

Prevalence, Knowledge and Risk Factors for Postpartum Depression in Western Nepal - A Cross-Sectional Study

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ABSTRACT

Background: Postpartum depression (PPD) can be defined as non-psychotic depression occurring within a year after childbirth, characterized by low mood, unusual thoughts, feeling of guilt, unexplained anxiety, worthlessness, and other depressive symptoms. **Objective:** This study aims to assess the prevalence, knowledge and risk factors of postpartum disorder.

Methods: A cross-sectional descriptive study was conducted among 217 postpartum mothers in the outpatient department of psychiatry of a tertiary care hospital using the Edinburgh postnatal depression scale (EPDS). All the patients enrolled were directly interviewed using a structured questionnaire to identify the associated risk factors of postpartum depression. The data collected were checked for validity and analyzed using S.P.S. version 16.0.

Results: Out of 217 patients, five women were found to have an EPDS (Edinburgh postnatal depression scale) score greater than 10. The prevalence of postpartum depression was found to be 2.3%. Upon evaluation of knowledge about postpartum depression, 90.3% of women were found to have a poor level of knowledge and 8.8% had a good knowledge level. The statistically significant factors associated with postpartum depression were the lack of support from family and partners ($p < 0.005$).

Conclusion: There was a comparatively low prevalence of P.P.D. in Western Nepal. Majority of the mothers (90.3%) were found not aware of P.P.D. The present study concluded on the need for educational intervention among the mothers regarding P.P.D. in Western Nepal.

Keywords: EPDS, Nepal, Post-partum depression, Postnatal care

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INTRODUCTION

Depression occurring within a year of childbirth characterized by low mood, a feeling of guilt and anxiety is known as postpartum depression (P.P.D.). Despite the severe consequences, it remains undiagnosed in more than 50% of cases.^{1,2} The prevalence of P.P.D. is about 6.5% to 12.9% in women but is estimated to be higher due to underreporting and negligence.³

The etiology of P.P.D. is still unclear, but several studies have linked it to various factors, including socioeconomic status, prenatal depression, cultural factors, use of certain medication, excessive stress, and anxiety.^{4,5} Certain other risk factors including poor financial condition, lack of planned pregnancy, lack of family and social support, illness during the pregnancy, positive family history, premature age of mother, history of complications during a previous pregnancy, etc. are also found prevalent.⁴ Various classes of drugs are used in the treatment of postpartum depression, including antidepressants and antipsychotics, in severe cases.⁶ Preliminary research conducted across the globe suggests early identification of post-partum depression and its possible prevention.^{7,8} PPD is not only neglected with respect to its early detection and prevention but also in the areas of research.^{9,10} There is a need of effective research to gain more knowledge on its prevalence and diagnosis. Hence, this study aims to find the prevalence, knowledge, and contributing factors of the PPD among the postpartum mothers of western Nepal.

MATERIALS AND METHODS

A cross-sectional study was carried out in the outpatient psychiatry department of a tertiary care teaching hospital in Western Nepal. Ethics committee approval was secured before the initiation of the study (Ref: MCOMS/IRC/163), and volunteer patient consent was obtained from all the patients enrolled in the study.

The study was conducted for five months from July 2018 to November 2018 in the psychiatry department among the patients referred from the gynecology ward of Manipal Teaching Hospital, Pokhara, Nepal.

The sample required for the study was calculated (by $1.96^2 \times p \times q/e^2$, assuming that prevalence is 15% and margin of error 5%)

The minimum required sample was 166 patients.

Postpartum mothers within a year of childbirth who visited the outpatient psychiatry department were included in the study. The inpatient mothers, mothers associated with medical complications, and mothers who were not willing to participate in the study were excluded. Data on variables like socio-demographic factors (age, literacy level, gravida), economic factors, and social factors (family and friend's support, health care provider-patient relationship) were collected during the study. The relevant data were collected from a total of 217 patients.

The patient information sheet was provided to the patients satisfying inclusion criteria. Volunteer informed consent was obtained before collecting the data. Patients were directly interviewed using a structured questionnaire to identify the factors for postpartum depression. The relevant data on socio-demographic variables was obtained. Additional information like sick leave during pregnancy, number of pregnancies, data on breastfeeding, type of delivery, family and partner support, any illness of a child, any complications during the antenatal period, regular antenatal care (A.N.C.) checkups, and past medical history were recorded using the questionnaire. The EPDS was used to collect the data on the prevalence of postpartum depression. The filled questionnaires were checked at the field level on the same day of data collection. Coding was applied during data collection to maintain confidentiality. The collected data was used only for research purposes

The study subjects were not subjected to any risks during data collection. The interview was conducted in a private and friendly environment to minimize discomfort and subject bias. The data collected were validated, entered, and analyzed using SPSS (version 16.0). Association between the risk factors and postpartum depression was analyzed using Pearson's Chi-Square test.

RESULTS

In this study, a total of 217 patients were enrolled. The maximum number of patients belonged to the age group of 21-30 years (table 1). In the study, the maximum number of patients was found pregnant within the first five years of their marriage $n=116$ (53.45%), followed by 5-10 years $n=70$ (32.26%). Least number of pregnancies were found among women after 20 years of married life $n=1$ (0.46%) (table 2).

Table 1: Age-wise distribution of study population

Age (in years)	Frequency (%)
20 or less	28 (12.9)
21-30	145 (66.8)
31-40	43 (19.8)
> 40	1 (0.5)
Total	217

Table 2: Distribution of patient according to years of marriage

Years of Marriage	Frequency (%)
<5 years	116 (53.45)
5-10 years	70 (32.26)
10-15 years	26 (11.98)
15-20 years	4 (1.85)
>20 years	1 (0.46)
Total	217 (100)

Occupation, education and family income were analysed among the study subjects and the results showed that maximum number of mothers were household workers 77.95%, % those involved in service 11.1%, business 6.9%, and agriculture 4.1%. Most patients were educated 96.70%, and only 2.30% were illiterate. The education level of mothers, basic education 22.5%, secondary school 53.1% ,higher secondary level 24.4%. The majority of patients 34.6% were found to have a low family annual income of below 1.2 Lakhs NPR, followed by income more than 3.6 Lakhs NPR 33.2% and with annual income between 1.2-3.6 Lakhs NPR 32.2%.

The majority of the patients were involved in household activities, business, and agriculture. Hence, there was only minimal data available on sick leave. The distribution of mothers doing service as employees based on their sick leaves is shown in table 3.

Table 3: Distribution of patients according to sick leave

Sick leave (in days)	Frequency (%)
<30 days	6 (2.75)
30-60 days	9 (4.18)
60-90 days	3 (1.38)
90-120 days	6 (2.75)
Missing data	193 (88.94)
Total	217 (100)

Patient distribution, according to ethnicity, shows a higher number of Brahmin and Chhetri 50.2% followed by Dalit ethnicity 17.5% according to table 4. Among the studied population, only five subjects were found to affected by postpartum depression (table 4).

Table 4: Distribution of patients according to ethnicity

Ethnicity	Frequency (%)	Patients with PPD
Brahmin/Chhetri	109 (50.2)	3
Newar	26 (12.0)	0
Janajati	42 (19.4)	0
Dalit	38 (17.5)	2
Muslim	2 (0.9)	0
Total	217(100)	5

Analysis of data showed the highest number of primigravida 57.6% followed by second child 33.6% and third child 7.4%. In the total study population majority of the mothers were found to continue breastfeeding their children, 91.7%. The majority of the patients delivered their child through cesarean section 80.6%, whereas 19.4% had a normal vaginal delivery.

The majority of mothers had a good level of support from their family, n=217 (98.6%), and husbands, n=213 (98.2%).

Only n=11 (5.1%) reported the presence of illness among their infants during the postpartum period. A total of n=35 (16.1%) mothers were found reported with some complications during their pregnancy. The majority of the women completed all four antenatal visits to the hospital during pregnancy. Among all the study patients, only n=1 (0.46%) was found to have a history of depression.

The prevalence of P.P.D. among the study population was found to be 2.3 % (considering EPDS score greater than or equal to 10. The mean score was 0.98 (2.67), with a minimum value of 0 and a maximum of 19. Only five patients were found to have postpartum depression, i.e., EPDS≥10. All the patients enrolled were asked to answer ten different questions on P.P.D. The majority of the study population were found to be not aware of postpartum depression 90.3%, and 0.92% patients were found to have a satisfactory level of knowledge. Good level of knowledge was found in 8.8% patients.

Association of contributing factors with P.P.D

The statistically significant contributing factors of P.P.D. were lack of family support and partner's support ($p < 0.005$). The detailed information is referenced in table 5.

DISCUSSION

A total of 217 patients were enrolled, and the

Table 5: Association of socio-demographic variables with P.P.D.		
Variables	Chi-square test(P-value)	D.F.
Age	0.845	3
Years of marriage	0.378	3
Occupation	0.693	2
Ethnicity	0.521	4
Religion	0.874	4
Literacy	0.728	1
Educational level	0.388	2
Family Income	0.295	3
Number of pregnancies	0.502	4
Breastfeeding	0.337	1
Delivery	0.971	1
Family Support	0.000*	1
Partner's Support	0.002*	1
Pregnancy Planned	0.726	1
Health problems of Infant	0.601	1
Problem with pregnancy	0.812	1
Antenatal care visits	0.295	1
Psychiatric history in the immediate family	0.878	1

prevalence of P.P.D. was found to be 2.3% (considering EPDS score > 10). This is less when compared to other studies conducted in Nepal (prevalence was 5-12%). Similarly, it was found less than the prevalence reported in other South Asian countries, including China (11%), Pakistan (40%), and India (17%).¹¹⁻¹⁴ There is no uniformity in the data reported on the prevalence rate of PPD. Some studies reported a prevalence of 0, whereas some other studies reported a high prevalence of 60%. The majority of the studies reported the prevalence of PPD, ranging between 10-15%.^{11,12,15}

This variation between the prevalence of PPD may be due to the difference in the geographical area, educational status, study designs, and tools used in the study. The knowledge level of the patients on PPD was quite less compared to the other similar studies. This could be due to the lack of awareness and information among the present study subjects on PPD. Various socio-demographic parameters were analyzed to find out its association with PPD. In this study, we found a statistically significant association between family and partner's support and development of postpartum depression. This observation was found similar to a study in which lack of support from husband and family were identified as the key risk factor for developing PPD.¹⁶ Although this study provided an insight into the prevalence of PPD among the patients of Western Nepal, the data cannot be generalized for the entire population as the study was unicentric and limited by small sample size.

CONCLUSION

The prevalence rate of postpartum depression was found to be lower when compared to other studies conducted in Nepal and neighboring countries. Increasing awareness about postpartum depression among the general population and improving support from family and partner could reduce the prevalence of postpartum depression.

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