

Postpartum Psychiatric Disorders in Bangladeshi Mothers: A Comprehensive Analysis

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ABSTRACT

Objective: Pregnancy and motherhood bring joy and fulfillment, but also significant responsibilities. This study aims to explore psychological problems among mothers' experience during the postpartum period, focusing on screening and confirming nature of these disorders, identify risk factors, and providing recommendations for management.

Method: A cross-sectional study was conducted at Square Hospital's Child Development Center (CDC), suspected 7932 mothers for psychological problems from January 2022 to August 2024. Different Scales were used to assess and grade depressive symptoms.

Inclusion Criteria: mood swings, guilt, anxiety, suicidal ideation, and difficulty bonding with the baby.

Exclusion Criteria: Pre-existing mental disorders.

Results: Out of 7932 mothers, 292 (3.7%) mothers were at risk of psychological problems and majority mothers i.e., 125 (42.81%) pregnant mothers between 25-35 years age, all mothers were educated 7932 (100%), more than half of the mothers i.e., 154 (52.74%) were working. Medical history revealed that psychological problems were more during the antenatal period i.e., 167 (57.19%) than postnatal period 125 (42.81%). Screening was done by Edinburgh-Bangla Version Postnatal Depression Scale. Baby Blues affected only 98 (1.24%) mothers, this low numbers may be not receiving treatment due to lack of awareness, family supports and stigma. Confirming diagnosis by DSM-5 and was found Postpartum Depression (PPD) among 161 (2.03%) mothers and Postpartum Psychosis among 16 (0.20%) mothers respectively.

Conclusion: Maternal mental health should be prioritized from conception through postpartum, with families' education on its importance. Breaking the stigma and providing timely interventions will safeguard both mother and baby's well-being.

Keywords: Pregnancy, Baby blues, Postpartum depression, Postpartum psychosis

INTRODUCTION

Pregnancy and motherhood are transformative life events that bring immense joy and fulfillment, contributing to personal and familial growth. These stages offer immeasurable pleasure but also introduce significant responsibilities. The journey of pregnancy, which begins at conception and continues post-birth, can present various challenges. These challenges may manifest physically, psychologically, socially, and emotionally, depending on how well a woman adapts to the changes [1]. Despite being a natural part of human development, the gestational period often brings health changes that may be accompanied by uncertainties, fears, anxieties, and concerns, especially in

pregnancies with complications [2,3]. The postpartum period, which begins at delivery and lasts until six weeks after birth, is particularly a vulnerable time. Numerous risk

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factors and challenges arise for parents during this phase, evoking emotions and concerns about child care and time management, which can either foster intimacy or create barriers in their daily routines. This study focuses on women's psychological problems during postpartum period. The objective is to screen and confirm these psychological disorders, distinguish them from other conditions, identify the associated risk factors, and provide recommendations for management and prevention. The pathogenesis of postpartum depression (PPD) remains largely unknown, but research suggests that it is multifactorial [4], involving a complex interplay of genetic, hormonal, psychological, and social stressors. Several key biological systems and factors are implicated in the development of PPD [5-7]. Hormonal fluctuations are playing a vital role. The postpartum period is marked by significant hormonal changes. A rapid drop in reproductive hormones like estradiol and progesterone following childbirth may trigger depressive symptoms in women who are predisposed to such changes. Oxytocin and prolactin, which are responsible for regulating lactation, also play a vital role. Low oxytocin levels are linked to PPD, particularly in cases of unwanted early weaning and difficulties in breastfeeding. Lower oxytocin levels during the third trimester are associated with an increased risk of depressive symptoms during and after pregnancy [8]. Prolactin, responsible for breast milk production, may also be implicated in the onset of PPD, as failure to lactate is often observed alongside depression. Hypothalamic-Pituitary-Adrenal (HPA) Axis, responsible for the body's stress response, is a central player in PPD. Dysfunction of the HPA axis results in decreased release of catecholamines, leading to an impaired stress response. During pregnancy, the HPA axis becomes hyperactive, resulting in elevated levels of cortisol. This hyperactivity often persists for up to 12 weeks postpartum, potentially contributing to the onset of PPD. Cortisol dysregulation is frequently observed in individuals with PPD, along with low levels of tryptophan, a precursor to serotonin, which is important in mood regulation [4,9,10]. Emerging evidence suggests that the dysfunction in the Gamma-Aminobutyric Acid (GABA) neurotransmission system is involved in PPD. GABA, the primary inhibitory neurotransmitter in the brain, helps regulate mood and anxiety. An imbalance in GABA signaling may play a role in depressive symptoms seen in postpartum women [4]. Psychosocial and environmental factors play a critical role in developing the psychological issues. Emotional changes, such as intense sadness, fear, and anxiety, may be heightened due to physical and psychological demands following childbirth. Social stressors, such as lack of support, relationship difficulties, or financial concerns, may exacerbate these biological vulnerabilities, further contributing to the risk of developing PPD. In summary, PPD is likely driven by a combination of biological and environmental factors, with alterations in hormonal, neuroendocrine, and neurotransmission systems

contributing to its onset. Early identification and intervention are essential for effective management of PPD.

METHODOLOGY

This facility-based cross-sectional study was conducted over 32 months from January 1, 2022 to August 31, 2024, at the Square Hospital Child Development Center (CDC) in Dhaka, Bangladesh, a well-known tertiary care private hospital. The CDC routinely conducts neurodevelopmental screenings for all neonates born at the hospital, typically between 15 to 28 days of age [11]. During these assessments, doctors and developmental therapists observed psychological distress among many mothers accompanying their newborns. This observation prompted the initiation of the study to investigate the psychological conditions of these mothers. The Edinburgh Postnatal Depression Scale (EPDS) is a well-known tool for the screening of depression during postnatal periods which comprises of 10-questions, each having scores as 0-3, with minimum and maximum scores as 0 and 30 respectively. This scale is validated in many countries including Bangladesh as The Edinburgh-Bangla Version Postnatal Depression [12] Scale The calculated Cronbach's alpha value of the present scale was found to lie within range of 0.814-0.844, which was quite reliable [13]. The Edinburgh-Bangla Version Postnatal Depression Scale was utilized for screening of suspected mothers having psychological problems [14]. An informed consent was also taken from the mothers. The current psychiatric nosology in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) does not recognize postpartum psychosis as a distinct disorder; rather, if a woman meets criteria for a brief psychotic disorder, the DSM-5 suggests adding "with postpartum onset" as a specifier if the onset is during pregnancy or within 4 weeks postpartum [15]. Specific psychological disorders were confirmed using the DSM-5 diagnostic criteria [16]. All screenings and assessments were administered by a certified psychosocial counselor. All data was collected and analyzed by using SPSS version 25 and ethical approval for this study was taken from the ethical review committee of the study hospital.

Inclusion Criteria:

- Mood swings (persistent sadness, excessive crying, difficulty controlling anger)
- Disorganized appearance
- Inattentiveness
- Feelings of guilt
- Sleep disturbances
- Anxiety
- Loss of appetite
- Difficulty bonding with baby

- Hyperventilation
- Suicidal ideation

Exclusion Criteria:

- Mothers with pre-existing mental disorders before pregnancy

RESULTS

The study on psychological problems among mothers attending the Child Development Center (CDC) for Neonatal Rapid Neurodevelopmental Assessment (NRNDA) provided valuable insights into postpartum mental health. Among 7,932 mothers screened by EPDS, 292 (3.68%) experienced psychological issues (**Figure 1**).

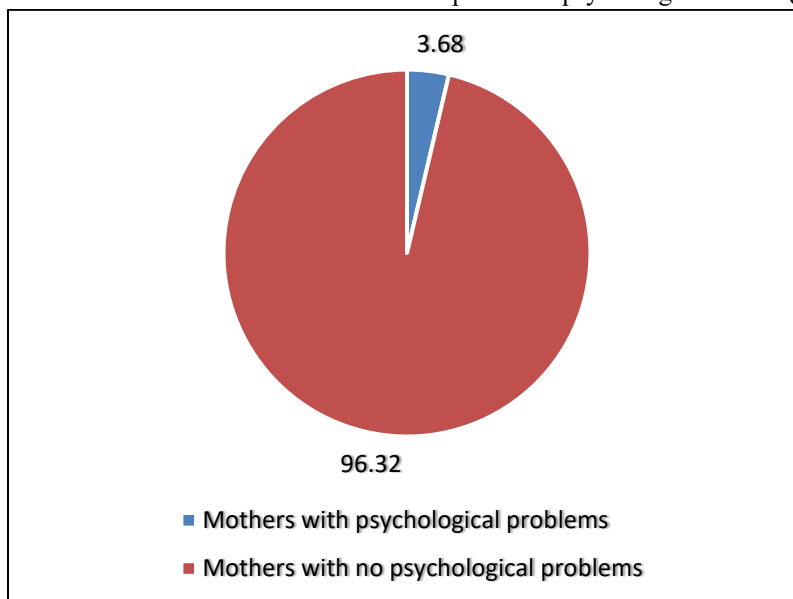


Figure 1. Total enrolled mothers and postpartum psychological problem of mothers (n=7932).

According to DSM-5 criteria, 292 mothers having postpartum psychological problems, who were further evaluated. The study revealed the following distribution: Baby blues were experienced by 98 (1.24%) mothers, postpartum depression (PPD) was identified in 161 (2.03%)

mothers, and postpartum psychosis was observed in 16 (0.20%) mothers and 17 (0.21%) mothers were found to have no psychological issues who were screened positive initially (**Figure 2**).

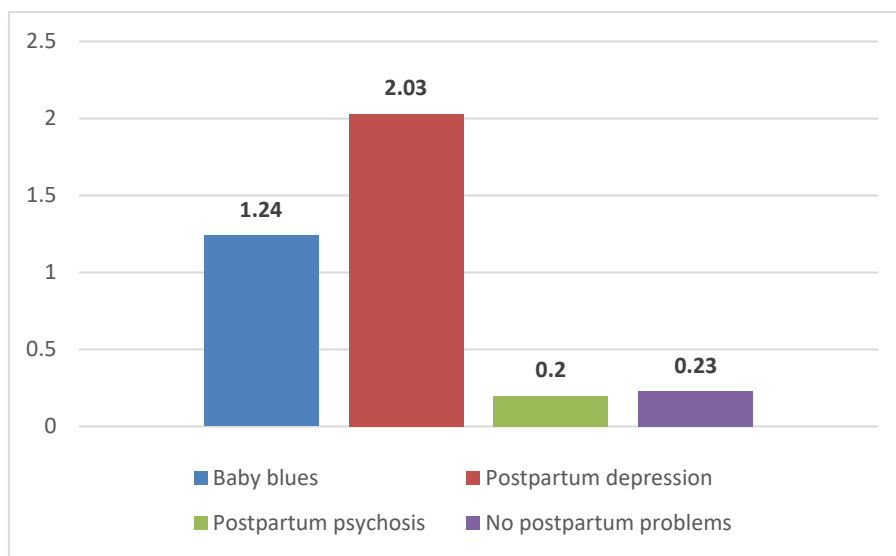


Figure 2. Classification of mothers with psychological problems and with no psychological problem(n=292).

Baseline Characteristics of 292 mothers are plotted below **Table 1**. They were grouped by age into three, 49 (42.81%) mothers belonged to 18-24 years, 125(42.81%) mothers to 25-35 years and 118(40.41) mother in 36-50 years. Majority of the mother belonged to 25-35 years of age (**Figure 3**). There was a striking feature that educational qualification

levels showed that all mothers were educated, with 98(33.56%) holding undergraduate degrees, graduate 83(28.42%), post graduate 66(22.60%) and 45(15.41%) mothers have PhDs (**Figure 4**). Professional status indicated that more than half of mothers 154(52.74%) were employed, while 138(47.26%) were housewives (**Figure 5**).

Table 1. Baseline Characteristics of Mothers.

Characteristics	N (292)	Percent (%)
Age of pregnancy (years)		
18-24	49	16.78
25-35	125	42.81
36-50	118	40.41
Education of mothers		
Educated	292	100
Qualification status		
Under graduate	98	33.56
Graduate	83	28.42
Post graduate	66	22.60
PhD	45	15.41
Employment status		
Working	154	52.74
Housewives	138	47.26
Socioeconomic status		
Middle income group	21	7.19
Upper middle- i n c o m e group	124	42.47
High income group	147	50.34
Psychological problems		
Antenatal	167	57.19
Postnatal	125	42.81
Pregnancy plan		
Planned	135	46.23
Unplanned	157	53.77
Number of Children		
One	143	48.97
Two	80	27.40
Three or more	69	23.77

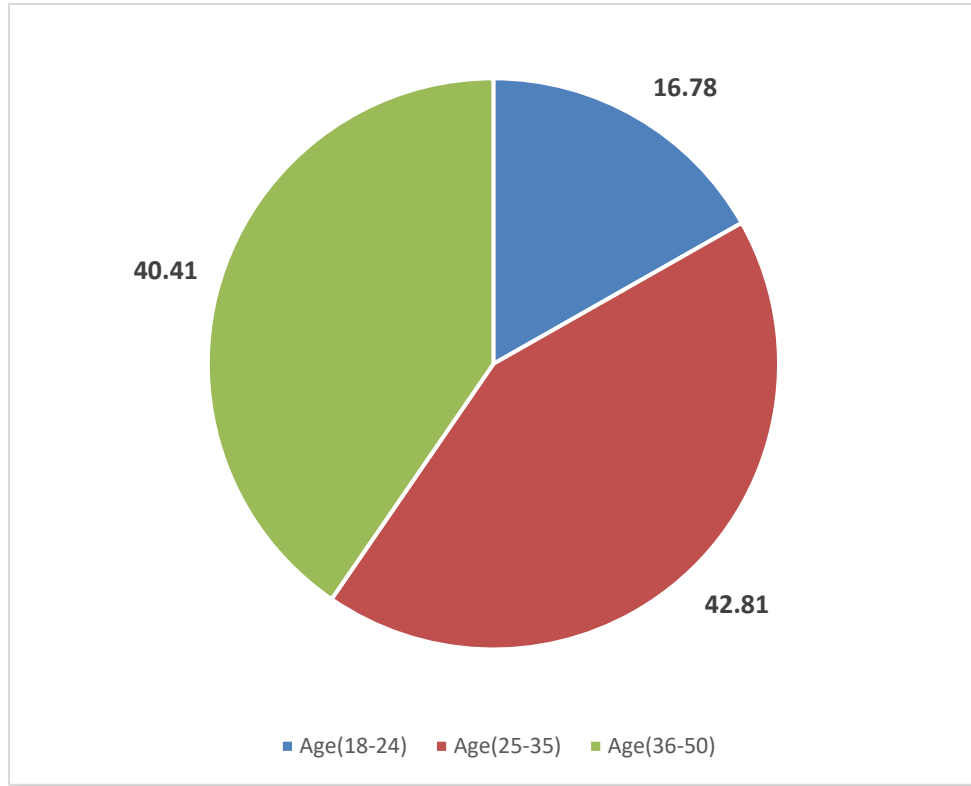


Figure 3. Age distribution of mothers (n=292).

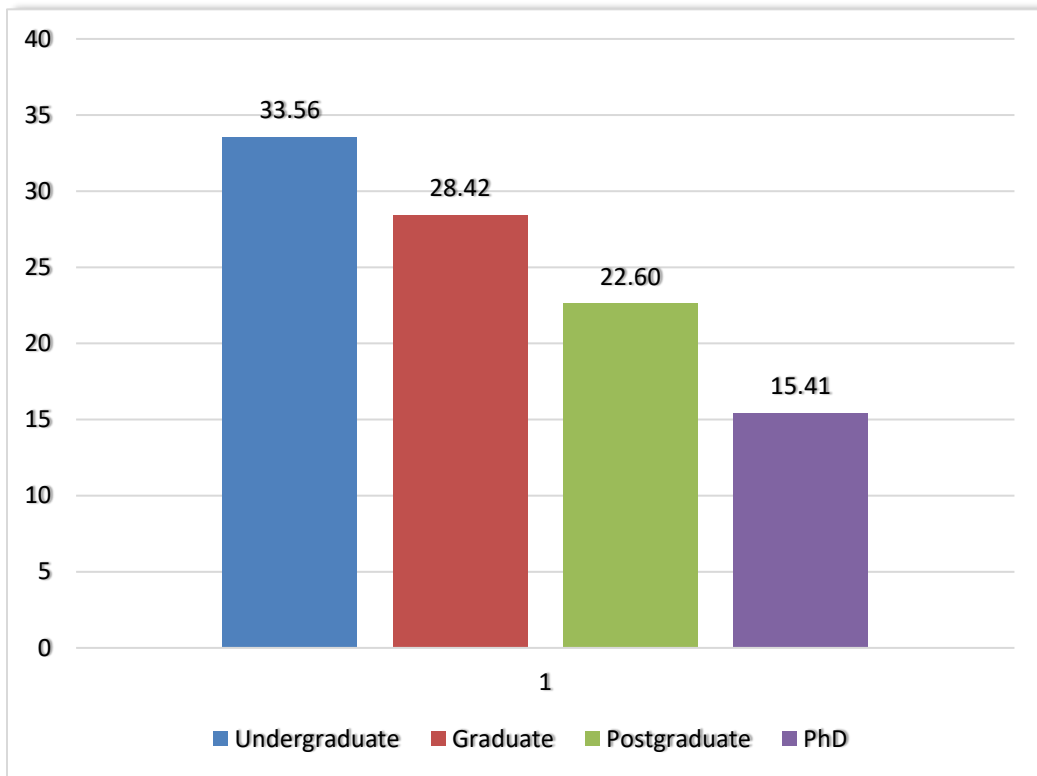


Figure 4. Educational qualification of mothers (n=292).

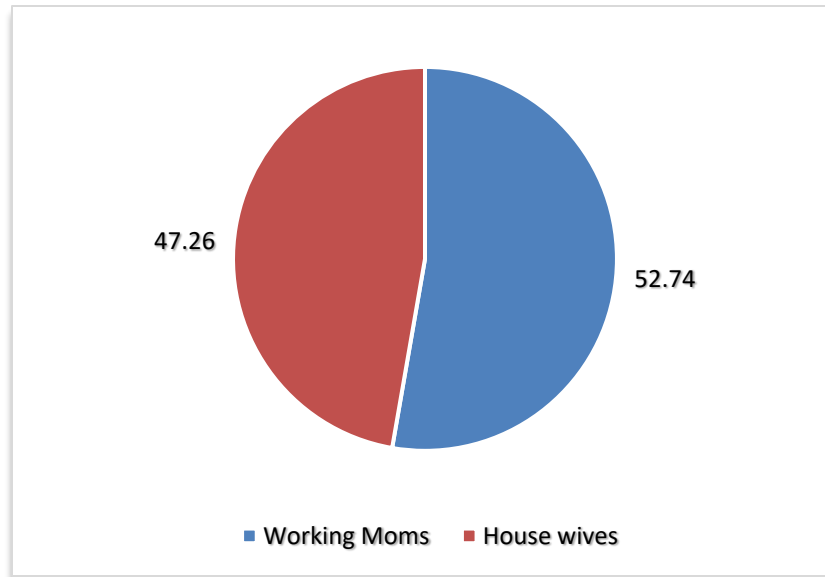


Figure 5. Employment status of mothers (n-292).

The distribution of children indicated that most mothers had one child 143(48.97%), two children among 80(27.40%) and three or more children among 69(23.77%) mothers (Figure 6). Psychological problems observed more in mothers who had one child. Socioeconomic status of the mother was divided in three groups, middle income group

(MI) mothers were 21(7.19%), monthly income in between 20,000- 40,000 BDT, upper middle-income group (UMI) were 124(42.47%), monthly income in between 40,000-60,000 BDT and high-income group (HI) mothers were 147(50.34%), monthly income more than 60,000 in BDT respectively.

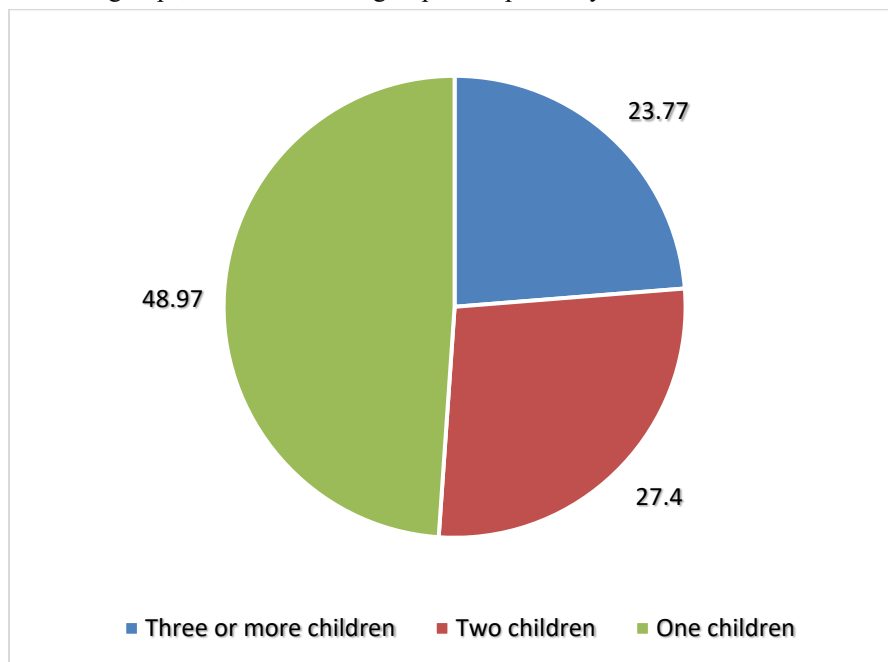


Figure 6. Number of children of mothers (n-292).

One important finding from the medical history was that psychological problems were more prevalent during the antenatal period, with 167 (57.19%) mothers, compared to 125 (42.81%) mothers in the postnatal period (Figure 7).

Another significant observation was that psychological problems were more common in mothers with unplanned pregnancies 157 (53.77%) than in those with planned pregnancies 135(46.23%) (Figure 8).

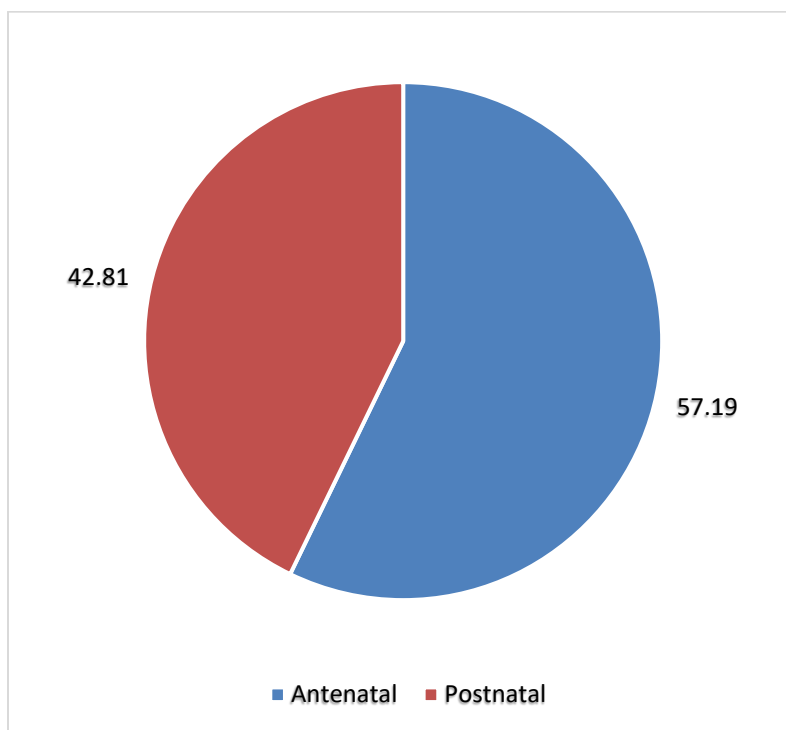


Figure 7. Psychological problems more in antenatal period than postnatal period (n-292).

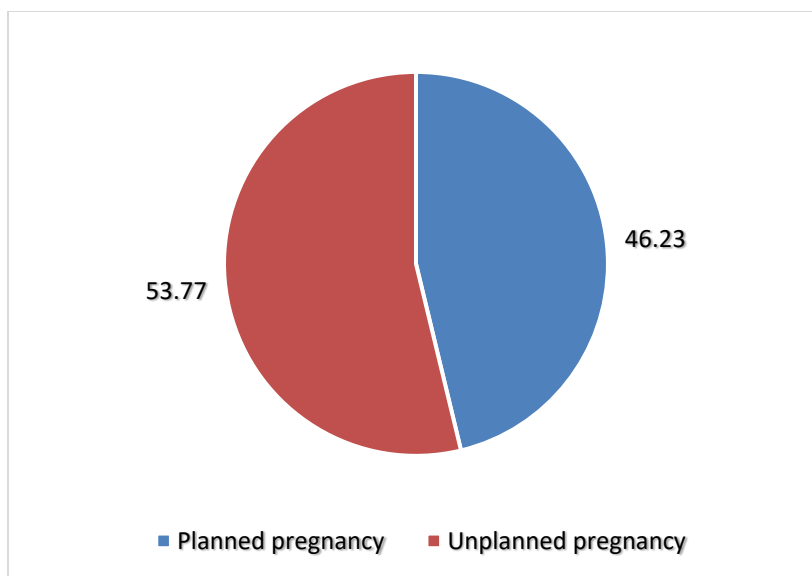


Figure 8. Psychological problems more in unplanned pregnancy than planned pregnancy (n-292).

DISCUSSION

During the antenatal period, expectant mothers often experience shifting anxieties as their pregnancies progress. These emotional shifts are tied to physical changes, concerns about the baby, and fears about childbirth. During first trimester, discomfort arises from early physical changes, fears of miscarriage, and increased irritability. During

second trimester, mother could feel the growing presence of the baby can influence emotions and heighten anxiety and during third trimester, fear of impending childbirth and the uncertainties surrounding delivery dominate [1]. In the postpartum period, around 85% of women experience some form of mood disturbance. While most symptoms are mild and short-lived, 10-15% of women may develop more serious symptoms of depression or anxiety. Postpartum

psychiatric illnesses are classified into three main categories: postpartum blues, postpartum depression (PPD), and postpartum psychosis, representing a spectrum from mild to severe disorders [17-19]. Postpartum baby blues appears up to 85% of mothers within the first few weeks after delivery [20]. Symptoms include sadness, mood swings, tearfulness, anxiety, or irritability. These symptoms typically peak on the 4th or 5th day after delivery and last for a few hours or days, remitting spontaneously within 2-3 weeks. Does not interfere with a woman's ability to function, and no specific treatment is required beyond reassurance [21]. In Bangladesh, the prevalence of psychological conditions during the postpartum period, such as baby blues, postpartum depression (PPD), and postpartum psychosis, mirrors global trends, but it is influenced by local socio-economic factors and healthcare access. Global prevalence of baby blues around 50-75%, and these figures are similar in Bangladesh, particularly in urban areas [22]. In this study, 1.24% of mothers experienced baby blues, which is significantly lower than the general prevalence. This less number may be due to not all suspected mothers with Baby blues were willing to seek psychosocial services due to social stigma and lack of support from family or in-laws except those mothers who were suffering from major depressive illness. Postpartum Depression (PPD) usually emerges within the first 2-3 months postpartum but can appear at any time after delivery. The global prevalence of PPD is 100-150 per 1000 births (10- 15%)²¹. Symptoms include depressed mood, tearfulness, and fatigue, sleep disturbances, feelings of worthlessness, poor concentration, and poor bonding with child. Edinburgh Postnatal Depression Scale is a widely used tool, and a score of 12 or greater or an affirmative answer on question 10 (presence of suicidal thoughts) indicates a need for thorough evaluation [23]. In this study, 2.03% of mothers were diagnosed with PPD and were managed by both psychiatrists and counselors. Postpartum Psychosis is the most severe form of postpartum psychiatric illness, affecting 1-2 per 1000(0.1-0.2%) women after childbirth [23]. In Bangladesh, postpartum psychosis has similar incidence [22]. Onset of symptoms often occurs within the first 48-72 hours postpartum, with most cases emerging within the first two weeks. Early signs include restlessness, irritability, and insomnia, followed by more severe symptoms like disorientation, delusional beliefs, and auditory hallucinations. Postpartum psychosis is associated with a high risk of infanticide and suicide [19,24]. This study found that 0.20% of mothers were diagnosed with postpartum psychosis, which is consistent with the global prevalence. This study revealed more interesting findings like psychological problems more during antenatal period than the post postnatal period, more in unplanned pregnancy than in the planned pregnancy. These problems are more in mothers who had single child. Their education level quite impressive and more than half of the mother were doing job. The mothers who had baby blues were managed by

counseling and reassurance at CDC but Postpartum depression (PPD) and Postpartum Psychosis received psychiatric consultation and counseling. However, the study highlights the importance of mental health screening during both the antenatal and postnatal periods, especially considering the impact of unplanned pregnancies. It also emphasizes the need for continued support for working mothers and the need for interventions in various socioeconomic and educational groups.

RISK FACTORS

Several risk factors contribute to the occurrence of postpartum psychological problems in Bangladesh, often intertwined with the country's socio-cultural context. Mental illness often carries stigma, and a lack of emotional or practical support from family members can worsen the mother's psychological well-being. Women face societal expectations regarding their roles as mothers and caregivers, and failure to meet these expectations can lead to feelings of inadequacy, contributing to mental health issues. Medical complications during pregnancy, childbirth, or the postpartum period also increase the risk of postpartum psychosis. Traumatic or high-risk deliveries, preterm births, or neonatal complications elevate the psychological burden on the mother. Sleep deprivation, which many new mothers face, exacerbates existing mental health issues or triggers new ones, while the physical fatigue of childbirth combined with continuous care for a newborn adds to emotional and psychological strain. Drastic hormonal fluctuations, particularly in estrogen and progesterone after childbirth, are also thought to contribute to postpartum psychosis. Social isolation, especially for new mothers in urban settings or nuclear families, can lead to feelings of helplessness and depression. In traditional Bangladeshi families, insufficient spousal or family support may leave a mother feeling overwhelmed, further contributing to psychosis. Additionally, a family history of psychiatric disorders, especially bipolar disorder or schizophrenia, increases the likelihood of postpartum psychosis.

MANAGEMENT

The management of postpartum depression (PPD) involves a combination of pharmacologic and non-pharmacologic approaches, tailored to the individual's symptoms and needs. The following are some key interventions:

Pharmacologic Treatment:

- **Antidepressants:** Medications such as selective serotonin reuptake inhibitors (SSRIs) are commonly prescribed for PPD. They help to regulate neurotransmitters like serotonin, which play a role in mood stabilization. Antidepressants can be used safely during breastfeeding, but should always be prescribed under medical supervision [25].
- **Hormonal Therapy:** In some cases, hormone therapy,

such as estrogen supplementation, may be considered to counteract the drop-in hormone levels that occurs after childbirth. However, more research is needed to fully understand its efficacy in treating PPD.

Psychological and Therapeutic Interventions:

- **Interpersonal Therapy (IPT):** This therapy focuses on addressing interpersonal issues that may contribute to PPD, such as relationship conflicts, social role transitions, and the stress associated with becoming a mother. IPT has been shown to be effective in treating PPD by helping women develop better communication skills and social support.
- **Cognitive-Behavioral Therapy (CBT):** CBT helps mothers identify and challenge negative thought patterns, which can exacerbate feelings of depression. This therapy is beneficial in providing coping strategies to manage the stress, anxiety, and mood disturbances associated with PPD [26].
- **Psychodynamic Therapy:** This form of therapy aims to address unresolved emotional conflicts that may contribute to PPD, helping mothers understand how their past experiences influence their current emotional state and relationships [27].
- **Couple Counseling:** For mothers experiencing relationship stress, couple counseling can provide a supportive environment to improve communication, share concerns, and work through conflicts. This helps reduce emotional strain and isolation.

Lifestyle and Supportive Interventions:

- **Physical Activity:** Engaging in regular exercise has been shown to reduce symptoms of depression. Physical activity helps boost endorphin levels, which can improve mood and energy levels.
- **Social Support:** Encouraging mothers to talk to close friends and family can alleviate feelings of isolation. Creating a strong support network is crucial in preventing and managing PPD.
- **De-stressing Techniques:** Relaxation techniques such as mindfulness, meditation, and deep-breathing exercises can help reduce anxiety and stress levels. These strategies promote emotional well-being and are useful as part of a holistic approach to managing PPD.

Counseling and Support Groups:

- **Peer Support:** Joining support groups for new mothers can provide emotional support and validation. Sharing experiences with others going through similar challenges can be reassuring and help build coping skills.
- **Professional Counseling:** Regular sessions with a

mental health professional (e.g., psychologist or psychosocial counselor) can offer mothers a safe space to explore their feelings and receive guidance on managing their mental health.

Integrated Care Models:

- In many cases, a multidisciplinary approach involving pediatricians, obstetricians, psychiatrists, and therapists may be ideal to ensure comprehensive care for both mother and child.

So, in summary, while medications such as antidepressants can be crucial for treating PPD, non-pharmacologic treatments, especially various forms of psychotherapy are highly effective. A combination of counseling, lifestyle changes, and social support plays a central role in the management of PPD. Integrating these interventions based on individual needs can lead to a successful recovery and improved mental health outcomes for new mother [28].

CONCLUSION

Pregnancy is often seen as a joyful time, but it can also bring emotional and psychological challenges. Prioritizing maternal mental health from conception through the postpartum period is crucial for the well-being of both the mother and the baby.

Comprehensive care should include mental health screenings, support systems, and education for mothers and their families, especially partners, to ensure that they understand the significance of maternal mental health. This open communication allows families to recognize early signs of distress and seek appropriate help. Timely and effective management of these issues can prevent long-term complications for both mother and baby. By addressing the emotional and mental well-being of mothers, we not only enhance their overall health but also promote healthy child development.

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