

Prevalence of Postpartum depression among Mothers attending Maternal and Child health clinic of Tertiary level hospital

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Abstract

Introduction: Postpartum depression is a mood disorder that affects women from period of delivery to one year after childbirth. Early screening and identification of mothers with depression can help reduce mental health-related morbidities. The objective of this study was to find the prevalence of postpartum depression using the Edinburgh Postnatal Depression Scale (EPDS) most widely used scale for assessing depression.

Methods: Descriptive cross-sectional study was conducted among 185 mothers with child from 6 weeks 14 weeks who came for immunization of their child in Maternal and child Health clinic of Rapti Academy of health science after taking ethical approval from Institutional review committee of RAHS through face-to-face interview using validated Nepali version of Edinburg depression scale.

Results: The mean age and standard deviation of the participants was 26.84 ± 4.77 years. In this study, the prevalence of postpartum depression was 7%. Psychosocial factors—particularly subjective feelings of stress, exposure to stressful life events within the previous year, and perceived family support—were found to be significantly associated with postpartum depression at the 95% confidence level.

Conclusion: Although prevalence of postpartum depression is low, there is a need of regular screening of postpartum depression as it is critical aspect of postnatal period. Awareness regarding postpartum depression sign and symptoms among mothers during the time of discharge from hospital should be focused by health worker.

Key words: Edinberg depression scale, Maternal and child health clinic, Postpartum depression

Introduction

Postpartum depression (PPD) is a mood disorder that affects mothers up to one year after childbirth. Postpartum depression of women can lead to postpartum psychosis affecting 1% of women.¹ During Postpartum depression, a mother shows serious symptoms, such as melancholy, anxiety, fatigue, irritability, episodes of crying, and impairment in sleep or appetite, self harm. These symptoms often occur for weeks to year.² Several

factors contribute to the development of postpartum depression, including miscarriage, anxiety during pregnancy, birth of a female child, and relationship-related issues.³ A study carried in Ethiopia found that the overall prevalence of postpartum depression was 25%.⁴ The study done in Norway among Pakistani women depicted that the prevalence of depression was 7.6%, past history of depression, marital status, a poor relationship to partner and an age of 30 years or more were found to be significant vulnerable factors for postpartum

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depression.⁵ The prevalence of postpartum depression differs across cultures, regions, and communities. Various factors such as the age of mothers, pressure to conceive a child, delivery-related complications were found to be significantly associated with the occurrence of postnatal depression in Chitwan with prevalence of 16.9%.⁶ The Edinburgh Postnatal Depression Scale (EPDS) is widely acceptable and used tool for identification of PPD with simple method of scoring.⁷ Despite the serious consequences of postpartum depression on both mothers and infants, the condition receives limited attention in developing countries like Nepal.

In Nepal, few studies have explored postpartum depression, particularly in Lumbini Province. The findings of study highlight the need for routine screening for postnatal depression, which should be integrated into maternal counseling during antenatal care, delivery, and postnatal follow-up visits.

Methods

Research with cross-sectional design was conducted at Rapti Academy of Health Sciences. The study population consisted of 185 mothers (calculated using Cochran's formula using prevalence as 17.1%⁷) with infants aged between 6 and 14 weeks who visited the Maternal and Child Health (MCH) clinic for routine childhood immunization services. Non Probability Purposive sampling method was used to select sample. Ethical approval was obtained from the Institutional Review committee, and formal permission was secured from the Institutional Review Committee of Rapti Academy of Health Sciences prior to data collection. Participants were selected during their visit for child vaccination at Rapti Academy of Health Sciences.

Data were collected using the standardized and validated Nepali version of the Edinburgh Postnatal Depression Scale (EPDS), following permission from the original author. The EPDS demonstrated a sensitivity of 92% and specificity of 95.6%. The reliability of the standard tool, assessed using Cronbach's alpha, was 0.742. The EPDS is a 10-item self-administered questionnaire designed to assess the severity of depressive symptoms experienced over the preceding seven days. Each item is scored on a four-point Likert scale ranging from 0 to 3, resulting in a total score between 0 and 30. Items 1, 2, and 4 were scored in ascending order based on symptom severity (0 to 3), while items 5 to 10 were reverse scored (3 to 0). The overall EPDS score was calculated by adding the scores of all ten items, taking score of 12 or higher as cut off score which denoted the presence of postpartum depressive symptoms.

Each participant was interviewed individually in a private counseling room within the MCH clinic after

taking the written consent before interview. Mothers identified with depressive symptoms were referred for psychiatric consultation. Collected data were reviewed for completeness and entered into SPSS version 16. Frequencies and percentages, were calculated as descriptive statistics data analysis, and associations between variables were examined using the chi-square test assuming significance at p value <0.05.

Results

Table 1: Socio-demographic characteristics n=185

Characteristics	Frequency	Percentage (%)
Age of mother(in years)		
<20	9	4.9
20-30	137	74.1
41-50	39	21.0
Mean age±std. dev:26.84±4.77		
Postpartum Period		
6-10 weeks	103	55.7
10 weeks and more	82	44.3
Residence		
Sub-metropolitan/Municipality	126	68.1
Village municipality	59	31.9
Ethnicity		
Brahmin/Chhetri	69	37.3
Janajati	90	48.6
Dalit	19	10.3
Others	7	3.8
Educational status of Participants		
Basic / Primary	43	23.2
Secondary	99	53.6
Higher Secondary and more	43	23.2
Educational status of Partner		
Basic / Primary	46	24.8
Secondary	95	51.4
Higher Secondary and more	44	23.8
Birth order		
One	76	41.1
More than one	109	58.9
Sex of baby		
Male	108	58.4
Female	77	41.6

A total of 185 women participated in the study. The mean (± standard deviation) age of the participants was 26.84 ± 4.77 years, more than half of participants (55.7%) were from 6-10 weeks of postpartum period. The majority of participants (68.1%) resided in sub-metropolitan areas.

Nearly half of the respondents (48.6%) belonged to the Janajati ethnicity. Regarding educational status, 53.5% of participants and 51.4% of their partners had completed secondary-level education. Additionally, more than half of the mothers (58.9%) were primiparous, and a similar proportion (58.4%) had delivered male infants. (Table 1)

Table 2 denotes more than half of the mothers (55.1%) had a vaginal delivery. Fewer than one-fourth (18.4%) experienced complications during childbirth. Subjective feelings of stress were reported by 15.7% of the participants, while 4.3% had a family history of psychiatric illness. Stressful life events within the past year were reported by 11.4% of the mothers, and 1.6% had a personal history of psychiatric illness. The majority of participants (81.6%) reported receiving perceived support from family members during the childbirth period.

Table 2: Socio-clinical characteristics

n=185

Characteristics	Frequency	Percentage (%)
Type of delivery		
Vaginal delivery	102	55.1
Cesarean delivery	83	44.9
Complication during childbirth		
Yes	34	18.4
No	151	81.6
Subjective feeling of stress		
Yes	29	15.7
No	156	84.3
Family history of Psychiatry illness		
Yes	8	4.3
No	177	95.7
History of psychiatry illness		
Yes	3	1.6
No	182	98.4
Stressful event within 1 year		
Yes	21	11.4
No	164	88.6
Perceived support from family		
Yes	151	81.6
No	34	18.4

Figure 1 denotes prevalence of Postpartum depression was 7%. The mean and standard deviation of score was 5.77 ±3.36. Among 185 postnatal, 13 mothers (7%) had postpartum depression.

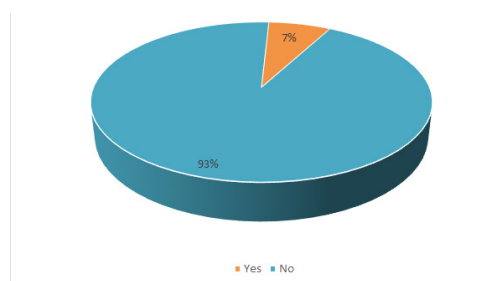


Figure1: Prevalence of postpartum depression

Table 3: Association of sociodemographic variables with prevalence of postpartum depression
n=185

Socio-demographic characteristics	Prevalence of Postpartum depression		X ²	df	p value
	Present n %	Absent n %			
Age					
< 20 years	1(11.1)	8(88.9)	0.00	1	1.00
≥ 20 years	12(6.8)	164(68.2)			
Postpartum period					
Less than 10 weeks	10(9.7)	93(90.3)	2.72	1	0.099
10 weeks and more	3(3.7)	79 (96.3)			
Sex of baby					
Male	9(8.3)	99(91.7)			
Female	4(5.2)	73(94.8)	0.67	1	0.41
Residence					
Village Municipality	4(4.1)	55(93.2)	0.08	1	
Sub metropolitan/ municipality	9(7.1)	117(92.9)			0.92
Ethnicity					
Brahmin/ Chhetri	2(2.9)	67(97.1)	3.2	1	0.07
Others	11(9.5)	105(90.5)			
Educational status of Participants					
Less than higher secondary	5(11.6)	38(88.4)	1.63	1	0.202
Higher secondary and more	8(5.6)	134(94.4)			
Educational status of Partner					
Less than higher secondary	2(4.3)	44(95.7)	0.74	1	0.389
Higher secondary and more	11(7.9)	128(92.1)			
Type of family					
Nuclear	7(7.9)	82(92.1)	0.18	1	0.66
Joint	6 (6.2)	90(93.8)			

Association of variables with prevalence of postpartum depression reveals that age of mother, age of children, sex of baby, residence, ethnicity, educational status, husband's educational status, type of family were not associated with postpartum depression with p value 1.00,0.099,0.41, 0.92,0.007, 0.20, 0.38, 0.66 respectively (Table3).

Association of variables with prevalence of postpartum depression indicates that subjective feelings of stress, stressful event and perceived support from family member were significantly associated with prevalence of depression (p= 0.007), (p= 0.048) and p =0.003 respectively whereas type of delivery (p=0.28) complications during childbirth (p=0.65 and family history of psychiatry illness p=0.52 were not associated with prevalence of postpartum depression (Table 4).

Table 4: Association of socio-clinical variables and prevalence of postpartum depression
n=185

Socio-clinical variable	Prevalence of Postpartum depression		X ²	Df	p value
	Present n %	Absent n %			
Type of delivery					
Vaginal delivery	9(8.8)	93(91.2)	1.12	1	0.289
Caesarean delivery	4(4.8)	79(95.2)			
Complication during childbirth					
Yes	3(8.8)	31(91.2)	1.95	1	0.65
No	10(6.6)	141 (93.4)			
Subjective feelings of stress					
Yes	6(20.7)	23(79.3)	7.39	1	0.007
No	7(4.5)	149(95.5)			
Family history of Psychiatry illness					
Yes	1(12.5)	7(87.5)	0.31	1	0.57
No	12(6.8)	165(93.2)			
Stressful event					
Yes	4(11.9)	79(81.0)	3.91	1	0.048
No	9(5.5)	155(94.5)			
Perceived support from childbirth					
Yes	6(4)	145(96)	9.066	1	0.003
No	9(5.5)	155(94.5)			

Discussion

In the present study, the prevalence of postpartum depression was found to be 7%. This prevalence is lower than that reported in a study from Surat, India, where postpartum depression was observed in 12.5% of participants.³ These findings contrast with studies

conducted in Bangladesh using EPDS scale, where the 47.78%⁸ of postnatal mothers had depression, in KMC hospital Kathmandu where postpartum depression's prevalence was 22.2%.⁹ This might be due to different in sample size and setting. In the present study there was significant association between postpartum depression and variables like subjective feelings of stress and perceived family support with p-values of 0.007 and 0.003, respectively. These findings are consistent with a study from Surat, India, and Paropakar Maternity hospital Kathmandu which reported a significant association between subjective feelings of stress or tension and postnatal depression (p value= 0.008)³ and < 0.00110 respectively. Furthermore, experiencing a stressful event within the previous year was significantly associated with depression in present study (p value= 0.048), which is consistent with findings from research conducted at TUTH, Kathmandu, where stressful life events were also significantly linked to postpartum depression (p value=0.004).⁷ In contrast, no significant association was seen between postpartum depression and the educational status of both the participants and her partner in the current study, a finding that aligns with research conducted at a women's hospital in Nepal, where educational attainment of either spouse did not significantly influence postpartum depression.¹⁰

Additionally, mode of delivery and gender of the baby were not found to be significant determinants of postnatal depression in this study, which contrasts with findings from Karnataka, India, where both variables were predictor of with postpartum depression (p = 0.02 and p value = 0.001, respectively).¹¹ This variation may be due to different in cultural settings and sample size. Similarly, variables such as birth order, maternal age, and place of residence were not significantly associated with postpartum depression in the present study, consistent with results from a study conducted in Kerala, India.¹² Parity or birth order was not significantly associated with postpartum depression in findings from metanalysis of Japan.¹³ In this study, complications during childbirth were not significantly associated with the prevalence of postpartum depression. This finding contrasts with a study conducted in Dhulikhel, Kathmandu, which reported a significant association between complications during pregnancy and postpartum depression, with a p-value of less than 0.01.¹⁴ Moreover, a family history of psychiatric illness was not associated with postpartum depression, comparable to results from a study among postnatal mothers in Bangladesh.⁸ The study was limited to MCH clinic of RAHS and sample was selected using non probability sampling technique which limits the generalizability of research of research finding. The finding of study might be useful for similar study in future. This study finding will to helpful for selected

hospital and municipality to raise awareness regarding postpartum depression as well provide support during postpartum home visit by health worker. It is beneficial for nursing educators, researchers to conduct further research

Conclusion

This study identified a relatively low prevalence of postpartum depression compared to several regional and international studies. Psychosocial factors, particularly subjective feelings of stress, exposure to stressful life events within the past year, and perceived family support, were found to be significantly associated with postpartum depression. These findings highlight the important role of emotional well-being and social support systems in the postpartum period. In contrast, sociodemographic and obstetric variables such as maternal and paternal educational status, maternal age, place of residence, birth order, mode of delivery, gender of the newborn, and family history of psychiatric illness were not significantly associated with postpartum depression. The modifiable factors associated with symptoms of postpartum depression (PPD) can be addressed through screening and appropriate interventions to help prevent the condition.

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