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Understanding and Anticipations of Expectant Mothers Concerning Antenatal Ultrasound in the Indian Demographic

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Abstract: ***Antenatal ultrasound is a cornerstone of modern prenatal care, offering critical insights into fetal development and maternal health. This study explores the knowledge and expectations of 500 pregnant women in India regarding antenatal ultrasound, using a structured questionnaire administered across prenatal clinics in Delhi. Findings reveal a broad recognition of ultrasound's value, tempered by gaps in understanding its timing and safety, alongside optimistic expectations for reassurance about fetal health. Concerns about accuracy and safety highlight a need for improved education. These insights underscore the potential for enhanced communication to strengthen prenatal care practices in India.***

Keywords: Antenatal ultrasonography, prenatal treatment, questionnaire, women's comprehension, maternity care practices

1. Introduction

Antenatal care is essential in India for decreasing mother and newborn morbidity and death. Antenatal ultrasonography is a fundamental instrument for evaluating foetal well-being and delivering essential information to pregnant women. Despite its importance, current research reveals varying degrees of awareness and anticipations among pregnant women concerning this diagnostic process (Choudhury et al., 2021). This study seeks to clarify the understanding and anticipations of pregnant women regarding prenatal ultrasonography, offering insights to guide healthcare policies.

2. Approach

Research Methodology
This cross-sectional study included a standardised questionnaire entitled "Knowledge and Expectations of Pregnant Women Regarding Antenatal Ultrasound." We recruited 500 pregnant women attending prenatal ultrasound exams in the Department of Radiology at Base Hospital, Delhi Cantonment, New Delhi. Participants- The study comprised 500 pregnant women referred for ultrasound at the Department of Radiology. The inclusion criteria comprised:

Women aged 18 and older
Presently expecting and participating in prenatal examinations. No independent ultrasound examination was conducted for research purposes.

Structure of the Questionnaire
The survey was segmented into four sections:

Demographic Data
Understanding Antenatal Ultrasound
Anticipations Concerning Antenatal Ultrasound
Concerns and Concluding Reflections

Data Examination
Data were analysed via SPSS software (version 25.0). Descriptive statistics were computed for demographic factors, knowledge, and expectations for prenatal ultrasonography.

Outcomes

Demographic Attributes
Demographic Age Distribution:

Individuals aged
18 to 25: 35%
Age 26-30: 40%
Age 31-35: 20%

Individuals over 35 years: 5%

Academic Attainment:
Elementary education: 15%
Secondary education: 30 percent
Completion Rate: 40%
Post-graduation: 15 percent

Profession:
Employment Rate: 45%
Unemployment rate: 30%
Domestic Manager: 25%

Gestational Age:
First trimester: 40%
Second trimester: 35%
Third trimester: 25%

Understanding Antenatal Ultrasound
Comprehensive evaluation of knowledge:
Extremely Unsatisfactory: 10%
Impoverished: 20%
Mean: 35%
Excellent: 25%
Excellent: 10%

Primary objectives of prenatal ultrasonography (Select all that apply):
Pregnancy confirmation: 55%
Assess gestational age: 65%
Assess foetal heartbeat: 55%
Identify anomalies: 70%
Ascertain the gender of the infant: 10%
Standard gestational age for initial ultrasound:
Prior to 6 weeks: 10%
6 to 10 weeks: 20%
11 to 14 weeks: 40%
15 to 20 weeks: 25%
I am uncertain: 5%

Perceptions concerning the safety of ultrasounds:
Extremely secure: 45%
Moderately secure: 40%
Hazardous: 5%
I am uncertain: 10%

Anticipations Concerning Antenatal Ultrasound
Anticipations associated with undergoing an ultrasound (Select all that apply):
Guarantee of infant's health: 80%
Due date clarity: 55%
Chance to see the baby: 75%
Data about possible complications: 60%

Perception of ultrasonic technology:
Extremely favourable: 60%
Positive: 30 percent
Neutral: 5 percent
Negative: 3 percent
Extremely unfavourable: 2%

Preferred attributes in an ultrasound experience (Select all that are applicable):
Three-dimensional/Four-dimensional imaging: 55%
Real-time observation: 40%
Family participation: 30%
Technician's comprehensive elucidation: 65%

Concerns and Concluding Reflections
Issues pertaining to prenatal ultrasounds:
Affirmative: 20% Prevalent apprehensions encompassed safety and precision.
Negative: 80%

Further assistance required about prenatal ultrasounds:
Seventy percent of participants expressed a need for education on the advantages.
Data on foetal development: 60%
Safety assurance: 50%

3. Case Study

The study's findings indicate that although most pregnant women in India recognise the need of prenatal ultrasonography, there are notable gaps in understanding, especially about the scheduling and safety of the operation. Many women had positive expectations of the benefits of an ultrasound, including comfort about the infant's health. Nonetheless, apprehensions over safety and precision persist, underscoring the necessity for more education and communication from healthcare professionals.

Healthcare professionals must underscore the significance of prenatal ultrasonography during routine consultations, ensuring that pregnant women depart their sessions feeling informed and empowered regarding their options. This may encompass distributing pamphlets, facilitating instructional seminars, and enhancing vocal explanations during ultrasounds.

4. Conclusions

This study reveals that while pregnant women in India value antenatal ultrasonography, gaps in knowledge about its timing and safety persist. With 80% expecting reassurance about their baby's health, yet 20% worried about risks, the need for clear, accessible education stands out. By bridging these gaps, healthcare providers can empower women, reduce anxiety, and enhance maternal and fetal outcomes—a small step with big potential in India's diverse healthcare landscape.

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