

A Quasi-Experimental Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Selected Obstetric Drugs among Nursing Officers of KCGMCH, Karnal, Haryana

Amandeep Kaur¹, Anu², Ashima³, Ankush⁴

¹Assistant Professor, Govt. College of Nursing, Pt. DDU UHS, Kutail, Karnal

^{2,3,4}B.Sc. Nursing, Pt. DDU UHS, Kutail, Karnal

Corresponding Author: Amandeep Kaur

DOI: <https://doi.org/10.52403/ijhsr.20230911>

ABSTRACT

Background: The nurses who are caring for pregnant and labouring women should be knowledgeable of pharmaceuticals agents that help with labour initiation, labour augmentation, and labour that may be postponed or retarded. Modern drugs have greatly alleviated the risk of childbirth. It is crucial to understand the problems associated with drug use throughout pregnancy and the puerperium. The primary goal of the study is to evaluate the effectiveness of Structured Teaching Programme on Knowledge Regarding Selected Obstetric Drugs among Nursing Officers of KCGMCH, Karnal, Haryana.

Material and Methods: The study consisted of 40 Nursing Officers selected by convenient sampling technique. Data was collected by using self- structure questionnaire.

Finding and Conclusion: Findings showed that, in pre-test, 77.5% of nursing officers had good knowledge, 20% had average and only 2.5% had very good knowledge regarding selected obstetric drugs. In case of post-test, 92.5% of nursing officers had very good knowledge, 5% had good and 2.5% had average knowledge regarding selected obstetric drugs. Study results also showed that there was no significant association between post-test knowledge score with selected socio-demographic variables. The study concluded that subjects didn't possess adequate knowledge in pre- test but after structured teaching program knowledge improved among nursing officers.

Keywords: *selected obstetric drugs, knowledge, structure teaching program and effectiveness*

INTRODUCTION

Nurses are a constant presence at the bedside and regularly interact with physicians, pharmacists, families, and all other members of the health care team and are crucial to timely coordination and communication of the patient's condition to the team. In terms of patient safety, a nurse's responsibilities include keeping an eye out for clinical deterioration in patients, spotting errors and incidents, understanding care procedures and flaws in some systems,

recognizing and communicating changes in patient condition, and carrying out an extensive range of other duties to guarantee patients receive high-quality care. They guarantee that each patient receives the necessary attention.

The nurses who are caring for pregnant and labouring women should be knowledgeable of pharmaceuticals agents that help with labour initiation, labour augmentation, and labour that may be postponed or retarded. Modern drugs have greatly alleviated the

risk of childbirth. It is crucial to understand the problems associated with drug use throughout pregnancy and the puerperium., so that women can be correctly informed and advised regarding the potential benefits and risks. Along with knowledge regarding pharmaceutical agents nurses should possess excellent critical thinking skills and ability to make decisions quickly using good professional judgement.

Drugs may directly affect the foetus, causing harm that could result in birth abnormalities or even death. They can also change the way the placenta works, mainly by constricting blood arteries and decreasing the mother's blood supply of oxygen and nutrients, which leads to an underweight and undeveloped baby. Additionally, they may cause the uterus' muscles to contract forcefully, which could harm the foetus directly by limiting its blood supply or by starting preterm labour and delivery.

A patient's fundamental right is to have the appropriate medication administered at the appropriate time, in the appropriate dose, to the appropriate patient. Following the administration of the medicine, documentation is also necessary. Direct observation, chart review, and voluntary reporting are used to identify medication errors. Systems must be put in place by organizations to prevent pharmaceutical errors.

From clinical experience, the researcher identified that nurses had inadequate knowledge regarding obstetric drugs, which may lead to the verse effect on both the mother and her fetus. Hence, the investigator felt the need for self-structured teaching program regarding selected obstetric drugs which provides guidelines that could bring considerable changes in the knowledge of staff nurses.

Objectives

1. To pre-assess the knowledge regarding selected obstetric drugs among nursing officers.

2. To evaluate the effectiveness of structured teaching program on knowledge regarding selected obstetric drugs among nursing officers.

3. To find out the association of knowledge regarding selected obstetric drugs among nursing officers with selected demographic variables.

MATERIAL AND METHODS

Research Design: A quasi-experimental one group pre-test post-test design was used to assess the effectiveness of structured teaching programme on knowledge regarding selected Obstetric Drugs among Nursing Officers of KCGMCH, Karnal, Haryana.

Sample and sampling technique: Convenient sampling technique was used to select the sample of 40 nursing officers.

Data collection instrument: The study tool was self –structured questionnaire for collecting demographic data and for the assessment of knowledge. The questionnaire was developed by the investigators of this study and the validity and reliability of the tools were assessed by experts in the field. Tool tryout was carried out on 5 samples to check it for the clarity, relevance and to determine the time taken for collecting the data. Reliability co-efficient of tool was found to be 0.88 revealing the tool was consistent, precise and accurate for administration in the main study. Pilot study was conducted on 5 study subjects to assess the feasibility and practicability of the main study.

The tool had two parts. Part (i) dealt with the demographic variables of the study subjects and Part (ii) had self – structured knowledge questionnaire regarding selected obstetric drugs. The part- II of the tool consisted of 44 multiple choice questions. The correct response was given 1 score and wrong answer were given 0 score.thw maximum score was 44 which was converted to percentage. The score was interpreted as poor knowledge (0-11), average knowledge (12-22), Good (23-33) and very good knowledge (34-44).

Data collection process:

The main study was conducted among 40 study subjects from June 2022 to August 2022. The informed consent was obtained from the participant’s first afterwards self-structured Questionnaire was administered to nursing officer on day 1 as a pre-test measurement of knowledge level regarding selected obstetric drugs and intervention was given in the form of Structured Teaching Programme on knowledge regarding selected obstetrics drugs on the same day. Post-test was conducted on day 7 after giving intervention using same self-structured questionnaire which was used in pre-test. The data of the main study was evaluated in master data sheet and analyzed by using descriptive and inferential statistics at 0.05 level of significance.

Data analysis: Statistical analysis was performed using SPSS 23.0 Statistics.

Descriptive statistics was used to analyze the demographic distribution, knowledge and attitude with frequency, proportions (%), mean, and standard deviations.

RESULTS AND DISCUSSION

Demographic Characteristics of nursing officers

According to demographic data Majority (50.0%) of nursing officers were in the age group of 30-40 years. The highest percentage of nursing officers belonged to General Nursing and Midwifery.35.0% of nursing officers had professional experience between 5-10 years. The highest percentage (62.5%) of nursing officers were had the information about the obstetric drugs from previous experience and 32.5% of the nursing officers had previous experience of obstetric drugs administration.

Table -1: Frequency and percentage distribution of knowledge scores of nursing officers regarding selected obstetric drugs.

| Level of knowledge | Range of score | Pre-test | | Post test | |
|--------------------|----------------|--------------|----------------|--------------|----------------|
| | | Frequency(f) | Percentage (%) | Frequency(f) | Percentage (%) |
| Poor | 0-11 | 0 | 0 | 0 | 0 |
| Average | 12-22 | 8 | 20 | 1 | 1 |
| Good | 23-33 | 31 | 77.5 | 2 | 5 |
| Very good | 34-44 | 1 | 2.5 | 37 | 92.5 |

Showed that in pre-test, 20% nursing officers had average knowledge, 77.5% had good and only 2.5% had very good knowledge regarding selected obstetric drugs. In case of post– test 92.5% had very

good knowledge, 5% had good, only 1% nursing officers had average knowledge regarding selected obstetric drugs, whereas none of them had poor knowledge.

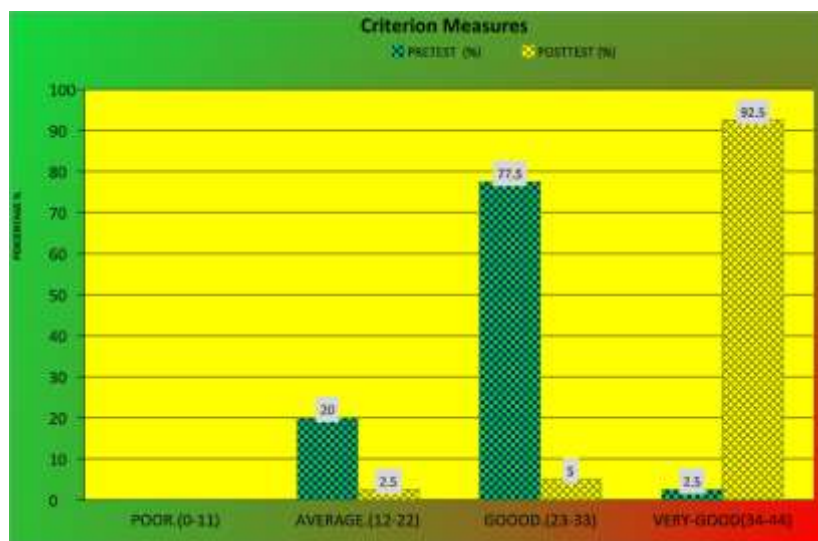


Table no. -2: Range, Mean, Median, Standard deviation and Mean Percentage of the pre- test and post -test knowledge score of nursing officers

| Paired T Test | Mean ± S.D | Mean% | Range | Mean Diff. | Paired T Test | P value | Table Value at 0.05 |
|--------------------|------------|-------|-------|------------|---------------|---------|---------------------|
| PRETEST KNOWLEDGE | 26.13±4.0 | 59.40 | 18-34 | 11.570 | 13.144 *Sig | <0.001 | 2.02 |
| POSTTEST KNOWLEDGE | 37.7±3.68 | 85.70 | 21-43 | | | | |

Maximum=44
Minimum=0

Table :2: showed that the post- test knowledge score range (21-43), was statically significantly higher than the mean pre- test knowledge score range (18-34). The data also depicts that mean of post- test

knowledge score i.e., 37.7 was significantly higher than the mean of pre- test knowledge score i.e.,26.13.

Diagram Showing Mean and SD Score.

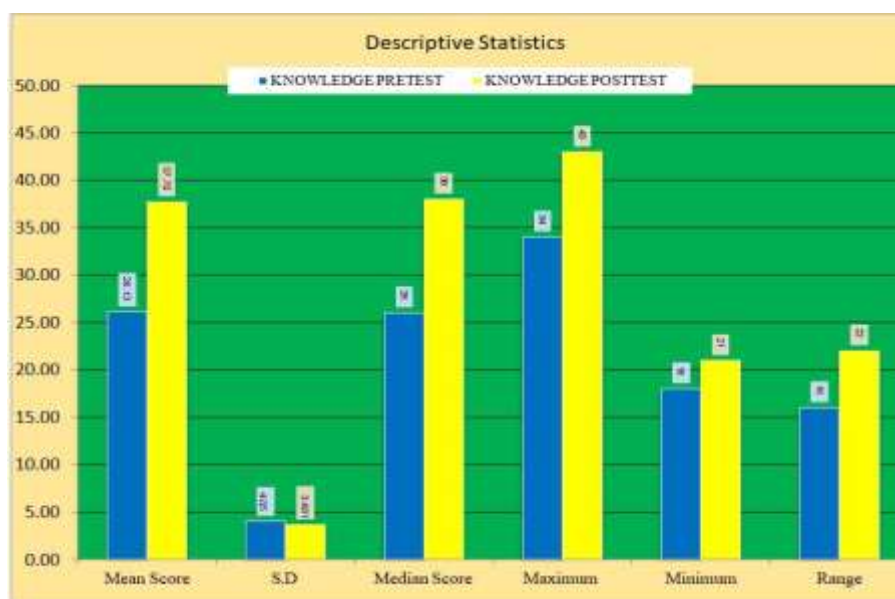


Table:3: Effectiveness of the Structured teaching program on selected obstetric drugs Comparison of the area-wise mean pre-test and post-test knowledge scores.

| Paired T Test | Mean±SD | Mean% | Range | Mean Diff. | Paired T Test | P value | Table Value at 0.05 |
|--------------------|-------------|-------|-------|------------|---------------|---------|---------------------|
| PRETEST KNOWLEDGE | 26.13±4.052 | 59.40 | 18-34 | 11.570 | 13.144 | <0.001 | 2.02 |
| POSTTEST KNOWLEDGE | 37.7±3.681 | 85.70 | 21-43 | | *Sig | | |

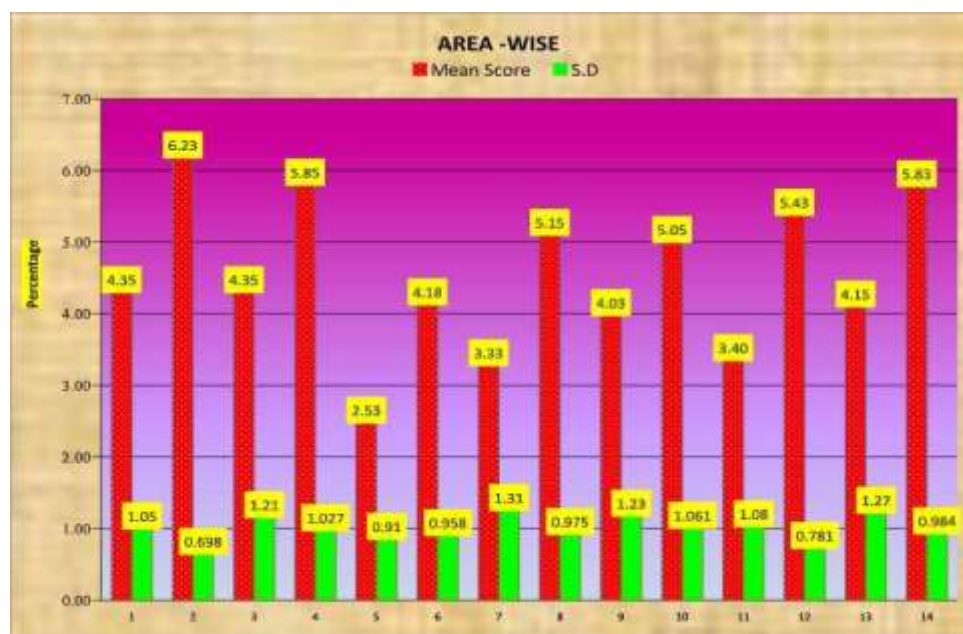
Table: 3 showed that post-test mean knowledge score (37.7±3.681) was higher than that the pre- test mean knowledge score (26.13±4.05). The calculated t value

(13.144) was higher than the table value (t=2.2) at 0.05 level of significance. Hence, H1 hypothesis was accepted.

Table 4: Area wise distribution of knowledge regarding selected obstetric drugs among nursing officers.

| Areas | | Mean score | S.D | Median score | Mean Percentage | Mean Difference | Paired T Test | P value | Table Value At 0.05 df 59 |
|-------------------|------|------------|------|--------------|-----------------|-----------------|---------------|---------|---------------------------|
| Oxytocin | Pre | 4.35 | 1.05 | 4 | 62.10 | 1.880 | 9.377 *Sig | <0.001 | 2.02 |
| | Post | 2.0 | 0.69 | 6 | 88.9 | | | | |
| Ergot Derivatives | Pre | 4.35 | 1.21 | 4 | 62.10 | 1.500 | 6.111 *Sig | <0.001 | 2.0 |
| | Post | 5.85 | 1.02 | 6 | 83.6 | | | | |

| | | | | | | | | | |
|--------------------|------|-------|-------|----|-------|-------|----------------|--------|------|
| Prostaglandins | Pre | 2.53 | 0.91 | 2 | 50.50 | 1.650 | 8.337 *Sig | <0.001 | 2.02 |
| | Post | 4.18 | 0.958 | 4 | 83.50 | | | | 2.02 |
| Magnesium Sulpiate | Pre | 3.33 | 1.31 | 3 | 55.40 | 1.820 | 7.216 *Sig | <0.001 | 2.02 |
| | Post | 5.15 | 0.975 | 5 | 85.80 | | | | |
| Methyldopa | Pre | 4.03 | 1.23 | 4 | 67.10 | 1.020 | 3.809 *Sig | 0.0005 | 2.02 |
| | Post | 5.05 | 1.061 | 5 | 84.20 | | | | |
| Labetalol | Pre | 3.40 | 1.08 | 3 | 56.70 | 2.030 | 11.429 *Sig | <0.001 | 2.02 |
| | Post | 5.43 | 0.781 | 6 | 90.40 | | | | |
| Anticoagulants | Pre | 4.15 | 1.27 | 4 | 59.30 | 1.680 | 5.971 *Sig | <0.001 | 2.02 |
| | Post | 5.83 | 0.984 | 6 | 83.20 | | | | |
| Overall | Pre | 26.13 | 4.05 | 26 | 59.40 | 11.57 | 13.144 *Sig | <0.001 | 2.02 |
| | Post | 37.70 | 3.681 | 38 | 85.70 | | | | |



Area wise percentage, mean score and SD

Table 4:

- Shows that in pre-test for oxytocin mean score \pm SD is 4.35 ± 1.05 . In post-test for oxytocin drug mean score \pm SD is 6.23 ± 0.69 .
- In pre-test for ergot derivatives the pre-test mean score \pm SD was 4.35 ± 1.21 . Post-test mean score \pm SD for ergot derivatives was 5.85 ± 1.027 .

- In pre-test for prostaglandins the pre-test mean score \pm SD was 2.53 ± 0.91 . In post-test mean score \pm SD for prostaglandins was 4.81 ± 0.95 .
- In pre-test for MgSO₄ mean score \pm SD was 3.33 ± 1.31 . In post-test mean score \pm SD for MgSO₄ was 5.15 ± 0.975 .
- In pre-test for methyldopa pre-test mean score \pm SD was 4.03 ± 1.23 and post-test mean score \pm SD was 5.43 ± 1.061 .

- In pre-test for labetalol the mean score \pm SD was 3.40 ± 1.08 and post-test score was 5.43 ± 0.781 .
- In pre-test for Anticoagulant mean score \pm SD was 4.15 ± 1.27 and in post-test score was 5.83 ± 0.984 .
- Overall, in pre-test mean score \pm SD was 26.13 ± 4.05 and in post-test mean score \pm SD was 37.7 ± 3.6 .
- Overall calculated value was 13.144 was higher than the table value at level of 0.001 of level of significance

DISCUSSION

The findings of the study were similar to a quasi-experimental study which was conducted among 50 staff nurses working in selected maternity hospital, Mangalore. Data was collected by using non-probability purposive sampling technique. The study results revealed that pretest findings of staff nurses had poor knowledge regarding selected obstetric drugs, after administration self-instructional module, knowledge of staff nurses improved.

Various similar studies conducted in Faridkot, Kotkapura, Bathinda and Badal, Bangalore, South Karnataka, Belgaum, Mangalore and Egypt revealed that nursing officers had poor to average knowledge regarding selected obstetrical drugs, after administration of planned teaching program, knowledge of nursing officers improved.

Limitations

- Study was limited to small sample.
- In this study only selected obstetrical drugs are covered.
- Study was conducted on nursing officers of KCGMCH selected by non-probability convenient sampling techniques.
- A structured knowledge questionnaire was used for data collection which restricts the amount of information that can be obtained from the respondents.
- The study did not use any control group. The investigators had no control over the event that took place between the pre-test and post-test

- No follow up was done after the post test.

Future scope or recommendation

- A similar study can be conducted on a larger sample for wider generalization.
- A study can be conducted to evaluate the effectiveness of teaching program on knowledge regarding selected obstetrical drugs among BSc. Nursing 4th year students.
- A study can be conducted to assess level of knowledge of staff nurses on emergency obstetrical drugs.

Declaration by Authors

Ethical Approval: Approved

Acknowledgement: None

Source of Funding: None

Conflict of Interest: The authors declare no conflict of interest.

REFERENCES

1. Payto RG., Brucker MC. Drug uterine motility. Journal of obstetric gynecologic and neonatal nursing. 1999 Nov; 28(6):628-37.
2. DC Dutta. A textbook of "obstetrics" including perinatology and contraception. 2nd edition. New Delhi: Jaypee brothers; 2013.p 498 – 501.
3. Bijapurkar M, Raddi Sudha A. Effectiveness OD self-instructional Module on the knowledge of obstetrics drugs among nurses working in Maternity unit. Journal of South Asian Federation of Obstetrics & Gynecology. 2009 May-August; 1(2):60-62.
4. Sabitha S. The effectiveness of self-instructional module on selected obstetric drugs among staff nurses working in jayanagar general hospital, Bangalore, South Karnataka.2005; 14(139):159-4.
5. Ali,H & Ameer,A (2012) A cross-section study of knowledge and practice on use of oxytocin.
6. Broadsky P L and Pelzer E M. Rational for the revision of oxytocin administration protocols.Journal of obstetrical and Gynecology and neonatal nursing. 1991 Nov-Dec; 20(6):440-4.
7. Haleena & Prathap, V (2013) retrospective study of assess the knowledge and practice

regarding oxytocin induction and quality of delivery care.

8. Selinamma Devasia Sr. Dhanya. A study to assess the effectiveness of a Planned Teaching Programme (PTP) on knowledge regarding selected obstetric drugs among the 3rd year B.Sc. nursing students of selected college of nursing Mangalore. Int. J. of Advances in Nur. Management. 2021; 9(1):1-3.

How to cite this article: Amandeep Kaur, Anu, Ashima, Ankush. A quasi-experimental study to assess the effectiveness of structured teaching programme on knowledge regarding selected obstetric drugs among nursing officers of KCGMCH, Karnal, Haryana. *Int J Health Sci Res.* 2023; 13(9):61-67.
DOI: <https://doi.org/10.52403/ijhsr.20230911>
