that there was a significant relationship between practice, interpretation of CTG and qualification and work experience of studied sample.

Meanwhile, this result disagrees with who⁽¹³⁾ studies assessment of emergency nursing care offered at labor ward in Ain Sham maternity hospital. Who found that there was no statistically significant difference between nurses' performance and their qualifications. Also, these results disagree with⁽¹²⁾ who stated that there was insignificant relation between nurses' practice and their experiences year and personal characteristics.

In the researcher point of view, the dissimilarity may be related to study subject in second study (nurses) spending a lot of times working in the same department and absence of training program in that time and state of unrefreshment.

Conclusion

Implementing emergency obstetric protocol had a positive effect on the practices of interns nursing students.

Recommendations: Dissemination of emergency obstetric protocol for all internship nursing students in faculties of nursing and nursing institutions this will be effective in improving their practical skills about obstetric emergencies.

Further Researches: Replication of the study on large sample size and in other different institutions for generalizing the findings.

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Conflict of Interest: Non to declare.

Ethical Clearance: All experimental protocols were approved under the collage of Nursing – Ain Shams University Cairo. Egypt and all experiments were carried out in accordance with approved guidelines.

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