

STUDY OF POST NATAL DEPRESSION IN RELATION TO MODE OF DELIVERYM. S. Sowmya¹, Halder Abhijit², Datta Siddhartha³**HOW TO CITE THIS ARTICLE:**

M. S. Sowmya, Halder Abhijit, Datta Siddhartha. "Study of Post Natal Depression in relation to mode of delivery". Journal of Evolution of Medical and Dental Sciences 2014; Vol. 3, Issue 57, October 30; Page: 13003-13008, DOI:10.14260/jemds/2014/3726

ABSTRACT: OBJECTIVE: 1.To show whether mode of delivery is associated with postpartum depression on second postpartum day. 2. To show correlation between variables like age, parity, literacy, socioeconomic status, occupation of client, family structure with postpartum depression in study group. **METHODS:** Study was conducted in Postnatal Ward, Department of Obstetrics and Gynecology, in conjunction with Department of Psychiatry at Nilratan Sircar Medical College, Kolkata, from April 2012 to march 2013, included 200 mothers were in control group included 100 mothers who delivered vaginally, not having caesarean section and forceps delivery, study group included 50 patients who had elective caesarean section and 50 patients who had instrumental vaginal delivery. The Bengali translated version of the Edinburgh Postnatal Depression Scale (EPDS) was used at 2nd postpartum day to assess Post- partum depression (PPD), with a score of ≥ 12 as the cutoff for PPD. The Statistical software namely SAS 9.2, SPSS 15.0, Stata 10.1, Med Calc 9.0.1, Systat 12.0 and R environment ver.2.11.1 were used for the analysis of the data. **RESULTS:** Incidence of post-partum depression in present study on 2nd postpartum day was 9.5% of 200 mothers. Significant association of PPD seen in mothers who were in study group ($p=0.03$) with 42% of mothers had undergone Caesarean section. History of social violence showed significant association with PPD ($p=0.02$). literacy, family structure, age, parity, socioeconomic status showed no association. **CONCLUSION:** Post-partum depression was significantly associated with caesarean section. **KEYWORDS:** Post natal depression, Edinburgh Postnatal Depression scale.

INTRODUCTION: Non-psychotic depression in the postpartum period is a well-known clinical phenomenon, but women at risk are recognized rarely during pregnancy or at the delivery ward. Prevalence varies between 8% and 15% according to the different diagnostic criteria used. Although the incidence in the year following childbirth does not appear to exceed the incidence of depression, found in non-childbearing populations, a public health problem exists. Postpartum depression has also been associated with adverse effect on infant development, especially among socially disadvantaged children. Serious consequences for the child include increased risk of accidents, sudden infant death syndrome and overall higher frequency of hospital admissions.

Numerous studies have addressed the significance of various biological and non-biological factors in the etiology of postpartum depression. The frequent use of retrospective study methods may explain the conflicting data available on the role of perinatal events. The most consistent findings link low socioeconomic status and previous psychiatric illness to postpartum depression. Few attempts made to test the predictive power of putative risk factors and none has used standardized and well-validated questions.

The purpose of this study is to determine whether postpartum depression at 2nd day (48hours) following childbirth as measured by EPDS scale Bengali translated version is associated with mode of delivery.

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It includes a comparison group of women who delivered vaginally, uses a cross-sectional prospective approach, and uses a measure of postnatal depression with established psychometric properties. The study also presents the findings of an exploratory examination of interactions between mode of delivery and potential moderator variables.

MATERIALS AND METHODS: Study was conducted in Postnatal Ward, Department of Obstetrics and Gynecology, in conjunction with Department of Psychiatry at Nilratan Sircar Medical College, Kolkata, from April 2012 to march 2013, included 200 mothers were in control group included 100 mothers who delivered vaginally, not having caesarean section and forceps delivery, study group included 50 patients who had elective caesarean section and 50 patients who had instrumental vaginal delivery.

Exclusion criteria included 1. Mothers who had psychiatric disorder. 2. Mothers on antidepressant drugs. 3. Psychiatric admission and psychiatric contacts. 4. Congenital anomalies of fetus. 5. Fetal death in uterus. 6. History of previous stillbirth, abnormal baby. 7. Multiple gestations. 8. PPTCT positive mothers. 9. Hepatitis B positive mother. 10. Ante partum hemorrhage, postpartum hemorrhage, 11. Medical illnesses. 12. Index baby birth weight less than 2.5 kg. 13. Baby admitted in nursery/SCBU for care. 14. Baby having convulsion/having parenteral nutrition. 15. Babies receiving phototherapy with bilirubin >5mg%.

Study is Prospective study. Antenatal history from the mother, mode of delivery was asked, Clients fulfilling criteria selected. Pretested questionnaire (EPDS scale) after 48hrs of delivery was asked.

RESULTS: Since no same study done earlier in NRS Medical College, this is a Pilot Study. Following tables showed distribution of women in study & control group in relation to variable parameters. Age, parity, residence, gender of baby, birth weight of baby showed no relationship to PPD. Mode of delivery was significantly associated with PPD.

EPDS score	Study Group		Control group	
	No	%	No	%
<12.0	86	86.0	95	95.0
>=12.0	14	14.0	5	5.0
Total	100	100.0	100	100.0

Table 1: EPDS score

P=0.03

Mode of delivery	EPDS score <12 (n=181)	EPDS score ≥12 (n=19)
Vaginal delivery	95(52.5%)	5(26.3%)
C-section	42(23.2%)	8(42.1%)
Forceps delivery	44(24.3%)	6(31.57%)

Table 2: Showing EPDS score in relation to mode of delivery

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Gender of baby	EPDS score<12 (n=181)	EPDS score≥12 (n=19)	p value
Girl	90(49.7%)	13(68.4%)	0.15
Boy	91(50.2%)	6(31.5%)	

Table 3: Showing distribution of gender of babies in relation to EPDS score

History of social Violence	EPDS<12 (n=181)	EPDS≥12 (n=19)	p value
Yes	20(11.04%)	6(31.57%)	0.022
No	161(88.95%)	13(68.4%)	

Table 4: Distribution of women with history of social violence based on EPDS score

Score (family income per month in rupees)	EPDS<12 (n=181)	EPDS≥12 (n=19)	P value
1	54(29.83%)	9(47.3%)	0.32
2	81(44.75%)	7(36.8%)	
3	41(22.6%)	2(10.52%)	
4	5(2.76%)	1(5.2%)	

Table 5: Showing distribution of family income score in relation to EPDS score(modified Kuppuswami's classification)

Clinical variables	EPDS score at 48 hours		P value
	<12 (n=86)	≥12.0 (n=14)	
Age in years			
• ≤20	14(16.3%)	3(21.4%)	0.905
• 21-25	42(48.8%)	6(42.9%)	
• 26-30	25(29.1%)	5(35.7%)	
• 31-35	4(4.7%)	0(0%)	
• >35	1(1.2%)	0(0%)	

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Parity			
• 1	55(64%)	5(35.7%)	0.077+
• 2	24(27.9%)	8(57.1%)	
• 3	7(8.1%)	1(7.1%)	
Education			
• Illiterate	14(16.3%)	2(14.3%)	0.073+
• Primary	37(43%)	4(28.6%)	
• Secondary	25(29.1%)	3(21.4%)	
• High School	8(9.3%)	2(14.3%)	
• Graduate	2(2.3%)	3(21.4%)	
Family structure			
• Nuclear	53(61.6%)	11(78.6%)	0.221
• Joint	33(38.4%)	3(21.4%)	

Table 6: Comparison of Clinical variables with EPDS score in Study group

DISCUSSION: The systematic, prospectively collected information about potential risk factors among non-selected population and use of well-validated screening instrument provided the possibility of estimating the incidence of postpartum depression in a general obstetric population. Since emergency caesarean may constitute experience that is more traumatic, adverse psychological outcomes after emergency caesarean section will be more than after elective or planned caesarean section.¹

It is important to note that the EPDS scale is not a diagnostic instrument, but rather a tool developed to detect depression in the postpartum period.¹

In present study mode of delivery is significantly associated with postpartum depression, more cases with EPDS score ≥ 12 were in study group that included elective caesarean section and forceps delivery with p value 0.030, compared to vaginal delivery group, showing significant association of PPD with mode of delivery. Rihua Xie RN et al also found an increased risk of PPD in women who underwent caesarean section after they adjusted for potential confounding factors or considered C-section by social indications.²

Women who belonged to income group of score 1 and 2 constituted large proportion. However Ghosh et al found association of PPD with socioeconomic status with those having monthly income of INR less than 5000 constituted large proportion.³ Goker et al did not find association between PPD and socioeconomic status⁴. Significant association between with social violence and postpartum depression with p value 0.022. Ghosh et al and Mani chandran et al found similar results were abused women were prone to develop PPD.^{3,5} Between postpartum depression and literacy level, suggestive significance was found where 37% had primary education. Goker et al found no

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association with literacy level⁴. However Ghosh et al found significant association between PPD and literacy level illiterate and just literate group outnumbered other groups with p value of <0.001.³

Family structure including nuclear and joint family did not show significant association with postpartum depression with p value of 0.2. Similar results was found by Goker et al.⁴ However, Neilsen D et al showed significant association of PPD with perceived social isolation, Ghosh et al also found association between PPD and nuclear family structure, Sword et al found low social support is associated with PPD.^{7,3,8}

68% women with EPDS score of ≥ 12 had girl child but association being not significant. Mani chandran et al in their study found that 10 of 33 depressed women with depression had specifically wanted a male child and were disappointed with gender of newborn⁵. Patel V et al investigated risk factors particularly related to infant gender bias (preference for male child) on occurrence and outcome of depression. Gender of infant was determinant of PPD.⁶

CONCLUSION: Identified risk factors provide valuable factors that can alert healthcare providers to pay particular attention to the assessment of maternal mood. Screening or clinical assessment for possible postpartum depression is an important first step in early identification and intervention, which are important given that the length of time until obtaining adequate treatment is the most significant factor in the duration of depression. Untreated depression has negative implications for women, children, and families, yet many cases are undetected.

Although there is recent shifts in societal and women's attitudes away from the long standing belief that a 'normal birth' is a 'vaginal birth' which has made caesarean section delivery more acceptable in other population but even now Indian population are not satisfied with operative delivery and acceptability of caesarean section and forceps delivery compared to vaginal delivery.

REFERENCES:

1. Mutryn CS. Psychosocial impact of cesarean section on the family: A Literature review. Soc Sci Med 1993; 37:1271-81.
2. Rihua Xie, Jun Lei, Snuhong Wang, Haiyan Xie, Mark Walker, Shi Wu Wen Journal Women's Health.2011; vol 20 : 2842.
3. Ghosh A, Goswami S, Evaluation of post-partum depression in a tertiary hospital. Journal of Obstet Gynaecol India 2011 Oct; 61 (15):528-3035.
4. Goker A, Yamikkerem E, Demet MM, Dikayak S, Yildirim Y, Kajuncu FM. Post- partum depression: Is mode of delivery a risk factor? ISRN Obstet Gynecol. 2012.
5. Manichandran, Prathap Tharayan, Jayaprakash Muliyl, Sulochana Abraham. Post-partum depression in a cohort of women from rural area of Tamil Nadu, India. Incidence and risk factors. British Journal of Psychiatry 2002; 181:499-504.
6. Patel V, Rodrigues M, De Souza N. Gender, poverty, and postnatal depression: a study of mothers in Goa, India. AmJ Psychiatry.2002 Jan; 159 (1): 43-7.
7. Nielsen Forman D, Videbech P, Hedegaard M, Dalby Salvig J, N. J. Secher. Postpartum depression: identification of women at risk. Br J Obstet Gynaecol Oct. 2000; 107: 1210-1217.
8. Sword W, Kurtz Landy C, Thabane L, Watt S, Krueger P, Farine D, Foster G. Is mode of delivery associated with postpartum depression at 6 weeks: a prospective cohort study. BJOG.2011; 118:966-977.

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