



PREVALENCE AND EVALUATION OF PERIPARTUM DEPRESSION IN WOMEN ATTENDING RHTC AND UHTC OF A TEACHING HOSPITAL OF SAURASHTRA REGION OF GUJARAT

Psychiatric Social Work

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ABSTRACT

Introduction: Perinatal and postnatal are the two most vulnerable time periods in the life of woman. As during those periods, many changes like physical, physiological, psychological, social and mental changes occur which can lead to many issues among women. **Aims & Objectives:** To study the prevalence of depression among women in peri-partum period and to find the association of peripartum depression and its risk factors. **Methodology:** Cross-sectional Hospital based study which was conducted at rural and urban areas under government medical college, Gujarat amongst women in peri-partum period using EPDS. Verbal informed consent was taken from every subject. The study was initiated after it was approved by the Research and Ethics Committee of MPSGMC. **Results:** Out of total 200 participants, mean age was 26 years. Prevalence of perinatal depression was 9%. **Conclusion:** This study concluded depression among women in peri-partum period and recommends increased role of health-care workers and family members in prevention, screening and treatment of depression in such women.

KEYWORDS

Edinburgh Postnatal Depression Scale, Perinatal depression, Pregnancy, Mental Health

INTRODUCTION

Perinatal and postnatal are the two most vulnerable time periods in the life of woman. As during those periods, many changes like physical, physiological, psychological, social and mental changes occur which can lead to many issues among women. There may be huge impact on health on maternal health and further could have worse pregnancy outcomes. Such outcomes could be short- and long-term developmental trajectories of the child.¹ Perinatal depression (PND) is defined as the depression in pregnant women or 12 months post-delivery. PND may be considered as the most common mental disorder in reproductive age women.² Now a days, PND is considered as a significant mental and public health problem.³ Signs and symptoms of PND are sadness, hopelessness, loss of interest or environment, anger/rage/ anxiety, reduced energy and difficulty in making bond with baby. There are multiple adverse sequelae of PND in the life of woman and also her family and children face the similar situation and its consequences. These could be poor mother-baby bond, worse newborn outcomes (low birth weight, preterm birth, small for gestational age), early childhood developmental delays, and worse mental status of mother and further relationship within family.⁴

Worldwide, about 10% of pregnant women and 13% of women who have given birth experience a mental disorder, primarily depression. In developing countries like India, this is even higher, i.e., 15.6% during pregnancy and 19.8% after childbirth.⁵ According to Gelaye B et al.,⁶ the prevalence of postnatal depression ranges from 15 to 35% with an average of around 19% in low- and middle- income countries while as per Arora et al.,⁷ Biratu et al.,⁸ Weobong et al.,⁹ Zeng et al.¹⁰ prevalence of antenatal depression ranges from 9.18% to 65.0%, approximate 25% in other studies respectively. Almost all women are at risk to mental disorders during pregnancy and during the first-year post-delivery. There may be multiple risk factors of PND like pregnancy complications, domestic violence, family history of depression, lack of support, unintended pregnancy, life stress, financial loss etc. Pregnancy is a stressful experience, this could lead to weakness, lethargy, and nutrient deficiency, leading to deterioration of health. Due to perinatal depression, mother could face lots of changes and challenges in daily routine activities.

Thus, the present study is done using Edinburgh postnatal depression scale¹¹ (EPDS). The EPDS is one of the most common tools for assessing postnatal depression in prevalent studies reported till date on PPD. The aims & objectives of the current study were to study the prevalence of depression among women in peri-partum period and further to find the association of peripartum depression and associated risk factors.

MATERIALS AND METHODS

This was a hospital based cross-sectional study done on the reproductive age women coming to the immunization clinics at both

RHTC and UHTC of the study district of Gujarat. The study was initiated after it was approved by the Research and Ethics Committee of the institute. Verbal informed consent was taken from each participant. Study duration was April 2021 till august 2021. According to a study titled "A controlled study of the onset, duration and prevalence of postnatal depression" conducted in the Department of Psychiatry, School of Postgraduate Medicine, Keele University,¹² the prevalence was found to be 13.8%. To calculate the sample size, the following formula¹³ was used:

$$n = \frac{Z_a^2 P(1-P)}{d^2}$$

where, n = sample size, Z_a = Z statistic for a level of confidence, P = expected prevalence or proportion, d = precision (in proportion of one; if 5%, d=0.05)

Thus, our minimum sample size was 190, and a sample of 200 was taken. Pre-tested, Pre-structured Questionnaire (Edinburgh Postnatal Depression Scale) was used and was administered in local language by interview technique. EPDS was having the 10-question self-rating scale which were proven to be an efficient and effective way of identifying patients at risk for perinatal depression and was used to identify the patients at the risk of depression. All the women who had given consent and were in their peripartum period came to the immunization clinics in both RHTC (100) and UHTC (100) during study duration, were included in the current study. Women who did not give consent and did not come to the RHTC and UHTC of the study district were excluded from the current study. The prevalence was reported as percentages. The pattern of symptoms was calculated in frequencies and percentage. Risk factors were calculated in frequencies and percentages. Association with risk factors was assessed using Chi-square test. The data were recorded and documented in MS Excel and was further analysed using Statistical Package for Social Sciences (SPSS version 26).

RESULTS

Table1: Socio-demographic Characteristics Of The Study Participants (N=200)

Socio-demographic characteristics		Frequency (N)	Percentage (%)
Age-Group (Years)	<21	55	27.5
	21-28	96	48
	>28	49	24.5
Educational Qualification of the participants	Illiterate	52	26
	Till 10 th	69	34.5
	Till 12 th	58	29
	Graduate	21	10.5

Occupation of the participants	Working	58	29
	Home Maker	142	71
Educational Qualification of the husband	Illiterate	54	27
	Till 10 th	70	35
	Till 12 th	48	24
	Graduate	28	14
Residential Area	Urban	100	50
	Rural	100	50
Family Type	Nuclear	68	34
	Joint	132	66

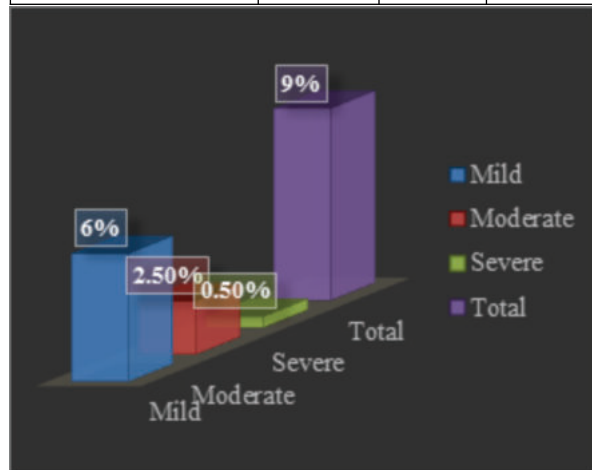


Figure 1: Prevalence of PND among study participants and its Severity

Table 2: Association Of Peripartum Depression With Socio-demographic Characteristics Of The Study Participants

Socio-demographic characteristics		PND		X ² (p-value)
		Present	Absent	
Age-Group (Years)	<21	2	53	2.66 (0.263)
	21-28	10	86	
	>28	6	45	
Educational Qualification of the participants	Illiterate	1	51	34.41 (0.000)
	Till 10 th	3	66	
	Till 12 th	5	53	
	Graduate	9	12	
Occupation of the participants	Working	13	45	17.95 (0.000)
	Home Maker	5	137	
Educational Qualification of the husband	Illiterate	1	53	21.52 (0.000)
	Till 10 th	2	68	
	Till 12 th	7	41	
	Graduate	8	20	
Residential Area	Urban	14	86	6.105 (0.013)
	Rural	4	96	
Family Type	Nuclear	15	53	21.45 (0.000)
	Joint	3	129	

Table 3: Association Of Peripartum Depression With Maternal And Child Risk Factors Of The Study Participants

Psycho-social Characters		PND		OR (CI)
		Present	Absent	
History of Depression	Present	3	8	4.35 (0.044)
	Absent	15	174	
Family Support	Present	5	100	0.3 (0.028)
	Absent	13	78	
Desire for a male child	Present	11	91	1.57 (0.371)
	Absent	7	91	
Stressful life events	Present	16	65	14.4 (0.000)
	Absent	2	117	

Table 4: Association Of Peripartum Depression With Maternal And Child Risk Factors Of The Study Participants

Maternal and Child Risk Factors		PND		OR (CI)
		Present	Absent	
Pregnancy	Wanted	13	142	0.732 (0.575)
	Unwanted	5	40	

Obstetric History	Primigravida	16	93	7.656 (0.007)
	Multigravida	2	89	
Mode of delivery	Normal	11	158	0.239 (0.007)
	Caesarean	7	24	
Delivery Number	<3	10	159	0.181 (0.001)
	≥3	8	23	
Breastfeeding	Yes	14	164	0.384 (0.122)
	No	4	18	
Contraceptive Use	Yes	12	141	0.582 (0.307)
	No	6	41	

DISCUSSION

In the current study out of total 200 women, 50% participants each from urban and rural area whereas, maximum participants (48%) were between age group 21-28 years with mean age 24 ± 4.2 and almost 3/4th women and their husband were educated more than high school. Almost 71% participants were homemaker while 34% were from nuclear family. (Table1). According to Al Nasr RS et al,¹⁴ of 174 participants, 34% were in an age group of 16-25 years, while the rest 66% were between 25 to 45 years of age. Almost 58% participants were graduates or above and 78% were homemaker. Whereas, according to Sidhu GS et al¹⁵ more than half of the participants (53.0%) were in the age group of 21-28 years. Almost 28.5% of participants were illiterate. Almost half (55.0%) of the participants were homemakers and 45% of females were working. The husbands of 28.0% of participants were illiterate while as per Vijaya Raghavan et al¹⁶ among total 564 participants, mean (SD) age was 23.4 (3.7) years and according to Sheeba B et al¹⁷ among 280 participants, 72.9% of them belonged to the age group of more than 20 years, the mean age of the respondents being 23.02 ± 3.40 years, 92.1% were housewives, the spouses of over half of the respondents (51.8%) were semi- skilled workers.

In the current study, prevalence of PND was 9% and their severity score (EPDS) was mild form in 6%, moderate in 2.5% and severe PND in 0.5% study participants (Figure1) whereas, almost 39%, 14%, 24% and 35.7% were reported postpartum depression as per Al Nasr RS et al¹⁴, Sidhu GS et al¹⁵, Vijaya Raghavan et al¹⁶ and Sheeba B et al¹⁷.

In the current study association of PND with socio-demographic characteristics (Educational Qualification of the participants and of their husband, occupation of participants, residential area, family type), association of PND with psycho-social characters (History of Depression, Family Support, Stressful life events) and association of PND with maternal-child risk factors (Obstetric History, Mode of delivery, Delivery Number) were found to be statistically significant. (Table2, Table3, Table4). Whereas according to Sidhu GS et al¹⁵ age, family type, obstetric history was found to be statistically significant and associated with PND while as per Vijaya Raghavan et al¹⁶ Family support and Al Nasr RS et al¹⁴ spouse support, stressful life events were statistically associated with PND.

CONCLUSIONS

PND is a serious mental disorder which could have disruptive impacts on the health of mothers, children and their family. As per the current study, prevalence of PND among study participants was 9% (18 out of 200). As per the EPDS severity scale, out of 18 PND patients 6%, 2.5% and 0.5% of study participants were categorized as mild, moderate and severe PND. The prevalence of PND was more among women more than 28 years who were working and belong to urban area (18%) and their family type was nuclear.

According to the current study Educational Qualification of the participants and of their husband, occupation of participants, residential area, family type, History of Depression, Family Support, Stressful life events, Obstetric History, Mode of delivery and Delivery Number were found to be statistically significant associated with PND. It is necessary to realize the real existence of PND among women as it is not a part of essential physiological or hormonal changes they undergo during pregnancy and delivery. Thus, it's the duty of women's family to protect her mental health and should try to reach to the mental health expert as any mental anomaly is observed among them. During such time full family and spouse support with proper mental health expert could reduce the problem to minimum. It is crucial to screen high-risk mothers for PPD during and after pregnancy and refer the detected cases to the mental health expert for early management and prevention of psychosocial impairment of the family. Prevention of PPD is not only essential for wellbeing of mothers but it is also

important to provide good conducive atmosphere for the new born.

LIMITATIONS

As current study is cross-sectional type thus we could not arrive to the causal associations we could arrive only at meaningful associations but not causal directions of associations whereas, longitudinal studies are needed to estimate the incidence and examine risk and protective factors that contribute to perinatal depression. Physical health parameters such as hemoglobin, nutritional status, blood pressure and gestational diabetes were not measured in the study due to the lack of facilities available to assess these measures.

REFERENCES:

1. Briscoe, L., Lavender, T., McGowan, L., 2016. A concept analysis of women's vulnerability during pregnancy, birth and the postnatal period. *J. Adv. Nurs.* 72, 2330–2345.
2. Muzik, M., Borovska, S., 2010. Perinatal depression: implications for child mental health. *Ment. Health Fam. Med.* 7, 239.
3. Shrivastava, S.R., Shrivastava, P.S., Ramasamy, J., 2015. Antenatal and postnatal depression: a public health perspective. *J. Neurosci. Rural Pract.* 6, 116–119.
4. Alhusen, J.L., Hayat, M.J., Gross, D., 2013. A longitudinal study of maternal attachment and infant developmental outcomes. *Arch. Womens Ment. Health* 16, 521–529.
5. World Health Organization. Maternal Mental Health. Available from: https://www.who.int/mental_health/maternal-child/maternal_mental_health/en/. (accessed on march 2019).
6. Gelaye, B., Rondon, M.B., Araya, R., Williams, M.A., 2016. Epidemiology of maternal depression, risk factors, and child outcomes in low-income and middle-income countries. *Lancet Psychiatry* 3, 973–982.
7. Arora, P., Aeri, B.T., 2019. Burden of antenatal depression and its risk factors in Indian settings: a systematic review. *Indian J. Med. Spec.* 10, 55.
8. Biratu, A., Haile, D., 2015. Prevalence of antenatal depression and associated factors among pregnant women in Addis Ababa, Ethiopia: a cross-sectional study. *Reprod. Health* 12, 99.
9. Weobong, B., Soremekun, S., Ten Asbroek, A.H., Amenga-Etego, S., Danso, S., Owusu-Agyei, S., Prince, M., Kirkwood, B.R., 2014. Prevalence and determinants of antenatal depression among pregnant women in a predominantly rural population in Ghana: the DON population-based study. *J. Affect. Disord.* 165, 1–7.
10. Zeng, Y., Cui, Y., Li, J., 2015. Prevalence and predictors of antenatal depressive symptoms among Chinese women in their third trimester: a cross-sectional survey. *BMC Psychiatry* 15, 66.
11. Edinburgh Postnatal Depression Scale. Psychology Tools. Available from: <https://psychology-tools.com/test/epds>
12. Cox JL, Murray D, Chapman G. A controlled study of the onset, duration and prevalence of postnatal depression. *Br J Psychiatry* 1993;163:27-31.
13. Sundaram KR. Medical Statistics Principles and Methods. 2nd ed. Gurgaon: Wolters Kluwer; 2015. p. 246.
14. Al Nasr RS, Altharwi K, Derbah MS, Gharibo SO, Fallatah SA, Alotaibi SG, et al. (2020) Prevalence and predictors of postpartum depression in Riyadh, Saudi Arabia: A cross sectional study. *P L o S O N E* 1 5 (2) : e 0 2 2 8 6 6 6 . <https://doi.org/10.1371/journal.pone.0228666>
15. Sidhu GS, Sidhu TK, Kaur P, Lal D, Sangha NK. Evaluation of peripartum depression in females. *Int J App Basic Med Res* 2019;9:201-5.
16. Vijaya Raghavan a, Homam A. Khan, Uttara Seshu, Surya Prakash Rai, Jothilakshmai Durairaj, G. Aarthi, C. Sangeetha, Sujit John, R. Thara. Prevalence and risk factors of perinatal depression among women in rural Bihar: A community-based cross-sectional study. *Asian Journal of Psychiatry* 56 (2021) 102552. <https://doi.org/10.1016/j.ajp.2021.102552>
17. Sheeba B, Nath A, Metgud CS, Krishna M, Venkatesh S, Vindhya J and Murthy GVS (2019) Prenatal Depression and Its Associated Risk Factors Among Pregnant Women in Bangalore: A Hospital Based Prevalence Study. *Front. Public Health* 7:108. doi: 10.3389/fpubh.2019.00108