ORIGINAL ARTICLE

Effectiveness of Planned Teaching Program on Knowledge Regarding Obstetric Triage among Final Year BSc Nursing Students of Selected Nursing Colleges, Mangaluru

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Abstract

Background and aim: Obstetric triage facilitates timely management of emergency cases. Obstetric triage can be counted as the best approach to reduce the length of hospital stay, for increasing patient satisfaction, reducing unnecessary admissions, decreasing maternal and foetal mortality, thereby improving obstetric care services. The present study aimed to determine the effectiveness of an education intervention program on knowledge about obstetric triage.

Methods: In the present study, a two-group, pre-test post-test, quasi experimental research design was adopted. Eighty final year BSc nursing students were selected using convenient sampling technique from few select nursing colleges in Mangaluru. The pretest was conducted using a validated knowledge questionnaire, following which educational intervention was administered for students in the experimental group. Subsequently, a post intervention test was conducted after eight days using the same tool for all the students. Data analysis was done using Chi-square, Fisher exact, paired and unpaired 't' tests.

Results: The study results confirmed that the educational intervention program was successful in improving the knowledge of nursing students. In the experimental group, the mean pretest and post test scores were 11.73 ± 3.493 and 20.75 ± 3.774, respectively. In the control group, the mean pre and post test scores were 13.28 ± 3.530 and 13.23 ± 2.370, respectively. There was a statistically significant difference in the overall knowledge scores between experimental and control groups ($P = 0.001$). There was no significant relationship between the socio demographic factors and the pre-test scores of experimental and control groups.

Conclusion: The current study revealed that the educational intervention program was more effectual in increasing the knowledge among nursing students and recommends that obstetric triage can be considered to be included in the nursing curriculum.

Keywords: Knowledge, Planned teaching program, Obstetric triage, Nursing students

Introduction

The growing demand for standard care in obstetrics has initiated the enhancement of a unit called 'obstetric triage', with a prime goal of reducing unnecessary labour admissions, decreasing waiting time and assessing foetal and maternal wellbeing.[1] Obstetric emergencies are life threatening conditions and are the leading cause of maternal and perinatal mortality. Globally, many women die each year due to the issues related to lack of immediate rapid response to obstetric emergencies. India has witnessed a dynamic decrease in maternal mortality rate from 130 in 2014-2016, to 122 in 2015-17, 113 in 2016-18, 103 in 2017-19 and 97 in 2018-20, as per the data derived from sample registration system.[2] The obstetric triage approach enables provision of emergency care to pregnant women, reduces the length of stay, improves obstetric services, increases patient satisfaction and prevents unnecessary admissions.[3] Hence, this study was undertaken on the obstetric triage system within the capacity by educating the final year nursing students preparing to join the workforce and motivated by the fact that obstetric triage is not part of their curriculum; also, very few studies have been conducted in India on the same.

Materials and Methods

A two-group, pre-test post-test, quasi experimental research design was adopted in the present study. The study was conducted at Masood College of Nursing, Laxmi Memorial College of Nursing and SCS college of Nursing, Mangaluru. The sample included 80 fourth year BSc nursing students chosen by convenient sampling method, equally distributed to experimental and control groups. On obtaining ethical clearance from the concerned authorities, the experimental tool was developed. The structured knowledge questionnaire included 30 items on knowledge regarding obstetric triage. The distribution of items according to the areas were based on three domains i.e. knowledge, comprehension and application. The questionnaire was categorized into areas like, triage meaning, definition, and source related to obstetric triage, definition, functions, purposes, issues in obstetric triage, common problems present to triage, Related Obstetric Triage Acuity Scale. On receiving permission from the concerned authorities and informed consent from the participants, pre testing of the designed tool, reliability testing of the tool and a pilot study were conducted. After establishing the feasibility of the study tool, the tool was distributed

among the selected participants to collect baseline information and questionnair eresponses. For the subjects allotted to the experimental group, a planned teaching program on obstetric triage was conducted. Following this, on the 8th day, post-test was conducted for all the subjects allotted to both experimental and control groups by utilizing the same tool. After the post-test, the investigator briefed the topic for the nursing students allotted to control group. The collected data were statistically analysed to assess the effectiveness of educational intervention.

Results

Findings related to the socio demographic variables

In the current study, the mean age of the participants was 21.51 ± 0.595 years. The majority of subjects, 39 (97.5%) were females, while one subject (2.5%) was male in both experimental group and control groups. In the experiment group, nearly half of the participants, 19 (47.5%) preferred to work in OBG wards, whereas 7 (17.5%) did not prefer the same, while 14 (35.0%) were not sure about their work preference. In the control group, half of the participants, 20 (50.0%) preferred to work in OBG wards, 6 (15.0%) did not prefer, and 14 (35.0%) were not sure about their preference. Around 12 (30.0%) subjects had prior information regarding obstetric triage and 28 (70.0%) did not have any prior information in the experimental group, while in the control group, 10 (25.0%) had prior information regarding obstetric triage and 30 (75.0%) did not have any prior information.

Findings related to comparison of pre-test and post-test levels of knowledge
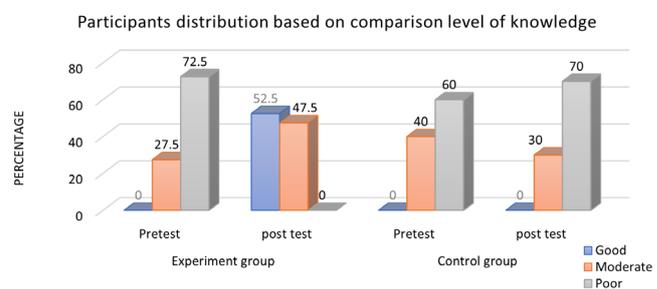
Figure 1: Nursing students' level of knowledge on obstetric triage

The data in Figure 1 shows that in the experimental group, in the pre-test, most of the subjects 29 (72.5%) demonstrated poor knowledge, 11 (27.5%) had moderate knowledge and none showed good knowledge about obstetric triage. Whereas in post-test, majority

of the subjects, 21 (52.5%) showed good levels of knowledge, 19 (47.5%) had moderate knowledge while none demonstrated poor levels of knowledge about obstetric triage. This clearly indicates the improvement in knowledge in post-test, implying the effectiveness of the educational intervention undertaken. In the control group, in the pre-test, most of the subjects 24 (60.0%) showed poor knowledge, 16 (40.0%) had moderate knowledge, while none had good knowledge about obstetric triage. In the post-test, not much improvement in the knowledge was observed, with 28 (70.0%) demonstrating poor knowledge, 12 (30.0%) showing moderate knowledge and none of the subjects demonstrating good knowledge about obstetric triage.

Findings related to effectiveness of planned teaching programme on knowledge regarding obstetric triage among final year BSc nursing students

Group	Mean ± SD	Mean %	Mean difference	t value	*P* value
Experimental group	20.75 ±3.774	69.2%	9.03	10.77	0.001***
Control group	13.23 ±2.370	44.1%	0.05		

On comparing the overall knowledge levels between experimental and control group subjects, a calculated 't' value of 10.77 (*P* = 0.001) was noted which was statistically significant indicating that the education intervention undertaken was effective in improving the knowledge of fourth year B.Sc. nursing students.

There was no significant association between socio demographic factors and the pre-test knowledge scores at 0.05 level of significance among experimental and control groups.

Discussion

Findings related to knowledge regarding obstetric triage among the final year BSc nursing students

The present study assessed pretest knowledge levels of the subjects allotted to experimental group, which showed that 72.5% had poor, 27.5% had moderate and none had good pretest knowledge, whereas in the post-test, majority of the subjects (52.5%) demonstrated good knowledge, 47.5% had moderate knowledge and none showed poor levels of knowledge about obstetric triage. However, in the control group, 70.0% showed poor knowledge levels, 30.0% showed moderate knowledge and none showed good knowledge regarding obstetric triage. Similar results were reported in a study conducted to evaluate the impact of introducing obstetric triage practice on performance of 63 Egyptian nurses specialised in obstetrics. The study findings showed that while none of the participants had sufficient knowledge before the pre-triage training program, 64.4% of nurses showed sufficient knowledge after post triage training program and 83.1% nurses demonstrated satisfactory levels of overall practice post the training program.[4]

Findings related to the effectiveness of planned teaching program on the knowledge regarding obstetric triage among final year B.Sc. nursing students

The present study revealed that the experimental group of fourth year BSc nursing students had a pretest mean knowledge score of 11.73±3.493 regarding obstetric triage, while the mean post-test score was 20.75±3.774. Meanwhile, the mean pretest and posttest scores of the control group showed no significant difference i.e., 13.28±3.530 (pretest) and 13.23±2.370 (posttest). The difference between pretest and post-test mean scores was 9.03 with computed *P* value of 0.001, which was statistically significant. A similar result was reported in a study conducted in Amlapuram which evaluated the knowledge and experience of 30 staff nurses on obstetric emergencies. The overall knowledge and practice scores obtained from the pretest was 12.12±5.406 and post-test was 26.57±3.31, which was found to be statistically significant.[5]

Findings related to the association between the pre-test knowledge scores and selected demographic variables

The current study revealed no significant relationship between pretest scores and demographic variables which is incongruent with the findings of study conducted at the Minia University that reported significant relationship between certain demographic factors like educational level (*P* = 0.001), years of experience in OBG ward (*P* = 0.030), attending training courses regarding obstetric triage (*P* = 0.002) and the pretest scores regarding obstetric triage.[6]

Limitations

1. The study was confined to a small sample of about 40 final year B.Sc. nursing students in the experimental group, and 40 students in the control

group selected from few nursing colleges in Mangaluru, which limits the generalization of findings.

2. A knowledge questionnaire was prepared for data collection, which restricts the extent of information that could be obtained from the respondents.

3. No attempt was made to conduct a follow up with the sample.

Conclusion

The objective of the current study was to evaluate the impact of the educational intervention programme on knowledge about obstetric triage among fourth year BSc nursing students and results indicated that the knowledge improved with educational intervention. The study recommends inclusion of obstetric triage in the nursing curriculum and emphasizes on the need for a pilot trial on implementation of obstetric triage in midwifery practice.

Conflict of interest

None

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