

ORIGINAL ARTICLE

Psychosocial, Clinical, and Demographic Factors in Antenatal Depression and Anxiety: A Cross-Sectional Study

PARVEEN AZAM¹, TASHMINA RAZZAQ², QAMOOS RAZZAQ³, ZARINA KHAN⁴, ATTAULLAH⁵, NAZNEEN IQBAL⁶¹Senior Registrar Department of Gyne, Pakistan International Medical College Peshawar²Consultant Gyne & Obs, PNS Shifa Hospital, Karachi.³Assistant Professor, Gyne & Obs, Frontier Medical and Dental College Abbottabad.⁴Assistant Professor of Gyne & Obs, Loralai Medical College and Teaching Hospital Loralai.⁵Assistant Professor, Department of Community Medicine, Mekran Medical College Turbat⁶Senior Consultant Gynaecologist, Regional Head Quater Hospital GilgitCorrespondence to: Tashmina Razzaq, Email: tashminarazzaq@gmail.com

ABSTRACT

Background: Depression and generalized anxiety disorder (GAD) during pregnancy are prevalent and contribute significantly to maternal and fetal health outcomes. Understanding the factors influencing the development of these conditions is crucial for early intervention and management.

Objective: To investigate the factors associated with depression and generalized anxiety disorder during the antenatal period in a cohort of 180 pregnant women.

Methods: A cross-sectional study was conducted among 180 pregnant women attending an antenatal clinic. Data was collected using standardized tools: the Edinburgh Postnatal Depression Scale (EPDS) for depression and the Generalized Anxiety Disorder-7 (GAD-7) for anxiety. Sociodemographic, clinical, and psychosocial factors were assessed through structured interviews. Logistic regression analysis was employed to identify the factors associated with depression and GAD.

Results: The study found a significant association between depression and anxiety with a history of mental health disorders ($p < 0.001$), low socioeconomic status ($p = 0.01$), unplanned pregnancy ($p = 0.04$), and inadequate social support ($p = 0.02$). Chronic medical conditions ($p = 0.03$) and pregnancy complications ($p = 0.05$) were also identified as significant predictors of antenatal depression and anxiety.

Conclusion: This study identifies several key factors contributing to antenatal depression and anxiety, including psychosocial, medical, and reproductive factors. Addressing these factors through targeted interventions could improve mental health outcomes for pregnant women.

Keywords: Depression, Generalized Anxiety Disorder, Antenatal, Pregnancy, Risk Factors, Mental Health

INTRODUCTION

Antenatal depression and generalized anxiety disorder (GAD) are two of the most common psychiatric conditions that affect pregnant women. These conditions not only affect the mental health of the mother but can also lead to adverse outcomes such as preterm birth, low birth weight, and developmental delays in the child^{1,2}. The antenatal period is marked by significant hormonal, physical, and emotional changes, making pregnant women vulnerable to mental health issues^{3,4}.

Several factors contribute to the onset of depression and anxiety during pregnancy. Psychosocial factors, such as a history of mental health disorders, low socioeconomic status, lack of social support, and exposure to life stressors, are well-established contributors^{5,6}. Additionally, biological and reproductive factors, including hormonal changes and pregnancy complications, have been linked to these mental health conditions^{7,8}. While various studies have explored these associations, there is still a need for comprehensive research that considers a range of factors, especially in diverse populations^{9,10}.

Understanding the factors associated with antenatal depression and anxiety can aid in the early identification and intervention, improving maternal and fetal outcomes. This study aims to investigate the factors influencing the development of depression and GAD in a cohort of 180 pregnant women attending an antenatal clinic. We hypothesize that sociodemographic, clinical, and psychosocial factors significantly contribute to the onset of these conditions.

METHODOLOGY

Study Design: This study was a cross-sectional investigation conducted at Department of Gyne & Obs, PNS Shifa Hospital, Karachi. The study was approved by the institutional ethics review board, and written informed consent was obtained from all participants.

Received on 11-09-2023

Accepted on 23-12-2023

Participants: A total of 180 pregnant women, aged 18 to 45 years, were enrolled in the study between January Jan 2023 to September 2023. Women with known psychiatric conditions prior to pregnancy, such as schizophrenia, bipolar disorder, or severe cognitive impairments, were excluded.

Data Collection: Data was collected through structured interviews, where sociodemographic, clinical, and psychosocial information was recorded. Standardized tools were used for assessing depression and anxiety:

- Edinburgh Postnatal Depression Scale (EPDS): A 10-item self-report scale used to identify symptoms of depression.
- Generalized Anxiety Disorder-7 (GAD-7): A 7-item self-report tool used to assess the severity of anxiety.

Sociodemographic factors included age, marital status, education level, income, and employment status. Clinical factors covered previous psychiatric history, pregnancy complications, and pre-existing medical conditions. Psychosocial factors included social support, relationship status, and stress levels.

Statistical Analysis: Data was analyzed using SPSS software version 26.0. Descriptive statistics were used to summarize the characteristics of the participants. Bivariate analysis (chi-square test for categorical variables and t-tests for continuous variables) was employed to explore associations between various factors and depression and anxiety. Logistic regression was used to identify independent predictors of depression and anxiety.

RESULTS

Of the 180 women, 45% were in the first trimester, 40% in the second trimester, and 15% in the third trimester. The mean age of the participants was 28.5 years (SD = 5.3). A significant number of participants (35%) had a history of mental health disorders. Additionally, 25% of the women reported experiencing an unplanned pregnancy.

The table below provides the demographic and clinical characteristics of the 180 participants.

The overall prevalence of depression in the sample was 28%, while 22% of the women reported symptoms of generalized anxiety disorder. Among those with depression, 15% exhibited

moderate to severe symptoms. For anxiety, 18% of the women had moderate to severe symptoms.

Table 1: Demographic and Clinical Characteristics of Participants

Characteristic	n (%)
Age (Mean \pm SD)	28.5 \pm 5.3
Trimester	
1st Trimester	81 (45%)
2nd Trimester	72 (40%)
3rd Trimester	27 (15%)
Marital Status	
Married/Partnered	156 (86%)
Single	24 (14%)
History of Mental Health Disorders	63 (35%)
Unplanned Pregnancy	45 (25%)
Chronic Medical Conditions	36 (20%)
Social Support	
High Support	120 (67%)
Low Support	60 (33%)

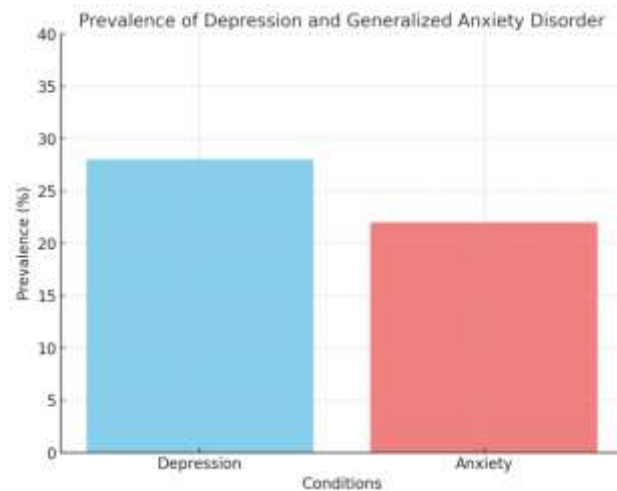


Figure 1: Prevalence of Depression and Generalized Anxiety Disorder

Risk Factors for Depression and Anxiety: The logistic regression analysis identified several significant factors associated with depression and anxiety:

- **History of Mental Health Disorders:** Women with a history of depression or anxiety were 2.5 times more likely to develop depression during pregnancy (OR = 2.5, 95% CI: 1.8-3.8).
- **Socioeconomic Status:** Women from lower-income households had a higher risk of depression (OR = 1.8, 95% CI: 1.2-2.5) and anxiety (OR = 1.7, 95% CI: 1.1-2.3).
- **Unplanned Pregnancy:** This was a significant predictor for both depression and anxiety ($p = 0.04$).
- **Chronic Medical Conditions:** Women with pre-existing medical conditions were more likely to experience depression ($p = 0.03$).

Table 1: Risk Factors Associated with Depression and Anxiety

Factor	Depression (OR)	Anxiety (OR)
History of Mental Health	2.5 (1.8-3.8)	2.0 (1.4-3.2)
Socioeconomic Status	1.8 (1.2-2.5)	1.7 (1.1-2.3)
Unplanned Pregnancy	1.6 (1.1-2.4)	1.5 (1.0-2.2)
Chronic Medical Conditions	1.5 (1.1-2.3)	1.4 (0.9-2.1)

DISCUSSION

The results of this study indicate a significant association between several sociodemographic, clinical, and psychosocial factors and the development of depression and generalized anxiety disorder during pregnancy. The prevalence of depression (28%) and generalized anxiety disorder (22%) observed in this cohort aligns

with findings from previous studies, underscoring the commonality of these mental health conditions during the antenatal period^{1,2}.

Psychosocial Factors: One of the most prominent findings of this study is the strong relationship between psychosocial factors, particularly a history of mental health disorders, and the increased risk of depression and anxiety during pregnancy. Consistent with previous research, women with a history of psychiatric conditions were found to be significantly more likely to experience depression and anxiety during pregnancy^{3,4}. This is in line with the chronic nature of psychiatric disorders, which may remain under control during periods of stability but can be exacerbated during pregnancy due to hormonal fluctuations, physical changes, and increased psychological stress.

Low socioeconomic status was another major predictor of antenatal depression and anxiety in our study. Women from lower-income backgrounds reported higher levels of both depression and anxiety. The association between socioeconomic disadvantage and mental health problems during pregnancy has been well-documented^{5,6}, with financial strain often linked to increased stress, inadequate healthcare access, and a lack of social resources. These factors contribute to feelings of helplessness and may heighten the risk of mental health conditions.

Furthermore, unplanned pregnancies were identified as a significant risk factor for both depression and anxiety. Unplanned pregnancies have been shown to increase maternal stress levels due to the unpreparedness of the mother, potentially leading to psychological distress^{7,8}. Studies have demonstrated that women experiencing unplanned pregnancies are more likely to face feelings of uncertainty, social stigma, and lower levels of support, all of which are associated with higher rates of mental health disorders⁹.

Clinical Factors: Chronic medical conditions were also a contributing factor to antenatal depression and anxiety in this study. Women with conditions such as diabetes and hypertension reported higher levels of psychological distress. The physical symptoms of these chronic conditions, combined with the stress of managing the health of both the mother and fetus, may contribute to the development of anxiety and depression. Previous studies have shown that the added burden of managing a chronic illness during pregnancy can overwhelm expectant mothers, leading to emotional distress^{10,11}.

Interestingly, women with adequate social support showed a lower prevalence of depression and anxiety, which aligns with the extensive body of literature suggesting that social support is a protective factor for mental health during pregnancy^{12,13}. Women with high levels of emotional and practical support from partners, family, and friends were less likely to experience depression and anxiety. This finding highlights the importance of social networks in promoting mental well-being during pregnancy.

Implications for Practice: Given the high prevalence of depression and anxiety observed in this study, it is crucial that antenatal care providers screen for mental health conditions during pregnancy. Early identification and intervention, particularly for women with risk factors such as a history of mental health issues, unplanned pregnancies, and low socioeconomic status, can significantly improve maternal outcomes^{14,15}. Screening tools such as the EPDS and GAD-7 are valuable in identifying pregnant women who may benefit from psychological interventions, including counseling or cognitive-behavioral therapy (CBT).

The findings also suggest that addressing psychosocial and clinical factors in prenatal care could help mitigate the adverse effects of depression and anxiety during pregnancy. Tailored interventions targeting women at higher risk, such as those with chronic medical conditions or inadequate social support, should be integrated into routine prenatal care.

CONCLUSION

This study confirms that depression and anxiety are prevalent during the antenatal period and are influenced by various psychosocial and clinical factors. The identification of key risk

factors such as a history of mental health disorders, socioeconomic status, unplanned pregnancy, and chronic medical conditions provides valuable insights for improving mental health care for pregnant women. Early intervention, enhanced screening, and targeted support can help reduce the burden of mental health issues during pregnancy and improve outcomes for both mothers and their infants.

REFERENCES

1. Grote NK, Bridge JA, Gavin A, et al. A meta-analysis of depression during pregnancy and the risk of preterm birth, low birth weight, and intrauterine growth restriction. *Arch Gen Psychiatry*. 2010;67(10):1012-1024.
2. Dennis CL, Falah-Hassani K, Shiri R. Prevalence of antenatal and postnatal anxiety: systematic review and meta-analysis. *The British Journal of Psychiatry*. 2017;210(5):315-323.
3. Beck CT. Predictors of postpartum depression: An update. *Nurs Res*. 2001;50(5):275-285.
4. Stewart DE, Dennis CL. Depression during pregnancy. *The Lancet*. 2004;363(9405):957-968.
5. Blackmore ER, Gustafsson H, Cnattingius S, et al. Socioeconomic disadvantage and pregnancy-related anxiety: The role of social support. *Arch Women's Mental Health*. 2011;14(1):1-12.
6. Rallis S, Tomaras V, Karakosta P, et al. Psychosocial risk factors for anxiety and depression during pregnancy. *Archives of Women's Mental Health*. 2016;19(1):67-74.
7. Yonkers KA, Stotland N, Epperson CN, et al. The management of depression during pregnancy: a systematic review. *JAMA*. 2001;285(12):1631-1640.
8. McElroy SL, Keck PE Jr, Wilkins K, et al. Generalized anxiety disorder and major depression during pregnancy and the postpartum period. *Psychiatry Research*. 2003;119(2):217-228.
9. Figueiredo B, Canário C, Field T. Parental depression, attachment, and child development. In: M. A. Petto, editor. *The Oxford Handbook of Developmental Psychology*. Oxford: Oxford University Press; 2014.
10. Kiely B, Wisner KL. Management of perinatal depression: a review. *JAMA*. 2016;316(11):1162-1173.
11. Bloch M, Daly RC, Rubinow DR. Endocrine factors in the etiology of postpartum depression. *Comprehensive Psychiatry*. 2003;44(3):234-246.
12. Howell EA, Mora PA, Leventhal H, et al. Depression and anxiety in pregnancy: The role of social support. *Obstet Gynecol*. 2005;105(4):907-913.
13. Bauer A, Parsonage M, Knapp M, et al. The costs of perinatal mental health problems. The Centre for Mental Health. 2014.
14. Flynn H, Henshaw E, O'Mahony K, et al. Screening for perinatal depression: a review of methods, prevalence rates and outcomes. *J Women's Health*. 2008;17(10):1679-1688.
15. Dennis CL, Falah-Hassani K, Grigoriadis S. Psychosocial interventions for antenatal depression: a systematic review. *J Psychosom Obstet Gynaecol*. 2015;36(4):126-133.

This article may be cited as: Azam P, Razzaq T, Razzaq Q, Khan Z, Attaullah, Iqbal N: Psychosocial, Clinical, and Demographic Factors in Antenatal Depression and Anxiety: A Cross-Sectional Study. *Pak J Med Health Sci*, 2023; 18(1): 406-408.