Effectiveness Of Structured Teaching Programme On Knowledge Regarding Polyhydramnios Among Antenatal Mothers At Government Maternity Hospital, Sikar, Rajasthan

Miss Shimla

Dr. Manoj Prajapati

Abstract

Background: Polyhydramnios is a high-risk obstetrical condition characterized by excessive accumulation of amniotic fluid. It is associated with maternal and fetal complications such as preterm labor, malpresentation, postpartum hemorrhage, and perinatal morbidity. Adequate knowledge among antenatal mothers regarding polyhydramnios is essential for early identification, timely management, and prevention of complications.

Objectives:

1.   To assess the pre-test knowledge of antenatal mothers regarding polyhydramnios.
2.   To assess the post-test knowledge of antenatal mothers regarding polyhydramnios.
3.   To evaluate the effectiveness of a structured teaching programme on knowledge regarding polyhydramnios.
4.   To find the association between post-test knowledge scores and selected demographic variables.

Methods: A quantitative evaluative research approach with a pre-experimental one-group pre-test post-test design was adopted. The study was conducted at the Government Maternity Hospital, Sikar. Antenatal mothers were selected using non-probability purposive sampling. Data were collected using a structured knowledge questionnaire. A structured teaching programme was administered, and post-test assessment was conducted after seven days.

Results: The findings revealed that the majority of antenatal mothers had inadequate to moderate knowledge in the pre-test. Post-test knowledge scores showed a significant improvement. The paired *t*-test indicated a statistically significant increase in mean knowledge scores ($p < 0.05$). Selected demographic variables showed significant association with post-test knowledge scores.

Conclusion: The structured teaching programme was effective in improving knowledge regarding polyhydramnios among antenatal mothers. Health education should be incorporated into routine antenatal care to promote maternal and fetal well-being.

Keywords: Polyhydramnios, antenatal mothers, structured teaching programme, knowledge, high-risk pregnancy

Introduction

Pregnancy is a physiological process; however, complications may arise that threaten the health of the mother and fetus. Polyhydramnios is one such high-risk condition defined as excessive accumulation of amniotic fluid beyond normal limits. It can occur due to maternal diabetes, fetal anomalies, infections, or idiopathic causes.

Polyhydramnios increases the risk of maternal discomfort, preterm labor, placental abruption, postpartum hemorrhage, and fetal complications such as malpresentation and cord prolapse. Early detection and proper management are crucial in reducing adverse outcomes.

Antenatal mothers often lack adequate knowledge regarding warning signs, causes, and preventive measures related to polyhydramnios. Nurses play a vital role in educating pregnant women during antenatal visits. Structured teaching programmes are effective educational strategies that enhance maternal knowledge and promote safe pregnancy outcomes. Therefore, this study was undertaken to assess the effectiveness of a structured teaching programme on knowledge regarding polyhydramnios among antenatal mothers.

Objectives

1. To assess the pre-test level of knowledge regarding polyhydramnios among antenatal mothers.
2. To assess the post-test level of knowledge regarding polyhydramnios among antenatal mothers.
3. To evaluate the effectiveness of the structured teaching programme.
4. To find the association between post-test knowledge scores and selected demographic variables.

Hypotheses

- **H_1:** There will be a significant difference between pre-test and post-test knowledge scores regarding polyhydramnios among antenatal mothers ($p < 0.05$).
- **H_2:** There will be a significant association between post-test knowledge scores and selected demographic variables.

Methodology

Research Design

A **pre-experimental one-group pre-test post-test research design** was adopted to evaluate the effectiveness of the structured teaching programme on knowledge regarding polyhydramnios among antenatal mothers.

Research Approach

A **quantitative evaluative research approach** was used to assess the change in knowledge levels before and after the intervention.

Setting of the Study

The study was conducted at the **Government Maternity Hospital, Sikar**.

Population

The population comprised **antenatal mothers attending the selected government maternity hospital** during the period of data collection.

Sample Size

The sample consisted of **antenatal mothers**, selected as per the study requirement.

Sampling Technique

Non-probability purposive sampling technique was used to select the antenatal mothers based on the inclusion and exclusion criteria.

Inclusion Criteria

- Antenatal mothers attending the maternity hospital
- Antenatal mothers who were **willing to participate** in the study
- Antenatal mothers who were able to **understand Hindi**

Exclusion Criteria

- Antenatal mothers with **severe medical complications**
- Antenatal mothers who were **critically ill** at the time of data collection

Description of the Tool

The data collection tool consisted of two sections:

Section A: Socio-Demographic Variables

This section included items related to **age, educational status, gestational age, parity, place of residence, and previous obstetric history**.

Section B: Structured Knowledge Questionnaire

A structured knowledge questionnaire was developed to assess antenatal mothers' knowledge regarding polyhydramnios, covering:

- Meaning and definition of polyhydramnios
- Causes and risk factors
- Signs and symptoms
- Maternal and fetal complications
- Diagnosis and management
- Preventive measures

Validity of the tool was established through expert review by specialists in **nursing and obstetrics**. **Reliability** of the tool was ensured using the **test–retest method**, which demonstrated acceptable consistency.

Intervention: Structured Teaching Programme

The structured teaching programme was developed based on literature review and expert guidance. The content included:

- Meaning and definition of polyhydramnios
- Causes and risk factors
- Signs and symptoms
- Maternal and fetal complications

- Diagnosis and management
- Preventive measures and importance of regular antenatal check-ups

Duration: 45–60 minutes
Teaching aids: Lecture, charts, posters, and discussion

Data Collection Procedure

The data collection was carried out in three phases:

1. **Pre-test:** Assessment of baseline knowledge using the structured knowledge questionnaire
2. **Intervention:** Administration of the structured teaching programme
3. **Post-test:** Re-assessment of knowledge using the same questionnaire after **seven days**

Plan for Data Analysis

Descriptive Statistics

- Frequency and percentage
- Mean and standard deviation

Inferential Statistics

- **Paired *t*-test** to evaluate the effectiveness of the structured teaching programme
- **Chi-square test** to determine the association between post-test knowledge scores and selected demographic variables

The level of statistical significance was set at $p < 0.05$.

Results

Table 1

Distribution of Antenatal Mothers According to Level of Knowledge on Polyhydramnios in Pre-test and Post-test (n = 100)

Knowledge Level	Pre-test Frequency (n)	Pre-test %	Post-test Frequency (n)	Post-test %
Inadequate	44	44.0	10	10.0
Moderate	38	38.0	26	26.0
Adequate	18	18.0	64	64.0
Total	**100**	**100**	**100**	**100**

Description:
In the pre-test, the majority of antenatal mothers (82%) had **inadequate to moderate knowledge** regarding polyhydramnios. After the structured teaching programme, **64% of antenatal mothers gained adequate knowledge**, indicating a marked improvement.
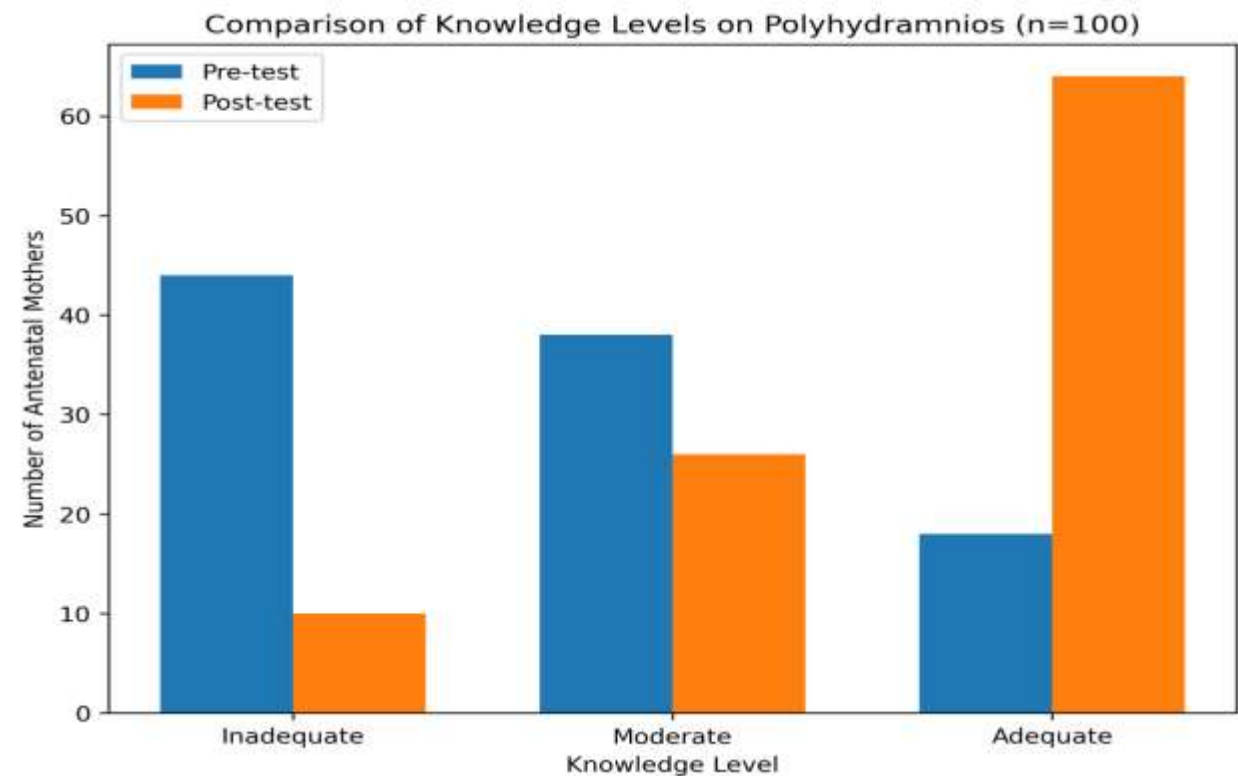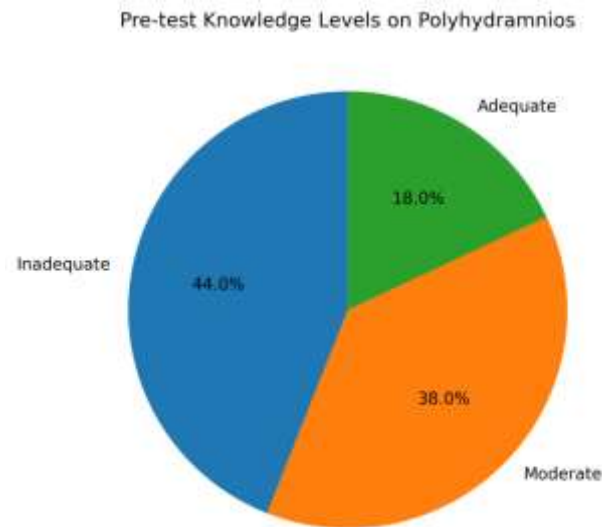
Comparison of Knowledge Levels on Polyhydramnios (n=100)

Table 2

Comparison of Mean Pre-test and Post-test Knowledge Scores on Polyhydramnios (n = 100)

Test	Mean Score	Standard Deviation (SD)	Mean Difference	t value	p value
Pre-test	10.82	3.21			
Post-test	18.96	2.84	8.14	22.48	$< 0.05^*$

*Statistically significant at $p < 0.05$

Pre-test Knowledge Levels on Polyhydramnios

Post-test Knowledge Levels on Polyhydramnios
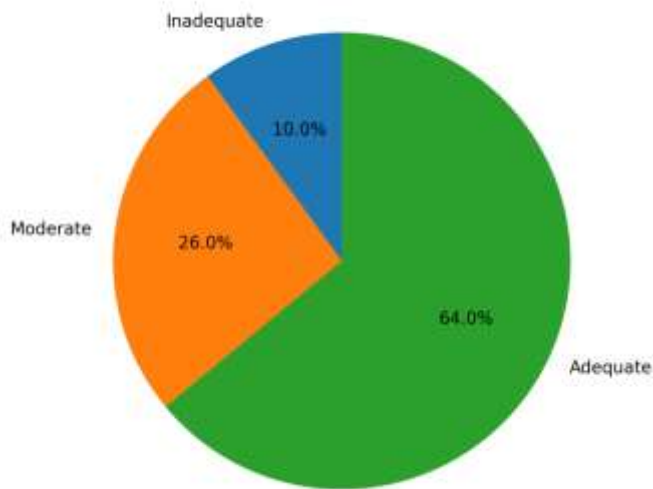
Description:

The mean post-test knowledge score was significantly higher than the mean pre-test score. The paired *t*-test showed a **statistically significant improvement**, proving the effectiveness of the structured teaching programme.

Conclusion

The study concluded that the structured teaching programme was effective in improving knowledge regarding polyhydramnios among antenatal mothers. Regular health education during antenatal visits can help in early identification and prevention of complications associated with polyhydramnios.

Recommendations

- Incorporation of structured teaching programmes in routine antenatal care
- Replication of the study with larger samples
- Development of educational booklets for antenatal mothers

References

1.   World Health Organization. (2023). *Maternal health*. https://www.who.int/health-topics/maternal-health

2.   Cunningham, F. G., Leveno, K. J., Bloom, S. L., Dashe, J. S., Hoffman, B. L., Casey, B. M., & Spong, C. Y. (2022). *Williams obstetrics* (26th ed.). McGraw-Hill Education.

3.   Lowdermilk, D. L., Perry, S. E., Cashion, K., & Alden, K. R. (2020). *Maternity & women's health care* (12th ed.). Elsevier.

4.   Pillitteri, A. (2019). *Maternal & child health nursing: Care of the childbearing and childrearing family* (8th ed.). Wolters Kluwer.

5.   Moore, T. R. (2014). Polyhydramnios. *Clinical Obstetrics and Gynecology, 57*(2), 341–347. https://doi.org/10.1097/GRF.0000000000000028

6.   Magann, E. F., Chauhan, S. P., Doherty, D. A., Lutgendorf, M. A., & Morrison, J. C. (2007). A review of idiopathic hydramnios and pregnancy outcomes. *Obstetrical & Gynecological Survey, 62*(12), 795–802. https://doi.org/10.1097/OGX.0b013e31815b4c8c

7.   American College of Obstetricians and Gynecologists. (2021). *Practice bulletin: Antepartum fetal surveillance*. https://www.acog.org

8.   Dutta, D. C. (2020). *Textbook of obstetrics* (9th ed.). Jaypee Brothers Medical Publishers.

9.　　Polit, D. F., & Beck, C. T. (2021). *Nursing research: Generating and assessing evidence for nursing practice* (11th ed.). Wolters Kluwer.

10.　　Burns, N., & Grove, S. K. (2019). *The practice of nursing research: Appraisal, synthesis, and generation of evidence* (8th ed.). Elsevier.

11.　　Indian Council of Medical Research. (2017). *National ethical guidelines for biomedical and health research involving human participants*. https://ethics.ncdirindia.org

12.　　Park, K. (2023). *Park's textbook of preventive and social medicine* (27th ed.). Banarsidas Bhanot.