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Anxiety levels and its demographic predictors among first time mothers: A survey report from Maharashtra

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ABSTRACT

Background: First-time mothers often experience heightened anxiety about transition to motherhood. Factors like lack of social support, socioeconomic status, and partner involvement, previous mental health issues, unplanned pregnancy, unwanted baby, and stress can increase anxiety. Understanding anxiety levels and their predictors among this population is crucial for supporting the mental health of mothers and the well-being of families. Objectives: a) to assess the levels of anxiety among the first time mothers and b) to find out the demographic predictors of anxiety among first time mothers. Material: Hamiltons Anxiety scale Sample & Sample Size: 200 first time mothers Research Design: Face to Face Survey Results: Moderate to severe anxiety is found among 82% first time mothers. Strong statistically significant ($p<0.05$) positive association of anxiety was found with age (less than 22 years and > 30 years), level of education (low levels of education) and nuclear status of the family. Conclusion: First time mothers face moderate to severe levels of anxiety due to their low levels of education, early age or elderly primi status and lack of experienced family support in nuclear families.

Keywords: *First time mothers, anxiety, demographic predictors of anxiety*

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1. INTRODUCTION

The transition to motherhood is a profound life event, often accompanied by immense joy and fulfilment, but also significant psychological and emotional adjustments. First-time mothers lack prior experience in parenting. Anxiety disorders figure among the most frequent psychiatric disorders in the population and anxious symptoms are among the most common ones. Pregnancy, delivery and the puerperal stage represent sensitive periods in women's life *span*. These periods involve great transformations, not only from a physiological perspective, but also from the psychological perspective and of the female social-family role.1

First-time motherhood is often associated with a range of emotional challenges, including anxiety. The consequence of maternal post-natal anxiety is one of the most frequently reported mental health difficulties experienced by parents following childbirth. Post natal period is a demanding life stage. It has concerns about infant health combined with new responsibilities, changing relationship dynamics, a substantive unpaid workload, sleep deprivation, and the physical demands of recovery from birth and breastfeeding.2

Anxiety symptoms include worry, restlessness, agitation, sleep disturbance, and apprehension.3

Birth of the baby may cause negative feelings among first time parents including, confusion, anger, guilt, sufferance, weakness, tiredness, helplessness, frustration, depression, anxiety, lack of confidence, stress and loss of control and experience feelings of inclusion and exclusion regarding the care of babies.4

Parental self-efficacy refers to parents' beliefs about their parenting abilities and satisfaction in their parenting role. Literature showed high anxiety being associated with lower parental self-efficacy in first-time mothers at 1 month postpartum.5

Approximately 18% of mothers in the present study reported mild to extremely severe levels of anxiety within the first post-natal year.2

First time mothers with high levels of anxiety symptoms were more likely to report using ineffective parenting behaviours (e.g. less warmth, affection and involvement, and more irritability and frustration the parent–child relationship).2,5

Factors associated with mothers' report of clinically significant levels of anxiety included lower educational attainment, lower socio-economic position, high perceived need for social support, poor couple relationship, difficult child behaviour and poor maternal sleep quality.2,4

The transition to parenthood (TTP) is one of the most stressful life events for first time parents. In new parents, the demands of new roles and responsibilities related to the birth of a first child are usually associated with psychological distress such as anxiety and depressive symptoms.6

The prevalence of depression during pregnancy varies. Recent literature showed 16% or more women symptomatic and 5% with major depression.6

Anxiety during pregnancy and postpartum has been relatively neglected in literature. Post partum depression differs from depression not related to childbirth. Anxiety symptoms are more common in PPD. Anxiety disorders are more prevalent than depression in the postpartum period.8

Authors have found a 20%-25% prevalence of anxiety disorders during pregnancy and 15%-20% in the postpartum period.8 Predictors of postpartum anxiety were rarely addressed. Some studies focused on specific anxiety disorders such as general anxiety disorder or post-traumatic stress disorder while others reported predictor of anxiety as low birth weight babies.5,8 A study reported history of artificial abortion and unwanted pregnancy41 are significant predictors of postpartum anxiety. Mode of delivery (caesarean section or assisted vaginal delivery) is related to anxiety immediately after childbirth but not to anxiety 6 weeks postpartum.9, 10

2. BACKGROUND

Anxiety disorders are among the most common mental health conditions globally. The prevalence of anxiety disorders is increased during the perinatal period. Studies reported up to 20% of women experiencing anxiety symptoms during pregnancy or in the postpartum period.11, 12

Untreated perinatal anxiety results in poor maternal well-being, mother-infant bonding, infant development, and family dynamics.12

India, with its diverse socio-cultural fabric and varying levels of healthcare access, understanding the nuances of maternal mental health is crucial as well as critical. National and regional studies indicate a considerable burden of perinatal mental health issues.13, 14

The novelty of first-time motherhood often contributes to feelings of uncertainty, inadequacy, and overwhelming responsibility. The first-time mothers often suffer severe sleep deprivation, exacerbating fatigue and irritability (Dennis et al., 2017). Many mothers experience challenges with breastfeeding, which can contribute to feelings of failure and anxiety (Dennis et al., 2017). Despite increased connectivity, many new mothers experience social isolation, especially if they are away from their extended family or lack adequate social support networks (Fadzil et al., 2020). Constant worry about the baby's health, feeding, sleep, and developmental milestones is a common source of anxiety for first time mothers.(Gingras et al., 2024). The arrival of a baby often strains marital relationships, with changes in intimacy, roles, and shared responsibilities (Gingras et al., 2024).

A growing body of literature has identified several factors that can predict higher levels of anxiety in first-time mothers. Age, education level, socioeconomic status, and marital status have been found to influence anxiety levels (Correia & Linhares, 2007; Patel et al., 2012).

Women with a history of anxiety or depression are at a higher risk of experiencing perinatal anxiety (Gingras et al., 2024). Parental self-efficacy, defined as parents' beliefs about their parenting abilities and satisfaction in their parenting role, is

strongly linked to anxiety. Lower parental self-efficacy is associated with higher anxiety, particularly in the early postpartum period (Tognasso et al., 2022).

Unrealistic expectations about motherhood can lead to increased stress and anxiety when reality doesn't meet these ideals. Ineffective coping mechanisms can exacerbate anxiety symptoms. Insufficient emotional, practical, and informational support from partners, family, and friends is a significant predictor of perinatal anxiety (Fadzil et al., 2020).

Relationship strain can be a major source of stress and anxiety for new mothers (Gingras et al., 2024). Recent negative life events can increase vulnerability to anxiety. An unplanned or unwanted pregnancy can significantly contribute to emotional distress.

Difficult births or health complications in the mother or infant can heighten anxiety (Correia & Linhares, 2007). A colicky baby, a baby with health problems, or a difficult temperament can increase maternal stress and anxiety.

Maharashtra, being one of India's most populous and diverse states, presents a unique context for the study on post-partum anxiety among first time mothers. Cultural norms surrounding childbirth, family support systems, healthcare accessibility, and socioeconomic variations play pivotal role in shaping the experiences of first-time mothers. Understanding the specific demographic predictors of anxiety among first time mothers will enable the development of culturally sensitive and contextually appropriate interventions. This study aims to fill this gap by providing empirical evidence on the prevalence of anxiety levels and identifying key demographic predictors of anxiety among first-time mothers in Maharashtra. The findings of the study may prompt public health initiatives and clinical practices for promoting maternal mental well-being of first time mothers.

3. OBJECTIVES

a) To assess the levels of anxiety among the first time mothers and
b) To find out the demographic predictors of anxiety among first time mothers.

4. MATERIALS & MATHODS

Research Setting: Rural and urban communities of Nagpur district of Maharashtra state in India.
Research Design: Survey
Population: First Time mothers
Sample Size: 200
Sampling Technique: Simple Random Sampling
Material for Data Collection: Demographic information sheet and Marathi version of Hamilton's Anxiety Scale (r=0.84)

Eligibility Criteria:
1. First time mothers who have delivered live baby in the neonatal period.
2. Those delivered in the hospitals.
3. Those who are not suffering from any systemic disease.
4. Those who had uneventful antenatal period.
5. Those who had planned pregnancy and wanted baby.
6. Those who did not have any mental issues in the past.

Method of data collection:
The study participants are contacted in their household or in hospital before discharge within one month after delivery. They were informed about the study and their doubts were clarified. An informed consent was taken from each one of them. They were given Marathi version of Hamilton anxiety scale for self-reports. Each participant was then coded. The data had access only to the investigator and the statistician who aided in computation and analysis.

Analysis of the data:
The collected data was arranged in tables and graphs. Descriptive statistics of frequency percentage was used to describe the demographic characteristics of the participants. Inferential statistics was used to establish the reliability of Marathi version of Hamilton Anxiety scale.

5. RESULTS

The distribution of first-time mothers according o their demographic characteristics showed that 51% of them were less than 22 years of age and 4% of them were above 33 years of age. The mean age was 24.65$\pm$3.23. As per the socioeconomic

status, 70.5% belonged to middle class. Majority (76%) had their residence in urban areas. The educational level of First-time mothers was up to high school in 88%. The majority (81.5%) of them were not working. Majority (64.5%) of them belonged to nuclear families and 61% had normal delivery. Among the study participants 3% reported the history of abortion before becoming first time mother and 1% had previous still birth before becoming first time mother of a live baby. (Table No. 1)

The findings of the study revealed that 5.5% of the first-time mothers had mild anxiety, 12.5% of them had moderate anxiety and 82% of them had moderate to severe level of anxiety. Minimum anxiety score was 8 and maximum anxiety score was 42. Mean anxiety score was 28.75± 5.68. (Table No. 2)

The association of Anxiety score with age in years ($p=0.031 < 0.05$) of first time mothers was statistically significant. The association of anxiety score with socio-economic status of first-time mothers ($p=0.40>0.05$) was not statistically significant. The association of Anxiety score with area of residence of first-time mothers ($p=0.27>0.05$) was statistically not significant. The Anxiety score with educational status of first-time mothers ($p=0.0001$) was found statistically significantly associated. The association of Anxiety score with working status ($p=0.54>0.05$) of first time mothers was statistically not significant. The association of Anxiety score with type of family of first-time mothers ($p=0.026<0.05$) was found statistically significant. The nature of delivery was not statistically significantly associated with the anxiety scores ($p = 0.57>0.05$). (Table No. 3)

6. DISCUSSION

The study aimed at estimating the levels of anxiety among the first time mothers in Maharashtrian community and identifying the demographic predictors for the anxiety experienced by first time mothers of Maharashtrian community.

The results revealed that 82% of the participants experienced moderate to severe level of anxiety with minimum anxiety score of 8 and maximum anxiety score of 42. The Mean anxiety score was 28.75± 5.68.

The anxiety was found statistically significantly associated with age ($p=0.031 < 0.05$), educational status of first-time mothers ($p=0.0001$) and type of family (nuclear family) ($p=0.026<0.05$) of first time mothers.

An Australian community study by Matthey et. al. (2023) on 408 mothers found that 16% experienced an anxiety disorder at 6 weeks postpartum, and a further 4% reported co-morbid depression and anxiety.15

Reck and colleagues (2008) found in a community sample of German mothers that 11% of mothers had an anxiety disorder in the first 3 months postpartum. High maternal anxiety was associated with decreased parental self-efficacy.16,17

The presence of environmental stressors (e.g. finances, household duties, relationships) is known to significantly predict anxiety in the post-natal period. Socio-economic disadvantage, younger maternal age and low educational attainment have also been associated with increased likelihood of reporting elevated post-natal anxiety.18

Correia, L. L., & Linhares, M. B. M. (2007) reported that younger mothers, especially first-time mothers, may face unique challenges such as limited financial resources, less established social support networks, and lower emotional maturity compared to older mothers. They might also have less life experience to draw upon for coping with the demands of motherhood, contributing to feelings of overwhelm and inadequacy.1

Wenzel, A., Haugen, E. N., & Jackson, D. (2005) found that lower educational attainment can be a reason for socio-economic disadvantage. Women with lower education have less access to health information, fewer resources for childcare or domestic help, and potentially less empowerment in navigating healthcare systems. These factors can exacerbate feelings of vulnerability and reduce problem-solving capacities, thereby contributing to heightened anxiety.18

In the Indian context, extended family systems have traditionally played a crucial role in providing support during the postpartum period. In a nuclear family, first-time mothers may experience reduced practical and emotional support from in-laws or other relatives. The absence of experienced family members to provide guidance, share traditional knowledge, and offer direct assistance can leave new mothers feeling overwhelmed and alone, contrasting sharply with the communal support often found in extended families.

Gingras et al., (2024) in their longitudinal study on anxiety and depression during post-partum period reported similar findings.6

Fadzil et al., (2020) reported that in nuclear families the first time mother may experience increased isolation, higher burden of household and childcare responsibilities, and fewer opportunities for respite, all of which are significant predictors of

postpartum anxiety.12

7. CONCLUSION

The finding of the study revealed that 82% of the first time mothers of Maharashtra region experience moderate to severe levels of anxiety during post-partum period. The demographic predictors of early age, lower levels of education and nuclear families contribute to their anxiety. These prompt urgent need for routine screening and targeted interventions for anxiety in new mothers, particularly in Maharashtra, given the potential socio-cultural factors influencing mental health.

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TABLES

Table 1: Distribution of First time mothers according to their demographic characteristics

Demographic Variables	No. of mothers	Percentage (%)
Age (yrs.)		
a) Less than 22 yrs.	102	51
b) 23-27 yrs.	47	23.5
c) 28-32 yrs.	47	23.5
d) More than 33	4	2.0
Socio-economc status		
a) Low	56	28.0
b) Middle	141	70.5
c) High	3	1.5
Residence		
a) Rural	48	24.0
b) Urban	152	76.0
Educational Status		
a) Primary	66	33.0
b) High School	114	57.0
c) Graduate	20	10.0
d) Post Graduate	0	0
Working Status		
a) Working	37	18.5
b) Not Working	163	81.5
Family Type		
a) Nuclear	129	64.5
b) Joint	71	35.5
Type of Delivery		
a) LSCS	78	39
b) Normal	122	61
Previous obstetrical history		
a) Abortions	6	3
b) Still births	2	1

Table 2: Levels of Anxiety among First Time mothers

Level of Anxiety Score	Score Range	Level of Anxiety Score	
		No. of mothers	Percentage
Mild Anxiety	0-17	11	5.5
Moderate Anxiety	18-24	25	12.5
Moderate to Severe	25-56	164	82
Minimum score		8	
Maximum score		42	
Mean Anxiety score		28.75 ± 5.68	

Table 3: Demographic predictors of Anxiety among First time mothers

Demographic Predictors	No. of mothers	Mean anxiety score and SD	F- value	p-value
Age (yrs)				
18-22 yrs	102	27.63±5.06	3.02	0.031 S, p<0.05
23-27 yrs	47	28.67±5.85		
28-32 yrs	47	30.44±5.33		
33-37 yrs	4	24±8.04		
SES				
Low	56	29.58±4.97	0.90	0.40 NS, p>0.05
Middle	141	28.40±5.90		
High	3	29.66±8.08		
Residence				
Rural	48	27.97±6.40	1.08	0.27 NS, p>0.05
Urban	152	29±5.43		
Education				
Primary	66	26.72±6.13	14.57	0.0001 S, p<0.05
High School	114	29±5.10		
Graduate	20	34±3.30		
Post Graduate	0	0±0		
Working Status				
Working	37	29.27±4.31	0.61	0.54 NS, p>0.05
Not Working	163	28.63±5.95		
Family Status				
Nuclear	129	28.68±5.21	4.21	0.026 S, p<0.05
Joint	71	28.87±6.49		
Type of Delivery				
LSCS	78	27.27±4.39	0.35	0.57 NS, p>0.05
Normal	122	33.79±3.54		