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POSTNATAL DEPRESSION AMONG WOMEN ATTENDING A RURAL MATERNITY HOSPITAL IN SOUTH INDIA

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ABSTRACT

Introduction: The Diagnostic and Statistical Manual of Mental Disorders (DSM) V defines Postpartum Depression (PND) as depression with onset within 4 weeks of delivery, symptoms lasting for a minimum of two weeks, causing clinically significant impairment of functioning. PND has important implications for the welfare of the family and the development of the child. Objectives were to determine the prevalence of postnatal depression among women attending a rural maternity hospital in South India and to identify the risk factors determining postnatal depression.

Methodology: This was a cross sectional study, at a rural maternity hospital near Bangalore. One hundred and eighty women were selected through consecutive sampling. The Edinburg Postnatal Depression Scale (EPDS) was used administered to assess postnatal depression.

Results: Prevalence of probable depression was found to be 18%. Risk factors found to be significantly associated with postnatal depression were high risk pregnancy, being unhappy with in-laws, low income of the family, mood swings and low mood during pregnancy.

Conclusion: This study identified certain socio-demographic and obstetric risk factors for postnatal depressive symptoms in a rural community which helps to design intervention and preventive strategies for postpartum depression.

Key words: Postnatal depression, EPDS, rural women, South India

INTRODUCTION

Postpartum Depression (PPD) is clinical depression which affects women after childbirth. Depression is a mood disorder that affects one in four women at some point during their lifetime. It is a serious mental health problem among women and its consequences have important implications for the welfare of the family and the development of the child.[1] Reproductive events have been suggested to be involved in the onset and course of depression.[2] Several recent studies from South Asia have documented substantial rates of postnatal depression.[3-6] Symptoms are found to occur anytime from soon after delivery to up to a year post delivery. Effects of postpartum depression include relationship difficulties (particularly marital), disturbed mother-infant interactions including compromised care giving activities, feeding practices, sleep routines, well child visits, vaccinations, safety practices as well as long term negative effects on child health.[7]

It is important to identify postnatal depression early because, without treatment, it can lead to ongoing depression. It can also have an impact on maternal competence in childcare and has lasting and serious consequences upon the physical and psychological development of the child.[8]

The first and most important step to manage postnatal depression is the accurate assessment of the symptoms and early diagnosis. Screening helps in identifying mothers at risk and assists in prevention of PPD by means of psychosocial interventions for mothers who screen positive, anticipatory guidance by paediatricians for depressed mothers, intensive care by Midwives or Public Health Nurse for mothers with depressive symptoms etc.

However research on depression in the postnatal period especially among rural population in the Indian context is limited. Hence the present study was undertaken to determine the prevalence of probable depression among postnatal women attending a maternity hospital in Bangalore rural district and identify the risk factors that affect postnatal depression.

METHODS

This was a descriptive cross sectional study, based in a rural maternity hospital located in Solur, Ramanagara district in Bangalore. The study was conducted from October to November 2013.

Among the post natal women attending the rural maternity hospital during the study period 180 participated. All postpartum women obtaining care from the rural maternity hospital, irrespective of their age, parity and socio-economic statuswere included in the study while those previously diagnosed to have depression or those who were on treatment for any Psychiatric disorder including depression were excluded from the study.

EPDS is a validated tool for screening for postnatal depression. The participants were administered the Edinburgh Postnatal Depression Scale (EPDS) in the local language by trained the researchers. The face and content validity of the questionnaire in local language was done by experts in the field. The 10 item scale gauges depression based on a 7-day recall of mood and feelings, each item scored on a severity scale of 0 to 3, giving a total score ranging from 0 to 30. Mothers who score above 13 are likely to be suffering from depressive illness of varying severity (operational definition of depression based on EPDS score). At cut – off score of 9, it has 100% specificity and sensitivity of 76%.[9]

Low mood and mood swings during pregnancy were also assessed to find its association with postnatal depression. (A mood swing is an extreme or rapid change in mood)

Statistical Analysis: Data was entered in Microsoft Excel and analyzed using SPSS version 16. Data was described using, mean, median, mode and standard deviations. Bivariate analysis was done using Chi square tests following which variables with a significance level of < 0.25 were included in a logistic regression model to assess the factors associated with postnatal depression. All statistical tests were two-tailed and significance level set at 0.05.

Ethics Approval: Ethical approval for the study was obtained from the Institutional Ethics Committee, St. John's Medical College, Bangalore, Karnataka, India. Written informed consent was obtained from all participants prior to participation in the study.

RESULTS

The demographic details of the participants are described in table 1.

Among the 180 women who participated in this study 163 (90.6%) women had their first ante-natal check-up within three months of pregnancy and 159 (88.4%) had normal delivery

Among the study participants 99 (55%) were primi gravida and 81 (45%) were multi gravida. Of the 180 pregnant women interviewed 17(9.4%) were belonging to the category of high risk pregnancy. Risk factors included women suffering from the following - pregnancy induced hypertension, gestational diabetes, bad obstetric history, rheumatic heart disease, previous caesarean section, Rh incompatibility and twin gestation. The age at marriage was considered and it was seen that majority of them 110(61.2%) were between the age of 20 – 25 years. Family planning details showed that 31(17.2 %) reported to have used temporary family planning measures, most common being Copper-T 22 (71%) followed by condoms 7(22.6%) and others 2 (6.4%).

Table 1: Socio–demographic profile of the study population

Variable	Frequency (n = 180) (%)
Age distribution(In years)	
<20	15 (8.3)
20 – 25	143 (79.5)
> 25	22 (12.2)
Educational status	
0 – 4	11 (6.1)
5 – 7	18 (10)
8– 12	143 (79.5)
Degree	08 (4.4)
Occupational status	
House wife	161 (89.4)
Working	19 (10.6)
Family type	
Nuclear	37 (20.5)
Joint	131 (72.8)
Three generation	12 (6.7)
Socio economic status	
Above poverty line (APL)	111 (61.7)
Below poverty line (BPL)	24 (13.3)
Do not possess	38 (21.1)
Do not know	7 (3.9)
Monthly Family Income	
> Rs. 5000	146 (81.1)
< Rs. 5000	34 (8.9)
Religion	
Hindu	169 (93.9)
Muslim	6 (3.3)
Christian	5 (2.8)

Table 2: Prevalence of probable postnatal depression and associated factors

Variables	Depression		p value
Age (in years)	**Yes**	**No**	
< 20	4	11	0.25
20-25	22	121	
>25	6	16	
Educational status			
0-4	3	8	0.50
5-7	5	13	
8-12	23	120	
Degree	1	7	
Occupation			
Housewife	26	135	0.17
Working	6	13	
Family type			
Nuclear	5	32	< 0.05
Joint	16	115	
Three generation	11	1	
Monthly family income			
>5000	5	141	< 0.05
<5000	27	7	
Mode of delivery			
Normal	13	146	< 0.05
LSCS	19	2	

Table 3: Other associated factors

Obstetric score	Frequency (%)	Depression		p value
		Yes	No	
Primi gravida	99 (55)	24	75	< 0.05
Multi gravida	81 (45)	8	73	
High risk pregnancy				
Yes	17 (9.4)	15	2	< 0.05
No	163 (90.6)	17	146	
Others				
Family history of depression				
Yes	159 (88.3)	12	147	< 0.05
No	21 (11.7)	20	1	
Unhappy with in-laws				
Yes	21 (11.7)	18	3	< 0.05
No	159 (88.3)	14	145	
Mood swings				
Yes	38 (21.1)	30	8	< 0.05
No	142 (78.9)	2	140	
Low mood				
Yes	31 (17.2)	30	1	< 0.05
No	149 (82.8)	2	147	

Table 4: Logistic regression analysis for postnatal depression as outcome and associated factors

Variable	OR (95% CI)	p value
Unhappy with in – laws	3.4 (1.12–10.57)	0.03
High risk pregnancy	5.6 (1.49–21.62)	0.01
Income <Rs. 5000	2.7(1.009–7.62)	0.04
Low mood during pregnancy	2.6 (1.007–6.62)	0.04
Mood swings during pregnancy	5.4 (1.38–21.54)	0.01

*Multivariate logistic regression was done for all those factor variables like unhappy with in-laws, high risk pregnancy, low income, low mood during pregnancy and mood swings during pregnancy -which has got significant association with postnatal depression (dependent variable).

Only 67(37.2%) reported that they had a planned pregnancy. Most 159 (88.3%) did not have a family history of depression. Most 150 (83.3%) women reported that they had a happy married life. Twenty one (11.6%) of the women was unhappy with their in laws. Of the 180, 27 (15%) of the women had desire for a male child. About 169 (93.8%) of women reported that their husbands did not consume alcohol. On asked whether there had been a death or any other major illness in the family in recent past, majority of women 171(95%) replied negatively.

The prevalence of probable depression in our study was found to be 18%. Women with a high risk pregnancy, those who were unhappy with their in-laws, those with a low family income (< Rs. 5000 per month), those who had mood swings during pregnancy, those who had low mood during pregnancy those who underwent caesarean

section , primi and those with family history of depression had a higher risk of probable postnatal depression.

There was no significant association between presence of probable postnatal depression and age of the women, educational status, occupation, and desire for a male child, death in the family in the recent past, unplanned pregnancy or marital disharmony.

DISCUSSION

The present study provides information on prevalence and risk factors associated with postpartum depression. The prevalence of probable depression among postnatal women in the present study was found to be 18%. It is comparable to results of a study done on Egyptian women[10] where the prevalence of PPD was 17.9%, which is similar to previous results in developed countries[11] and developing countries including Sudan.[12] Differences in reported prevalence among various studies might be due to differences in the cut-off score used for EPDS, reporting style, differences in perception of mental health, differences in educational status, levels of social support or its perception, as well as biological vulnerability factors.

Factors studied to see whether they played a role in postnatal depression were individual characteristics like age, education and occupation of the women, family income, pregnancy related factors like high risk pregnancy, unplanned pregnancy, desire for male child, husband/marital relationship factors like relationship with in-laws, happy marriage and significant life events like death in recent past, obstetric score, mode of delivery and family history of depression. The factors which were significantly associated with probable postnatal depression were unhappy relationship with in-laws, high risk pregnancy, low family income, low mood, mood swings during pregnancy, obstetric score, mode of delivery and family history of depression.. Similar findings have been reported in other studies in Western countries.[13, 14]

In a hospital based Indian study by Rodrigues et al done in Goa in 2002, the prevalence of postpartum depression was 23%, significant factors noted were poverty, poor marital relationships, antenatal psychological morbidity.[15]

In a study done in Nigeria[16] the risk factors associated with PND include hospital admissions during the pregnancy, female sex of the baby, preterm delivery, instrumental delivery, Caesarean section and being single.

Certain limitations should be kept in mind while interpreting results of the present study. The study was conducted among women coming to a single hospital. The use of a single scale to measure probable post-natal depression, i.e. the EPDS was another limitation of our study. The inherent limitations of the EPDS, especially when it is investigator administered, include, it being a questionnaire based on recall and depending greatly on the woman's comprehension of the questions and rapport with the investigator.

CONCLUSION

This study found significant association between low mood during pregnancy and mood swings during pregnancy and post partum depression, prevalence being 18% in the post- partum period. The other factors in the present study which were significantly associated with probable postnatal depression were relationship with in-laws, high risk pregnancy, low family income, mode of delivery, obstetric score and family history of depression. These findings highlight the importance of routine screening for depression in primary health care given that postnatal depression is known to impact the welfare of child and child-care. Although the prevalence of PND symptoms seems to be the same across cultures, risk factors differ significantly. This study identified certain socio-demographic and obstetric risk factors for postnatal depressive symptoms in a rural community. These factors must be taken into consideration when planning intervention and preventive strategies for these women.

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