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Obstetrical Emergencies: Bridging The Knowledge Gap- Educating Future Nurses

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ABSTRACT

Emergency obstetric care is a set of critical life saving functions provided by a health care facility. Midwives and Doctors have to be vigilant to meet the emergencies to promote maternal health, pregnancy safety, proper delivery and follow-up care. Illiteracy, poverty and lack of access to health care and transport, prevent many women from adequate antenatal, intra-natal or postnatal care. Midwives and health care providers can manage obstetrical emergencies successfully with adequate and updated knowledge and skill. The present study aimed to find the final-year nursing students' knowledge, in managing high risk pregnancy, intra-natal and postpartum complications. The purpose of this study was to check the understanding of nursing student's before and after reading the booklet, if the booklet helped to improve knowledge and find any association between knowledge and various demographic variables. The design was a pre-experimental one-group pre-test and post-test design. By using, convenience sampling techniques, 53 B.Sc. nursing and GNM students, were enrolled in the study from a selected College at Sitapur. A pre-test was conducted by a structured knowledge questionnaire, an informational booklet was explained thereafter, and post-test was done on the eighth day. After the intervention, students showed an increased mean score of post-test 21.92 (SD 3.27) comparing with mean pre-test score of 15.36 (SD 2.13). According to the paired t-test (t-value 12.24, $p < 0.0001$) the booklet was highly effective in improving knowledge regarding management of obstetrical emergencies among final year nursing students of selected college at Sitapur, U.P.

Keywords: Obstetrical emergencies, Nursing students, Information booklet, Knowledge improvement

INTRODUCTION

During pregnancy, labor or after birth, if a mother experiences an obstetric emergency, quick medical attention is needed to prevent harm to her and her baby [1]. The right use of emergency obstetric care (EmOC) with quick attention and proper referral helps to save many mothers and new-born lives [2]. Even with the high need for antenatal care, only 51% of Indian women had all their required prenatal visits according to the 2015–2016 National Family Health Survey [3]. Because so many women are non-literate, poor, lack of proper roads and do not understand how to access maternal health services, they are denied the chance to use them [4]. A miscarriage, pre-eclampsia, uterine rupture or amniotic fluid embolism might lead to serious or deadly consequences without quick treatment [2]. If someone

experiences a lot of bleeding, high blood pressure or if the fetus's movements stop; they should be treated as an emergency [5]. In 2023, an estimated 260,000 maternal deaths occurred worldwide, equivalent to 712 deaths each day. This marks a 40% reduction in maternal mortality since 2000, reflecting sustained global efforts to improve access to essential health services [6]. Most maternal deaths can be stopped, if the midwives are given proper knowledge, coaching and medical tools that keep things improving [7]. To lower the number of deaths among mothers and newborns, India introduced National Rural Health Mission (NRHM), Janani Shishu Suraksha Karyakram (JSSK) and Mother and Child Tracking System (MCTS) [8]. Even so, many living in rural areas are usually unaware of these services [9]. The best EmOC outcomes are reached when experts from different fields, including doctors and midwives get continuous education, use simulation and follow guidelines [10]. Studies conclude that using proper checklist and effective transport can ease the management of emergencies [11]. Maternal and newborn death can be reduced by quality care, prompt responses to emergencies and timely medical action, especially where resources are limited [12].

PROBLEM STATEMENT

"A study to assess the effectiveness of an information booklet on knowledge regarding management of obstetrical emergencies among final year nursing students of selected college at Sitapur, U.P"

OBJECTIVES

- To assess the pre-test and post-test knowledge score regarding management of obstetrical emergencies among final year nursing students.
- To find out the effectiveness of information booklet on knowledge regarding management of obstetrical emergencies among final year nursing students
- To find out association between the pre-test knowledge score regarding management of obstetrical emergencies with selected demographic variables.

HYPOTHESES

- **H_1**: There is significant difference between pre-test and post-test knowledge scores of the final year nursing students regarding management of obstetrical emergencies.
- **H_2**: There is significant association between pre-test knowledge scores with selected demographic variables.

RESEARCH METHODOLOGY

A pre-experimental one-group pre-test and post-test design was adopted to evaluate the "effectiveness of an information booklet on knowledge regarding management of obstetrical emergencies" among final-year nursing students at a selected college in Sitapur, Uttar Pradesh [13]. It was a quantitative research approach and this design enables the comparison of knowledge levels before and after the intervention [14]. The independent variable was the information booklet and the dependent variable was knowledge level of nursing students regarding obstetrical emergencies [15]. The demographic variables were age, sex, and course of study. Setting of the study was at selected Nursing College, located in Sitapur, Uttar Pradesh. The target population was final-year B.Sc. and GNM nursing students. The inclusion criteria were students of 4th year B.Sc. Nursing and 3rd year GNM, who were willing to participate and were present during data collection [16]. The exclusion criteria were students studying of other courses and ot

her years, who were not willing to participate and absent during data collection period.

The sample comprised of 53 nursing students, chosen through convenience sampling, a method where the researcher selects participants based on availability and judgment about representativeness [17]. We included a knowledge questionnaire that contained 30 multiple-choice questions about the definition, incidence, symptoms, and management of obstetrical emergencies [18]. Participants showed knowledge levels categorized as poor (0 to 10), average (11 to 20) and good (21 to 30). Nine professionals in the subject reviewed the tool's validity and reliability, and it was found to be feasible [19]. The pilot study was conducted among 10% of sample and confirmed feasibility in terms of time, sample, and cost; allowing for necessary refinements before the main study [20]. Formal administrative permission was obtained followed by Institutional Ethical Committee clearance from the respective authority. Informed consent was obtained from all participants after clearly explaining the study's purpose and confidentiality assurances [21]. The data was collected in September 2023 by administering a pre-test and on 8th day post-test was conducted using the same tool.

DATA ANALYSIS AND INTERPRETATION

Data analysis was done by organizing and interpreting data systematically using Descriptive (frequency, percentage, mean & standard deviation) and Inferential Statistics (Paired t-test and Chi-square).

Distribution of participants based on demographic variable

Most of the participants were of 21years old (54.7%), while others belong to the age group of 20 years (20.8%), and older than 21 years (24.5%). Majority of participants were female (84.9%) and males were 15.1% of the sample. Among the participants, 50.94% were pursuing GNM course, while the remaining 49.06% were students of B.Sc.(N) course.

(n=53)

Sl.No	Variables	Category	Frequency	Percentage%
1	Age	20 years	11	20.8
		21 years	29	54.7
		>21 years	13	24.5
2	Gender	Male	8	15.1
		Female	45	84.9
3	Course of study	B.Sc.(N) 4th yr	26	49.06
		GNM 3rd yr	27	50.94

able1: Frequency and percentage distribution according to socio- demographic variables

Assessment of pre-test knowledge level

Majority of participants showed an average score (98.1%). 1.9% of participants demonstrated good knowledge, while none had poor knowledge.

(n=53)

Knowledge	Frequency (n)	Percentage %	Mean	SD
Good	1	1.9	15.36	2.13
Average	52	98.1		
Poor	0	0		

Table 2: Frequency and percentage distribution of pre-test knowledge score

Assessment of post-test knowledge score

In the post-intervention, a remarkable shift occurred; with 64.2% of participants demonstrated good knowledge and 35.8% had average knowledge. No participants scored poor knowledge range in the post-test also.

(n=53)

Knowledge	Frequency(n)	Percentage %	Mean	SD
Good	34	64.2		
Average	19	35.8		
Poor	0	0	21.92	3.27

Table3: Frequency and percentage distribution of post-test knowledge score

Assessment of effectiveness of information booklet

The analysis of knowledge scores before and after the intervention revealed a substantial improvement among participants. In the pre-test, the mean knowledge score was 15.36, with a standard deviation of 2.13. Following the intervention, there was an increase in post-test knowledge scores, with a mean of 21.92 and a standard deviation of 3.27. The paired t-test showed a highly significant difference between pre-test and post-test scores (t value 12.24, $p<0.0001$). These findings emphasize the positive impact of the intervention on improving the overall understanding of the subject matter among the participants.

(n=53)

Knowledge	Mean	SD	Paired t-test	p-value
Pre-test	15.36	2.13		
Post test	21.92	3.27	12.24	<0.0001

Table 4: Effectiveness of information booklet

Association between pre-test knowledge score with selected socio-demographic variables

The analysis of pre-test knowledge levels across different demographic variables (age, gender and course of study) reveals interesting patterns among participants. There was significant association between the pre-test knowledge score and gender and no association were found between pretest knowledge score with age and course of study.

(n=53)

Sl.No	Demographic variables	Pre-test knowledge			Chi-square value	df	p-value	Inference
		Good	Average	Poor				
1	**Age**				0.84	2	0.656	Non-Significant
	20 yrs	0	11	0				
	21 yrs	1	28	0				
	>21 yrs	0	13	0				
2	**Gender**				5.73	1	0.017	Significant
	Male	1	7	0				
	Female	0	45	0				

3	**Course of study**				1.06	1	0.304	Non-Significant
	B.Sc.(N) 4th yr	1	25	0				
	GNM 3rd yr	0	27	0				

Table 5: association between pre-test knowledge score with their socio-demographic variables

DISCUSSION AND CONCLUSION

The present study aimed to assess the effectiveness of an information booklet on knowledge regarding management of obstetrical emergencies among final year nursing students of selected college in Sitapur, U.P. The first Objective was to assess the pre-test and post-test knowledge score regarding management of obstetrical emergencies among final year nursing students. The pre-test knowledge assessment indicates that the participants' knowledge levels were predominantly categorized as average (scores ranging from 10 to 20), 98.1% of individuals falling within this range. 1.9% of participants demonstrated good knowledge (scores ranging from 21 to 30), while none were classified as having poor knowledge (scores ranging from 0 to 10). In the post-test, majority (64.2%) of participants had good knowledge; whereas 35.8% showed average knowledge and no one scored poor knowledge. This distribution highlights the baseline knowledge levels of the participants before the intervention and knowledge enhancement after the post-test.

The present study was supported by another study by Bhavana Verma, Manoj Kumar et al. (2022) titled "Pre-experimental study to assess the effectiveness of planned teaching program on knowledge and expressed practices regarding selected obstetrical emergencies among staff nurses in selected hospitals of Shimla district, Himachal Pradesh" among 60 staff nurses in selected hospitals through a validated questionnaire. 70% of participants belonged to General Nursing and Midwifery (GNM) as professional qualification and 51.7% were with one to five years of work experience. Results showed 46.7% of staff nurses had good knowledge in the pre-test assessment, whereas 95% had good knowledge in the post-test evaluation. There was a significant difference between pre-test and post-test knowledge and expressed practices score (mean pre-test and post-test knowledge score: 18.82 & 25.43, $p<0.001$; mean pre- test and post-test expressed practices score: 14.43 & 16.30, $p<0.001$) [22].

Similar results were found by Amruta Bhise and Ashwini Khope (2021), conducted a quasi-experimental study to assess pre-test and post-test knowledge levels regarding selected obstetrical emergencies among nurses working in labour rooms, antenatal, and postnatal wards. 60 staff nurses working in government and semi government hospitals in Pune were selected as sample using a non-probability convenience sampling technique. The mainly focused obstetrical emergencies were pregnancy-induced hypertension (PIH), cord prolapse and postpartum haemorrhage (PPH). In the pre-test result, mean knowledge percentage was found for cord prolapse (46.57%), PIH (40.72%) and PPH (26.63%) respectively. After the intervention, the post-test was taken. The mean knowledge scores were increased for cord prolapse (50.14%), PIH (54.61%) and PPH (30.45%). The overall mean knowledge percentage improved from 13.53% in the pre-test to 16.75% in the post-test [23].

This study also evaluated the effectiveness of information booklet on knowledge regarding management of obstetrical emergencies among final year nursing students. It revealed that there were significant improvements following the intervention, with 64.2% of participants having good knowledge and 35.8% still maintaining average knowledge. No participants scored poor knowledge range in the post-test. The present study was supported by Ulfat Rashid & Muneera Rashid (2020) conducted a pre experimental study on effectiveness of structured teaching program (STP) on knowledge regarding selected obstetrical

emergencies among BSc 3rd year students of Bibi Halima Nursing college Srinagar". Purposive sampling technique was used with one group pre-test- post-test design, for a sample of 50 students. In pre-test, 70% have average knowledge & 30% have poor knowledge. In post-test 88% have good knowledge & 12% have average knowledge. Post-test mean knowledge score was (53.2+/-0.832) more compared to Pre-test score (25.7+/-0.956) [24].

This study also aimed to assess the association between pre-test knowledge scores regarding the management of obstetrical emergencies and selected socio-demographic variables such as age, gender, and course of study. The findings revealed that, there is no significant association between age and pre-test knowledge scores **(**Chi square 0.84, p value 0.656). On the other hand, significant association was found in between gender and pre test knowledge score (Chi square 5.73, p value 0.017). The pre-test scores with type of nursing course (B.Sc. Nursing 4th year v/s GNM 3rd year) was found to be statistically non-significant **(**Chi square 1.06, p value 0.304). This indicates that, at the baseline level, students from both academic tracks possessed comparable levels of knowledge. Similar observations were made in a study by Rout L. (2018), "A pre-experimental study conducted in Odisha to evaluate the impact of an information booklet on the knowledge levels of Auxiliary Nurse Midwife (ANM) students regarding the management of selected obstetric emergencies". The findings revealed that the mean knowledge score in the pre-test was (13.83 ± 2.24), which is 34.57% revealing poor knowledge, whereas in the post-test it was (30.08 ± 3.95), which is 75.2%, revealing good knowledge and the effectiveness was 40.63%. Highly significant ($P < 0.01$) difference was found between pre and post-tests knowledge scores and no association was found between post-test Knowledge scores with all their selected demographic variables [25].

All in all, this study points out that using information booklets and other well-structured educational materials improves the knowledge of nursing students. Since obstetric emergencies are urgently important in healthcare, such techniques need to be added to nursing education to help students respond better and possibly achieve quality results for mothers and newborns.

MAJOR FINDINGS OF STUDY:

Findings related to demographic characteristics.

- Majority of the participants were 21 years old (54.7%).
- Majority of participants were female (84.9%).
- Majority of participants were enrolled in the GNM 3YR course (50.9%)

Findings related to Pre-Test Knowledge level and association with demographic variables

In the pre-test 98.1% of participants have average knowledge level and the remaining 1.9% of participants' demonstrated good knowledge. Findings for association between pre-test knowledge level and the demographic variables suggest that gender was statistically significant; no statistical significance were observed in knowledge levels based on age and course of study.

Findings related to Post-Test Knowledge level.

The study revealed 64.2% of participants categorized as having good knowledge, 35.8% have average knowledge and no participants scored in the poor knowledge range.

IMPLICATION

The scientific and technological development in the field of medicines is a challenge to nursing, to keep abreast with new developments. The findings of this study have several implications for nursing service,

nursing education, nursing administration and nursing research.

- **Nursing Service/Practice:**
- The findings of the study can be utilized as a basis for orientation programs and in-service education of the nurses to improve the knowledge level.
- An information booklet is very beneficial for newly involved midwives to deal well with obstetrical emergencies.
- **Nursing Education:**
- The findings can guide the nurse educator in teaching students proper ways to handle obstetrical emergencies.
- Student nurses can carry out more studies and share the results through publishing.
- **Nursing Administration**
- Nursing administration of every organization can plan a separate budget for continuing/ in service education programs on obstetric emergencies.
- Nursing administration can take initiative to conduct orientation programs for beginners.
- They can conduct in-service education/training to nursing staff especially to midwives to develop skill in managing obstetric emergencies.
- **Nursing Research:**
- Promote more research on obstetrical emergencies and their management, which will help in the reduction of maternal mortality & morbidity.
- Study can be done in large scale to increase the generalization of the findings

RECOMMENDATIONS

On the basis of findings of this study, the following recommendations were made;

- A similar study can be done on a large sample with different and more demographic characters.
- An experimental study can be undertaken with control group.
- A Similar study can be conducted using other teaching aids like social media video, leaflets, pamphlets etc.

LIMITATION

- The study was limited to nursing students who are studying in B.Sc. (N) 4th year and GNM 3rd year in a selected college at Sitapur.
- Data was collected from nursing students present during the data collection.

TAKE - HOME MESSAGE

Emergency obstetric care is a set of critical lifesaving functions provided by a health care facility throughout the day. Midwives and Doctors have to be vigilant to meet the emergencies to promote maternal health, pregnancy safety, proper delivery and follow-up care.

CONCLUSION

Immediate management of any type of obstetrical emergencies are crucial to the health of mother and child. An up to date knowledge for health care personals regarding these management will help many people. Finding of this study shows that, there is an improvement in the knowledge level of the nursing

students after administration of information booklet, thus proven the effectiveness of booklet. The study also found, there is significant association between demographic variable of age with pre-test score. The improved knowledge regarding management of different obstetrical conditions help the final year students to manage the obstetric emergencies in the near future more effectively, thus reducing maternal and neonatal mortality rate. This study also helps to create an interest in updating the knowledge of students.

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REFERENCES

1. World Health Organization. Managing complications in pregnancy and childbirth: A guide for midwives and doctors. Geneva; 2017.
2. Say L, Chou D, Gemmill A. Global causes of maternal death: a WHO systematic analysis. Lancet Global Health. 2014;2(6):e323–33.
3. Mumbai I, editor. International Institute for Population Sciences (IIPS) and ICF. National Family Health Survey (NFHS-4). 2017; 2015–6.
4. Pandey S, Panda M. Barriers in accessing maternal health care services in rural India: A review. International Journal of Health Sciences and Research. 2019;9 (5):265–70.
5. Obstetric emergencies: Best practices and clinical guidelines. Royal College of Obstetricians and Gynaecologists. 2016.
6. Geneva: WHO, UNICEF, UNFPA, World Bank Group and UN DESA/Population Division. 2000.
7. Sharma G, Mathur R, Singh A. Gaps in emergency obstetric services in India: Challenges and way forward. Indian Journal of Community Medicine. 2020;45 (2):117–21.
8. Ministry of Health and Family Welfare (MoHFW), Government of India. NRHM Framework for Implementation. 2012.
9. Singh PK, Rai RK, Alagarajan M. Utilization of maternal health care services among women in EAG states, India: A comparative study. Demographic Research. 2012; 27:369–86.
10. Ameh C, Mdegela M, White S. The impact of training on emergency obstetric care in sub-Saharan Africa: A systematic review. BMJ Global Health. 2019; 4 (2).
11. Walker D, Otieno P, Butrick E. Use of a structured checklist improves maternal care in emergencies. International Journal of Gynecology & Obstetrics. 2015; 129 (3):206–10.
12. Campbell OM, Graham WJ. Strategies for reducing maternal mortality: Getting on with what works. Lancet. 2006; 368 (9543):1284–99.
13. Polit DF, Beck CT. Nursing Research: Generating and Assessing Evidence for Nursing Practice. Lippincott Williams & Wilkins; 2020.
14. Burns N, Grove SK. The Practice of Nursing Research: Appraisal, Synthesis, and Generation of Evidence. Elsevier; 2017.
15. LoBiondo-Wood G, Rose-Grippa K, Haber J, Berry C, Yost J. Study guide for nursing research: Methods and critical appraisal for evidence-based practice – Elsevier on vital source. 7th ed. London, England: Mosby; 2009.
16. Polit DF, Beck CT. Essentials of nursing research: Appraising evidence for nursing practice. 7th ed. Lippincott Williams & Wilkins; 2012.

17. Creswell J. Educational research: Planning, conducting, and evaluating quantitative and qualitative research, global edition. 6th ed. London, England: Pearson Education; 2020.
18. Duffy JR, Hoskins LM. Research Instruments for Nursing Practice. Springer; 2015.
19. Waltz CF, Strickland OL, Lenz ER. Measurement in nursing and health research. 4th ed. New York, NY: Springer Publishing; 2010.
20. Grove SK, Gray JR. Understanding Nursing Research: Building an Evidence-Based Practice. Elsevier; 2018.
21. Indian Council of Medical Research. National Ethical Guidelines for Biomedical and Health Research Involving Human Participants. 2017.
22. Verma B, Kumar M, Swati S, Tanwar K, Kiran S. A pre-experimental study to assess the effectiveness of planned teaching program on knowledge and expressed practices regarding selected obstetrical emergencies among staff nurses in selected hospitals of Shimla district, himachalpradesh. Cureus [Internet]. 2022; Available from: http://dx.doi.org/10.7759/cureus.29811
23. Bhise A, Khope A. Effectiveness of structured teaching programme on knowledge regarding selected obstetrical emergencies among nurses working in labour room, antenatal & postnatal wards. Int J Obstetrics Gynaecological Nurs [Internet]. 2021;3(2):41–4. Available from: http://dx.doi.org/10.33545/26642298.2021.v3.i2a.73
24. M.Sc.Nursing (Obstetrical and Gynecological Nursing) Student, Madr-e-Maherbaan Institute of Nursing Sciences Research SKIMS, Soura Srinagar, Jammu and Kashmir, India, Rashid U. A study to assess the effectiveness of structured Teaching Programme on knowledge regarding management of Selected Obstetric Emergencies among B.sc. Nursing 3rd year students of Bibi Halima College of nursing and Medical Technology Srinagar Kashmir. Int J Nurs Midwifery Res [Internet]. 2021;07(03):31–5. Available from: http://dx.doi.org/10.24321/2455.9318.202023
25. Lopamudra R, Tutor, School of Nursing, S.C.B. Medical College Hospital, Cuttack, Odisha, India. Effectiveness of information booklet on knowledge of anm students regarding management of selected obstetric emergencies in selected anmtc, berhampur, ganjam, odisha. Imanagers J Nurs [Internet]. 2018;8(1):36. Available from: http://dx.doi.org/10.26634/jnur.8.1.14240