WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Evalution of Post Partum Depression Using EPDS Scale

Dr. Krishnananda Kamath K, Safa*, Sudhamshu K Tantry

Department of Pharmacy Practice, Srinivas College of Pharmacy, Valachil, Post Farangipete, Mangalore-574143.
Email: safasharief444@gmail.com
DOI : https://doi.org/10.55248/gengpi.5.1224.0213

ABSTRACT:

Postpartum depression (PPD) is a serious psychological condition affecting new mothers, potentially compromising their mental health, child development, and long-term well-being. To lessen its effects, early diagnosis and treatments are essential.

A recent study conducted in Dakshina Kannada aimed to investigate the prevalence of PPD among new mothers and evaluate the effectiveness of targeted interventions. Over six months, 131 mothers with infants aged 6 weeks to 12 months were screened using the Edinburgh Postnatal Depression Scale (EPDS).

The study revealed a staggering prevalence of PPD, with 83.54% (116/131) of participants exhibiting symptoms. However, post-intervention, EPDS scores demonstrated significant improvement, indicating effective management of PPD symptoms.

These findings highlight the critical need for early diagnosis, health education, and timely care in managing PPD. To address this issue, routine PPD screening for new mothers, integration of mental health services into maternal healthcare, health education and awareness campaigns, and timely interventions and support for affected mothers are recommended.

By prioritizing maternal mental health, healthcare providers can improve outcomes for both mothers and children. This study contributes to the growing body of research emphasizing the significance of addressing PPD and underscores the importance of proactive interventions to support new mothers' mental health and foster healthy child development.

Keywords: Postpartum depression, mother, EPDS.

Introduction:

Postpartum depression (PPD) is a prevalent and serious mental health condition that affects women during the postpartum period. It can manifest through a variety of symptoms, including intense sadness, fatigue, anxiety, irritability, and changes in sleep or eating patterns[1]. These symptoms can significantly impair a mother's ability to care for her infant and manage daily responsibilities, potentially affecting the mother-child bond and the overall well-being of the family. Recognizing and addressing PPD early is critical to providing the necessary support and treatment for affected mothers[2][3][4].

During the perinatal period, women frequently interact with healthcare services, presenting a crucial opportunity to identify those suffering from or at risk of developing depression. However, diagnosing postpartum depression can be challenging due to the prevalence of the 'baby blues,' a common postpartum experience affecting 50-80% of women shortly after childbirth[5][6]. Symptoms of the baby blues include irritability, fatigue, and excessive tearfulness but do not involve suicidal thoughts or feelings of worthlessness. These symptoms typically resolve within a few days to a week, in contrast to PPD, which lasts for more than two weeks[7].

While the baby blues are generally considered a normal part of the postpartum experience, evidence suggests that women experiencing these symptoms may be at an increased risk of developing minor postpartum depression. Differentiating between the baby blues and PPD can be difficult for many women[8][9][10]. The diagnosis is further complicated by the potential co-occurrence of PPD with other mental health disorders, such as anxiety and post-traumatic stress disorder (PTSD). Moreover, many symptoms of PPD, such as concentration difficulties, fatigue, reduced libido, and sleeplessness, are also common during the postnatal period. Therefore, it is essential to thoroughly explore the relationship between these symptoms and reported depression to ensure accurate diagnosis and appropriate treatment[11][12][13].

To facilitate the early detection of PPD, healthcare providers often rely on the Edinburgh Postnatal Depression Scale (EPDS). The EPDS is a globally accepted screening tool specifically designed to identify mothers at risk for PPD. This self-report instrument includes 10 questions that focus on the emotional and psychological experiences of the mother over the past seven days. Each question is rated on a scale from 0 to 3, resulting in a total

possible score ranging from 0 to 30. Scores above a certain threshold suggest the presence of PPD and indicate the need for further clinical evaluation[14][15].

The EPDS is valued for its simplicity and effectiveness. It is easy to administer, typically requiring about five minutes to complete, which makes it a practical choice for routine use in both clinical settings and research studies. The scale's ability to quickly identify those at risk allows for timely intervention, which can significantly improve outcomes for both mothers and their infants. Additionally, its straightforward format ensures that it can be used across diverse populations and settings, contributing to its widespread adoption and reliability as a screening tool for postpartum depression[17][18].

Objectives:

To assess the prevalence of PPD using EPDS scale

MATERIALS AND METHODS

Study Design:

A community-based interventional study was conducted to assess the prevalence of postpartum depression in Mangaluru, Dakshina Kannada, Karnataka state, India. The study was carried out over a duration of 6 months, from March 2023 to August 2023.

Ethical Clearance:

The study protocol received approval from the Institutional Ethics Committee (IEC) of Srinivas Institute of Medical Sciences, Mukka, Mangaluru. Additionally, written informed consent was obtained from all participants in the study.

Inclusion Criteria:

Mothers who were willing to participate and were in the postpartum period ranging from 6 weeks to 1 year after delivery were included in the study.

Exclusion Criteria:

Mothers who initially consented but later withdrew from the study and those with a current history of undergoing any psychiatric treatment were excluded from the study.

Source of Data:

Data were collected using a data collection form through direct interaction with the study subjects at their residences. The study included mothers who were in the postpartum period.

Informed Consent Process:

Informed consent forms were available in English and Kannada, and only participants willing to complete the informed consent form were included. The informed consent forms were orally explained to the participants before completion, and nonverbal methods, with the assistance of a caregiver, were utilized if necessary.

Data Collection Method:

Data were collected using a questionnaire after providing information about the study and assuring the confidentiality of respondents' information. The depression status was assessed using the Edinburgh Postnatal Depression Scale (EPDS). Data were collected using a Data Collection Form, a Prevalidated Questionnaire, and the EPDS through direct interaction with the patient at their homes. All data were kept confidential. The average time required to answer the questionnaire and complete the session was between 20 and 30 minutes.

Data Analysis:

The collected data were recorded and analysed using SPSS. Descriptive statistics were generated for all variables, and the data were represented using tables and charts. Inferential statistics were conducted using chi-square analysis, with the level of significance set at 5% (0.05). Student's t-test was applied to analyse the data using the Social Sciences Statistical Software.

Operational modality:

Phase 1: Study Preparation: During this phase, the Patient's Data Collection form, containing demographic details, and the Patient Information Leaflet (PIL) were prepared**.**

Phase 2: Pre-Intervention Study:

After obtaining ethics approval, subjects who met the inclusion criteria were selected. They were approached through Anganwadis of Mangaluru. Each session lasted an average of 20-30 minutes. Participants were informed about the study and their consent was obtained. The Edinburgh Postnatal Depression Scale (EPDS) was utilized to assess mothers suffering from postpartum depression (PPD).

Criteria Selection for Intervention Group:

Subjects with an EPDS score of ≥10 were randomly categorized into control and intervention groups.

Intervention Provision:

The intervention group received the intervention using the Patient Information Leaflet (PIL).

Phase 3: Post-Intervention Study:

The post-intervention phase commenced two months later, during which the subjects were analysed using the same data collection form to check for improvement. The data obtained were then analysed using the student t-test.

Results:

Socio Demographic Characteristics of Study Participants:

This study conducted a comprehensive examination of 131 married participants, revealing a high literacy rate of 98.5%. All participants were married, with 129 being literate and only 2 illiterates. The majority, 61%, were aged between 20 and 29. The study also highlighted diverse family structures, consisting of 86 joint families and 45 nuclear families, showcasing the varied social dynamics. Furthermore, the employment status was divided, with 61 participants engaged in workforce and 70 dedicating themselves to homemaking. Most notably, a significant 116 participants exhibited symptoms of postpartum depression, as indicated by EPDS scores of 10 or higher. Table 1 outlines the participants' sociodemographic profiles.

Table 1: Socio-demographic profile of study subjects

Variable	Responses	Frequency	Percentage (%)
Age	<20	9	6.87
	21-30	80	61.06
	31-40	39	29.77
	>40	10	7.63
Education	Illiterate	2	1.52
	Primary	8	6.10
	High school	21	16.03
	Graduation	100	76.33
Occupation	Employed	61	46.53
	Housewife	70	53.43
Domicile	Rural	75	57.25
	Urban	56	42.74
Type of family	Joint	45	34.35
	Nuclear	86	65.64
Mode of delivery	C- section	58	44.27
	Vaginal	73	55.72
Gender of baby	Female	71	54.19
	Male	60	45.8

Assessment of PPD using EPDS Scale:

This study aimed to identify mothers suffering from postpartum depression (PPD). To achieve this, we utilized the Edinburgh Postnatal Depression Scale (EPDS), which is the most frequently used questionnaire for screening PPD. The EPDS is a self-administered tool comprising 10 items, where

women assess their feelings over the past week. Each item is rated on a scale from 0 to 3, resulting in a total possible score range of 0 to 30. Completing the questionnaire typically takes approximately five minutes.

The questions in the EPDS are crucial as they cover a range of emotional and psychological experiences that are common indicators of PPD. These questions include inquiries about the frequency of feeling sad or miserable, experiencing anxiety or panic attacks, and changes in sleep patterns. The comprehensive nature of these questions helps in accurately capturing the varied manifestations of PPD.

A cut-off score of more than 10 is considered indicative of possible depression, signaling the need for further assessment. Scores below 10 generally indicate non-depressive mothers. Those who score above the predefined threshold are recommended for further evaluation by a trained health professional. This additional assessment ensures that those at risk receive the appropriate support and intervention.

The EPDS not only facilitates the early detection of both minor and major depression but also helps in distinguishing between normal postnatal experiences and more serious depressive conditions. Table 1 presents the EPDS scale along with the responses used in this study. The detailed responses help in understanding the prevalence and severity of PPD among the participants, guiding necessary follow-up actions and interventions.

SL. No	**Question**	**Responses in Scores**			
		0	**1**	**2**	**3**
1	**I have been able to laugh and see the funny side of things**	65	35	20	11
2	**I have looked forward with enjoyment to things**	59	37	17	18
3	**I have blamed myself unnecessarily when things went wrong**	23	40	38	30
4	**I have been anxious or worried for no good reason**	28	26	60	17
5	**I have felt scared or panicky for no very good reason**	22	33	44	32
6	**Things have been getting top of me**	31	32	46	22
7	**I have been so unhappy that I have had difficulty sleeping**	32	31	38	30
8	**I have felt sad or miserable**	32	38	42	19
9	**I have been so unhappy that I have been crying**	44	45	23	19
10	**The thought of harming myself has occurred to me**	70	26	22	13

Prevalence of PPD:

In our study, a significant number of mothers faced challenges in recognizing their mental health condition. Surprisingly, we identified 116 mothers suffering from postpartum depression (PPD) who were unaware of their condition, attributing their symptoms to common postpartum experiences. These mothers reported feelings of irritation and even contemplated self-harm.

Our findings reveal a high prevalence of PPD, with 88.54% of women scoring >=10 on the EPDS, indicating an experience of postpartum depression. Detailed prevalence rates of PPD are provided in Table 2, offering insights into the extent of this mental health issue among the participants.

Table 2: Prevalence of PPD

EPDS Scores	**No of subjects**	**Percentage (%)**
≥10	116	88.54
<10	15	11.45

To assess the impact of intervention provided on Postpartum depression (PPD) status.

To evaluate the impact of the intervention on postpartum depression (PPD), 116 mothers with depression were randomly assigned to two groups: the intervention group and the control group, each consisting of 58 mothers. Only the intervention group received a Patient Information Leaflet (PIL).

The evaluation of the intervention's effects on PPD status began after a period of two months. Subjects were carefully analyzed and observed for signs of improvement using predetermined questions.

Comparison of EPDS scores of controls and intervention group:

A comparison of the Edinburgh Postnatal Depression Scale (EPDS) scores between the control and intervention groups revealed that PPD was initially present in all 58 subjects. After the intervention, significant improvement was observed in 47 subjects from the intervention group, whereas no changes

were noted in the control group. The results, analyzed using social science statistical software, indicated significant p-values ($p < 0.05$), demonstrating the effectiveness of the intervention in reducing PPD. Table 5 presents the comparison of EPDS scores between the control and intervention groups.

SL. No	Question	Responses in Scores			
		0	**1**	**2**	**3**
1	**I have been able to laugh and see the funny side of things**	71	37	14	9
2	**I have looked forward with enjoyment to things**	63	38	16	14
3	**I have blamed myself unnecessarily when things went wrong**	25	47	40	19
4	**I have been anxious or worried for no good reason**	29	41	49	12
5	**I have felt scared or panicky for no very good reason**	23	48	42	18
6	**Things have been getting top of me**	31	49	34	17
7	**I have been so unhappy that I have had difficulty sleeping**	32	50	26	23
8	**I have felt sad or miserable**	33	54	28	16
9	**I have been so unhappy that I have been crying**	59	38	15	19
10	**The thought of harming myself has occurred to me**	91	12	15	13

This study conducted in Mangalore investigated the prevalence of Postpartum Depression (PPD) among mothers and evaluated the efficacy of an educational intervention in enhancing their knowledge, attitudes, and symptom management. The results demonstrated significant improvements in maternal understanding and perspectives on PPD, accompanied by a reduction in depressive symptoms. The findings underscore the importance of maternal education as a viable strategy for improving knowledge, attitudes, and mental health outcomes related to PPD. The study employed a structured questionnaire and the Edinburgh Postnatal Depression Scale to collect sociodemographic data and assess depressive symptoms, respectively.

A study on postpartum depression (PPD) revealed a remarkably high prevalence rate of 88.54% using the Edinburgh Postnatal Depression Scale (EPDS), underscoring the urgent need for community education and intervention. This finding starkly contrasts with a previous study by Gebregziabher et al., which reported a prevalence of 7.4%. The study examined various sociodemographic factors, revealing that the majority of participants (20-29 years old) were educated housewives from rural areas with nuclear families. However, none of these factors showed a significant association with PPD ($p<0.05$).

Participants reported challenges such as sleeplessness, financial stress, postpartum food restrictions, excessive household responsibilities, and the pressure to be a perfect mother, which correlated with their EPDS scores. This echoes the findings of Gaikwad S et al., suggesting that rural-dwelling mothers are more susceptible to PPD.

The post-intervention assessment showed a substantial reduction in PPD cases, with a p-value of <0.05 indicating statistical significance. Notably, a predominant percentage of the population showed complete recovery from postpartum depression, highlighting the effectiveness of the intervention.

CONCLUSION:

this study highlights the alarmingly high prevalence of postpartum depression (PPD) among mothers, underscoring the need for targeted interventions. The findings demonstrate that providing specialized education to mothers can significantly reduce the prevalence of PPD, whereas maintaining the status quo has little impact. A comparative analysis of the pre-intervention and post-intervention phases reveals that tailored education and intervention can empower mothers to manage their depression, alleviate its severity, and enhance their overall quality of life. These results emphasize the critical importance of prioritizing maternal mental health and providing accessible support systems to facilitate a healthier transition to motherhood.

ACKNOWLEDGEMENT:

Authors would like to extend deepest gratitude to Srinivas College of Pharmacy and study participants.

BIBLIOGRAPHY

1. Obioha EG, Balogun MR, Olubodun T, Okafor I. Knowledge, Attitude and Prevalence of Postpartum Depression among Postnatal Mothers in Southwest Nigeria. African Journal of Health Sciences. 2021;34(6):779-92.

2. Branquinho M, Canavarro MC, Fonseca A. Knowledge and attitudes about postpartum depression in the Portuguese general population. Midwifery. 2019; 77:86-94.

3. Shriraam V, Shah PB, Rani MA, Sathiyasekaran BW. A community-based study of postpartum depression in rural Southern India. Indian Journal of Social Psychiatry. 2019;35(1):64-8.

4. Hendrick V, Altshuler LL, Suri R. Hormonal changes in the postpartum and implications for postpartum depression. Psychosomatics. 1998 Mar 1;39(2):93-101.

5. Gaikwad S, Mundada V, Dhande V, Doibale M. Assessment of postnatal depression and some associated risk factors among mothers attending the immunisation outpatient department in a tertiary health care centre: a cross sectional study. 2019;6(10):4412-16

6. Hadia R, Bhavsar K, Patel R, Shivadas V, Gohel K, Gaikwad R, et al., A Prospective Observational Study to Find out the Characteristics of Postpartum Depression (PPD) and to Assess the Impact of Pharmacist Led Counselling among the Females with PPD. Journal of Young Pharmacists. 2022;14(2):214.

7. Ezinwanne G O, Balogun MR, Olubodun T, Okafor I. Knowledge, Attitude and Prevalence of Postpartum Depression among Postnatal Mothers in Nigeria. 2022;24(6):779-92.

8. Malik FR, Malik BB, Irfan M. Comparison of postnatal depression in women following normal vaginal delivery and caesarean section: a pilot study. Journal of Postgraduate Medical Institute. 2015;29(1):217-30

9. Gebregziabher NK, Netsereab TB, Fessaha YG, Alaza FA, Ghebrehiwet NK, Sium AH. Prevalence and associated factors of postpartum depression among postpartum mothers in central region, Eritrea: a health facility-based survey. BMC public health. 2020; 20:1-10.

10. Stewart DE, Robertson E, Dennis CL, Grace SL, Wallington T. Postpartum depression: Literature review of risk factors and interventions. Toronto: University Health Network Women's Health Program for Toronto Public Health. 2003 :1-289.

11. World Health Organization. Maternal mental health & child health and development. Department of Mental Health and Substance Abuse. Geneva: WHO. 2008.412-62

12. Stephens T, Dulberg C, Joubert N. Mental health of the Canadian population: A comprehensive analysis. Chronic Dis Can. 2019; 20:118–26.

13. Nielsen D, Videbech P, Hedegaard M, Dalby J, Secher NJ. Postpartum depression: identification of women at risk. BJOG: An International Journal of Obstetrics & Gynaecology. 2012;107(10):1210-7.

14. Kerie S, Menberu M, Niguse W. Prevalence and associated factors of postpartum depression in Southwest, Ethiopia, 2017: a cross-sectional study. BMC research notes. 2018:1-7.

15. Doke PP, Vaidya VM, Narula AP, Datar MC, Patil AV, Panchanadikar TM, Wagh GN. Assessment of difference in postpartum depression among caesarean and vaginally delivered women at 6-week follow-up in hospitals in Pune District, India: an observational cohort study. BMJ open. 2021;11(9):52-68.

16. Afolayan JA, Onasoga OA, Rejuaro FM, Yusuf AR, Onuabueke C. Knowledge of postpartum depression and its associated risk factors among nurse-midwives in a Nigerian tertiary hospital. Sierra Leone Journal of Biomedical Research. 2016;8(2):54-65.

17. Segre LS, O'Hara MW, Arndt S, Stuart S. The prevalence of postpartum depression. Social psychiatry and psychiatric epidemiology. 2007 Apr;42(4):316-21.

18. Cox JL, Holden JM, Sagovsky R. Detection of postnatal depression: development of the 10-item Edinburgh Postnatal Depression Scale. The British journal of psychiatry. 1987;150(6):782-6.

19. Cummings EM, Davies PT. Maternal depression and child development. J Child Psychol Psychiatry. 1994;(5)73–78.

20. Norhayati MN, Nik Hazlina NH, Asrenee AR, et al. Magnitude and risk factors for postpartum symptoms: a literature review. J Affect Disord 2014; 175: 34–52.

21. Society CP. Maternal depression and child development. Paediatr Child Health 2004; 9(8): 575–598.