



A STUDY ON THE PREVALENCE AND RISK FACTORS OF POSTNATAL DEPRESSION AMONG WOMEN IN URBAN AREAS OF KAMRUP (M) DISTRICT, ASSAM

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ABSTRACT

Introduction: Postpartum depression is a significant maternal mental health problem which might start during pregnancy or after childbirth and needs to be treated. The global prevalence of postpartum depression has been estimated as 100-150 per 1000 births. **Objective:** To study the prevalence and risk factors of postnatal depression among women in Kamrup (M) District. **Materials and Methods:** This Community based cross-sectional study was studied in urban areas of Kamrup (M) district, from September to December, 2017. A sample of 280 postnatal women were taken as study population. Edinburgh Postnatal Depression scale was used as a tool. **Results:** Prevalence of postnatal depression was found to be 15.4%, it was found more among women in younger age (23%), belonging to nuclear family (21.5%), employed (24.5%), younger age at marriage (41.9%), unplanned pregnancy (29.5%), Caesarean Section (18.6%) as the type of delivery of last pregnancy, presence of family history (71.4%). **Conclusion:** Maternal and child health policies must integrate maternal depression as a disorder of public health significance especially in developing countries.

KEYWORDS : Postnatal Depression, Unplanned Pregnancy, Maternal Mental Health.

INTRODUCTION:

Mental health problems such as depression and anxiety disorders are very common during pregnancy and after childbirth globally. One in three women in developing countries, and about one in ten in developed countries, have a significant mental health problem during pregnancy and after childbirth.¹ Postpartum depression can start soon after childbirth or as a continuation of antenatal depression and needs to be treated. The global prevalence of postpartum depression has been estimated as 100–150 per 1000 births.² Sichel and Driscoll in 1999 explained the increased vulnerability to mood disorders at critical times in women's life, such as puberty, childbirth or menopause by using Earthquake Model for conceptualization of woman's mental health which is a non-psychotic depressive episode of mild to moderate severity. Postpartum depression is an important public health problem, having a significant impact on the mother, her partner, mother-infant interaction and on the long term emotional and cognitive development of the baby.³ Despite the launch of India's national mental health programme in 1982, maternal mental health is still not a prominent component of the programme. There is deficiency of dedicated maternal mental health services and health workers and lack mental health training. The availability of mental health specialists is also limited in peripheral health-care facilities. Moreover there is also a lack of research in the field of maternal mental health. The present study aims at determining the prevalence and risk factors of postnatal depression in urban areas of Kamrup (M) District, Assam.

MATERIALS AND METHODS:

The present study was a community based crossed sectional study conducted in urban areas of Kamrup (M) district, from September to December, 2017. The study population comprises of women in their first postnatal period (having children less than or equal to one year). The sample size was calculated using Cochran's formula $4pq/d^2$; Where, $p = 22\%$ (Prevalence of postnatal depression)⁴, $q = 100 - p$; Taking d (degree of precision) = 5%. The minimum sample size comes out to be $n = 4(22)(78)/25 = 274.56$, rounding off to 280. The list of wards in Kamrup (M) was considered as primary sampling unit. Each ward was considered as a cluster. From 31 clusters, 20 clusters were selected at random. From each cluster, 14 women were selected to get 280 women in their postnatal period. Then house to house visit was done till 14 women were found in each cluster. A predesigned pretested interview schedule for socio-demographic profile and Edinburgh Postnatal Depression Scale for assessment of depression (cut off score of 13 was taken as depression present) was used as data collection tools. Confidentiality of the women was maintained. Married women in their first postnatal period who has given consent for the study were included in the study. Women with serious illness, women who were diagnosed cases of major mental illnesses were excluded. Statistical analysis was done using SPSS-16, Chi square, Fisher's Exact test was done to compare variables, p value <0.05 was considered to be significant.

Ethical clearance has been obtained from institutional ethics committee.

RESULTS:

In the present study out of total 280 women in their first postnatal period, 43(15.4%) were found to be suffering from postnatal depression by Edinburgh postnatal depression scale.

TABLE 1: Distribution of the women according to their socio-demographic profile

AGE (YEARS)	DEPRESSED	NONDEPRESSED	TOTAL*	
18-21	12(23%)	40(76.9%)	52(18.6%)	$\chi^2=6$ d.f=2 p=0.04**
22-25	20(17.9%)	92(82.1%)	112(40%)	
26-30	11(9.5%)	105(90.5%)	116(41.4%)	
Total	43(15.4%)	237(84.6%)	280(100%)	
EDUCATIONAL STATUS				
Illiterate	3(15%)	17(85%)	20(7.14%)	Fisher's exact p=1 OR=0.9(02-3.4)
Literate	40(15.4%)	220(84.6%)	260(92.9%)	
Total	43(15.4%)	237(84.6%)	280(100%)	
TYPE OF FAMILY				
Nuclear	35(21.5%)	128(78.5%)	163(58.21%)	Fisher's exact P=0.0007* * OR=3.7(1.6-8.3)
Joint	8(6.8%)	109(93.1%)	117(41.8%)	
SOCIOECONOMIC STATUS				
Lower Middle class	13(24%)	41(75.9%)	54(19.3%)	$\chi^2=5.6$ d.f=3 p=0.1
Middle class	12(18%)	54(81.8%)	66(23.6%)	
Upper Middle class	11(11.2%)	87(88.7%)	98(35%)	
Upper class	7(11.3%)	55(88.7%)	62(22.1%)	
Total	43(15.4%)	237(84.6%)	280(100%)	
OCCUPATION				
Homemaker	17(9.7%)	157(90.2%)	174(62.1%)	$\chi^2=9.9$ d.f=1, p=0.001* OR=0.3(0.17-0.6)
Working outside	26(24.5%)	80(75.4%)	106(37.8%)	
Total	43(15.4%)	237(84.6%)	280(100%)	

(* Figure in parenthesis in the total column signifies column wise percentage in Table1)

Maximum (81.4%) of the women were found to be in the age groups of 22-30 years. The literacy state of the women in the present study was found to be 92.9% and majority (62.1%) were homemakers (Table 1). The prevalence of postnatal depression was found maximum in younger women (23%) and the prevalence decreases as the age increases. The association was also found to be significant. Women living in a nuclear family had odds of 3.7 times higher risk of postnatal depression in compared to women living in joint family. Working women had higher prevalence (24.5%) than homemakers. Educational status and socioeconomic status of the women had no association with prevalence of postnatal depression among women.

TABLE 2: Distribution of women according to different risk factors

AGE AT MARRIAGE (YEARS)	DEPRESSED	NONDEPRESSED	TOTAL	
≤20	26(41.9%)	36(58%)	62(22.1%)	$\chi^2=43.67$
21-25	10(9.3%)	97(90.6%)	107(38.2%)	d.f=2
≥26	7(6.3%)	104(93.6%)	111(39.6%)	p<0.0001
Total	43(15.4%)	237(84.6%)	280(100%)	
LAST PREGNANCY				$\chi^2=43.67$
Planned	14(7.6%)	168(92.3%)	182(65%)	d.f=1
Unplanned	29(29.5%)	69(70.4%)	98(35%)	p<0.0001
Total	43(15.4%)	237(84.6%)	280(100%)	OR=0.2
POSTNATAL PERIOD	Depressed	Nondepressed	Total	$\chi^2=0.2$
0-6 Months	17(13.8%)	106(86.1%)	123(43.9%)	d.f=1
6-12 Months	26(16.5%)	131(83.4%)	157(56%)	p=0.64
Total	43(15.4%)	237(84.6%)	280(100%)	OR=0.8
GENDER OF NEWBORN				$\chi^2=2.2$
Male	12(10.9%)	98(89%)	110(39.2%)	d.f=1
Female	31(18.2%)	139(81.7%)	170(60.7%)	p=0.13
Total	43(15.4%)	237(84.6%)	280(100%)	OR=0.54
TYPE OF DELIVERY				$\chi^2=4.4$
NVD	7(8.04%)	80(91.9%)	87(31%)	d.f=1
CS	36(18.6%)	157(81.3%)	193(68.9%)	p=0.03
Total	43(15.4%)	237(84.6%)	280(100%)	OR=0.38
FAMILY HISTORY				$\chi^2=13.2$
Present	5(71.4%)	2(28.5%)	7(2.5%)	d.f=1
Absent	38(16%)	235(99.1%)	237(84.6%)	p=0.03
Total	43(15.4%)	237(84.6%)	280(100%)	OR=15.46
				CI:2.8-82

(*The figure in the parenthesis in the 'Total' column signifies column wise percentage)

Table 2 shows that women who had younger age at marriage (≤20 years) had higher prevalence (41.9%) of postnatal depression and the association was significant. Women who had planned the pregnancy had less risk of having depression than the rest with protective factor of 0.2.

Women who had caesarean section as type of delivery, who had family history of mental illness had higher risk (18.6% & 71.4% respectively) of postnatal depression. Duration of Postnatal period, gender of the newborn had no association with postnatal depression.

DISCUSSION:

In the present study the prevalence of postnatal depression was found to be 15.4% which is higher than study done in Karnataka by Kruthika K et al. (2015)⁵ reported the prevalence of postnatal depression 13.6%. In the present study the prevalence was found more among young women in age group of 18-21 years (23%) Kruthika K et al⁵ in their study found it was highest 28.4% among the age group 25-29 years. Similarly a study done among the women in Andhra Pradesh,⁶ the prevalence was found to be 31.4% and majority of the women were found to be between the ages of 21-25 years. Another study done in Goa⁷, Mangalore⁸ and Delhi⁹ showed the prevalence 22%, 31.44% and

24% respectively. The prevalence was quite low in the present study compared to the above studies. This may be due to good and proper postnatal care was given to the women in the study area.

Postnatal depression and educational status of the women were inversely associated in study by Kruthika K et al⁵ which was similar to a study done in Delhi, but present study shows no association. In the present study there was significant association between the age, type of family and occupational status of the women with the prevalence of postnatal depression which was similar to a study done in Nepal¹⁰.

Beck (2001)¹¹ examined 8 studies of 1732 subjects and found a small effect between socioeconomic status and postpartum depression. However, it is unclear which indicators of socioeconomic status were included in this meta-analysis. In the present study no association was found between socioeconomic status and prevalence of postnatal depression.

The prevalence of postnatal depression was higher among women who delivered female baby 21.3% in Karnataka⁷. Study done in Mangalore by Shivalli S et al⁸ also showed high prevalence among women who delivered female baby. This may be due to culturally male dominated Indian society where male children are preferred. But present study showed no significance association between gender of the newborn and prevalence of postnatal depression.

Another study done among Bahraini¹² women reported that the women who delivered baby through LSCS had high prevalence of postnatal depression, which is similar to Kruthika K et al⁵ and which was similar to our study. This may be because of the post-delivery pain of the incision in LSCS. The prevalence was high among the women who had unplanned pregnancy in the present study, which may be as because mentally they were not ready to accept the new-born as it was not planned.

Ahmed et al in 2015¹³ in Pakistan found that women in the third postnatal week had highest prevalence (87%) of postnatal depression than the rest part. A systematic review of studies in 11 high-income countries showed that, based on point prevalence estimates, around 12.9% (95% CI: 10.6– 15.8) of mothers were depressed at three months postpartum.

O'Hara and Swain (1996)² combined data from 6 studies to evaluate the association between a family history of depression and women's experience of postpartum depression. Similarly present study also showed significant association between family history of mental illness and postnatal depression.

CONCLUSION:

This study found factors like age, type of family, occupation of the women, young age at marriage, unplanned pregnancy, type of delivery, family history of mental illness were significant predictors for postpartum depression. All of these potential risk factors can be ascertained during routine pregnancy care; therefore, it is important that antenatal healthcare providers and women in reproductive age group should be made aware about these risk factors. This will help in early identification of high risk women for postnatal depression and closer follow-up and intervention is possible in them.

Maternal and child health policies must integrate maternal depression as a disorder of public health significance especially in developing countries.

Limitation of the study: Although adequate privacy and confidentiality was maintained during the study procedure few women might not give proper data due to social stigma related to mental health.

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