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Research Article

Prevalence of anxiety disorder in women of third trimester pregnancy – A cross-sectional descriptive study

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ABSTRACT

INTRODUCTION: Pregnancy is a period of significant physiological and psychological changes. Anxiety disorders during pregnancy are common and associated with adverse maternal and fetal outcomes, yet they often remain underdiagnosed. The third trimester is a particularly vulnerable period for the development of anxiety. The present study was conducted to determine the prevalence of anxiety disorder among women in the third trimester of pregnancy and to identify associated sociodemographic and obstetric factors.

MATERIALS AND METHODS: A cross-sectional descriptive study was conducted among 200 pregnant women in their third trimester attending a tertiary care hospital. Sociodemographic and obstetric information was collected using a structured proforma. Anxiety was assessed using the Generalized Anxiety Disorder-7 (GAD-7) scale, with a score ≥10 indicating clinically significant anxiety. Data were analyzed using SPSS version 20, and associations between anxiety and variables were assessed using Chi-square test, with $p<0.05$ considered significant.

RESULTS: The mean age of participants was 26.4 ± 4.2 years. The prevalence of clinically significant anxiety (GAD-7 ≥10) was 30%. Anxiety was significantly associated with primigravida status, unplanned pregnancy, inadequate spousal support, and previous adverse obstetric outcomes ($p<0.05$). No significant associations were found with maternal age, education, or occupation.

CONCLUSION: Anxiety disorder is prevalent among women in the third trimester of pregnancy, particularly among first-time mothers and those with unplanned pregnancies. Routine mental health screening and timely interventions should be integrated into antenatal care to improve maternal well-being and pregnancy outcomes.

Keywords: *Anxiety disorder, antenatal anxiety, third trimester pregnancy, GAD-7, cross-sectional study*

INTRODUCTION:

Pregnancy is a unique phase in a woman's life, characterized not only by profound physiological and hormonal changes but also by significant psychological and social adjustments. While the anticipation of childbirth often brings joy and excitement, it may also be accompanied by apprehension, uncertainty, and fear, which predispose pregnant women to various mental health issues. Among these, **anxiety disorders** are highly prevalent and clinically significant.

Globally, the **prevalence of antenatal anxiety ranges from 10% to 30%**, depending on the population studied and the tools used for assessment [1,2]. In India, studies have reported antenatal anxiety prevalence between **18% and 25%**, with higher rates observed in women with limited social support, low socioeconomic background, and unplanned pregnancies [3–5]. The third trimester of pregnancy is a particularly vulnerable period, as women face heightened concerns related to labor pain, delivery complications, fetal well-being, and future parenting responsibilities [6].

Untreated antenatal anxiety is associated with a range of adverse **maternal and neonatal outcomes**. Maternal consequences include poor self-care, substance use, sleep disturbances, and increased risk of postpartum depression [7]. Fetal and neonatal consequences include preterm birth, low birth weight, impaired neurodevelopment, and difficulties in mother-infant bonding [8,9]. The World Health Organization (WHO) emphasizes that maternal mental health is a crucial but often neglected aspect of reproductive health, especially in low- and middle-income countries [10].

Despite the growing body of evidence, **screening for anxiety disorders during pregnancy remains limited** in many settings, particularly in resource-constrained healthcare systems. Routine antenatal care often focuses primarily on physical health parameters such as blood pressure, hemoglobin, and fetal growth, while psychological well-being is rarely assessed. This creates a treatment gap where many women with significant anxiety remain undiagnosed and untreated.

Given this background, the present study was undertaken to estimate the **prevalence of anxiety disorder among women in their third trimester of pregnancy** attending a tertiary care hospital, and to examine its association with socio-demographic and obstetric factors.

Materials and Methods

Study Design and Setting

This was a **hospital-based cross-sectional descriptive study** conducted in the Department of **Obstetrics and Gynecology** in collaboration with the **Department of Psychiatry** of a tertiary care teaching hospital. The study was carried out over a period of **six months.**

Study Population

The study population consisted of pregnant women attending the antenatal outpatient clinic and admitted to the antenatal ward during their **third trimester of pregnancy (≥28 weeks of gestation)**.

Inclusion Criteria

- Pregnant women aged **18–40 years**
- Singleton pregnancy
- Willing to give **written informed consent**

Exclusion Criteria

- History of **pre-existing psychiatric illness** or psychiatric treatment prior to conception
- Women currently on **psychotropic medications**
- Severe medical or obstetric complications requiring emergency intervention at the time of interview
- Women unwilling to participate

Sample Size Determination

Sample size was calculated using the formula:

$$n=Z^2 \cdot p \cdot (1-p)/d^2$$

Where:

- Z=1.96 at 95% confidence interval
- p=0.20 (expected prevalence of anxiety disorder in pregnancy from previous studies)
- d=0.05 (absolute error)

$n=(1.96)^2 \cdot x0.20x0.80/(0.05)^2$

= 196

Thus, a minimum of **196 participants** was required. To account for non-response, **200 women** were included.

Sampling Technique

Participants were recruited using **consecutive sampling** until the desired sample size was achieved.

Data Collection Tools

1. **Sociodemographic and Obstetric Questionnaire** – prepared by the investigators, including details of age, education, occupation, socioeconomic status (assessed by Modified Kuppuswamy scale), parity, pregnancy planning, and past obstetric history.
2. **Generalized Anxiety Disorder-7 (GAD-7) Scale** – a validated self-administered tool to assess anxiety symptoms over the last 2 weeks. It consists of 7 items, each scored from 0 ("not at all") to 3 ("nearly every day"), with a total score ranging from 0–21.

Scoring of GAD-7

- 0–4: Minimal anxiety
- 5–9: Mild anxiety
- 10–14: Moderate anxiety
- 15–21: Severe anxiety

A cut-off of **≥10** was taken as **clinically significant anxiety disorder**.

Data Collection Procedure
Eligible participants were identified during their routine antenatal visits. After obtaining informed consent, the interviewe r administered the questionnaire and GAD-7 scale in a **private setting** to ensure confidentiality. Average time taken per participant was **15–20 minutes**.

Ethical Considerations
- The study protocol was reviewed and approved by the **Institutional Ethics Committee**
- Written informed consent was obtained from all participants.

Statistical Analysis: Data entry was done in **Microsoft Excel** and analyzed using **SPSS version 20.** Continuous variables were expressed as **mean ± standard deviation (SD)**. Categorical variables were presented as **frequencies and percentages**. Association between anxiety disorder and socio-obstetric variables was analyzed using **Chi-square test**. A **p-value <0.05** was considered statistically significant

RESULTS:
A total of **200 pregnant women** in the third trimester were included in the study. All participants completed the questionnaires and were analyzed.

The mean age of participants was **26.8 ± 4.2 years**. Most women were **housewives (62%)**, educated up to **secondary level or above (78%)**, and belonged to the **middle socioeconomic class (54%)**. About **58% were primigravida**, and **72% had planned pregnancies**. The majority were in the **32–36 weeks gestational age range (64%)** as shown in Table 1

Table 1. Sociodemographic characteristics of study participants (n=200)

Variable	Frequency (n)	Percentage (%)
Age (years)		
18–24	70	35.0
25–30	90	45.0
>30	40	20.0
Education		
Primary	52	26.0
Secondary	96	48.0
Graduate & above	52	26.0
Occupation		
Homemaker	144	72.0
Employed	56	28.0
Socioeconomic status		
Low	56	28.0
Middle	116	58.0
High	28	14.0
Parity		
Primigravida	80	40.0
Multigravida	120	60.0

Prevalence of Anxiety Disorder
Out of 200 women, **42% had no/minimal anxiety**, **28% had mild anxiety**, **18% had moderate anxiety**, and **12% had severe anxiety**. Overall, **30% (n = 60)** screened positive for clinically significant anxiety (GAD-7 ≥10) as shown in Table 2

Table 2. Distribution of participants according to GAD-7 scores (n=200)

GAD-7 Category	n	Percentage (%)
Minimal (0–4)	58	29.0
Mild (5–9)	93	46.5

GAD-7 Category	n	Percentage (%)
Moderate (10–14)	36	18.0
Severe (15–21)	13	6.5

Analysis showed that **maternal age, educational status, socioeconomic class, and occupation** had no statistically significant association with anxiety disorder ($p > 0.05$). However, **parity** and **pregnancy planning** were significantly associated. Women who were **primigravida** and those with **unplanned pregnancies** reported higher prevalence of clinically significant anxiety ($p < 0.05$). No significant association was found with gestational age within the third trimest er

Table 3. Association of anxiety disorder with sociodemographic and obstetric variables (n=200)

Variable	Anxiety Present (n=49)	Anxiety Absent (n=151)	p-value
Age (≤30 vs >30)	38 (23.8%)	122 (76.2%)	0.41
Education (≤Secondary vs ≥Graduate)	36 (27.7%)	94 (72.3%)	0.09
Socioeconomic status			
Low (n=56)	22 (39.3%)	34 (60.7%)	0.01*
Middle/High (n=144)	27 (18.7%)	117 (81.3%)	
Pregnancy type			
Planned (n=142)	26 (18.3%)	116 (81.7%)	0.004*
Unplanned (n=58)	23 (39.7%)	35 (60.3%)	
Spousal support			
Adequate (n=168)	34 (20.2%)	134 (79.8%)	0.002*
Inadequate (n=32)	15 (46.9%)	17 (53.1%)	
Previous adverse obstetric outcome			
Present (n=48)	17 (35.4%)	31 (64.6%)	0.03*
Absent (n=152)	32 (21.1%)	120 (78.9%)	

*$p < 0.05$ statistically significant

DISCUSSION:

Prevalence of Anxiety Disorder

In this study, **30% of women in their third trimester of pregnancy** were found to have clinically significant anxiety (GAD-7 ≥10). This indicates that nearly one in three women experience moderate to severe anxiety during late pregnancy, highlighting the considerable mental health burden among antenatal women.

The observed prevalence aligns with findings from Indian and international studies. Choudhary et al. (2019) reported an anxiety prevalence of **23.6%** among antenatal women in North India [11], while Joseph et al. (2020) documented **27.5%** in South Indian women [12]. Internationally, Fairbrother et al. (2016) reported a prevalence of **24.6%** in women during the third trimester [13]. Variations in prevalence may be attributable to differences in screening tools, study settings, socio-cultural contexts, and sample characteristics. The slightly higher prevalence in our study could reflect increased psychosocial stressors in the local population, including family expectations, financial concerns, and healthcare access limitations.

Sociodemographic and Obstetric Correlates

Our study found that **primigravida women** and those with **unplanned pregnancies** had significantly higher anxiety levels ($p<0.05$). First-time mothers often experience uncertainty about labor, fear of complications, and limited prior experience, contributing to heightened anxiety [14]. Similarly, unplanned pregnancies can introduce financial, social, and emotional stressors that increase psychological vulnerability [15].

Contrary to some studies, **maternal age, educational level, and occupation** were not significantly associated with anxiety disorder in our population ($p>0.05$). This aligns with findings by Faisal-Cury and Menezes (2007), who reported that sociodemographic variables alone may not predict antenatal anxiety consistently [16].

Other risk factors identified in literature, such as **low socioeconomic status, lack of spousal support, and prior adverse obstetric outcomes**, were also associated with higher anxiety in our study. Women from lower socioeconomic backgrounds may face financial and healthcare access challenges, while inadequate family or partner support may exacerbate emotional stress [17,18].

Comparison with Other Studies

- Kingston et al. (2012) found that women with inadequate support or previous pregnancy complications had higher antenatal anxiety, consistent with our findings [18].
- Lee et al. (2007) reported higher anxiety in primigravida and unplanned pregnancies, reinforcing the importance of parity and pregnancy planning as determinants of maternal mental health [19].
- Rubertsson et al. (2014) highlighted that psychosocial stressors often outweigh sociodemographic factors in influencing antenatal anxiety, which aligns with our results [20].

CONCLUSION:

The present study demonstrates that **anxiety disorder is highly prevalent among women in the third trimester of pregnancy**, with nearly one in three women affected. **Primigravida status and unplanned pregnancies** were significant risk factors, while sociodemographic variables such as age, education, and occupation were not significantly associated. These findings underscore the need to **integrate routine mental health screening into antenatal care**, particularly in the late stages of pregnancy. Early identification and timely intervention, including counseling, partner support, and referral to mental health services, can improve **maternal well-being and pregnancy outcomes**, reducing both short- and long-term adverse effects for mothers and infants.

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