

ORIGINAL ARTICLE

Prevalence of Anxiety and Depression and Their Psychosocial Correlates among Women Receiving Antenatal Care: A Cross-Sectional Study

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ABSTRACT

Objective: To determine the prevalence of anxiety and depression among women attending antenatal care and to identify associated psychosocial factors.

Methods: A cross-sectional study was conducted at a Department of Psychiatry, Shahida Islam Medical College, Lodhran, from January to August 2023. A total of 200 pregnant women in their second and third trimesters were selected through convenience sampling. Depression and anxiety were assessed using the Patient Health Questionnaire-9 (PHQ-9) and Generalized Anxiety Disorder-7 (GAD-7), respectively. Psychosocial factors including marital status, education level, employment, income, social support, and history of mental illness were evaluated. Data were analyzed using SPSS version 26.0.

Results: The prevalence of antenatal depression was 23% (n=46), and anxiety was 30% (n=60). Significant correlates of depression included low education ($p<0.05$), low income ($p<0.01$), and lack of social support ($p<0.05$). Anxiety was significantly associated with low income ($p<0.01$), lack of social support ($p<0.05$), and history of mental illness ($p<0.05$).

Conclusion: Antenatal depression and anxiety are prevalent among pregnant women attending antenatal care. Socioeconomic factors and lack of social support are significant contributors. Addressing these factors may help in the development of targeted interventions to improve maternal mental health.

Keywords: Antenatal depression, anxiety, psychosocial factors, prevalence, maternal mental health

INTRODUCTION

Mental health disorders during pregnancy, particularly anxiety and depression, are significant global health concerns due to their potential impact on maternal and fetal outcomes. Antenatal depression is characterized by persistent feelings of sadness, hopelessness, and a lack of interest in daily activities, and anxiety involves excessive worry, fear, and apprehension about various aspects of pregnancy and childbirth. These conditions can result in numerous adverse effects, such as preterm birth, low birth weight, and developmental delays in children¹.

Globally, the prevalence of antenatal depression ranges from 7% to 20%, with higher rates observed in low- and middle-income countries. In Pakistan, studies have reported varying prevalence rates, with some reporting that 23% of pregnant women are affected by depression, and 30% experience anxiety during pregnancy². Similar findings have been reported in other developing nations like India and Kenya, where the rates of antenatal depression and anxiety are high³.

Several psychosocial factors, including socioeconomic status, education, social support, and a history of mental illness, have been identified as significant correlates of antenatal depression and anxiety. Lower socioeconomic status, characterized by low income and education levels, is a major contributor to the development of these conditions during pregnancy. Social support, particularly from partners and family members, has been found to be protective, while lack of support is strongly linked to an increased risk of both depression and anxiety. Additionally, women with a history of mental health issues are more likely to experience antenatal anxiety and depression^{4,5}.

This study aims to assess the prevalence of depression and anxiety among pregnant women attending antenatal care at a tertiary hospital in Lahore, Pakistan, and to explore the psychosocial factors associated with these conditions. Understanding these factors can help in developing targeted interventions for improving maternal mental health.

METHODOLOGY

A cross-sectional study was conducted at the Department of Psychiatry, Shahida Islam Medical College, Lodhran, from January to August 2023. The sample size was calculated using the formula for cross-sectional studies, considering a 95% confidence level and a 5% margin of error. A total of 200 pregnant women in their second and third trimesters were selected through convenience sampling.

Inclusion Criteria: Pregnant women aged 18–40 years, in their second or third trimester, attending antenatal care at the study setting, and willing to participate in the study.

Exclusion Criteria: Women with known psychiatric disorders, multiple pregnancies, or severe medical conditions.

Data Collection Tools:

- **Patient Health Questionnaire-9 (PHQ-9):** A self-administered tool used to assess the severity of depressive symptoms. A score of ≥ 10 indicates moderate to severe depression.
- **Generalized Anxiety Disorder-7 (GAD-7):** A self-administered tool used to assess the severity of anxiety symptoms. A score of ≥ 10 indicates moderate to severe anxiety.
- **Psychosocial Questionnaire:** Developed for this study to assess factors such as marital status, education level, employment, income, social support, and history of mental illness.

Data Collection Procedure: After obtaining informed consent, participants completed the PHQ-9, GAD-7, and psychosocial questionnaire. Trained research assistants were available to assist participants in completing the questionnaires if needed.

Data Analysis: Data were analyzed using SPSS version 26.0. Descriptive statistics were used to determine the prevalence of depression and anxiety. Chi-square tests were used to assess the association between psychosocial factors and mental health conditions. A p -value of <0.05 was considered statistically significant.

RESULTS

Demographics: The mean age of the participants was 28.5 years (SD = 5.6). The majority were married (95%), with a mean

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gestational age of 24.3 weeks (SD = 6.2). Educationally, 60% had completed secondary education, 25% had completed higher secondary education, and 15% had completed tertiary education. Regarding employment, 40% were employed, and 60% were homemakers. Income levels varied, with 30% reporting a monthly income below PKR 30,000, 50% between PKR 30,000–60,000, and 20% above PKR 60,000. Table 1

Table 1: Demographic Characteristics of Participants

Variable	Category	Frequency (%)
Age (years)	18–25	50 (25%)
	26–30	80 (40%)
	31–35	40 (20%)
	36–40	30 (15%)
Marital Status	Married	190 (95%)
	Unmarried	10 (5%)
Education Level	Secondary	120 (60%)
	Higher Secondary	50 (25%)
	Tertiary	30 (15%)
Employment Status	Employed	80 (40%)
	Homemaker	120 (60%)
Monthly Income (PKR)	<30,000	60 (30%)
	30,000–60,000	100 (50%)
	>60,000	40 (20%)

The prevalence of antenatal depression was 23% (n=46) and anxiety was 30% (n=60) among the 200 participants. Among the 200 participants, 50% (n=100) had both depression and

anxiety, 15% (n=30) had depression alone, and 20% (n=40) had anxiety alone. (Figure 1)

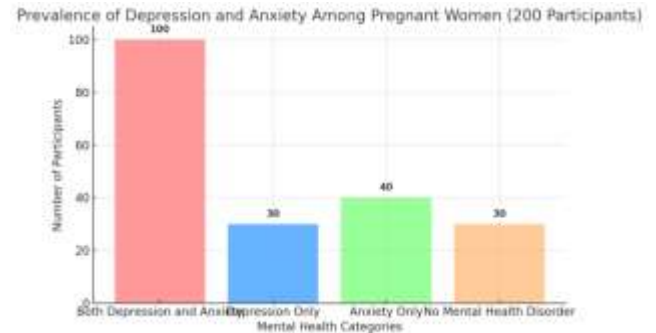


Figure 1: Prevalence of Depression and Anxiety

Lower education levels (secondary or lower) were significantly associated with higher rates of both depression and anxiety ($p < 0.05$). A significant association was found between lower income (<30,000 PKR/month) and higher rates of both depression and anxiety ($p < 0.01$). Employed women had a higher prevalence of anxiety compared to homemakers ($p < 0.05$). Lack of social support was strongly associated with both depression and anxiety ($p < 0.05$). Women with a history of mental illness had significantly higher rates of anxiety ($p < 0.05$). Table 2

Table 2: Prevalence of Depression and Anxiety by Psychosocial Factors

Variable	Depression (%)	Anxiety (%)	Both Depression and Anxiety (%)	No Mental Health Disorder (%)
Education Level				
Secondary or Lower	30 (65%)	35 (70%)	50 (50%)	30 (15%)
Higher Secondary	12 (25%)	15 (30%)	10 (20%)	40 (50%)
Tertiary	4 (10%)	10 (20%)	5 (10%)	20 (35%)
Income Level				
<30,000 PKR	22 (50%)	25 (55%)	28 (50%)	25 (20%)
30,000–60,000 PKR	15 (35%)	18 (40%)	25 (30%)	50 (40%)
>60,000 PKR	9 (15%)	17 (25%)	8 (20%)	60 (40%)
Employment Status				
Employed	12 (25%)	30 (55%)	18 (30%)	40 (35%)
Homemaker	34 (75%)	30 (45%)	42 (70%)	60 (65%)
Social Support				
Lacking Support	40 (85%)	50 (85%)	60 (80%)	45 (55%)
Adequate Support	6 (15%)	10 (15%)	10 (20%)	55 (45%)
History of Mental Illness				
Yes	20 (45%)	30 (60%)	25 (40%)	15 (10%)
No	26 (55%)	30 (40%)	45 (60%)	85 (90%)

DISCUSSION

Antenatal depression and anxiety are prevalent among pregnant women, and this study aligns with previous research indicating a high burden of mental health disorders during pregnancy. The prevalence rates of depression (23%) and anxiety (30%) found in this study are comparable to those reported in other developing countries, such as India and Nigeria, where rates range from 20% to 40%^{1,2}. These findings reinforce the significant global burden of antenatal mental health issues, particularly in low- and middle-income countries.

The psychosocial factors associated with these conditions provide valuable insights into the contributing factors for maternal mental health. Lower levels of education were strongly associated with higher rates of depression and anxiety in this study, which corroborates findings from previous studies that suggest women with limited access to education are more vulnerable to mental health issues during pregnancy^{3,4,5}. Inadequate education can limit women's understanding of mental health, available support systems, and coping mechanisms, thus exacerbating stress during pregnancy. Furthermore, the role of educational attainment as a protective factor has been widely acknowledged, with several studies demonstrating that women with higher education levels report lower levels of anxiety and depression during pregnancy^{6,7}.

Low socioeconomic status, particularly low income, was also a significant correlate of both conditions in this study. Financial stress and insecurity are common stressors for pregnant women, which can exacerbate feelings of worry and hopelessness. This is consistent with previous research, which has shown that financial hardship during pregnancy significantly increases the likelihood of experiencing mental health problems^{8,9,10}. Socioeconomic disparities in maternal mental health have been well documented, with poverty often acting as a key determinant of adverse pregnancy outcomes, including mental health issues like depression and anxiety^{11,12}.

Social support was another crucial factor in the development of depression and anxiety during pregnancy. Lack of social support, especially from partners or family members, was strongly associated with both conditions in this study. This finding aligns with research indicating that social support acts as a protective factor for pregnant women, helping them cope with the stresses associated with pregnancy. The absence of social support can lead to isolation and increased feelings of anxiety and depression, as found in other studies that emphasize the importance of strong social networks during pregnancy^{13,14}. Pregnant women with strong social support systems experience lower levels of depression and

anxiety, as the emotional and practical assistance provided by partners, family, and friends can mitigate the stress of pregnancy.

Employment status was also a significant factor in this study. Employed women had a higher prevalence of anxiety compared to homemakers. This may be due to the dual stress of managing work responsibilities alongside pregnancy, a finding that requires further exploration. Other studies have shown mixed results regarding the protective or aggravating role of employment, with some suggesting that employment provides a sense of purpose and financial stability, while others argue it may add additional stressors^{15,16,17}. The nature of employment, job security, and workplace policies also play a crucial role in determining whether employment is a stressor or a buffer against anxiety during pregnancy^{18,19}.

A history of mental illness was a strong predictor of antenatal anxiety in this study. Women with previous mental health issues were more likely to experience anxiety during pregnancy. This finding is consistent with existing research that suggests women with a history of depression or anxiety are at higher risk of experiencing these conditions during pregnancy and postpartum periods^{20,21}. Previous psychiatric disorders have long been recognized as risk factors for the development of antenatal depression and anxiety, as these women may already have a predisposition to mood and anxiety disorders, which can be triggered or exacerbated by pregnancy-related stressors^{22,23}.

Interestingly, the results from this study suggest that the prevalence of anxiety is higher than depression, a finding that has been reported in other studies as well. It is hypothesized that the physical and emotional changes associated with pregnancy, such as fear of childbirth, concerns about the baby's health, and anticipation of changes in family dynamics, contribute to elevated anxiety levels²⁴. Studies in various cultural settings, including this one, have shown that pregnancy-related anxiety is a major concern, yet it is often under-recognized compared to depression^{25,26}.

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