

PREGNANT WOMEN'S KNOWLEDGE, ATTITUDE AND ASSOCIATED FACTORS TOWARD OBSTETRIC ULTRASOUND IN HOSPITAL ERODE.

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Abstract

Background: Obstetric ultrasound is a harmless, cheap and non-invasive imaging modality that helps to scan a pregnant mother and deliver parents with a real-time image of the foetus. As the number of pregnancies rises globally, the demand for obstetric ultrasound becomes even more pressing.

Objectives: To assess pregnant women's knowledge, attitude and associated factors toward obstetric ultrasound in hospital, Erode.

Methods: This is a Cross sectional and observational study which includes 200 pregnant women with an age group above 21 admitted in hospital at erode.

Result: In this study, only 200 of the respondents had good knowledge on obstetrical ultrasound. Residence, educational status and parity were significantly associated with knowledge of pregnant women on obstetrical ultrasound. Majority of the participants in this study had a positive attitude towards obstetrical ultrasound. Exposure to obstetrical ultrasound, knowledge on obstetrical ultrasound and educational status were significantly associated with attitude of pregnant women to obstetrical ultrasound.

Conclusion: Majority of pregnant women had a positive attitude towards the use of obstetric ultrasound whereas pregnant women's attitude towards obstetric ultrasound are significantly associated to their educational status, knowledge of obstetric ultrasound and current exposure to obstetric ultrasound.

Keywords: Pregnancy, obstetric ultrasound, educational status, knowledge

Introduction

Obstetric ultrasound is a harmless, cheap and non-invasive imaging modality that helps to scan a pregnant mother's abdominal and pelvic cavity with high-frequency sound waves and delivers parents with a real-time image of the foetus. ⁽¹⁾ The use of ultrasound in obstetrics is critical because it allows us to explore and detect various disorders even in the early stages of pregnancy, improve the quality of antenatal care (ANC) and pregnancy outcomes and treatment of disease in the current era of evidence-based medicine and as the number of pregnancies rises globally, the demand for obstetric ultrasound becomes even more pressing. ⁽²⁾

World Health Organization (WHO) recommends that all pregnant women have one ultrasound scan before 24 weeks of pregnancy to estimate gestational age (GA), assess placental placement, determine single or multiple pregnancies, increase foetal abnormality detection and improve pregnancy outcomes in addition to ultrasound scans when indicated. ⁽³⁾

Pregnant women in developing countries are more likely to have complications during pregnancy and die and their new-borns are more likely to have complications during birth or shortly after delivery; however, many of the problems may be avoided with adequate prenatal care involving ultrasound scan, which is one of the most significant components of prenatal care. ⁽⁴⁾ It has been demonstrated that women's understanding and attitude about antenatal ultrasonography are critical, and that it has an impact on their mental health. ⁽⁵⁾

Knowledge, attitudes and factors related to obstetric ultrasound among women in Africa, particularly in SSA, have not been fully addressed. ^{(6),(12)} There were no studies conducted related to pregnant women's knowledge and attitude toward obstetric ultrasound in Ethiopia. ⁽⁷⁾ Therefore, this study aimed to assess pregnant women's knowledge, attitude, and associated factors toward obstetric ultrasound in public hospitals, Erode. ⁽⁸⁾ Development begins on the day of fertilization, when one sperm penetrates the ovum and unites with it to form one cell. ⁽⁹⁾ About 280 days, or 40 weeks whole pregnancy exist. ⁽¹⁰⁾ The objective is to create awareness among patients about obstetric ultrasound. ⁽¹¹⁾

Methodology

This cross-sectional observational study was conducted over a period of nine months at a multi-speciality hospital in Erode, Tamil Nadu, involving 200 pregnant women aged above 21 years. The sample size was calculated using RAO software with a 7% margin of error, 90% confidence interval, and 50% response distribution, yielding 200 participants. Data collected using a structured

questionnaire and data collection form designed to record patient demographic details as well as assess pregnant women’s knowledge, attitude, and associated factors towards obstetric ultrasound. The study included all pregnant women attending ANC who have been residing in Erode Hospital for at least nine months, while excluded those who are critically ill or unable to communicate at the time of data collection.

Result & Discussion

- **Sociodemographic characteristic of pregnant women**

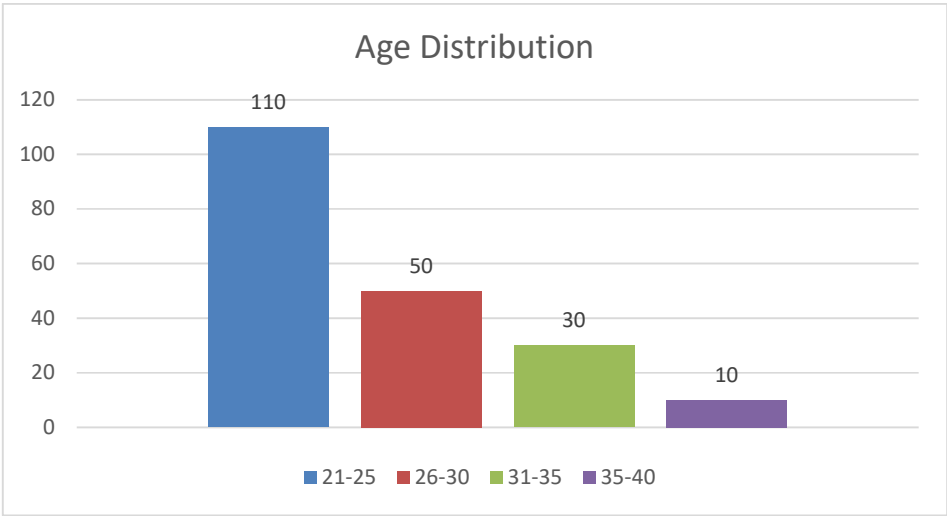


Figure 1: Age Distribution

As per the demographic data obtained, out of the total 200patient 55%were at the age of 21-25and 25% were belongs to group of 26-30and15% were belongs to 31-35and only 5% were belongs to 35-40.

Table 1 : Obstetric And Maternal Health Services Characterstic

Total number of pregnancy	Number	Percentage %
1-2	130	65%
3-4	40	20%
5-6	30	15%
Total	200	100%

Among the 200 patient 65%of patient have their 1nd &2nd pregnancy and 20%were belongs to 3rd &4th pregnancy and only 5%were belongs to 4th and 5th pregnancy.

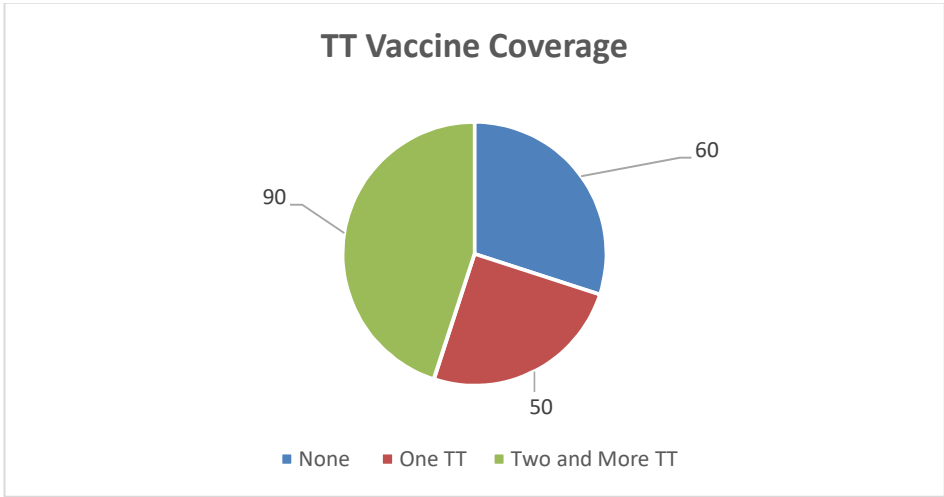


Figure 2 : Distribution based on TT vaccine coverage

The data shows that 30% of patients not had any TTvaccine; 5%were taken one TT and 45% were taken two & more TT.

• Knowledge component on obstetric ultrasound of pregnant women

Table 2 : Know Importance Of Ultrasound To Conform Pregnancy

Know Importance Of Ultrasound To Conform Pregnancy	Number	Percentage
Yes	180	90%
No	20	10%
Total	200	100%

Table 3: Know Importance Of Ultrasound To determine sex of baby

Know Importance Of Ultrasound To determine sex of baby	Number	Percentage
Yes	150	75%
No	50	25%

Total	200	100%
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Table 4: Know Importance Of Ultrasound To determine the Fetal Position

Know Importance Of Ultrasound To determine the Fetal Position	Number	Percentage
Yes	120	60%
No	80	40%
Total	200	100%
Know Importance Of Ultrasound To determine the cord and Placenta position	Number	Percentage
Yes	90	45%
No	110	55%
Total	200	100%

Table 5: Know Importance Of Ultrasound To determine the Expected date of Delivery

Know Importance Of Ultrasound To determine the Expected date of Delivery	Number	Percentage
Yes	150	75%
No	50	25%
Total	200	100%

Table 6: Know Importance Of Ultrasound To detect complication of pregnancy

Know Importance Of Ultrasound To detect complication of pregnancy	Number	Percentage
Yes	170	85%
No	30	15%
Total	200	100%

Table 7 : Know Importance Of Ultrasound To conform the presence of multiple pregnancy

Know Importance Of Ultrasound To conform the presence of multiple pregnancy	Number	Percentage
Yes	150	75%
No	50	25%
Total	200	100%

Table 8: Patient Knowledge

Patient Knowledge	Number	Percentage
Good Knowledge	180	90%
Poor Knowledge	20	10%
Total	200	100%

As per the data obtained, 90% of patients know the importance of ultrasound to confirm pregnancy, 10% of patients were not; 75% of population know the importance of ultrasound to determine sex of the baby remaining 25% were not; 60% of patients know the importance of ultrasound to determine the fetal position, 40% of patients don't know the importance. The data shows that 45% of patients know the importance of ultrasound to determine the cord & placenta position 75% of patients know the importance of ultrasound to determine the expected date of delivery, remaining 20% don't have the knowledge. Out of 200 patients 75% know about importance of ultrasound to confirm presence of multiple pregnancy; 60% of patients were know

the importance of ultrasound to estimate fetal weight. Overall data showing that out of 200 patients 90% of patients have good knowledge about obstetric ultrasound of pregnant women.

- **Attitude of pregnant women to obstetric ultrasound**

Table 9: Percive that obstretial ultrasound is safe for mother

Percive that obstretial ultrasound is safe for mother	Number	Percentage
Yes	130	65%
No	70	35%
Total	200	100%

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Table 10: Percive that obstretial ultrasound is safe for Fetus

Percive that obstretial ultrasound is safe for Fetus	Number	Percentage
Yes	180	90%
No	20	10%
Total	200	100%

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Table 11: Felt comfortable during ultrasound Examination

Felt comfortable during ultrasound Examination	Number	Percentage
Yes	190	95%
No	10	5%
Total	200	100%

Table 12: Belive that pre natal sex determination is right

Belive that pre natal sex determination is right	Number	Percentage
Yes	150	75%
No	50	25%
Total	200	100%

Table 13: Pregnant women attitude towords obstretial ultrasound

Pregnant women attitude towords obstretial ultrasound	Number	Percentage
Positive attitude	150	75%
Negative attitude	50	25%
Total	200	100%

Attitude of pregnant women to obstetric ultrasound is well examined, 65% of patients perceive that obstetric ultrasound is safe for foetus; 95% of patients felt comfortable during ultrasound examination; 75% of patients believe that prenatal sex determination is more right; 90% of patients believe that ultrasound finding is more accurate; 75% of patients had positive attitude towards obstetric ultrasound and 25% of patients have negative attitude.

Conclusion

In this study, pregnant women's knowledge of obstetrical ultrasound scanning was (75%). The importance of ultrasound for sex determination is commonly reported by respondents, which is 76.1%. Knowledge of obstetric ultrasound is significantly associated with educational status of the pregnant women, parity, and residency. Majority (90%) of pregnant women had a positive attitude toward the use of obstetric ultrasound. Whereas pregnant women's attitudes toward obstetric ultrasound are significantly associated to their educational status, knowledge of obstetric ultrasound, and current exposure to obstetric ultrasound.

Therefore, ensuring that all antenatal women receive obstetric ultrasound scans will be helpful to prevent and manage obstetric complications and have a better pregnancy outcome, as recommended by WHO. Obstetric care providers should provide proper obstetric care, which includes regular obstetric ultrasound scans, and raise awareness about the positive effect of ultrasound scans on pregnancy outcomes for all antenatal women by giving special attention to rural women and pregnant mothers without ultrasound scans to address their poor knowledge and attitude toward ultrasound scans. Furthermore, a periodic campaign targeting rural pregnant women with a full package of maternity care focusing on the positive outcome of obstetric ultrasound for every pregnancy should be implemented.

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