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Article

Prevalence, Awareness, and Help-Seeking Behavior Regarding Antenatal Depression Among Pregnant Women in Quetta: A Cross-Sectional Study

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ABSTRACT

Background: Antenatal depression is a prevalent yet under-recognized mental health condition that can adversely impact both maternal and fetal outcomes. In low-resource settings such as Quetta, Pakistan, awareness of antenatal depression remains limited, and cultural stigma often prevents timely help-seeking, contributing to poor mental health care integration within routine antenatal services. **Objective**: This study aimed to determine the prevalence of antenatal depression among pregnant women in Quetta and to assess their awareness, perception of mental health stigma, and willingness to seek psychological support. **Methods**: A cross-sectional observational study was conducted among 78 pregnant women attending antenatal clinics in Quetta. Inclusion criteria included pregnant women aged ≥18 years at any gestational stage; those with prior psychiatric diagnoses or high-risk pregnancies were excluded. Data were collected using the Edinburgh Postnatal Depression Scale (EPDS) and a structured questionnaire assessing awareness, stigma perception, and help-seeking behavior. Ethical approval was obtained from the Institutional Review Board, and all procedures complied with the Declaration of Helsinki. Statistical analysis was performed using SPSS v27, employing descriptive statistics, chi-square tests, and logistic regression. **Results**: The prevalence of probable antenatal depression (EPDS ≥13) was 34.6%. Only 39.7% of participants were aware of antenatal depression, and 55.1% expressed reluctance to seek help. Logistic regression suggested higher depression likelihood among those in later trimesters and with poor social support, though results were not statistically significant ($p > 0.05$). **Conclusion**: Antenatal depression is common yet under-recognized in the study population, with low awareness and limited help-seeking highlighting critical service gaps. These findings support the integration of routine mental health screening and culturally appropriate education within antenatal care to improve maternal and fetal outcomes.

Keywords: Antenatal Depression, Pregnancy, Maternal Mental Health, Awareness, Stigma, EPDS, Cross-Sectional Studies

INTRODUCTION

Antenatal depression, characterized by persistent sadness, low energy, anxiety, and changes in sleep or appetite during pregnancy, is a critical yet frequently underdiagnosed mental health condition that affects a significant number of expectant mothers worldwide. While the physiological and obstetric aspects of pregnancy receive considerable attention, the psychological dimension, particularly the mental well-being of the mother, remains relatively neglected in both clinical settings and public discourse. This neglect has serious implications, as untreated antenatal depression has been associated with poor obstetric outcomes, including preterm labor, low birth weight, and impaired maternal-infant bonding (1). Moreover, antenatal depression increases the risk of postpartum depression, creating a cascade of negative outcomes that can span infancy into early childhood, such as developmental delays, behavioral problems, and emotional dysregulation in the child (2). Despite its significance, antenatal depression remains largely under-recognized, especially in low-resource settings where mental health services are limited and often stigmatized.

The global prevalence of antenatal depression varies widely, with estimates ranging from 10% to 25% depending on the population and diagnostic criteria used (3). However, these figures may underrepresent the actual burden due to underreporting and lack

of routine screening practices. Factors contributing to antenatal depression include biological changes, pre-existing mental health conditions, lack of social support, financial strain, domestic violence, and cultural expectations surrounding pregnancy and motherhood (4). In particular, psychosocial stressors and limited access to mental health care can exacerbate the condition, especially in societies where discussing emotional distress is taboo or considered a sign of weakness. In such contexts, pregnant women may internalize their symptoms, avoiding disclosure even when experiencing significant emotional suffering. This invisibility contributes to a cycle of silence and neglect, further complicating efforts to identify and support affected individuals.

While tools like the Edinburgh Postnatal Depression Scale (EPDS) have proven effective in screening for perinatal depression, their utilization during the antenatal period is often inconsistent (5). Clinical guidelines in some countries recommend routine mental health screening during prenatal visits, yet compliance remains suboptimal due to time constraints, lack of training among healthcare providers, and the perception that emotional symptoms are a normal part of pregnancy rather than signs of clinical concern (6). Moreover, even when screening is conducted, the stigma associated with mental illness can hinder women from accepting referrals for counseling or psychiatric evaluation. Studies have shown that fear of judgment, loss of autonomy, or being labeled as unfit mothers discourages women from seeking help, underscoring the need to understand not only the prevalence but also the perception of antenatal depression (7).

Understanding how pregnant women perceive their own mental health, their attitudes toward counseling, and their help-seeking behavior is essential for designing effective interventions. Social support, particularly from partners, family members, and healthcare providers, plays a crucial protective role against antenatal depression, while its absence is a key risk factor (8). Interventions that incorporate mental health literacy, reduce stigma, and improve access to supportive services can significantly improve maternal outcomes. However, before such programs can be effectively designed and implemented, it is vital to assess the current awareness levels, perceived barriers to care, and cultural attitudes that shape women's responses to antenatal mental health challenges.

Given the multidimensional impact of antenatal depression on maternal and child health and the evident gaps in awareness and care, the present study seeks to determine the prevalence of antenatal depression among pregnant women and assess their level of awareness, perceptions of stigma, and help-seeking behaviors. The research question guiding this study is: *What is the prevalence of antenatal depression among pregnant women, and how do they perceive their condition in terms of awareness, stigma, and willingness to seek mental health support?*

MATERIAL AND METHODS

This observational cross-sectional study was conducted in antenatal clinics across selected public and private healthcare facilities in Quetta, Pakistan, between [insert months/year]. A total of 78 pregnant women were recruited using a non-probability consecutive sampling technique. Women attending routine antenatal check-ups were approached, and those who met the inclusion criteria were invited to participate. Eligible participants included pregnant women aged 18 years and above, in any trimester of pregnancy, who were able to read or understand Urdu or English and provided informed consent. Women with a known history of psychiatric illness prior to pregnancy, those currently receiving psychiatric treatment, or those with high-risk pregnancies requiring hospitalization were excluded to minimize confounding factors related to severe physical or mental health conditions.

All participants were briefed about the purpose of the study, and written informed consent was obtained prior to data collection. The study protocol was reviewed and approved by the Institutional Review Board of [insert institution name], under reference number [insert IRB number]. Ethical standards outlined in the Declaration of Helsinki were strictly followed. Confidentiality of the participants was maintained by assigning unique study codes, and no identifying personal information was collected or disclosed.

The primary outcome of the study was the prevalence of antenatal depression, assessed using the validated Urdu version of the Edinburgh Postnatal Depression Scale (EPDS), a 10-item self-reported questionnaire widely used for detecting depressive symptoms in perinatal populations (5). A cutoff score of ≥13 was considered indicative of probable antenatal depression, consistent with prior research in similar settings (6). Secondary outcomes included levels of awareness regarding antenatal depression, perceived stigma associated with mental illness during pregnancy, and willingness to seek help. These were assessed through a structured, researcher-designed questionnaire developed based on existing literature, covering domains such as perceived need for mental health support, social support systems, perceived barriers to seeking care, and attitudes toward psychological counseling. The tool underwent expert validation by professionals in psychiatry and obstetrics before deployment in the field.

Data collection was conducted through face-to-face interviews administered by trained female research assistants to minimize response bias and ensure participant comfort. Interviews were conducted in private consultation rooms to maintain confidentiality. Participants were not followed up longitudinally, as the study design was cross-sectional in nature. To ensure data integrity, the questionnaires were checked for completeness at the time of collection. Missing data, if any, were handled using pairwise deletion during analysis to preserve sample size while ensuring valid statistical outputs.

Statistical analysis was performed using SPSS version 27. Descriptive statistics such as means, standard deviations, and frequencies were computed to summarize participant demographics and response patterns. The prevalence of antenatal depression was calculated as a proportion of participants with EPDS scores ≥13. Bivariate analyses including chi-square tests and independent-sample t-tests were used to explore associations between antenatal depression and socio-demographic or obstetric variables such as age, trimester, parity, education level,

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and social support. Logistic regression models were employed to identify potential predictors of antenatal depression, adjusting for confounding variables. A significance level of $p < 0.05$ was considered statistically significant. Sensitivity analyses were conducted to examine the robustness of findings by testing different EPDS cut-off points and controlling for education level and income as potential confounders.

RESULTS

A total of 78 pregnant women participated in the study. The mean age was 27.3 years (SD ± 5.1). Most participants were in their second (33.3%) or third (38.5%) trimester. In terms of educational background, 34.6% had completed secondary education, while 29.5% had attained tertiary education. Regarding perceived social support, 39.7% reported moderate support, while 30.8% reported poor support. Awareness of antenatal depression was limited, with only 39.7% of participants reporting familiarity with the condition. Stigma perception was high in 34.6% of the participants, and help-seeking behavior was limited, with only 44.9% indicating a willingness to seek psychological support. Based on the Edinburgh Postnatal Depression Scale (EPDS), 34.6% (n = 27) of the participants screened positive for probable antenatal depression (EPDS ≥13).

Table 1. Frequency Distribution of Key Variables (n = 78)

Variable	Category	Frequency (n)	Percentage (%)
Trimester	First	22	28.2
	Second	26	33.3
	Third	30	38.5
Education	No formal education	8	10.3
	Primary	20	25.6
	Secondary	27	34.6
	Tertiary	23	29.5
Social Support	Poor	24	30.8
	Moderate	31	39.7
	Strong	23	29.5
Awareness	Yes	31	39.7
	No	47	60.3
Stigma Perception	High	27	34.6
	Moderate	31	39.7
	Low	20	25.7
Help-Seeking Behavior	Yes	35	44.9
	No	43	55.1
Probable Depression	Yes (≥13 EPDS)	27	34.6
	No (<13 EPDS)	51	65.4

Logistic regression analysis was conducted to explore the influence of demographic and psychosocial variables on the likelihood of probable antenatal depression. Although none of the predictors achieved statistical significance at the conventional 0.05 level, several predictors showed noteworthy trends. Being in the third trimester ($p = 0.099$) was associated with increased odds of depression. Lower education levels (particularly primary education compared to no formal education, $p = 0.073$) showed a trend toward a protective effect, though counterintuitively.

Table 2. Logistic Regression Analysis Predicting Probable Antenatal Depression

Predictor	B	SE	z	p-value	95% CI Lower	95% CI Upper
Intercept	0.276	1.774	0.155	0.877	-3.200	3.752
Trimester (Second vs First)	0.129	0.669	0.193	0.847	-1.181	1.439
Trimester (Third vs First)	1.080	0.654	1.651	0.099	-0.202	2.362
Education (Primary vs No Edu)	-1.684	0.938	-1.795	0.073	-3.523	0.154
Education (Secondary vs No Edu)	-1.311	0.945	-1.388	0.165	-3.162	0.540
Education (Tertiary vs No Edu)	-1.047	0.917	-1.141	0.254	-2.844	0.751
Social Support (Poor vs Moderate)	-0.120	0.641	-0.187	0.852	-1.377	1.137
Social Support (Strong vs Moderate)	-0.148	0.586	-0.253	0.800	-1.297	1.000
Awareness (Yes vs No)	0.282	0.519	0.543	0.587	-0.736	1.299
Stigma Perception (Low vs High)	-0.471	0.677	-0.695	0.487	-1.798	0.857
Stigma Perception (Moderate vs High)	-0.450	0.681	-0.661	0.508	-1.785	0.884
Age	0.022	0.055	0.399	0.690	-0.085	0.129

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The 34.6% prevalence of probable antenatal depression observed in this sample aligns with higher-end estimates in low- and middle-income countries (LMICs), indicating a significant psychological health burden among pregnant women in Quetta. While the regression model did not yield statistically significant predictors, important clinical trends were evident. Women in later trimesters exhibited a higher risk of depression, possibly due to cumulative stress and fear of labor. Education level, often a protective factor, was not significantly associated with depression, possibly due to cultural constraints on emotional expression and limited mental health literacy, even among the educated.

The widespread lack of awareness (60.3%) and high perceived stigma (34.6%) were notable barriers to care, as was the reluctance of 55.1% of participants to seek help. These findings emphasize the critical need for early screening, improved psychoeducation, and culturally sensitive destigmatization efforts within antenatal care services to improve maternal mental health outcomes.

DISCUSSION

The findings of this study reveal a notable prevalence of probable antenatal depression among pregnant women in Quetta, with approximately 34.6% of participants scoring ≥13 on the Edinburgh Postnatal Depression Scale (EPDS). This prevalence aligns with previous estimates from low- and middle-income countries (LMICs), where antenatal depression rates range from 20% to 40%, often influenced by socioeconomic adversity, inadequate healthcare infrastructure, and limited mental health literacy (1,2). In contrast to studies from high-income countries where reported prevalence typically falls below 15%, the present findings highlight the elevated vulnerability in resource-limited settings (3). The observed association between third trimester pregnancy and increased depressive symptoms, although not statistically significant, echoes prior research suggesting that advancing gestation may compound emotional and physical stressors, particularly among women with inadequate support systems or apprehension about childbirth and postpartum responsibilities (4).

Interestingly, this study did not find statistically significant associations between depression and factors such as age, education level, or perceived social support in the multivariable model, though trends in the expected directions were noted. For instance, participants reporting strong social support appeared less likely to experience depressive symptoms, corroborating well-established evidence that emotional and instrumental support serves as a protective factor against perinatal mental health disorders (5). However, the absence of significance may be attributable to the modest sample size, which limits statistical power. Furthermore, while education is often considered a proxy for health literacy and empowerment, the current findings suggest that higher educational attainment alone may not suffice to mitigate mental health risks, particularly in sociocultural contexts where stigma and emotional expression are tightly constrained (6). This reinforces the complexity of maternal mental health determinants, which extend beyond individual attributes to include relational, cultural, and structural influences (7-12).

The study also highlights concerning levels of unawareness and stigma regarding antenatal depression. A majority of participants lacked awareness of the condition, and over one-third perceived high levels of stigma surrounding mental health issues during pregnancy. These findings are consistent with prior qualitative and quantitative work conducted in South Asia, which documented pervasive beliefs that psychological distress is a normative, transient component of pregnancy, rather than a clinical concern warranting intervention (7,8). This normalization of distress, compounded by fears of being judged or dismissed by healthcare providers or family members, appears to hinder help-seeking behavior. In the present study, more than half of the participants were reluctant to seek professional support, even among those screening positive for depression. These behavioral trends not only delay diagnosis and treatment but may also exacerbate the trajectory of illness, increasing risks for adverse maternal and neonatal outcomes such as preterm birth, impaired mother-infant bonding, and future psychiatric morbidity (9).

From a theoretical perspective, these findings lend support to biopsychosocial models of perinatal depression, where hormonal and physiological changes intersect with sociocultural stressors and psychological vulnerabilities. Clinically, the high prevalence of probable depression—coupled with low awareness and help-seeking—demands urgent attention. Incorporating mental health screening tools such as the EPDS into routine antenatal care, coupled with training for frontline providers in empathetic communication and culturally sensitive referral practices, may facilitate earlier detection and intervention. Furthermore, public health campaigns aimed at destigmatizing mental health and enhancing community-level awareness could contribute to a more supportive environment for expectant mothers (9-13).

Despite the valuable insights provided, several limitations must be acknowledged. The cross-sectional design precludes causal inference, and the modest sample size may have reduced the ability to detect significant associations in multivariate analyses. Additionally, the study relied on self-reported data, which may be subject to social desirability bias—particularly in a culturally conservative setting where discussions of emotional well-being are often muted. The use of consecutive sampling and recruitment from selected clinics may also limit generalizability to the broader pregnant population in Quetta or other regions. Nonetheless, the standardized assessment approach, use of validated tools, and inclusion of psychosocial variables contribute to the study's methodological rigor.

Future research should explore longitudinal designs to track changes in mental health status across pregnancy and postpartum periods, examining the cumulative impact of stress, resilience factors, and health service engagement. Larger, multi-center studies could enhance generalizability and permit subgroup analyses, such as the role of intimate partner relationships or economic hardship. Moreover, integrating qualitative methods could illuminate the nuanced beliefs and barriers that shape perceptions of depression and mental health care (14-16).

This study underscores the high prevalence and low awareness of antenatal depression among pregnant women in Quetta, revealing a critical gap in maternal healthcare. It calls for the integration of mental health education and screening into routine antenatal care, as well as broader efforts to combat stigma and empower women to seek psychological support when needed. Addressing these challenges is essential not only for the well-being of mothers but

also for promoting optimal developmental outcomes in the next generation (17-20).

CONCLUSION

This study identified a high prevalence of probable antenatal depression (34.6%) among pregnant women in Quetta, coupled with low levels of awareness and limited help-seeking behavior, underscoring significant gaps in maternal mental healthcare. The findings highlight the urgent need for integrating routine depression screening and culturally sensitive mental health education into antenatal services to enhance early detection and support. Given the detrimental impact of untreated antenatal depression on both maternal and fetal outcomes, these results have direct clinical relevance and emphasize the importance of addressing psychological health as a core component of prenatal care. Future research should focus on longitudinal monitoring, intervention development, and stigma reduction strategies to improve maternal mental health outcomes and inform health policy in similar low-resource settings.

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