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A study to evaluate the effectiveness of structured teaching programme on knowledge regarding partograph among B.Sc. nursing 4th year students in selected nursing colleges at Raipur, Chhattisgarh

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Abstract
Introduction: The WHO Partograph are the best known Partograph in low resource settings. Experiences with WHO and other types of Partograph in low resource settings suggest that when used with defined management protocols, this inexpensive tool can effectively monitor labor and prevent obstructed labour which is an important cause of maternal and perinatal morbidity and mortality. Hence, an initiative is taken to improve the quality of available services through, better management, development of knowledge and skills among student nurses, nurses and other health care professionals. The investigator found that, as the good foundation lays the basic step towards building a strong tower. Study is to improve the knowledge of the students and making them aware of a standard protocol of WHO Partograph and to improve quality care to the mother as well as child.
Methods research approach: An evaluative approach was adopted for the study. Research design used was Pre-experimental -one group pre-test post-test design. The conceptual framework based on theory of General Systems Theory was used for the study which is designed by "Ludwig von Bertalanffy" Born 19 September 1901. In this study, setting was selected Nursing Colleges at Raipur, Chhattisgarh. Purposive Sampling technique was used for 60 B.Sc. Nursing 4th year students at the time of data collection in selected Nursing Colleges at Raipur, Chhattisgarh. The tool developed which includes-
Section I: Demographic variables
Section II: Consists of structured questionnaire.
Section III: Evaluate the effectiveness of structured teaching programme by comparing pre and post test knowledge score.
Section IV: Association between pre-test knowledge score regarding Partograph with selected socio-demographic variables.
Tool used to assess the knowledge using structured questionnaire. Inferential statistics were used paired't' test to compare pre and post test knowledge scores. Chi-square test was used to find out the association between selected variables with pre test knowledge scores. Tool validity was done and tool found reliable. Study found feasible after pilot study.
Result: It has been observed that in this study pre test and post test research design was used. The population for the present study comprised B.Sc. Nursing 4th year student of selected Nursing Colleges at Raipur, Chhattisgarh. Total 60 samples were taken; sample was collected through the use of Purposive Sampling technique. To ensure reliability of tool data of the structured knowledge questionnaire was analyzed by test re-test method and the reliability co-efficient of the whole test was then estimated by Spearman's Brown Prophecy Formula. The reliability was 0.83 thus, the tool was found to be valid and reliable.
Section A: Descriptive Statistics Frequency, percentage distribution used to assess the demographic variables.
Section B: Analysis of level of knowledge score regarding Partograph.
Section C: 't' test Analysis of pre-test and post-test knowledge score to find out the effectiveness of Structured Teaching Programme regarding Partograph.
Section D: Chi-square analysis to find out the association between pre-test knowledge score with selected socio-demographic variables.
Conclusion: The study findings showed that the knowledge score to find out the effectiveness of structured teaching programme regarding partograph the mean post-test knowledge score 21.95 was higher than the mean pre-test knowledge score 11.98, mean difference was 9.96, SDD was 2.54, SE_{MD} was 0.32 and the 't' test was calculated 30.36 which value was found to be significant at 0.05 level. Hence it was concluded that the STP has been an effective method to increase Knowledge of B.Sc. Nursing 4th year students regarding Partograph.

Keywords: effectiveness, knowledge, partograph

Introduction
The Partograph is usually preprinted paper form on which labour observations are recorded. Partograph is basically a graphic representation of the events of labour plotted against time in hours.

The aim at the Partograph is to provide a pictorial overview of labour, to alert midwives and obstetricians to deviations in maternal and fetal wellbeing and progress of labour. Various environmental elements influence a woman's care during labour and birth Partograph consists of three components that is monitoring and managing the fetal condition, maternal condition and progress of labour.

Research Design
Pre-experimental (one group pre-test post-test design) research design was used for the study.

Research setting
In this study, setting were selected Nursing Colleges at Raipur, Chhattisgarh.

Population
In population of the present study is B.Sc. Nursing 4th year students of selected Nursing Colleges at Raipur, Chhattisgarh.

Sample
In the present study the sample are B.Sc. Nursing 4th year students of selected Nursing Colleges at Raipur, Chhattisgarh.

Sample size
The sample size consist of 60 B.Sc. Nursing 4th year students.

Sampling technique
In the present study the sample was collected through Purposive Sampling technique.

Criteria for selection of sample
Inclusion criteria
The study includes B.Sc. Nursing 4th year students who are,
- Studying in selected Nursing institutions.
- Students willing to participate in the study.
- Students available at the time of data collection.
- Students who know English and Hindi.

Exclusion criteria
The study excludes 4th year B.Sc. Nursing students who are,
- Students not willing to participate in the study.
- Students sick at the time of data collection.

Development of tool
1. Structured questionnaire has been prepared to assess the knowledge regarding Partograph.
2. Review of research and non research literature in the area related to Partograph.
3. Opinions and suggestions were taken from the experts in the development of tools.
4. The investigator's own exposure to clinical field helped in developing the tools.

Description of the tool
Section A: It consists demographic variables such as age, religion, marital status, type of family, family income /month, previous source of information, number of vaginal delivery observed, number of working days in labour room and any family members belonging to health profession.

Section B**:** It consist of structured knowledge questionnaire.

Validity
The tool and content were given to experts. Based on the suggestions given by the valuators after considering the experts suggestions and modification the tool was finalized.

Reliability of the tool
The data of the structured knowledge questionnaire was analysed by test retest method and the reliability coefficient was calculated using spearman brown prophecy formula. The reliability co-efficient of the tool was found to be 0.83 Hence the tool was found to be valid, reliable and feasible.

Ethical consideration
- The research problem and objectives were approved by the research committee.
- Due permission from authorities was sought and obtained.
- Informed written consent was taken from the participants.
- Anonymity of the participants was ensured.
- Confidentiality of the data was maintained.

Plan for data collection
- Ethical committee clearance
- Written permission was obtained from head of the institution Principal of Government College of Nursing Raipur, Chhattisgarh and Shristhi College of Nursing Raipur, Chhattisgarh.
- Consent from 4th year B.Sc. Nursing students.
- The investigator approached the 4th year B.Sc. Nursing students of selected sample, informed them regarding the objectives of the study and obtained their informed consent after assuring the confidentiality of the data.

Pilot study
After obtaining formal administrative approval the pilot study was conducted from 7th to 14th January 2012 at C.G. College of Nursing Raipur, Chhattisgarh. 10 students were selected by the purposive sampling technique. Purpose of the study was explained to the students and assured for confidentiality. On day one the pre-test of knowledge regarding Partograph was carried out and the same day Structured Teaching Programme was also administered. Post-test on knowledge was conducted on seventh day after the Structured Teaching Programme. The collected data was analyzed using descriptive and inferential statistics. The mean post test knowledge score of the respondent were found to be significantly higher than their mean pre test score. Findings of the pilot study revealed that it was feasible to conduct the study.

Data analysis and interpretation
Analysis and interpretation was done as per the objectives of the study. Descriptive and inferential statistics were used for the analysis of the data.

Section A: Frequency and percentage distribution of socio-demographic variables.
Age distribution of B.Sc. Nursing 4th year students that 37 (61.67%) belonged to age group 20-22 years, 17 (28.33 %) in age group of 23-25 years, and 6 (10%) in age group of above 26 years. In terms of religion maximum students 47

(78.33%) were beloging to hindu religion, 0 (0%) were muslim, 12 (20%) were christian, 1(1.67%) sikh. With regard to marital status maximum students 58 (97.67%) were unmarried, 2 (3.33%) were married and 0 (0%) were separated. In terms of type of family maximum students 40 (67.67%) were belonging to nuclear family, 20 (33.33%) were belonging to joint family and 0 (0%) no students were belonging to extended family. Related to family income/month maximum students 30 (50%) were belonging to family income Rs.10, 001-20,000 per month, 20 (33.33%) in family income group above Rs. 20,001 per month, and 10 (16.63%) in family income group below Rs. 10,000 per month. In terms of previous source of informatiom maximum students 29 (48.33%) had previous source of information, 20 (33.33%) had previous source of information from mass media, 0 (0%) had no previous source of information from workshop/ conference, 11 (18.33%) had previous source of information from Nursing journals. In terms of number of vaginal delivery observed maximum students 33 (55%) had observed 0-5 vaginal delivery, 18 (30%) had observed 6-10 vaginal delivery, 9 (15%) had observed 11-15 vaginal delivery, and 0 (0%) students had observed above 16 number of vaginal delivery. Regarding number of working days in labour room maximum students 34 (56.67%) had 1 weeks of working days in labour room, 14 (23.33%) had 2 weeks, 12 (20%) had 3 weeks and 0 (0%) students had above 4 weeks of working days in labour room. With regard to any family members belonging to health profession maximum students 34 (56.67%) of family members not belonged to health profession, 12 (20%) of family members belonged to Nursing profession, 11(18.33%) of family members belonged to medical profession and 3(13%) of family members belonged to other health worker.

Section B: To assess the knowledge of B.Sc. Nursing 4th year students regarding Partograph.

Analysis of pre-test knowledge scores on the basis of criterion maximum B.Sc. Nursing 4th year students 33 (55%) had inadequate knowledge, 27 (45%) had moderately adequate knowledge and 0 (0%) had adequate knowledge regarding Partograph. The analysis of post-test knowledge scores on the basis of criterion maximum B.Sc. Nursing 4th year students 37 (61.67%) had adequate knowledge, 23 (38.33%) had moderately adequate knowledge and 0 (0%) had inadequate knowledge regarding Partograph.

Section C: Analysis of pre-test and post-test knowledge scores regarding Partograph

analysis of mean pre-test knowledge scores of B.Sc. Nursing 4th year students regarding Partograph was 11.98, mean % was 42.79%, SD was found to be 3.69 and the mean post-test knowledge score 21.95 was higher than mean pre-test knowledge score, mean % was 78.39%, SD was found to be 3.29, the gain in mean % score was 35.6%. the mean pot test score was higher than mean pre test score.

Section D: To evaluate the effectiveness of Structured Teaching Programme on knowledge regarding Partograph among B.Sc. Nursing 4th year students.

Distribution of difference between knowledge score the mean post-test knowledge score 21.95 was higher than the mean pre-test knowledge score 11.98, mean difference was 9.96, SD_D was 2.54, SE_{MD} was 0.32 and dF (59) = 1.671 the 't' value 30.36 was found to be significant at 0.05 level. This explains that the Structured Teaching Programme on Partograph was effective in enhancing the knowledge scores of B.Sc. Nursing 4th year students.

Section E: To find out the association between pre-test knowledge score regarding Partograph with selected socio-demographic variables.

There was significant association between the pre-test knowledge score of B.Sc. Nursing 4th year students with type of family (chi-square 4.84), previous source of information (chi-square 7.19), number of vaginal delivery observed (chi-square 13.07), number of working days in labour room (chi-square 7.71), and any family members belonging to health profession (Chi-square 10.60) at 0.05 level of significance.

There was no significant association between the pre-test knowledge score of B.Sc. Nursing 4th year students with age group, marital status, family income.

Conclusion

Thus, it is concluded that the Structured Teaching Programme on Partograph is effective as a teaching strategy to update the knowledge of B.Sc. Nursing 4th year students. After the administration of Structured Teaching Programme regading partogarh the post test scores showed an increase in knowledge, hence Structured Teaching Programme helped the B.Sc. Nursing 4th year students to improve their knowledge regarding Partograph.

Limitation

- The study was confined to 60 samples which limits the generalization of the findings.
- Owing to the time limit for data collection after 7 days of administration of Structured Teaching Programme, repeated administration of Structured Teaching Programme could also not be attempted after identifying the area of deficit in knowledge scores.

Recommendations

- The study can be replicated on a large sample to validate the findings and make generalization.
- A comparative study can be done between the effects of Structured Teaching Programme verses self instructional module.
- A similar study may be conducted on experimental research approach and pre-test post-test control group design.
- A study may be done to explore the attitude and practice of the B.Sc. Nursing 4th year students regarding Partograph.
- A similar type of study can be conducted for staff nurses working in labour units and other community health care settings.

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"Gratitude unlocks the fullness of life. It turns what we have into enough, and more. Gratitude makes sense of our past, brings peace for today and creates a vision for tomorrow."

~Melody Beattie

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