Section: Obstetrics & Gynecology

Original Research Article

# A PROSPECTIVE STUDY ON PREVALENCE, RISK FACTORS OF POSTPARTUM PSYCHIATRIC DISORDERS AND THEIR OUTCOME AMONG POSTPARTUM MOTHERS IN SEMI-URBAN POPULATION AT VILLUPURAM

**V.Sangeetha[1], V. Chitradevi[1], Keerthanaa[2]**

[1]Associate Professor, Government Villupuram Medical College and Hospital Villupuram, Tamilnadu, India.
[2]Junior Resident, Government Villupuram Medical College and Hospital, Villupuram, Tamilnadu, India.

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Corresponding Author:
**Dr. V Chitra Devi ,**
Email: chitraramdoss2010@gmail.com

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## Abstract

**Background:** Aim of the study is to determine prevalence of postpartum blues, depression, psychosis among postpartum mothers presenting to postnatal clinic with objective to determine risk factors for postpartum psychiatric disorders and study the clinical and demographical profile of patients with postpartum psychiatric disorders. **Materials and Methods:** Postpartum mothers presenting to postnatal clinic will be selected randomly after satisfying inclusion and exclusion criteria. A detailed history taking and examination will be done. After consent they will be screened for postpartum psychiatric disorders using EDPS questionnaire. Data will be collected and analysed. **Result:** We noted that three of the most prevalent psychiatric disorders in postpartum period are postpartum blues, postpartum depression and psychosis in our study. The interventions include pharmacological interventions, supportive interpersonal and cognitive therapy, psychosocial support through support groups and complementary therapies. **Conclusion:** Stressful life events, childcare stress and prenatal anxiety are the predisposing factors for developing PPD. Therefore we recommend that for both mother and child to be healthy, postpartum mental illness in women must be recognized and treated promptly.

## INTRODUCTION

Maternal death represents a small portion of the overall burden of poor maternal health and is a tragic but uncommon occurrence. The health issues that women experience throughout pregnancy, childbirth, and the postpartum period—maternal morbidity also significantly add to this burden. The Sustainable Development Goals (SDGs) and the Global Strategy for Women's, Children's, and Adolescent Health both set forth health and development objectives that must be met, and measuring the burden of pregnancy and related postpartum morbidity is essential to accomplishing these objectives.[1,2]

The worldwide burden of disease is significantly influenced by mental health. According to WHO estimates, mental and behavioral illnesses cost the world's population 64 million Disability Adjusted Life Years (DALYs) between 2000 and 2012 for women of reproductive age (15-49). It also seems as though this responsibility is getting heavier over time. As a percentage of DALYs from all causes, mental and behavioral illnesses rose from 5.9% to 7.3% between 2000 and 2012.[3]

Women experience psychological anguish and psychiatric disorders in different ways than males do. Men have greater mean levels of externalizing disorders than women do, with internalizing illnesses being more prevalent in women. Women from the middle class traditionally take on household duties with a focus on child care.

Due to financial constraints poorer women look for work outside the home. However, because the jobs that are available to them pay less than those that are, exploitation occurs. Gradually, more respectable office positions with higher education requirements have become more readily available. Therefore, despite the fact that more women across all socioeconomic strata work outside the home, this does not appreciably change their social status or relieve them of their domestic responsibilities. In instance, there are gender variations in the prevalence of common mental diseases, where women predominate. In comparison to boys or men, girls and


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women are disproportionately affected across all regions; women experience depression at a rate that is around twice that of men. Hence, this calls for a consistent effort which can enhance the lives of Indian women and their mental health by bringing about change on social, political, economic, and legal levels.[4,5]

Women's DALYs are most prevalent during critical reproductive years. These results underline the significance of taking perinatal (i.e., the period right before and after birth) psychiatric illness into account. An average of 10% of expectant mothers and 13% of new mothers suffer from a mental illness, most frequently sadness or anxiety.[6-8]

Postnatal depression can decrease a mother's quality of life, her ability to work, and the expense of the healthcare system. Women who have postpartum depression run the risk of experiencing back discomfort, insomnia, suicidal thoughts, and bad parenting habits. Breastfeeding initiation and efficient use of available medical resources are both impacted by postnatal depression. This may result in malnutrition, reduced immune systems, and increased susceptibility to infections such diarrhea, pneumonia, measles, and other disorders common in children. To stop the onset and following effects of PND, it is essential to identify women who may be at risk.[8-11]

The severity and duration of the maternal mental disorder are two elements that may have a significant role in determining the outcomes of children when there is mother depression, however there is a dearth of information specifically for PND.[12-14]

According to Petterson and Albers, in a sample of children under the age of five, those who had experienced persistent mother depression scored worse on cognitive tests than non-exposed children (a decrement of 0.47 SDs for girls and 0.36 for boys). The Sequenced Treatment Alternatives to Relieve Depression (STAR*D) Child studies, which looked at depression in mothers of school-aged children, revealed that the risk of offspring depression increased noticeably with both the intensity and duration of maternal depression after the perinatal period.[15]

Also, Women who suffered from PND reported having lower-quality relationships with their children, even those who are now adults, and that the more severe the PND, the worse the relationship quality over time remained. The relationships women had with all of their children were found to be worse in mothers who had depressive symptoms at other times, but PND was found to be particularly harmful to the relationship mothers had with the kid whose birth caused the PND.[16]

This implies that factors that have an impact on mother-child relationships during early infancy may have a lifelong impact on the relationship that develops through time.

PPD is closely associated with adverse consequences for mothers and newborns, including maternal suicide, poor maternal engagement with her child, early weaning, and developmental delays in the child.[17]

Hence, the aim of the study is to determine the prevalence of postpartum blues, postpartum depression and postpartum psychosis among postpartum mothers presenting to obstetrics clinic in GVMCH with the objective to determine risk factors for postpartum psychiatric disorders and study the clinical and demographical profile of patients with postpartum psychiatric disorder.

**Aims and Objectives**

**Aim:**

To determine the prevalence of postpartum blues, postpartum depression and postpartum psychosis among postpartum mothers presenting to obstetrics clinic in GVMCH

**Objectives:**

**Primary:**

To determine the prevalence of postpartum blues, postpartum depression and postpartum psychosis among postpartum mothers presenting to obstetrics clinic in GVMCH.

**Secondary:**

To determine risk factors for postpartum psychiatric disorders.

To study the clinical and demographical profile of patients with postpartum psychiatric disorders.

## MATERIALS AND METHODS

**Study Centre:** Government Villupuram Medical College, Mundiyampakkam

**Period of the study:** Two years

**Study design:** Prospective observational study

**Inclusion criteria**

- Patients age 18-45 years
- Term pregnancy
- High risk pregnancy (Gestational Diabetes Mellitus, PIH, Multiple gestation)
- Patients giving consent for study

**Exclusion criteria**

- Patients under 18 years of age
- Patients with known psychiatric illness
- Patients with diagnosed fetal anomalies
- Patients with known neurological disorders
- Still birth/ Intra uterine death
- Patients not giving consent for study

**Factors under study**

- Age wise distribution
- Parity wise distribution
- Socioeconomic status
- Booking status of the patient
- Literacy
- Urban rural distribution
- Family history of psychiatric disorders
- Postpartum mental illness in previous pregnancy
- Unplanned/ unintended pregnancy wise distribution
- Pregnancy complication wise distribution


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- Associated risk factors (GDM, PIH, Anemia, heart diseases)
- Maternal and postnatal outcome

**Methodology:**

Postpartum mothers presenting to obstetric clinic were selected randomly after satisfying inclusion and exclusion criteria.

A detailed history taking and examination were done. After consent, they were screened for postpartum psychiatric disorders using EPDS questionnaire. Data was collected and analyzed.

The Edinburgh Postnatal Depression Scale (EPDS) was employed to evaluate the severity of the depression. The most popular and culturally accepted instrument is EPDS. It comprise Of 10 self-administered questions about the mother's emotions over the previous seven days. The best cut-off scores for likely depression were EPDS scores of more than 12, according to validated research.

Scores of 0–9 show no chance of experiencing PND symptoms, 10–12 suggest minor/major risk of experiencing PND symptoms (possible depression), while 13 or above indicate a significant risk of experiencing PND symptoms in the examined group (probable depression).

Using SPSS, all data analysis was done (20.0). The missing data were handled by doing multiple imputations. The association between each variable and the result (EPDS scores at two weeks and eight weeks) was determined using a negative binomial regression model. A p value of 0.05 was regarded as statistically significant, and the adjusted odds ratio (OR) and 95% confidence interval (95% CI) were both provided.

## RESULTS

About 61% were in the age group of 21 to 30 years. About 24% were in the age of 31 to 40 years. Only 15%were in the age of less than 20 years. Mean age is 24.86 and standard deviation is 3.2.

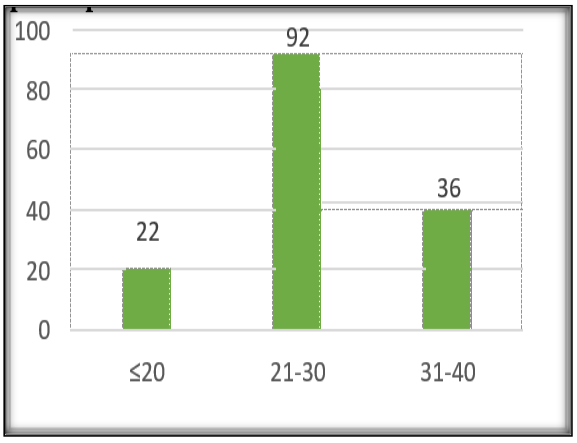


**Figure 1: Age wise distribution of study participants**

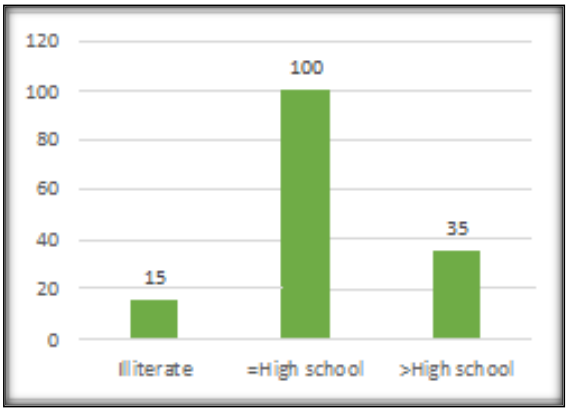


**Figure2: Educational status among study participants**

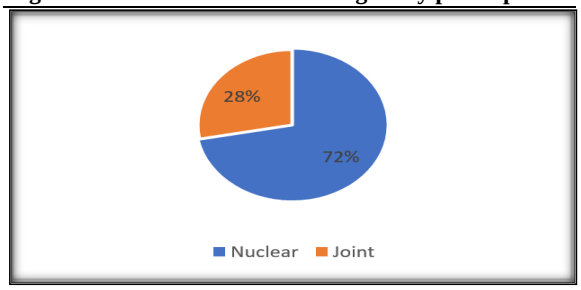


**Figure 3: Type of family of study participants**

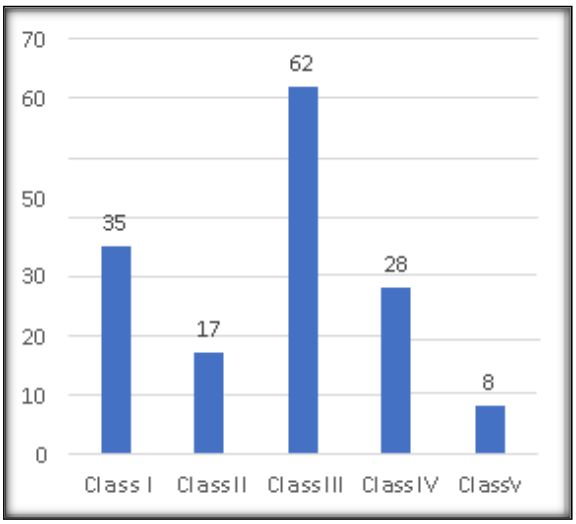


**Figure 4: Socioeconomic status of study participants**

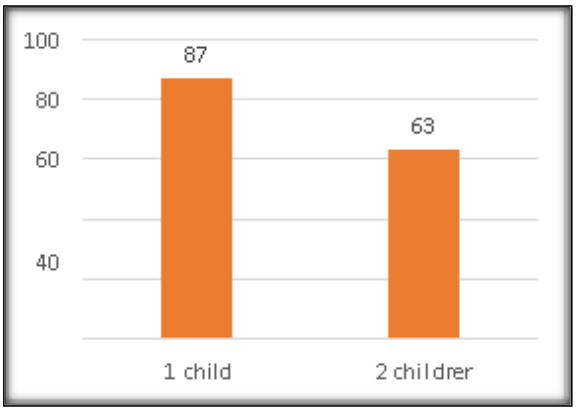


**Figure 5: No of children for study participants**


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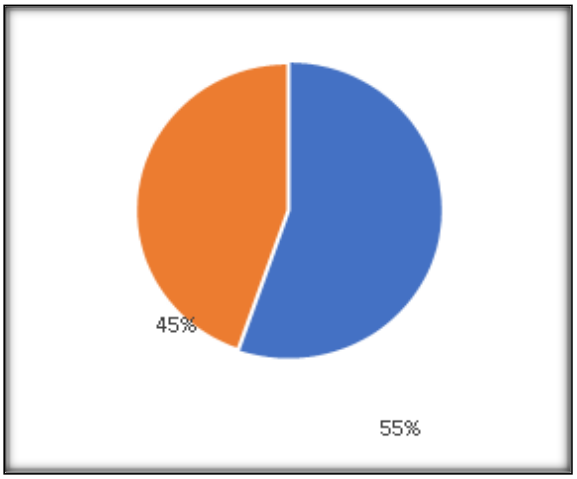


**Figure 6: Mode of delivery of study participants**

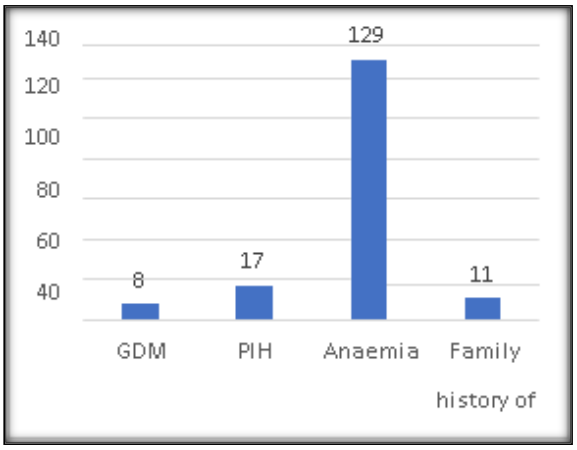


**Figure 7: Maternal risk factors among study participan**

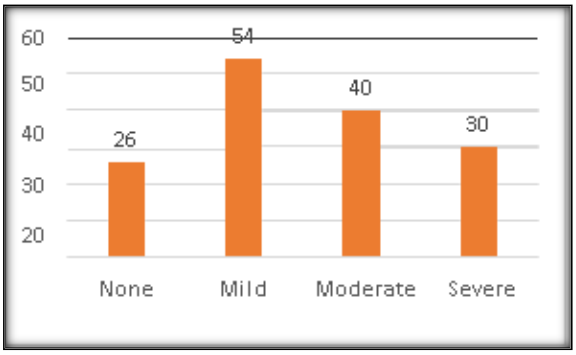


**Figure 8: Prevalence of Postpartum depression among study participants**

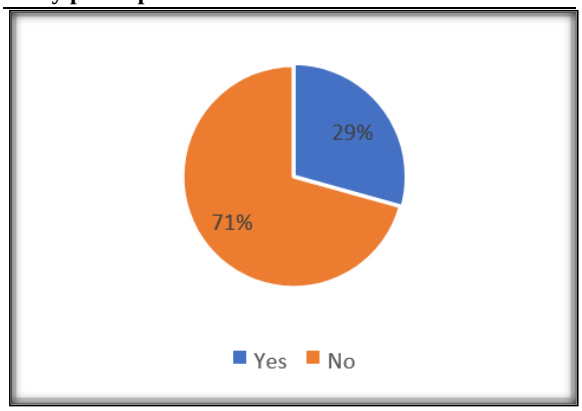


**Figure 9: Prevalence of Postpartum psychosis among study participants**

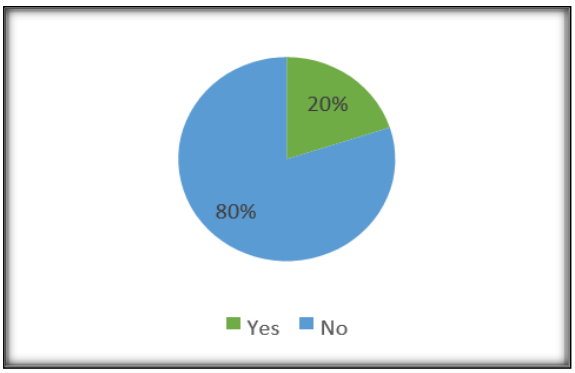


**Figure 10: Prevalence of Postpartum blues among study participants**

**Table 1: Age wise distribution of study participants**

| Age in years | Frequency | Percentage | Mean ±S.D |
|---|---|---|---|
| ≤20 | 22 | 15 | |
| 21-30 | 92 | 61 | 24.86±3.2 |
| 31-40 | 36 | 24 | |
| Total | 150 | 100 | |

**Table 2: Educational status among study participants**

| Education | Frequency | Percentage |
|---|---|---|
| Illiterate | 15 | 10 |
| ≤High school | 100 | 67 |
| >High school | 35 | 23 |
| Total | 150 | 100 |

**Table 3: Type of family of study participants**

| Type of family | Frequency | Percentage |
|---|---|---|
| Nuclear | 108 | 72 |
| Joint | 42 | 28 |
| Total | 150 | 100 |


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About 72% belonged to nuclear family and 28% belonged to joint family

**Table 4: Socioeconomic status of study participants**

| SES | Frequency | Percentage |
|---|---|---|
| Class I | 35 | 23 |
| Class II | 17 | 11 |
| Class III | 62 | 41 |
| Class IV | 28 | 19 |
| ClassV | 8 | 6 |
| Total | 150 | 100 |

**Table 5: No of children for study participants**

| Number of children | Frequency | Percentage |
|---|---|---|
| 1 | 87 | 58 |
| 2 | 63 | 42 |
| Total | 150 | 100 |

About 58% had one children and 42% had two children.

**Table 6: Mode of delivery of study participants**

| Mode of delivery | Frequency | Percentage |
|---|---|---|
| Normal | 83 | 55 |
| LSCS | 67 | 45 |
| Total | 150 | 100 |

About 55% LSCS.

**Table 7: Maternal risk factors among study participants**

| Risk factors | Frequency | Percentage |
|---|---|---|
| GDM | 8 | 5 |
| PIH | 17 | 11 |
| Anaemia | 129 | 86 |
| Family history of depression | 11 | 7 |

**Table 8: Prevalence of Postpartum depression among study participants**

| Eds score | Interpretation | Frequency | Percentage |
|---|---|---|---|
| 0 to 6 | None | 26 | 17 |
| 7 to 13 | Mild depression | 54 | 36 |
| 14 to 19 | Moderate depression | 40 | 27 |
| 20 to 30 | Severe depression | 30 | 20 |
| Total | | | |

In the present study 36% had mild depression, 27% had moderate depression and 20% had severe depression.

**Table 9: Prevalence of Postpartum psychosis among study participants**

| Postpartum psychosis | Frequency | Percentage |
|---|---|---|
| Yes | 44 | 29 |
| No | 106 | 71 |
| Total | 150 | 100 |

About 29% had postpartum psychosis

**Table 9a: Postpartum psychosis based on brief psychiatric rating scale**

| Score | Interpretation | Frequency | Percentage |
|---|---|---|---|
| 1 | Not present | 106 | 71 |
| >1 | Present | 44 | 29 |
| Total | | 150 | 100 |

**Table 10: Prevalence of Postpartum blues among study participants**

| Postpartum blues | Frequency | Percentage |
|---|---|---|
| Yes | 30 | 20 |
| No | 120 | 80 |
| Total | 150 | 100 |

**Table 10a: Postpartum blues based on mood disorder questionnaire**

| MDQ | Frequency | Percentage |
|---|---|---|
| Yes to 3 questions | 30 | 20 |
| No to 3 questions | 120 | 80 |
| Total | 150 | 100 |


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**Table 11: Association between risk factors and depression**

| Variables | Depression | No depression | Total | P value |
|---|---|---|---|---|
| Age | | | | 0.05 |
| ≤30 years | 100 | 14 | 114 | |
| >30 years | 24 | 12 | 36 | |
| | 124 | 26 | 150 | |
| Type of family | | | | |
| Nuclear | 84 | 24 | 108 | 0.87 |
| Joint | 40 | 2 | 42 | |
| | 124 | 26 | 150 | |
| Educational status | | | | |
| Illiterate | 8 | 7 | 15 | 0.76 |
| Literate | 116 | 19 | 135 | |
| Total | 124 | 26 | 150 | |
| Maternal risk factors | | | | |
| Present | 118 | 18 | 136 | 0.04 |
| Absent | 6 | 8 | 14 | |
| Total | 124 | 26 | 150 | |
| Family history | | | | |
| Present | 9 | 2 | 11 | 0.05 |
| Absent | 115 | 24 | 139 | |
| Total | 124 | 26 | 150 | |

There is statistically significant association between age, maternal risk factors, family history and depression (P<0.05)

## DISCUSSION

Postpartum depression is a debilitating mental disorder with a prevalence between 5% and 60.8% worldwide.[18] The intensity of feeling inability in suffering mothers is so high that some mothers with postpartum depression comment life as the death swamp while nondepressed mothers see their baby's birth as the happiest stage of their life.[19,20] The disease manifests as sleep disorders, mood swings, changes in appetite, fear of injury, serious concerns about the baby, much sadness and crying, sense of doubt, difficulty in concentrating, lack of interest in daily activities, thoughts of death and suicide.[21,22]

Postpartum depression (PPD) is a mood disorder that affects approximately 10–15% of adult mothers yearly with depressive symptoms lasting more than 6 months among 25–50% of those affected Postpartum depression often occurs within a few months to a year after birth. However, some studies have reported the occurrence of postpartum depression 4 years after birth. Causes of PPD may be physiological, situational, or multifactorial.[23]

Major predisposing factors for developing PPD are social in nature usually stressful life events, childcare stress, and prenatal anxiety appears to have predictive value for PPD. In addition, a history of the previous episode of PPD marital conflict, and single parenthood are also predictive. It was believed for a long time that only women from western societies suffered from PPD and that postnatal mood disorders were defined by culture. However, conditions with similar symptoms have also been identified in other countries Some studies have found the same prevalence of PPD in different societies.[24,25]

Feelings of hopelessness in severe cases of illness can threaten life and lead to suicide; it is a factor that causes 20% of maternal deaths in the course after giving birth. In addition, issues such as fear of harming the baby (36%), weak attachment to the baby (34%) and even, in extreme cases, child suicide attempts have been reported.[26] These symptoms have serious effects on family health.[27] Therefore, susceptible people need to be identified before delivery to receive proper care measures. However, the development of screening programs as well as designing evidence-based prevention programs requires principled collection of scientific documentations. However, systematic reviews were seen in the review of some available studies that have assessed the resources in explaining the therapeutic effects of selective serotonin reuptake inhibitors on postpartum depression and cognitive behavioral therapies.[28,29] Review studies seem to be inadequate, which evaluate the social factors besides addressing biological and psychological factors, while for achieving sufficient knowledge to design screening and preventing programs, all the factors associated with postpartum depression need be evaluated together. Thus, this study aimed to evaluate risk factors for postpartum depression during pregnancy and afterward.

## CONCLUSION

**Prevention**

The role of antenatal counselling is to provide primary intervention whenever possible to assist in the normal development and functioning of people in the least invasive manner. Prevention also applies to counselling activities that remove barrier to services thus preventing worsened outcome. Psychoeducation and counselling aimed at modifying the patient's negative expectations of the entire process from pregnancy through early infant care and negative self-statements regarding the patient's capacity can assist in prevention of postpartum psychiatric disorders. Assisting the patient and father of the baby


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to increase communication skills, negotiating tasks of child care and household management and revamping role assignments to fit the couple's specific situation and increase problem solving skills can all serve as means of reducing stress. Family members should take part and make them involve in care antenatally, intrapartum and postnatally not only physically, psychologically and encourage them with positive energy, cognition skills and health care.

**Conclusion**

Prevalence of PPD has been difficult to determine because of several factors. We noted that three of the most prevalent psychiatric diseases in the postpartum period are postpartum blues, postpartum depression, and postpartum psychosis in our study. The interventions for PPD include pharmacologic interventions, supportive interpersonal and cognitive therapy, psychosocial support through support groups, and complementary therapies. This study found that postpartum depression was prevalent among mothers who were within 12 months after delivery though at a lower rate. Some of the respondents had minimal depression, moderate depression, and mild depression, as well as moderately severe depression, and extremely severe depression. The major predisposing factors for developing PPD are stressful life events, childcare stress, and prenatal anxiety, as well as the history of the previous episode of PPD. Therefore, we recommend that for both mother and child to be healthy, postpartum mental illness in women must be recognised and treated

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