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## Psychiatric Morbidity during pregnancy and postpartum

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### Abstract

Pregnancy and childbirth are very important events in the life of women and family. Pregnant women undergo marked biological, physical and psychosocial changes during the course of pregnancy to child birth to preparation of motherhood. Several studies indicates that women are particularly vulnerable to psychiatric morbidity during pregnancy and postpartum period especially anxiety disorder, depression, bipolar disorder and other mental illness. In this review paper, an attempt has been made to examine the prevalence and correlates of psychiatric morbidity among women at pregnancy and postpartum period.

**Keywords:** Psychiatric illness, Pregnancy, Postpartum.

### INTRODUCTION

The first clinical description of postpartum mental illness was written in the 4<sup>th</sup> century BC by hypocrates. In the third book of the epidemics, he cited the case of women who gave birth to twins, experienced severe insomnia and restlessness on the sixth day post partum, became delirious on the eleventh day followed by comatose and died on the seventeenth day. Hypocrates speculated two possible hypotheses as a cause of postpartum mental illness. (a) The lochial discharge, when suppressed could be carried towards the head and result in agitation, delirium and mania. (b) When blood collects at the breasts of women, it indicates madness. The 19<sup>th</sup> Century brought a revival of interest in the postpartum psychiatric problems. Esquirol's work "Des maladies mentales" published in 1938 discusses 92 cases of postpartum psychiatric illness wherein he suggested several causative factors such as hereditary, extreme susceptibility, previous attacks after child birth, emotional instability and traumatic events. Recommended treatment included careful nursing, tepid baths, and purgatives. Esquirol's highly pertinent observations included incidence of psychiatric illness following child birth was much greater than the statistic from psychiatric hospital would indicate, and large number of mild to moderate cases were cared for at home and never recorded. The most outstanding contribution to the literature of psychiatric problems associated with child bearing was Marce's book "trait's de la folie des femmes' enceintes" published in 1858 where he reported 310 cases of mental illness associated with child bearings. On careful analysis, it was observed that 27 ( 9%) began during pregnancy, 180 ( 58%) developed during the puerperal period ( first six weeks ) and 103 (33%) developed after 6 weeks. <sup>[1]</sup>

As compared to postpartum period, there are less studies pertaining to prevalence of psychiatric problems of pregnant women in the available literatures. On the etiology two trends of options can be made. The first trend is that pregnancy is a significant event in the natural history of mental breakdown either through physical factors or psychological factors. The physical factors contributing to this are infection, toxemia, hemorrhage, hormonal disturbances and the psychological factors, unhappy marriage, unwanted pregnancy, recent stress etc. Levy found that anemia, undernourishment and exhaustion, either through difficult labour or prolong stress are important vulnerability factors in the causation of psychiatric morbidity during pregnancy and immediate postpartum. <sup>[2]</sup> Cox JL et al stated that almost 10% of women have a depressive illness in the puerperium. <sup>[3]</sup> Mc Neil TF et al reported that women often report increased emotional lability, sensitivity, anxiety, moodiness and depression during pregnancy. <sup>[4]</sup> A number of studies concluded that the presence of psychiatric symptoms during pregnancy is strongly related to a history of mental disturbances prior to pregnancy and that the stress of mental disturbances prior to pregnancy tends to aggravate existing neurotic symptoms. Approximately 16% of women experienced

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depressed mood in the postpartum period and 25% reported depressed mood only during pregnancy in the study conducted by Costa Da D et al.<sup>[5]</sup> Depressed women tend to report more emotional copying and higher trait and state anxiety scores. Consistent with the literature, the best predictor of postpartum depression was depressed mood during pregnancy.

Large scale epidemiology studies have shown that the incidence of mental illness rises dramatically in the month after child birth.<sup>[6]</sup> Increased risk continues for months to a year with highest risk between 7-10 days. There is an interval of at least of few days between delivery and the onset of psychiatric disorder but symptoms are never noted before the 3<sup>rd</sup> day postpartum. However, Paffenbarger noted that 16 out of his 95 patients had symptoms on the first day of the puerperium. However the risk is least in the pregnant state compared to other periods, more especially in the second trimester of pregnancy. Postpartum psychiatric disorders are classified into three categories postpartum blue, postpartum depression and postpartum psychosis. Postpartum blues is a common phenomenon with prevalence rates ranging between 50-80%<sup>[7]</sup> Pakkel ES et al reported 20% prevalence of mild clinical depression with strong association with recent of occurrence of stressful events, previous history of psychiatric disorder, age, early postpartum blues, poor marital relationship, absence of social support. Poor marital support acted as a vulnerability factor, only producing an effect in presence of stressful life events. Previous psychiatric history produced a strong independent effect, both with or without life events postpartum blues were associated with depression in the absence of life events, suggesting small hormonal subgroups.<sup>[8]</sup> Dean and kendell used cross matched obstetric and psychiatric admission records to obtain a representative sample of puerperal illness. They found that manic and schizomanic illness was unusually common and characteristically occurs within 6=7 days of delivery. Majority had affective illnesses and puerperal depressive were noted to be more deluded, hallucinated, agitated, and labile and disorganized. Only one case was diagnosed as schizophrenia among 71 patients.<sup>[9]</sup> Watson JP et al interviewed 128 women regularly during pregnancy and the first postnatal period. Psychiatric interviews identified eight cases of psychiatric disorder (6%) in early pregnancy and 20 cases of psychiatric disorder (16%) at six weeks after birth. Postnatal depression is considered in terms of the disorder in the 29 women (23%) who had episodes of affective disorder at some time during pregnancy and the postnatal period. They found that the majority of episodes of affective disorder could be understood in terms of previous psychiatric history or reaction to events including the stress of child birth.<sup>[10]</sup>

Kumar R and Robertson K observed that incidence of depressive neurosis rose significantly in early pregnancy and in the 1<sup>st</sup> three months after delivery (10% and 14%). Marital conflicts and severe doubts about having the baby were associated with depression at either time. Depressed mothers were more likely to express negative or mixed feelings about their three months old babies. Many who had become depressed for the first time in their lives continued to experience psychological problems for upto to four years after child birth.<sup>[11]</sup> Levy V et al reported that the maternity blues is a poorly defined but common condition occurring in 50-70% of women in the early puerperium. The condition is characterized by crying, feelings of depression and despondency, confusion, anxiety, and insomnia. The cause of this dysphoria is unknown but it has been suggested that the rapid fall in sex hormones could be responsible.<sup>[12]</sup> Harris B et al observed dramatic changes in steroid and prolactin levels in the postpartum period. In an attempt to correlate these events 147 mothers completed standard psychological tests, including the Edinburg Montgomery Asberg and Ruskin scales between 6-8 weeks after delivery. They also provided matched samples of plasma for assay of cortisol, oestradiol, progesterone and prolactin and saliva of cortisol and progesterone. All steroids concentration was within appropriate normal ranges but 14.9% were depressed on all the three scales. In

bottle feeders, salivary progesterone was positively associated with depression, whereas in the breast feeders it was negatively associated. These data indicate that different therapies may be appropriate for depression in breast and bottle feeders.<sup>[12]</sup> Patricia H et al classified postnatal mental disturbances in three categories-the blues, postnatal depression and postnatal psychosis. During the first few days after delivery, about 50% of women experience the blues; a period of tearfulness, emotional lability, and confusion the long lasting and more severe postnatal depression follows approximately one in ten births. There is growing evidence of the blues among women who late suffer from postpartum depression.<sup>[13]</sup>

Aderibigbe YA et al evaluated 162 women for psychiatric morbidity in the 2<sup>nd</sup> trimester of pregnancy and between 6-8 weeks postnatal. Assessments were conducted with the 28 items Goldberg health questionnaire (GHQ). Thirty percent of women were cases at first prenatal assessment, while only 14% were cases at 6-8 weeks postnatal. The observation was reinforced by the low correlation between mean GHQ scores at both periods. Both prenatal and postnatal morbidities were associated with recent adverse life events, with the latter more likely to be associated with marital and family events.<sup>[14]</sup> Declan M et al interviewed 232 women six months after delivery using the EPDS and Goldberg's Standardized psychiatric Interview with control women individually matched for age, marital status and number of children, obtained from general practitioner's list that were not pregnant, nor had baby in the previous 12 months. No significant difference in the point prevalence of depression at six months was found between the postnatal (9.1%) and control women (8.2%) or in six month period prevalence between (13.8%) postnatal, and (13.4%) controls but a threefold higher rate of onset of depression was found within 5 weeks of childbirth.<sup>[15]</sup>

Harris B et al reported that the maternity blues refers to the tearfulness, irritability, hypochondriacs, and sleeplessness, impairment of concentration and headache that occurs in the 10 days postpartum. A peak in symptoms occurs around the 4-5 day after delivery coinciding with maximal hormonal changes. These include falling concentration of progesterone, oestradiol and cortisol and rising prolactin. Such hormonal changes may have casual relation to blues. During pregnancy, progesterone concentrations slowly rise to maximum at term, when they are several hundred times higher than normal. After delivery with abrupt withdrawal of the placenta, there is a precipitate drop in progesterone concentration. Cortisol concentration also rises during pregnancy to several times their normal values. They rise further during the stress of labor and then slowly return to normal within 15 days of delivery.<sup>[16]</sup> Augusto A et al stated that two factors were found significantly to contribute to higher depression scores: women with more children and those from lower socioeconomic groups were most at risk. They have also hypothesized underlying depression might be due to the problem in early childhood relationships, lack of current supportive relationship, marital difficulties, social adversity and life stress are among the most commonly cited precursors.<sup>[17]</sup>

Louis A et al concluded that although postnatal women as a whole appear to have a low rate of suicide, severe postpartum psychiatric disorder is associated with high rate of deaths from natural and unnatural causes, particularly suicide. The risk is high in the first postnatal year. The risk of suicide in postnatal women is low and those suicides that occur appear to be associated with severe psychiatric illness.<sup>[18]</sup> Kay DJ et al have described that the thoughts of harming the infant are common in depressed mothers. Demographic variables, psychosocial stressors and psychiatric variables do not help predict which mothers are likely to experience thoughts of harming or fear of being alone with the infant.<sup>[19]</sup> Vikram P et al prospectively study 252 postnatal mothers with 93% of them reexamined at 6-8 weeks after childbirth. Postnatal depression was observed in 59(23%) mothers with only 11(22%) had depression that arose in the puerperium.<sup>[20]</sup>

Sutter Dally et al suggested that women with anxiety are at greater risk of postnatal depression. On the study of 497 pregnant women attending a state maternity hospital, psychiatric status was assessed during 3<sup>rd</sup> trimester using a structured diagnostic interview. They found out that one out of four women had anxiety (24%) and Depression (6%).<sup>[21]</sup> Rubinchik SM *et al* have found out that approximately 30% of women experience some type of anxiety disorder during their lifetime.<sup>[22]</sup>

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## CONCLUSION

The review of literature reveals that conflicting opinions are expressed regarding psychiatric aspects of motherhood in respect of incidence, nosology, etiology, prognosis and management. This has been attributed to the differences in types of studies, selection of patients, study design, and social customs of the community. However, studies indicate that psychiatric morbidity especially postpartum blues, anxiety and clinical depression are common during pregnancy and postpartum period.

## Conflict of interest

The authors declare that they have no conflict of interest.

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