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STAI Reveals: Maternal Anxiety in Elective Caesarean Deliveries

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A B S T R A C T

This study aimed to assess maternal anxiety and in women undergoing elective caesarean delivery using the State-Trait Anxiety Inventory (STAI-S) score. A total of 400 pregnant women scheduled for elective caesarean section at SMS Medical College, Jaipur, were included in this descriptive observational study. The STAI-S questionnaire was administered two hours before the procedure to assess anxiety levels. Women with severe comorbidities, psychiatric or psychological problems, those on psychotropic drugs, and those carrying a fetus with congenital anomalies were excluded. The results indicated that 74.25% of women experienced significant anxiety (STAI-S score > 40). This study highlights the importance of preoperative counselling and targeted interventions to reduce maternal anxiety and improve psychological well-being in women undergoing elective caesarean sections.

Keywords: Maternal Anxiety, Elective Caesarean Delivery, STAI-S Score, Preoperative Anxiety, psychotropic drugs.

INTRODUCTION

Anxiety is a common psychological response to surgery, particularly in women undergoing caesarean sections. Preoperative anxiety can lead to adverse physiological and psychological outcomes, including increased postoperative pain, delayed recovery, and compromised neonatal outcomes. The State-Trait Anxiety Inventory (STAI-S) is a validated tool for assessing preoperative anxiety, with a score above 40 indicating significant anxiety.

This study aimed to assess the prevalence of maternal anxiety in women undergoing elective caesarean delivery. By understanding these factors, healthcare providers can implement targeted interventions to reduce anxiety and improve maternal and neonatal outcomes.

METHODOLOGY

This was a descriptive observational study conducted in the Department of Obstetrics and Gynaecology at SMS Medical College, Jaipur, from November 2022 to June 2024. A total of 400 women scheduled for elective caesarean section were included in the study. It consists of 20 questions which describe state anxiety (general anxiety) with one of the 4 descriptors (not at all, somewhat, moderate, very much) to best indicate the degree of their emotion. Sociodemographic data was also gathered.

Inclusion Criteria:

- Women undergoing elective caesarean section.
- Willingness to participate and provide written informed consent.

Exclusion Criteria:

- Severe comorbidities.
- Psychiatric or psychological disorders.
- Fetal congenital anomalies.

Data Collection:
The STAI-S questionnaire was administered two hours before the caesarean section to assess anxiety levels. A score of ≥40 was considered indicative of significant anxiety.

Statistical Analysis:
Data were analysed using statistical software. Continuous variables were summarized as mean and standard deviation (SD), while categorical variables were expressed as proportions. Differences between groups were analysed using the Chi-square test and ANOVA. Binary logistic regression was used to identify factors associated with anxiety. A p-value of <0.05 was considered statistically significant.

RESULTS

The study included 400 women with a mean age of 22.5 ± 2.2 years. The majority of participants were from rural areas (71.5%) and were homemakers (72%). The prevalence of significant anxiety (STAI-S score > 40) was 74.25%.

Table 1: Socio-Demographic Characteristics of Participants

Variable	Number (n=400)	Percentage (%)
Residence		
Rural	286	71.5%
Urban	114	28.5%
Age (years)		
18-29	331	82.75%
30-39	68	17.00%
≥40	1	0.25%
Education Status		
Illiterate	286	71.5%
Till 12th standard	91	22.75%
Graduate	23	5.75%
Occupation		
Homemaker	288	72.00%
Farmer	97	24.25%
Student	8	2.00%
Working	7	1.75%

Table 2: Binary Logistic Regression Analysis for Factors Influencing Anxiety

Variable	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)
Rural Residence	1.205	0.287	17.511	1	0.019	3.228	1.834 - 5.457
Illiteracy	2.438	0.622	15.481	1	0.006	11.121	2.835 - 41.681
Constant	-9.628	4.262	5.104	1	0.024	0	-

DISCUSSION

This study highlights that women significant role of socio-demographic factors in predicting maternal anxiety in women undergoing elective caesarean delivery. The findings are consistent with previous studies that have shown a strong association between these factors and increased preoperative anxiety.

Rural Residence- Women from rural areas had significantly higher anxiety levels compared to urban residents (p<0.001). This could be due to limited access to healthcare information and resources.

Younger age- younger age women experienced higher anxiety levels due to elevated trait anxiety and socio cultural factors and lack of prior experience with surgery may contribute to increased anxiety.

Illiteracy-Illiterate women were more likely to experience anxiety (p=0.006), possibly due to a lack of understanding about the procedure and its outcomes. Contributory factors may include financial instability, lack of resources and social support.

CONCLUSION

This study demonstrates several key findings regarding anxiety in women undergoing elective caesarean delivery. Preoperative counselling and targeted interventions, particularly for rural, younger and illiterate women, are crucial for reducing anxiety and improving maternal and neonatal outcomes. The STAI-S score is a valuable tool for identifying women at risk of preoperative anxiety, allowing for timely interventions.

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