



Obstetrics & Gynaecology

TO ASSESS THE EFFECTIVENESS OF LECTURE CUM DEMONSTRATION ON KNOWLEDGE AND SKILL REGARDING PLACENTAL EXAMINATION AMONG NURSING STUDENTS IN SELECTED COLLEGES" A PER-EXPERIMENTAL STUDY

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ABSTRACT**Background of Study:****"Motherhood is the Biggest Gamble in the World"**

The placenta is a vital organ in pregnancy, providing nutrients and oxygen to the developing fetus and removing waste products from the bloodstream. It forms gradually during the initial trimester and grows alongside the uterus throughout pregnancy. Once fully developed, the placenta resembles a spongy disc, typically 20 cm in diameter and 3 cm thick. It attaches to the uterine wall, with the umbilical cord connecting the fetus to the placenta. However, complications can arise during pregnancy, posing risks to both maternal and fetal health. According to data from the World Health Organization (WHO), one woman died every two minutes in 2020 due to pregnancy-related avoidable causes, accounting for approximately 800 deaths each day. By 2030, maternal mortality is to be reduced to less than 70 deaths per 1,000 live births. To reduce the maternal mortality every nurse or student nurse must practice of placental examination in every institute because nurse is backbone of hospital and mediator between patient and clinician. Lecture cum demonstration is effective teaching programme to understand the detail knowledge

Objective: To assess the knowledge and skill regarding placental examination among nursing students in selected colleges. To assess the effectiveness of lecture cum demonstration on knowledge and skill regarding placental examination among nursing students in selected colleges. To associate the study finding with selected demographic variables. **Study Design and Methodology:** Descriptive Survey design will be used. The duration of the study one month. 80 nursing students selected from nursing colleges in Nagpur will be selected as sample through Non probability convenience sampling technique questionnaire for knowledge and checklist for skill will be used to assess the impact of lecture cum demonstration on placental examination. **Expected Result:** There will be significant improvement in knowledge score and skill in posttest as compare to pretest after administration of an intervention programme. **Limitation-** Study will be conducted in selected colleges of Nagpur district only. **Conclusion-** The study found that a self-structured questionnaire on placental examination knowledge among nursing students in selected colleges was effective. The self-structured questionnaire and demonstration helped students understand how to examine the placenta after expulsion and the importance and significance of placental examination.

KEYWORDS : Placental Examination, Lecture cum demonstration, knowledge and skill.**INTRODUCTION****"Motherhood is the Biggest Gamble in the World"**

The placenta is a vital organ in pregnancy, providing nutrients and oxygen to the developing fetus and removing waste products from the bloodstream. It forms gradually during the initial trimester and grows alongside the uterus throughout pregnancy. Once fully developed, the placenta resembles a spongy disc, typically 20 cm in diameter and 3 cm thick. It attaches to the uterine wall, with the umbilical cord connecting the fetus to the placenta. However, complications can arise during pregnancy, posing risks to both maternal and fetal health. These include placenta accreta, placental abruption, placenta previa, and abnormal morphology of the placenta. These conditions can impact fetal development and pregnancy outcomes. Placental complications can also contribute to other pregnancy-related issues such as gestational hypertension, pre-eclampsia, eclampsia, preterm birth, fetal distress, and fetal growth restriction. Healthcare professionals must monitor and manage these conditions to ensure the well-being of both mother and baby during pregnancy and delivery.¹

Understanding the placenta is crucial for nurses working in clinical settings, as it plays a vital role in supporting fetal growth and development during pregnancy. Any abnormalities or complications involving the placenta can have serious consequences for both the mother and the baby. Nurses need to recognize signs and symptoms of placental complications, such as placenta previa, placental abruption, and placental insufficiency, to ensure timely intervention and management.²

Fetal Complications associated with battledore placenta (a condition in which the umbilical cord is inserted at or near the placental edge rather than in center) placenta are preterm labor, fetal distress, and intrauterine growth restriction. The placenta is an organ of fetus which conforming of an umbilical cord, membranes (chorion and amnion), and parenchyma. Mother or fetal diseases may have placental sequelae since the mother and fetus. Interface at this point. Again, initial placental abnormalities can effect on both mother and fetal health. Examination of the placenta may yield information on the impact of

motherly complication on the fetus or the cause of preterm labor, fetal growth restriction, or neurodevelopmental impairment. This Research not done in Maharashtra and done on staff nurses not on nursing students and demonstration method be used novelty give new information to the pupil for farther educational Knowledge. The nature of the (smell) odor may provide a clue to identify the infecting organism: a fecal odor may indicate *Fusobacterium* and *Bacteroides*, while a sweet odor may indicate *Clostridium* and *Listeria*.³

According to a pre-experimental study done in August 2022 by Mr. Sandeep Kaur, 90% of the staff nurses in a few maternity hospitals in Amritsar, Punjab, including Dhingra Maternity Hospital, Aggarwal Nursing Home, and Beri Maternity Hospital, did not have adequate placental examination skills. Out of 100 nurses, the majority (47.6%) were unable to define the placental barrier, 45.2% were unable to name any recent advantages or applications of the placental, and 26.2% were unable to pinpoint the placental embedding site, the period of placental development, or the placental's function. The study found that when it came to placental inspection during the pretest, the majority of nurses were either ignorant or had inadequate information. In the practice after the demonstration, 70% of nurses had unsatisfactory skills, and fewer than 30% had satisfying skills.⁴

Nurses also play a crucial role in educating pregnant women about the importance of prenatal care and healthy lifestyle choices to reduce the risk of placental complications. They can provide guidance on maintaining a balanced diet, avoiding harmful substances, and attending regular prenatal appointments to monitor the health of the placenta and the fetus. Nurses also monitor fetal well-being during labor and delivery, assessing the fetus's oxygenation and nutrition. Knowledge of placental function is essential for interpreting fetal heart rate patterns and identifying signs of distress. Postpartum care involves monitoring the mother for signs of postpartum hemorrhage, infection, and other complications related to placental delivery. Nurses work closely with other healthcare professionals to provide comprehensive care to pregnant women and newborns.⁵

According to data from the World Health Organization (WHO), one woman died every two minutes in 2020 due to pregnancy-related avoidable causes, accounting for approximately 800 deaths each day. By 2030, maternal mortality is to be reduced to less than 70 deaths per 1,000 live births, according to Sustainable Development Goal 3.1. Pregnancy-related deaths include postpartum hemorrhage, puerperal infection, and retained placenta. Abnormal placenta is a major contributing factor to these deaths. According to a Nellore study, the majority of staff nurses and nursing scholars knew about placenta evaluation in a respectable amount of detail. Nonetheless, a per-experimental research conducted at a few maternity hospitals revealed that 90% of staff nurses lacked adequate placental inspection abilities. The results imply that a quantitative investigation including 80 participants is insufficient.⁶

OBJECTIVES

To assess the knowledge and skill regarding placental examination among nursing students.

1. To assess the knowledge and skill regarding placental examination among nursing students in selected colleges.
2. To assess the effectiveness of lecture cum demonstration on knowledge and skill regarding placental examination among nursing students in selected colleges.
3. To associate the study finding with selected demographic variables.

Hypotheses

Ho- There is no significant difference between pretest and post -test Knowledge and skill scores regarding placental examination among nursing students.

H1- There is significantly difference between pretest and post- test knowledge and skill scores regarding placental examination among nursing students.

MATERIAL AND METHOD

Study Design: Pre-Experimental one-group pretest post-test research design.

Study Setting: Selected Nursing Colleges in Nagpur Dist.

Participants: 3rd Year Nursing Students.

Sample Size Calculation:

Sample Size- 80

Cochran Sample Size Formula With Desired Error Of Margin:

$$N = \frac{(Z(1-\alpha) + Z\beta)^2 (P_1(1-P_1) + (P_2(1-P_2)))}{(P_2 - P_1)^2}$$

Where $Z_\alpha = 1.64$

α = Type I error at 5% Two tailed 5% each $Z_\beta = 0.84$

Beta Type II error at 20% Minimum sample size $N = 2 * (1.64 + 0.84)^2 (0.30)(1-0.30) + (0.50\%) (1-0.50)/(0.20)^2$
= 71 each in two group

Considering 10% drop out = 8 sample each group.

Total sample size required = 80 per group including drop out.

Sampling Technique

Non probability convenience technique

Inclusion Criteria

- Nursing student who are willing to participate in the study.
- G.N.M. 3rd year students.

Exclusion Criteria

- Nursing student who have attended any educational program on placental examination.

Data Collection Tool

Section A:

It includes demographic variables age, marital status, source of information, nursing course, academic year, and previous knowledge.

Section B:

It includes self structured questionnaire on knowledge and skill regarding placental examination.

Knowledge Assessment

Nursing students knowledge will be assessed by pre and post test using

self structure knowledge questionnaire. And skill assessed by checklist.

Validity and reliability of tool and check list will be assessed by experts in the field and appropriate statistical measures. Validity over questionnaire will be established for buildup through both the construct and content method to seek for the result what has intended purposely for the inference and conclusion to measure knowledge assessment will consider poor if the score is < 3-9, Average if it is 9 to 13, good 14 to 19, and excellent if it is > 20.

Description of Intervention

The researcher will develop an self structured questionnaire and checklist regarding placental examination. Which will be validated by expert in obstetric and gynecological Nursing field. Which will be then provided to the participant in pretest on day 1 and post test on day 7 and further analysis will be done to assess the effectiveness of lecture cum demonstration. Pretest post test will be conducted to assess the effectiveness.

Study Procedure and Data Collection

The study shall be conducted only after the approval of IEC Investigator will be visit the research area and will obtain the necessary permission from the concerned authorities.

Nursing student who will fulfill inclusion criteria shall be assign to study. Researcher will explain the purpose of the study, take informed written consent and pretest will be administered to the participants and will again visit study area and administered post test on 7th day.

Validity over the questionnaire will be established for build up through both the construct and content method to seek for the results what has intended purposely for the inference and conclusion to measure. Reliability of questionnaire will be calculated by using appropriate statistical test.

Data Analysis

All result will be calculated using Cochran Sample size formula. Overall result for the outcome variables will be listed in table and graphs for both descriptive (Mean, mean percentage, standard deviation), and inferential statistics (Paired t- test will be used to find the significance difference between two groups (before and after). Association results will be analyzed using chi Square analysis).

Expected Result

Expected improvement in the knowledge will be about 20 to 25 % after administration of an intervention. There will be positive or negative correlation between knowledge and skill regarding placental examination. Nursing students will be able to gain knowledge regarding placental examination in details, thus helping them understand the how to examine the placenta, importance of placental examination. The findings of this study have implications for the further studies in Nursing.

DISCUSSION

Findings of present study will supported by previous studies where lecture with demonstration are effective in information transfer and improving knowledge and skill.

CONCLUSION

The findings of this research will contribute to the existing body of knowledge regarding placental examination. In a view of this fact, present study aims to assess the effectiveness of lecture cum demonstration on knowledge and skill regarding placental examination among Nursing students

Consent and Ethical Approval

The study will be conducted after approval of Institutional Ethics Committee. Written consent will be taken from the participants for participation in the study. Throughout the Study, confidentiality will be maintained. Freedom to withdraw from the study at any point of time will be assured. The study findings will be disseminated to participants and published in a peer-reviewed journal.

Conflict of Interest

There is no conflict of interest in this study.
No any risk factors to the subjects of the study.

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