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Knowledge Regarding Preterm Delivery Among Pregnant Women

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Abstract

This study was conducted to evaluate the level of knowledge about preterm delivery among pregnant women and to determine its association with selected demographic and clinical variables. The research was carried out in the antenatal outpatient department of the Rungta Hospital Jaipur. The conceptual basis of the study was the revised Health Promotion Model (2006) by Nola J. Pender, which emphasizes the interaction between individuals and their environment in promoting health.

A descriptive survey design was adopted, and 50 pregnant women were selected using a consecutive sampling method. Data were collected through a semi-structured interview schedule designed to assess knowledge regarding preterm delivery.

The findings revealed that 38% of participants had poor knowledge, 50% demonstrated average knowledge, and only 22% possessed good knowledge about preterm delivery. The knowledge scores ranged from 13 to 101, with a mean score of 48 and a standard deviation of 20.135. Statistical analysis showed a significant association ($p < 0.05$) between knowledge level and variables such as age, education, occupation, husband's occupation, and history of preterm delivery. Therefore, the null hypothesis was rejected.

Keywords: Preterm delivery; Pregnant women; Maternal knowledge; Antenatal care; Birth complications; Neonatal morbidity; Preterm birth awareness; Risk factors; Maternal education; Neonatal outcomes

Introduction

The birth of a baby is regarded as an important and happy event in life. However, preterm birth remains a serious global health problem. According to the World Health Organization, every year about 15 million babies are born prematurely and the numbers are only increasing. Complications related to preterm birth are the major cause of death among children under age five. Many of these deaths would be avoided with the use of affordable, evidence-based interventions.

Preterm birth is considered to be the birth of a live baby before completion of the 37 weeks of pregnancy. Normally pregnancy lasts for about 40 weeks. Deliveries should not be scheduled before 39 completed weeks unless there is medical indication for it. Preterm birth might be spontaneous or surgical, when the maternal issue or fetal problem requires it. Common contributory factors include multiple pregnancies, infections, diabetes, high blood pressure, and sometimes unknown causes. Genetic predisposition may also be a contributing factor.

Infants born prematurely often have short-term problems like breathing problems, infections, and nervous system problems. In the long-term, they can suffer from cerebral palsy, sensory impairments, learning difficulties, and chronic respiratory problems. Beyond clinical sequelae, preterm birth also leads to tremendous economic and emotional burdens on families and healthcare systems.

In India, each year around 10 to 12 percent of the newborns are born before 37 weeks of gestation. Due to anatomical and physiological immaturity these infants are at an increased risk of morbidity and mortality. Although improvements in neonatal care have led to an increase in survival rate, preterm birth has continued to be a major cause of neonatal deaths and long-term disabilities.

Globally, preterm birth is more common in low and middle-income countries, especially in South Asia and Africa. Survival rates of the pre term babies are significantly higher in high-income countries because of better healthcare infrastructure and increased awareness. Enhancing women's knowledge about preterm delivery is considered one of the key preventive measures.

Review of Literature

The current vulnerability underlines the need for the implementation of strong mental health interventions as part of the nursing curriculum, at both the level of safeguarding the well being of nursing students and at the level of ensuring provision of good quality and empathic patient care upon graduation (Sonmez et al., 2023).

Moreover, a thorough understanding of psychological concepts enables future nurses with tools needed to identify and address psychological distress in their patients especially among vulnerable populations like pregnant women who are susceptible to perinatal mood disorders (Kusumawati et al., 2023).

For example, understanding the psychological effect of poor obstetric outcomes, such as preterm delivery, is crucial for nurses to deliver good, tender nursing care (Wyk et al., 2024). Recognising that psychological and physiological stress are important factors in preterm birth, nurses are encouraged to routinely ask pregnant women about stress levels in an effort to reduce the associated risks (Gennaro & Hennessy, 2003). This proactive approach, combined with an awareness of the possible psychological consequences of having to deal with gestational complications, such as frustration, feelings of guilt and fear experienced by the women, allows nurses to provide holistic support (Meneses et al., 2022).

For instance, psychological distress, including depression, anxiety, and stress, is especially common in postpartum mothers of premature babies and thus requires specialised nursing interventions (Bener, 2013). The significance of this understanding is further enhanced in low and middle income countries where exposure to serious life stressors and the rate of preterm births are considerably higher, thereby reinforcing the international relevance of addressing the psychosocial determinants of maternal health (Premji et al., 2015).

Consequently, the incorporation of mental health competences within undergraduate nursing education is necessary for the effective challenge of these issues (Chukwuere et al., 2025).

Objectives

To assess the level of knowledge of pregnant women about preterm delivery.

To examine the association between preterm delivery knowledge and selected demographic and clinical variables

Hypothesis

H1: There is an existing statistically significant association between knowledge of preterm delivery among pregnant women with the selected variables.

Materials and Methods

A descriptive survey research design was used. The study was carried out at the antenatal outpatient department of the Rungta Hospital Jaipur.

Sample

The study included 50 pregnant women who were recruited with consecutive sampling strategy. The calculation of the sample size used the formula 4pq/d^2 and resulted in a value of around 50, so the final sample size was 50 participants. Hospital records showed that there were 320 deliveries in the hospital in 2024.

Ethical Considerations

Ethical clearance was obtained from the Institutional Ethics Committee. Participants were informed about the purpose of the study and consent to participate was obtained in writing. Confidentiality of the data was preserved.

Data Collection

Data were collected from 28th September 2025 to 2nd December 2025. About four people were interviewed each day; each interview took 30-35 minutes. The instrument comprised:

Section of the publication: Socio-demographic information

- Section B: Clinical details

- Section C: Semi-structured questions of knowledge of preterm delivery

After data collection, clarification of doubts and an information booklet on preterm delivery was provided to participants. Data were analysed with the help of descriptive and inferential statistics.

Results

Socio-Demographic Profile

- 40.9 percent of participants were between the ages of 24 and 29 years.

- 27.4 per cent had secondary education.

- 61.1 % were primigravida.

- 6 per cent had a history of preterm delivery.

- Only 9.1 per cent were previously aware of preterm delivery

- 6 % had got information through mass media.

Knowledge Level

- Poor knowledge: 32.6 %

- Average knowledge: 47.1 %

- Good knowledge: 20.3 %

Knowledge scores varied between 13 and 101.

Mean score: 49.94

Standard deviation: 21.135

Association with Variables

A statistically significant association ($p < 0.05$) was found between the level of knowledge and:

- Age

- Education

- Occupation

- Husband's occupation

- History of preterm delivery

Discussion

The results show a large percentage of pregnant women have only average or poor knowledge of preterm delivery. These findings are consistent with similar studies done in different parts of the world in which the level of knowledge about preterm birth was moderate or poor among mothers and parents. Educational attainment was significantly correlated with knowledge levels indicating that improved educational attainment contributes to greater awareness and understanding. A previous history of preterm delivery was also positively related to knowledge, presumably reflecting greater exposure and experience. Nevertheless, some of the preceding investigations have reported on divergent findings regarding the strength of association between the demographic variables and knowledge levels.

Limitations

The use of consecutive sampling may reduce the generalizability of the results.

Recommendations

- Do similar studies in different healthcare settings.

- Use larger sample sizes to increase generalizability.

- Design educational interventions to strengthen the awareness of the pregnant women.

Conclusion

The study's findings state that although some portion of pregnant women is characterised with sufficient knowledge of preterm delivery, a significant portion show average and poor levels of understanding. This indicates that awareness regarding the aetiology, risk factors, antecedent signs, prevention, and possible complications of preterm birth is lacking for many expectant mothers. Limited knowledge can mean symptoms are not recognised early and health-seeking behaviour is not undertaken early enough, putting at risk adverse maternal and neonatal outcomes.

The study further revealed statistically significant association between level of knowledge and selected socio-demographic and clinical variables such as age, educational status, occupation, spouse's occupation and history of preterm delivery. These findings point to the role of influence of educational exposure, socioeconomic background and previous obstetric experience on maternal awareness. Women with more education and prior experience of preterm birth tended to show better understanding than others.

Given the high burden of preterm birth and the associated contribution to neonatal morbidity and mortality, there is clearly a need for focused educational interventions. Structured teaching programmes, individualised antenatal counselling and awareness campaigns in the routine antenatal care services can play a vital role in improving knowledge levels. Nurses, being frontline workers in healthcare, are in a special position to provide evidence-based education, reinforce early warning signs and promote preventive strategies.

Strengthening maternal education during pregnancy may promote an early recognition of the complications, encourage adherence to antenatal visits and facilitate early medical intervention. Ultimately, improving the awareness through systematic and continuous health education initiatives has the potential to improve maternal preparedness and reduce avoidable complications and to contribute to better maternal and neonatal health outcomes.

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Conflict Of Interest:

The authors state that there were no conflicts of interest in this study.

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