

Patterns of Presentation of Psychiatric Disorders During Pregnancy and Postpartum Period in a Tertiary Care Center- A 5 Years Retrospective Study

Dr. Ashwini Padmashali^{1*}

ABSTRACT

Introduction: Postpartum psychiatric disorders are a common cause of morbidity and distress affecting the lives of significant number of women. **Materials And Methods:** A five-year retrospective chart review was carried out in the psychiatry department of a tertiary care hospital in Northern Karnataka from 2014-2018 to determine the patterns of presentations of psychiatric disorders during pregnancy and postpartum period. The data was collected from the records available in the hospital. Information regarding demographic details, Obstetric details, Psychiatric diagnosis and treatment details was recorded. **Results:** During the study period, 74 women were evaluated during pregnancy and postpartum period in the Department of Psychiatry. All these patients were referred from the department of Obstetrics and Gynecology. The study found that Postpartum Depression was the most common diagnosis with 39% followed by Postpartum Psychosis being 28% and 3% patients presented with postpartum Baby Blues. About 9% women had exacerbation of their pre-existing mood disorder, 5.4% have been diagnosed with adjustment disorder and 4.1% women presented with Delirium. Due to infant death because of various reasons, 7% patients presented with a Grief reaction. More than half the women required inpatient care (51%), 12 patients received ECTs. Treatment was predominantly with antipsychotics (51%), antidepressants (50%) and one woman received Lithium during the postpartum period due to the severity of presentation. It was noted that 13.5% women had recurrent mood episodes and 8% had schizophrenia in the next 5 years period. **Conclusion:** Postpartum depression and postpartum psychosis were the cause for psychiatric consultation during pregnancy and postpartum in general hospital setup. About 1/3rd women with postpartum onset psychiatric disorder did have further episodes in the next 5 yrs. Therefore, we need to follow up these patients in the long-term to monitor for recurrent illness in the future.

Keywords: Postpartum, Psychiatric Disorders, Chart Review

Postpartum psychiatric disorders are a common cause of morbidity and distress affecting significant women. The life of a woman during the postpartum period is said to be a demanding period as it is characterized by overwhelming biological, social and emotional changes. Following childbirth mothers are more prone to develop general psychiatric disorders due to both physical and psychological changes that occur in the body

¹Asst Professor, Dept of Psychiatry, USM KLE-IMP, Belagavi

*Corresponding Author

Received: April 29, 2023; Revision Received: August 07, 2023; Accepted: August 11, 2023

Patterns of Presentation of Psychiatric Disorders During Pregnancy and Postpartum Period in a Tertiary Care Center- A 5 Years Retrospective Study

and mind. The most common postpartum psychiatric disorders are maternal blues, postpartum depression and puerperal psychosis.^{1,2} Following delivery a woman has to adjust to changes in her body image, her responsibilities and her relationship with her husband and family members. This transition period is considered to be stressful.^{3,4} The prevalence of postpartum blues is higher and is estimated to range from 50-75% and postpartum depression about 10-13%.⁵ Postpartum psychosis is considered as psychiatric and obstetric emergency and characterized by the presence of delusions, hallucinations, elated or depressed mood, infanticide and suicidal tendencies.⁶ Psychiatric disorders cause significant distress to the infant, patient as well as the caregivers.

There is a great variation in the incidence of postpartum depression depending on the race, region and economic backgrounds. The morbidity during puerperium increases when the women have undergone caesarean section, being underweight, obese or have pelvic floor symptoms. Chen L et al conducted a retrospective study to find the association between preeclampsia postpartum depression. The study found that the prevalence of postpartum depression in women with preeclampsia was two times when compared to women without preeclampsia.⁷ Brown et al conducted a population based retrospective cohort study which found that chronic physical conditions predating pregnancy were at higher risk of developing psychiatric disorders during pregnancy and 1 year after delivery.⁸ A study by Sagayadevan et al, Retrospective observation of mental health disorders during postpartum period concluded women who were married, employed and had no physical comorbidities were less likely to develop psychiatric disorders during postpartum period.⁹

Postpartum psychiatric disorders are considered to have a complex and heterogeneous etiopathogenesis. Di Florio et al study found that patients who suffered from preeclampsia and first onset psychiatric disorders shared similar clinical features.¹⁰ Bergink et al conducted an epidemiological population-based cohort study to investigate the association between preeclampsia and psychiatric disorders in primiparous women. The study found that primiparous women were at high risk and the study also confirmed the link between preeclampsia and onset of psychiatric disorders such as unipolar depression and adjustment disorders.¹¹

The objective of this study was to evaluate the patterns of presentation of psychiatric disorders during pregnancy and postpartum period and the management practices of such patients in a tertiary care center.

MATERIALS AND METHODS

The present study utilized a retrospective chart review design. This study was done in a tertiary care hospital in Northern Karnataka. The study was approved by the Institutional Ethics Committee. Five years retrospective chart review was carried out in the psychiatry department from January 2014 to December 2018 to determine the patterns of presentations of psychiatric disorders during pregnancy and postpartum period. The data was collected from the records of the patient available from the medical records, Department of Psychiatry. Information regarding demographic details, Obstetric details, Psychiatric and Medical Diagnosis and treatment details was recorded. The inclusion criteria for the present study were: All women with history of behavioral changes during pregnancy, postpartum period and Past history of psychiatric disorders and on treatment. The patients with organic causes of behavioral change such as cerebral vein thrombosis, chronic infections were excluded from the study.

Patterns of Presentation of Psychiatric Disorders During Pregnancy and Postpartum Period in a Tertiary Care Center- A 5 Years Retrospective Study

A total of 20,858 patients were evaluated during five-year period from January 2014 till December 2018, which included both male and female patients. The diagnosis of psychiatric disorders during pregnancy and postpartum period was made in 74 patients as per ICD 10. Data were analyzed using Statistical Package for the Social Sciences (SPSS) version 20.0 for Windows using descriptive statistics. Descriptive statistics in mean and standard deviation were calculated for the continuous variables; and frequency and percentages for the categorical variables.

RESULTS

A total of 20,858 patients were evaluated and treated by the psychiatry in-patient and out-patient services during this five-year period. We identified 74 patients with a diagnosis of psychiatric disorders during pregnancy and postpartum period according to the ICD-10 codes (O00-O99) in the records. Based on the above data, the five-year period prevalence of psychiatric disorders during pregnancy and postpartum treated in psychiatry department was 0.35%.

The mean age of the study sample was 25.52±4.58 years. Majority of the subjects presented between 17 to 42 years of age. The religious status of the samples was as follows: 94.6% Hindus and 5.4% Muslims. About 43.2% of patients had attained high school education. Majority of the patients hailed from rural backgrounds (70.3%). Regarding symptom onset, 6.8% became symptomatic during pregnancy. During the postpartum period, 78.4% of patients presented during the initial 3 months following delivery. Psychiatric disorders were more common in Primigravida 89.2%. With respect to the gender of the baby, 56.8% women delivered male babies, and 6.8% had a history of twin birth. Medical comorbidities such as Preeclampsia and Eclampsia were present in 5.4% and 6.8% respectively. None of them were noted to have Gestational diabetes mellitus or Hyperemesis gravidarum. Most of the women had normal vaginal delivery (66.2%), complications of preterm delivery and stillbirth were noted in 10.8 and 5.4% respectively. More than half the women required inpatient care (51.4%). Infanticide ideas were documented in 10.8% and 8% patients had history of suicidal attempt. (Table 1)

Table 1: Socio-demographic profile and clinical details

Sl. No	VARIABLE	FREQUENCY/MEAN	%/SD
1.	Mean Age (Years)	25.52	±4.58
2.	Education		
	0-5 th std	12	16.2
	6 th -10 th std	32	43.2
	PUC-Graduation	26	35.1
	Post-graduation	4	5.4
3.	Religion		
	Hindu	70	94.6
	Muslim	4	5.4
4.	Background		
	Rural	52	70.3
	Urban	22	29.7
5.	Symptom onset		
	During Pregnancy	5	6.8
	During Postpartum		

Patterns of Presentation of Psychiatric Disorders During Pregnancy and Postpartum Period in a Tertiary Care Center- A 5 Years Retrospective Study

	Initial 3 months	58	78.4
	3-6 months	10	13.5
	>6 months	1	1.35
6.	Pregnancy order		
	First	66	89.2
	Second	8	10.8
7.	Medical comorbidity		
	Pre-Eclampsia	4	5.4
	Eclampsia	5	6.8
8.	Gender of the baby		
	Male	42	56.8
	Female	27	36.5
9.	Twins Delivered	5	6.8
10.	Type of Delivery		
	Vaginal	49	66.2
	LSCS	25	33.8
11.	Complications related to Delivery		
	Preterm birth	8	10.8
	Still birth	4	5.4
12.	Infanticide Ideas	8	10.8
13.	Suicidal attempt	6	8.1
14.	Management		
	Inpatient	38	51.4
	Outpatient	36	48.6

Postpartum Depression was the most common diagnosis with 39.2% followed by Postpartum Psychosis being 28.4% and 2.7% patients presented with Postpartum Baby Blues. 10.8% women had exacerbation of their pre-existing mood disorder which included bipolar affective disorder- depression, mania, mixed and recurrent depressive episode, 5.4% have been diagnosed with adjustment disorder and 4.1% women presented with Delirium. Due to infant death 6.8% patients presented with a Grief reaction. (Table 2)

Table 2: Diagnostic Profile

Sl. No	Diagnosis	Frequency	Percentage
1.	Postpartum depression	29	39.2
2.	Postpartum psychosis	21	28.4
3.	BPAD- Depression	4	5.4
4.	BPAD-Mania	2	2.7
5.	Baby blues	2	2.7
6.	Grief	5	6.8
7.	Postpartum Delirium	3	4.1
8.	RDD postpartum	1	1.4
9.	BPAD-Mixed	1	1.4
10.	ATPD	2	2.7
11.	Adjustment disorder	4	5.4

About 50% of the patients received antidepressants. Escitalopram was used in 28.4% and Fluoxetine was used in 13.5% patients. 51% were treated with antipsychotics and

Patterns of Presentation of Psychiatric Disorders During Pregnancy and Postpartum Period in a Tertiary Care Center- A 5 Years Retrospective Study

Olanzapine was the drug used more frequently (35.1%). One woman received Lithium during the postpartum period due to the severity of presentation. The sedative drug more commonly used was Clonazepam (27%). 12 Patients were treated with Electroconvulsive therapy (Table 3).13.5% of these women had recurrent mood episodes and 8% had schizophrenia within 5 years duration.

Table 3: Management Profile

Sl. No	Drug Class	Frequency	Percentage
1.	Antidepressants		
	Escitalopram	21	28.4
	Fluoxetine	10	13.5
	Paroxetine	1	1.4
	Sertraline	3	4.1
	Mirtazapine	1	1.4
	Desvenlafaxine	1	1.4
2.	Antipsychotics		
	Olanzapine	26	35.1
	Risperidone	7	9.5
3.	Mood Stabilizers		
	Lithium	1	1.4
	Valproate	1	1.4
	Carbamazepine	1	1.4
4.	Benzodiazepines		
	Clonazepam	20	27
	Lorazepam	2	2.7
5.	ECT	12	16.2

DISCUSSION

The prevalence of psychiatric disorders during pregnancy and postpartum period in our study was 0.35%, whereas other studies which are community -based studies, reported prevalence of 44.46% (12). This low prevalence could be due to the nature of the present study which is a retrospective chart review.

Sociodemographic Profile

The mean age at presentation was 25.5 years (SD: 4.58 years). Other studies have shown a similar age of onset in postpartum depressive disorders.^{13,14,15,16,17,18} The prevalence was more in the rural population 70.3% when compared to urban population which was 29.7%. This may be due to the urban population planning pregnancy well in advance and having less pressure from the extended family members to conceive soon after marriage.

In our study symptomatic presentation during the postpartum period was 78.4%, 18.9% 2.7% during initial 3 months, 3-6 months and after 6 months respectively. About 6.8% patients had developed symptoms during pregnancy. This is similar to the definition of postpartum depression where symptoms generally develop within 6 weeks postpartum. According to the study by Gulseren L et al the prevalence of depression was highest during pregnancy and gradually declined during postpartum period. Our study has a similar finding

Patterns of Presentation of Psychiatric Disorders During Pregnancy and Postpartum Period in a Tertiary Care Center- A 5 Years Retrospective Study

where the presentation of symptoms has gradually declined during the course of the postpartum duration.¹⁹ The presentation during pregnancy could have been low due to the traditional practice of going to maternal house for delivery and the rest of the antenatal follow up happen at in laws place.

Comorbid preeclampsia and eclampsia were present in 5.4 and 6.8% of our sample. A study conducted by Li Chen et al reported the prevalence of postpartum depression as 26.67% in patients with preeclampsia and also stated that patients with preeclampsia are at 3 fold risk compared to normal women.²⁰ In our study 89.2% women were primiparous, this finding is similar to the study by Bergink et al which reported high risk of first-onset psychiatric episodes during the first month postpartum.²¹ The present study found that 66.2% of the patients had normal vaginal delivery and 33.8% delivered by c-section, which means the presence of c-section does not increase the prevalence of postpartum psychiatric disorders. But according to a study by Meltzer- Brody et al the risk for postpartum depression increases with c-section, preeclampsia and hyperemesis gravidarum.²²

With respect to the gender of the baby, 56.8% women delivered male babies and 36.5% delivered female babies. This finding is similar to the study by Sara M Sylven et al which reported no significant difference in the risk of occurrence of postpartum depression in relation to the gender of the baby.²³ It was found that 8.1% of the patients presented with history of suicidal attempt. This is in contrast to the finding by Johannsen et al which reported increased mortality rate ratio in women with postpartum psychiatric disorders when compared to mothers with no history of psychiatric illness.²⁴

Diagnostic Profile

The diagnostic profile of the current study showed the prevalence of postpartum depression was the highest 39.2% followed by postpartum psychosis 28.4%. The other diagnosis made were as follows: Bipolar affective disorder-depression (5.4%), Bipolar affective disorder-mania (2.7%), postpartum baby blues (2.7%), grief (6.8%), postpartum delirium (4.1%), recurrent depressive disorder-postpartum (1.4%), Bipolar affective disorder-mixed (1.4%), Acute and transient psychotic disorder (2.7%), adjustment disorder (5.4%). This finding is similar to the findings in Li Chen et al which found the prevalence of postpartum depression was higher than postpartum psychosis.²⁰ Similar findings were also found in a study by Viguera et al, among the women with bipolar affective disorder the illness episode was present during pregnancy in 23% and during postpartum in 52%. The study also found among women with unipolar depression, illness episodes during pregnancy was present in 4.6% and during postpartum period in 30%.²⁵

Medication use

Treatment of postpartum depression was done predominantly using selective serotonin reuptake inhibitors. Similar were the findings in a review study by Brown JVE which stated SSRI was used in the treatment of postpartum depression between 4 to 12 weeks.²⁶ Among antipsychotics 35% of the patients were prescribed Olanzapine. Similar to our findings most of the case reports and case series have used Olanzapine considering it to be safe even during breastfeeding.²⁷

With respect to use of mood stabilizers one patient each were treated with Lithium, Carbamazepine and Valproate respectively. As they conceived during the treatment with

Patterns of Presentation of Psychiatric Disorders During Pregnancy and Postpartum Period in a Tertiary Care Center- A 5 Years Retrospective Study

mood stabilizers, it was changed to second generation antipsychotic considering the high risk of neural tube side effects with the antiepileptic mood stabilizers.

The present study showed that 16.2% of the patients received Electroconvulsive therapy, which is attributed to the effectiveness and safety of ECT when compared to other medications use during pregnancy and postpartum. A retrospective study by Grover S et al which stated the use of ECT to be 2.24% which is relatively low, compared to our study.²⁸

Limitations

- The obvious limitations of this study are the retrospective nature of the data, small sample size and lack of standardized instruments for the evaluation of patients during the postpartum period.
- Despite all the drawbacks, it is a comprehensive review of available clinical data on psychiatric disorders during pregnancy and postpartum period.

CONCLUSION

To conclude, not treating psychiatric disorders during pregnancy and postpartum can have negative consequences on both the mother and the infant. So, it is important to screen all the patients during pregnancy and postpartum and create an awareness among the patient and the family to seek help at the earliest. Thus, it will help in reducing the morbidity and mortality among the new mothers.

REFERENCES

1. Tuteja TV, Niyogi GM. Postpartum psychiatric disorders. *Int J Reprod Contracept Obstet Gynecol* 2016; 5:2497-2502.
2. Gautam S, Nijhawan M, Gehlot PS. Postpartum psychiatric syndromes- an analysis of 100 consecutive cases. *Indian J Psychiatry*. 1982;24:383-6.
3. Shah LP, Parkar S, Pandit AS. *Textbook of Postgraduate Psychiatry*; 1999:369-375.
4. Paykel ES, Emms EM, Fietcher. Life events and social support in puerperal depression. *Br J Psychiatry*. 1980;136:39-46.
5. O'Hara MW, Schlechte JA, Lewis DA, Varner MW. Controlled prospective study of postpartum mood disorders: psychological, environmental and hormonal variables. *J Abnorm Psychol*. 1991;100:63-73.
6. Nonacs R, Cohen LS. Postpartum mood disorders: diagnosis and treatment guidelines. *J Clin Psychiatry*. 1998;59:34-40.
7. L. Chen, X.Wang, Q. Ding, N. Shan ,H. Qi . Development of Postpartum Depression in Pregnant Women with Preeclampsia: A Retrospective Study. *Hindawi BioMed Research International*.2019; <https://doi.org/10.1155/2019/9601476>
8. Brown HK, Wilton AS, Ray JG, Dennis CL, Guttmann A, Vigod SN (2019) Chronic physical conditions and risk for perinatal mental illness: A population-based retrospective cohort study. *PLoS Med* 16(8): e1002864
9. Sagayadevan et al. Retrospective observation of mental disorders during postpartum period: Results from the Singapore mental health study. *BMC Women's Health* (2015) 15:119 DOI 10.1186/s12905-015-0279-x
10. Di Florio A, Jones L, Forty L, Gordon-Smith K, Blackmore ER, Heron J, Craddock N, Jones I. Mood disorders and parity – a clue to the aetiology of the postpartum trigger. *Journal of Affective Disorders*. 2014; 152–154:334–339.
11. V. Bergink, T. M. Laursen, B. M. W. Johannsen, S. A. Kushner, S. Meltzer-Brody, and T. Munk-Olsen. Pre-eclampsia and first-onset postpartum psychiatric episodes: a

Patterns of Presentation of Psychiatric Disorders During Pregnancy and Postpartum Period in a Tertiary Care Center- A 5 Years Retrospective Study

- Danish population-based cohort study. *Psychol Med.* 2015 December; 45(16): 3481–3489. doi:10.1017/S0033291715001385
12. Zivoder I, Martic-Biocina S, Veronek J, Ursulin-Trstenjak N, Sajko M, Paukovic M. Mental disorders/difficulties in the postpartum period. *Psychiatr Danub.* 2019 Sep;31(Suppl 3):338-344. PMID: 31488750.
 13. Wubetu et al. Prevalence of postpartum depression and associated factors among postnatal care attendees in Debre Berhan, Ethiopia, 2018. *BMC Pregnancy and Childbirth* (2020) 20:189 <https://doi.org/10.1186/s12884-020-02873-4>
 14. Modi VP, Parikh MN, Valipay SK. Prevalence of postpartum depression and correlation with risk factors. *Ann Indian Psychiatry* 2018; 2:27-32
 15. Desai N, Mehta R, Ganjiwale J. Validation of the Gujarati version of the Edinburgh postnatal depression scale among women within their first postpartum year. *Indian J Soc Psychiatry* 2011; 27:16-23.
 16. Khan B, Basu R. A study on evaluation of prevalence and risk factors of postpartum depression (PPD) in Indian women. *IOSR J Dent Med Sci* 2016; 15:59-62
 17. Dhande N, Khapre M, Nayak S, Mudey A. Assessment of postnatal depression among mothers following delivery in rural area of Wardha district: A cross sectional study. *Innov J Med Health Sci* 2014; 4:53-5.
 18. Savarimuthu RJ, Ezhilarasu P, Charles H, Antonisamy B, Kurian S, Jacob KS, et al. Post-partum depression in the community: A qualitative study from rural South India. *Int J Soc Psychiatry* 2010; 56:94-102
 19. Gulseren L, Erol A, Gulseren S, Kuey L, Kilic B, Ergor G. From antepartum to postpartum: a prospective study on the prevalence of peripartum depression in a semiurban Turkish community. *J Reprod Med.* 2006 Dec;51(12):955-60.
 20. Chen Li et al. Development of postpartum depression in pregnant women with pre eclampsia: A retrospective study. *Hindawi; BioMed Research International.* Volume 2019, Article ID 9601476, 7 pages <https://doi.org/10.1155/2019/9601476>
 21. Bergink et al. Pre-eclampsia and first-onset postpartum psychiatric episodes: a Danish population-based cohort study; *Psychol Med.* 2015 December; 45(16): 3481–3489. doi:10.1017/S0033291715001385
 22. Meltzer- Brody et al. Obstetrical, pregnancy and socio-economic predictors for newonset severe postpartum psychiatric disorders in primiparous women; *Psychol Med.* 2017 June; 47(8): 1427–1441. doi:10.1017/S0033291716003020
 23. Sara M Sylven et al. Newborn gender as a predictor of postpartum mood disturbances in a sample of Swedish women; *Arch Womens Ment Health.* 2011 Jun;14(3):195-201. Doi;10.1007/s00737-011-0211-9.
 24. Johannsen et al. All-Cause Mortality in Women with Severe Postpartum Psychiatric Disorders; *Am J Psychiatry.* 2016 June 01; 173(6): 635–642. doi:10.1176/appi.ajp.2015.14121510.
 25. Viguera et al. Episodes of Mood Disorders in 2,252 Pregnancies and Postpartum Periods; *Am J Psychiatry* 168:11, November 2011
 26. Brown JVE, Wilson CA, Ayre K, Robertson L, South E, Molyneaux E, Trevillion K, Howard LM, Khalifeh H. Antidepressant treatment for postnatal depression. *Cochrane Database Syst Rev.* 2021 Feb 13;2(2):CD013560. doi: 10.1002/14651858.CD013560.pub2. PMID: 33580709; PMCID: PMC8094614.
 27. Teodorescu A, Dima L, Popa MA, Moga MA, Bîgiu NF, Ifteni P. Antipsychotics in Postpartum Psychosis. *Am J Ther.* 2020 Jun 22;28(3): e341-e348. doi: 10.1097/MJT.0000000000001218. PMID: 32618591.

Patterns of Presentation of Psychiatric Disorders During Pregnancy and Postpartum Period in a Tertiary Care Center- A 5 Years Retrospective Study

28. Grover S, Sahoo S, Chakrabarti S, Basu D, Singh SM, Avasthi A. ECT in the postpartum period: A retrospective case series from a tertiary health care center in India. *Indian J Psychol Med* 2018;40:562-7

Acknowledgement

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Padmashali, A. (2023). Patterns of Presentation of Psychiatric Disorders During Pregnancy and Postpartum Period in a Tertiary Care Center- A 5 Years Retrospective Study. *International Journal of Indian Psychology*, 11(3), 1827-1835. DIP:18.01.174.20231103, DOI:10.25215/1103.174