ORIGINAL ARTICLE

Breastfeeding and postpartum depression among women in urban field practice areas of Belagavi – A cross-sectional study

Asha Anil Bellad[1], Hemavathe Sivaji[2], Sriram T R[3], Vignesh V N[4]

[1]Department of Community Medicine, Jawaharlal Nehru Medical College, KAHER

[2]Department of Community Medicine, Vels Medical College and Hospital, Chennai, Tamil Nadu

[3]Department of Community Medicine, Sri Lalithambigai Medical College & Hospital, Dr. M.G.R. Educational and Research Institute, Chennai, Tamil Nadu

[4]Department of Paediatrics, Vels Medical College and Hospital, Chennai, Tamil Nadu

CORRESPONDING AUTHOR

Dr Hemavathe Sivaji, Assistant Professor, Department of Community Medicine, Vels Medical College and Hospital, Chennai, Tamil Nadu 601102.

Email: hemavathe2112@gmail.com

CITATION

Bellad AA, Hemavathe S, Sariram TR, Vignesh VN. Breastfeeding and postpartum depression among women in urban field practice areas of Belagavi – A cross-sectional study. Indian J Comm Health. 2025;37(3):374-379. https://doi.org/10.47203/IJCH.2025.v37i03.004

ARTICLE CYCLE

Received: 17/05/2025; Accepted: 22/06/2025; Published: 30/06/2025

This work is licensed under a Creative Commons Attribution 4.0 International License.

©The Author(s). 2025 Open Access

Abstract

Introduction: Postpartum depression is an important medical issue and a common problem of women which also has a significant impact on the emotional and cognitive development of the baby. Studies in India have noted the prevalence of postnatal depression ranging between 11%-26.3%. **Methodology:** The present study was carried out among 506 postnatal women registered in two urban field practice areas of Belagavi. A pre-tested, standard, structured questionnaire was provided to them. After obtaining informed consent, the participants were asked to fill in the questionnaire. The collected data was entered and analyzed in SPSS Version 26. **Results:** Most women belonged to the age group 25-29 years (33.20%). Majority were Muslim by religion (62.45%) and housewife by occupation (66.60%). Most of them initiated breast feeding within 30 minutes to 4 hours, majority of them practiced exclusive breast feeding, around 70% of them faced some difficulty in breast feeding. Around 11.07% of the women had Edinburg Postnatal Depression Scale score ≥ 10. Edinburg Postnatal Depression Scale was found to be statistically significant with age, educational status, socio economic status, pregnancy planning, history of previous miscarriage/abortion, and difficulty in breast feeding. **Conclusion:** Many factors including breastfeeding is associated with postpartum depression. Early detection of mental health diseases is needed by training grassroot level staff with tools like Edinburgh scale to identify risk factors and integrating mental health activities into the routine antenatal care at primary level.

Keywords

Postpartum Depression; Breastfeeding; Antenatal Care; Mental Health

Introduction

Postpartum Depression (PPD) is an important public health concern.(1) It is defined as "a non-psychotic depressive episode of mild to moderate severity beginning in or extending into the first postnatal year."(1) Postpartum period (from delivery of placenta to 6 weeks after delivery) is a period during which dramatic hormonal changes occur which can lead to depression among women.(2) PPD may occur during pregnancy and/or within one year post delivery. Symptoms include depressed mood, loss of interest/pleasure, fatigue, feelings of guilt, decreased appetite, psychomotor agitation/retardation, insomnia, and suicidal ideation occurring in various combinations.(3)

During postpartum period, around 85% of women experience some mood disturbance. In majority of the women, symptoms are transient and mild, referred to as postpartum blues; when mood disturbance is more disabling and persistent it is called as postpartum depression.(4)

PPD can lead to poor marital and familial relationships and have adverse effects on the mental health of partners. Children of mothers with PPD tend to have reduced sharing and effective sociability with others, more instances of behavioral problems, and malnutrition. Over a long run they are prone for significantly affected cognitive and emotional development.(5)

Studies done in India have noted the prevalence of postnatal depression ranging between 11 - 26.3%.(6)

The objective of the present study was:

- to assess the prevalence of postpartum depression
- to assess the relationship between postpartum depression and breastfeeding among women in urban field practice areas of Belagavi.

Material & Methods

Study Design: Cross-sectional study

Study Period: 1st January to December 31st, 2021

Sample Size: All registered Postnatal women less than 6 weeks from the day of delivery in two urban field practice areas of Belagavi.

Sampling technique: Universal sampling

Inclusion Criteria:

All postnatal women less than 6 weeks from the date of delivery from 2 UHC's willing to participate in this study

Aged between 18-35 years

Exclusion Criteria:

Mothers with any current chronic diseases.

Mothers who had childbirth within the last 2 weeks were excluded from the study as they might have postpartum blues, which could be a confounding factor.

Preexisting depressive disorder.

Data collection procedure: A pre-tested, standard, structured questionnaire based on the "Edinburgh Postnatal Depression Scale" (EPDS)(7) which is a systematic method of screening patients at risk for postpartum depression, was prepared. After obtaining informed consent, the questionnaire was explained to them in their local language and they were asked to fill in the questionnaire.

Participants with EDPS score 10 or more than 10 were considered to be at risk for PPD and referred to Department of Psychiatry at a tertiary care hospital in Belagavi for further evaluation and treatment.

Data processing and analysis/statistical analysis: The collected data was entered and analyzed in SPSS Version 26.

Ethical Clearance: The ethical clearance was obtained from the Institutional Ethics Committee (MDC/DOME/74).

Results

A total of 506 participants were included in the study. The mean age of the participants was 26.51 (SD ± 3.89). Most women belonged to the age group 25-29 years (33.20%). Majority were Muslim by religion (62.45%) and housewife by occupation (66.60%). More than half of the study participants belonged to socio-economic class 3 according to "Modified B.G.Prasad Classification". Around 78.26% said that the present pregnancy was planned. Majority of them were multipara and delivered at term. Around 20% had a history of previous miscarriage/abortion. Most of them initiated breast feeding within 30 minutes to 4 hours, around 75% practiced exclusive breast feeding, around 70% of them did not face any difficulty in breast feeding (Table 1). Of the 506 study participants, 11.07% of the women had Edinburg postnatal depression scale score ≥ 10 (Table 2).

In the present study, association of "Edinburg Postnatal Depression Scale" was found to be statistically significant with age, educational status, socio economic status, pregnancy planning, history of previous miscarriage/abortion, and difficulty in breast feeding (Table 3).

Table 1: Sociodemographic details of the participants

S.No.	Variables	Frequency	Percentage
1	**Age (in years)**		
	18-20	23	4.55
	21-24	152	30.04
	25-29	168	33.20
	30-34	163	32.21
2	**Religion**		
	Hindu	186	36.76
	Muslim	316	62.45
	Christian	4	0.79
3	**Educational Qualification**		
	Illiterate	10	1.98

© 2025 Indian Journal of Community Health

S.No.	Variables		Frequency	Percentage
	Read and write		16	3.16
	Primary school		56	11.07
	High school		197	38.93
	PUC/Diploma		197	38.93
	Degree		30	5.93
4	**Occupation**			
	Housewife		337	66.60
	Private employee		80	15.81
	Laborer		39	7.71
	Government employee		36	7.11
	Business		14	2.77
5	**Type of family**			
	Joint		143	28.26
	Nuclear		251	49.60
	Three-generation		112	22.13
6	**Socioeconomic class**			
	1		8	1.58
	2		116	22.92
	3		264	52.17
	4		114	22.53
	5		4	0.80
7	**Pregnancy details**			
	Planned		396	78.26
	Unplanned		110	21.74
	Primipara		192	37.94
	Multipara		314	62.06
	Term delivery		366	72.33
	Preterm delivery		136	26.88
	Post-term delivery		4	0.79
	History of previous miscarriage/abortion present		93	18.38
8	**Breastfeeding details**			
	Initiation of breast feeding	Within 30 minutes	215	42.49
		30 minutes to 4 hours	252	49.80
		4 to 24 hours	35	6.92
		>24 hours	4	0.79
	Exclusive breast feeding	Yes	378	74.70
		No	128	25.30
	Difficult breast feeding	Yes	154	30.43
		No	352	69.57

Table 2: Distribution of participants according to the "Edinburg Postnatal Depression Scale" (EPDS)

Edinburg postnatal depression scale score	Number	Percentage
≥ 10	56	11.07
<10	450	88.93
Total	506	100.00

Table 3: Crosstabulation between the different study variables and EPDS

Variable	Subgroup	Edinburg postnatal depression scale				Total (n=506)		x2	p
		<10 (n=450)		≥ 10 (n=56)					
		No.	%	No.	%	No.	%		
Age group (in years)	18-20	21	4.67	2	3.57	23	4.55	21.95	< 0.001
	21-24	121	26.89	31	55.36	152	30.04		
	25-29	161	35.78	7	12.50	168	33.20		
	30-35	147	32.67	16	28.57	163	32.21		

Variable	Subgroup	Edinburg postnatal depression scale				Total (n=506)		x2	p
		<10 (n=450)		≥ 10 (n=56)					
		No.	%	No.	%	No.	%		
Religion	Hindu	166	36.89	20	35.71	186	36.76	-	0.928
	Muslim	280	62.22	36	64.29	316	62.45		
	Christianity	4	0.89	0	0.00	4	0.79		
Educational status	Illiterate	8	1.78	2	3.57	10	1.98	-	0.002
	Read and write	16	3.56	0	0.00	16	3.16		
	Primary School	55	12.22	1	1.79	56	11.07		
	High School	182	40.44	15	26.79	197	38.93		
	10 to 12/ Diploma	163	36.22	34	60.71	197	38.93		
	Graduate and/or above	26	5.78	4	7.14	30	5.93		
Occupational status	House wife	294	65.33	43	76.79	337	66.60	-	0.056
	Business	12	2.67	2	3.57	14	2.77		
	Laborer	38	8.44	1	1.79	39	7.71		
	Government employee	30	6.67	6	10.71	36	7.11		
	Private employee	76	16.89	4	7.14	80	15.81		
Type of family	Joint	131	29.11	12	21.43	143	28.26	-	0.329
	Nuclear	223	49.56	28	50.00	251	49.60		
	Three generation	96	21.33	16	28.57	112	22.13		
Socio-economic class	Class I	4	0.89	4	7.14	8	1.58	-	0.041
	Class II	106	23.56	10	17.86	116	22.92		
	Class III	236	52.44	28	50.00	264	52.17		
	Class IV	100	22.22	14	25.00	114	22.53		
	Class V	4	0.89	0	0.00	4	0.79		
Planning of pregnancy	Planned	381	84.66	15	26.78	396	78.26	98.070	<0.001
	Unplanned	69	15.34	41	73.22	110	21.74		
Previous miscarriage/abortion	Yes	71	15.77	22	39.28	93	18.38	18.346	<0.001
	No	379	84.23	34	60.72	413	81.62		
Parity	Primipara	170	37.78	22	39.29	192	37.94	0.048	0.884
	Multipara	280	62.22	34	60.71	314	62.06		
Initiation of breast feeding	Within 30 minutes	188	41.78	27	48.21	215	42.49	0.853	0.415
	30 minutes to 4 hours	230	51.11	22	39.29	252	49.80		
	4 to 24 hours	30	6.67	5	8.93	35	6.92		
	>24 hours	2	0.44	2	3.57	4	0.79		
Exclusive breast feeding	Yes	339	75.33	39	69.64	378	74.70	0.578	0.446
	No	111	24.67	17	30.36	128	25.30		
Difficulty in breast feeding	Yes	127	28.22	27	48.21	154	30.43	9.402	0.003
	No	323	71.78	29	51.79	352	69.57		

© 2025 Indian Journal of Community Health

Discussion

In the present study, 78.26% of the women had planned pregnancy and 21.74% had unplanned pregnancy. A study done in New Delhi stated that 77.1% of the participants had planned their pregnancy and 22.9% had unplanned pregnancy.(8)In the present study 62.06% of the women were multipara and 37.94% women were primipara. In this study, majority of the participants had term delivery (72.33%), 26.88% of the participants had preterm delivery.

In this study, initiation of breast feeding was done within 30 minutes to 240 minutes by 49.80% of the women. Exclusive breast feeding was done by 74.70% of the participants and 25.30% of the participants did not practice exclusive breast feeding. 30.43% of the participants faced difficulty during breast feeding and 69.57% of the participants had no difficulty during breastfeeding.

A similar study stated that 29.5% of the participants-initiated breast feeding to the baby within 1 hour, 68.5% initiated within 24 hours and 2.0% initiated after 24 hours. They also stated that 94.77% of the participants have exclusive breastfeeding and only 5.23% of the participants did not practice exclusive breastfeeding.(9) Another study done stated that 36% of the mothers faced difficulty during breastfeeding.(10)

In the present study, 11.07% of the women had "Edinburg Postnatal Depression Scale" score of ≥ 10. A similar study concluded that the prevalence of postpartum depression was 11% among their study participants.(11) A different study using another questionnaire – PHQ9 scale, concluded that prevalence of postpartum depression was 10%.(12) Another study stated that 6.83% of the participants were screened positive using EPDS.(13)

In the present study, association of "Edinburg Postnatal Depression Scale" score was found to be statistically significant with age, educational status, socio economic status, pregnancy planning, history of previous miscarriage/abortion, and difficulty in breast feeding. A similar study concluded that education and breastfeeding were statistically significant and were associated with postnatal depression. This finding is in line with other studies in literature.(14,15,16)

Conclusion

"Edinburg Postnatal Depression Scale" score was found to be statistically significant with many factors including breastfeeding such as: age, educational status, socio economic status, pregnancy planning, and history of previous miscarriage/abortion.

Recommendation

Early detection of mental health diseases especially those that affects the wellbeing of both the mother and the new born is of vital importance. It can be done by training grassroot level staff with easy-to-use tools like EPDS to identify risk factors of the disease and integrating mental health activities into the routine antenatal care at primary level.

Limitation of the study

The self-reported nature of the questionnaire can lead to reporting bias. Also, cross-sectional design of the study itself is a limitation. Further longitudinal studies are warranted to ascertain the findings.

Relevance of the study

Studies done in India have noted the prevalence of postnatal depression. Not many studies have been carried out on the prevalence of PPD in the northern part of Karnataka. This study adds evidence to the existing literature regarding the prevalence of postpartum depression and also its associated factors.

Authors Contribution

All authors have contributed equally.

Financial Support and Sponsorship

Nil

Conflict of Interest

There are no conflicts of interest.

Declaration of Generative AI and AI Assisted Technologies in the writing Process

The authors haven't used any generative AI/AI assisted technologies in the writing process.

References

1. Prabhu S, George LS, Shyamala G, Noronha JA, Hebbar S. Prevalence and Associated Risk Factors of Postnatal Depression in South Asian Region - A Systematic review. Indian Journal of Public Health Research and Development. 2019 May;10(5):329-333. doi:10.5958/0976-5506.2019.01022.2
2. Sharma P, Sherkane M. Prevalence and Risk Factors of Postpartum Depression in Women – A Cross-Sectional Study. International Journal of Preventive, Curative & Community Medicine. 2018;4(1):33-40.
3. Takegata M, Ohashi Y, Lazarus A, Kitamura T. Cross-national differences in psychosocial factors of perinatal depression: A systematic review of India and Japan. Health. 2017;5(4):1–21. doi: 10.3390/healthcare5040091.PMCID: PMC5746725
4. Nigam A, Prakash A, Maheshwari N. Postpartum depression in an Indian community: more prevalent less addressed issue. International Journal of Reproduction, Contraception, Obstetrics and Gynecology. 2016 Aug;5(8):2691-95.

5. Johnson AR, Edwin S, Joachim N, Mathew G, Ajay S, Joseph B. Postnatal depression among women availing maternal health services in a rural hospital in South India. Pakistan Journal of Medical Sciences. 2015;31(2):408–13. doi: 10.12669/pjms.312.6702. PMCID: PMC4476352
6. Kruthika, Udayar SE, Mallapur MD. An epidemiological study of postnatal depression among women availing maternal health services in rural areas of Belagavi, Karnataka, India. International Journal of Community Medicine and Public Health. 2017 Mar;4(3):759-763. doi: 10.18203/2394-6040.ijcmph20170754.
7. Eberhard-Gran M, Eskild A, Tambs K, Opjordsmoen S, Ove Samuelsen S. Review of validation studies of the Edinburgh Postnatal Depression Scale. Acta Psychiatrica Scandinavica. 2001 Oct;104(4):243-9. doi: 10.1034/j.1600-0447.2001.00187.x. PMID: 11722298
8. Zaidi F. Postpartum depression in women: A risk factor analysis. Journal of Clinical and Diagnostic research. 2017 Aug;11(8):13–6. doi: 10.7860/JCDR/2017/25480.10479. PMCID: PMC5620853
9. Sharmin KN, Sarwar N, Mumu SJ, Taleb DA, Flora MS. Postnatal depression and infant growth in an urban area of Bangladesh. Midwifery. 2019 Jul;74:57-67. doi: 10.1016/j.midw.2019.03.014. PMID: 30927633
10. Patel V, Rodrigues M, DeSouza N. Gender, poverty, and postnatal depression: a study of mothers in Goa, India. American Journal of Psychiatry. 2002 Jan;159(1):43-7. doi: 10.1176/appi.ajp.159.1.43. PMID: 11772688
11. Shriraam V, Shah PB, Rani MA, Sathiyasekaran B. A community-based study of postpartum depression in rural Southern India. Indian Journal of Social Psychiatry. 2019 Jan 1;35(1):64-8. doi: 10.4103/ijsp.ijsp_13_18.
12. Rathod SD, Honikman S, Hanlon C, Shidhaye R. Characteristics of perinatal depression in rural central, India: a cross-sectional study. International Journal of Mental Health System. 2018 Dec;12(1):1-8. doi: 10.1186/s13033-018-0248-5. PMCID: PMC6231264
13. Jain A, Tyagi P, Kaur P, Puliyel J, Sreenivas V. Association of birth of girls with postnatal depression and exclusive breastfeeding: an observational study. BMJ Open. 2014 Jun 9;4(6):e003545. doi: 10.1136/bmjopen-2013-003545. PMID: 24913326; PMCID: PMC4054658.
14. Saldanha D, Rathi N, Bai H, Chaudhari B. Incidence and evaluation of factors contributing towards postpartum depression. Medical journal Dr D Y Patil Univ.2014;7(3):309-316. doi: 10.4103/0975-2870.128972.
15. Amipara T, Baria H, Nayak S. A Study on Postpartum Depression and its Association with Infant Feeding Practices and Infant Nutritional Status among Mothers Attending the Anganwadi Centers of Valsad District, Gujarat, India. Indian Journal of Community Medicine, 2020 Jul-Sep;45(3):299-302. doi: 10.4103/ijcm.IJCM_171_19. Epub 2020 Sep 1. PMID: 33354006; PMCID: PMC7745798.
16. Xia M, Luo J, Wang J, Liang Y. Association between breastfeeding and postpartum depression: A meta-analysis. J Affect Disord. 2022;308:512–9 https://doi.org/10.1016/j.jad.2022.04.091