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Prevalence and related factors to postnatal depression: A comparison between NVD and LSCS mothers

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ABSTRACT

Postnatal depression is a critical and neglected phase in the life of mother and babies. Early detection of depression will reduce the morbidity & mortality among postnatal mother, says WHO as 'Depression let's talk.' The assessment for postnatal depression after delivery is not a routine practice in many of the hospitals of Odisha. Hence in view of this, the current study was designed. The primary objective is to assess the prevalence of postnatal depressive cases and to find out the related factors responsible for the same. The secondary objective is to determine the level of depression & its association with the demographic variables and the regression analysis of both the cases. This was a comparative study conducted among 200 postnatal mothers, out of whom 100 were normal delivery (NVD) & rest 100 were lower segment caesarean section (LSCS) mothers admitted in the postnatal ward of IMS & SUM Hospital, Bhubaneswar, Odisha. The subjects were interviewed through a self-structured demographic Performa & Edinburgh postnatal depression scale (EPDS) within three days post-delivery. As per the survey result, depression was more among mothers having a cesarean delivery. The major factors contributing to depression were age and complications during the antenatal and intra-natal period. However, a high level of depression was associated with normal delivery cases with poor economic background and lack of family support. This study may bring light to the prevalence & related factors to depression among postnatal mothers in IMS & SUM Hospital so that healthcare professionals can focus more on counseling to the mothers on parenthood & other aspects so that the depression among the mothers not only can be early detected rather can be prevented.

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INTRODUCTION

Depression is a serious mental illness twice as common in female than in male (WHO, 2014). Postnatal depression is a global public health concern in low to middle economy countries with an incidence as high as 10-15% (Upadhyay *et al.*, 2017; Almond, 2009). This condition has received little attention & very least research conducted on both normal & cesarean mothers to compare the severity of depression. In India the incidence range from 7.5-21.5% (Upadhyay *et al.*, 2017; Saldanha *et al.*, 2014; Shriraam *et al.*, 2019). The strong predictor to depression in a female are stress during the childbearing period,

nerve-racking life events, poor support from society and a past record of depression.

Fully committed maternal mental health care facilities were greatly lacking in majority health-care centers of India and lack of mental healthcare training to healthcare providers makes them unaware of the severity & early detection of such cases (Baron *et al.*, 2016).

Literature suggests children born to depressive mothers have higher cognitive, behavioral and interpersonal problems than non- depressed mothers (Upadhyay *et al.*, 2017).

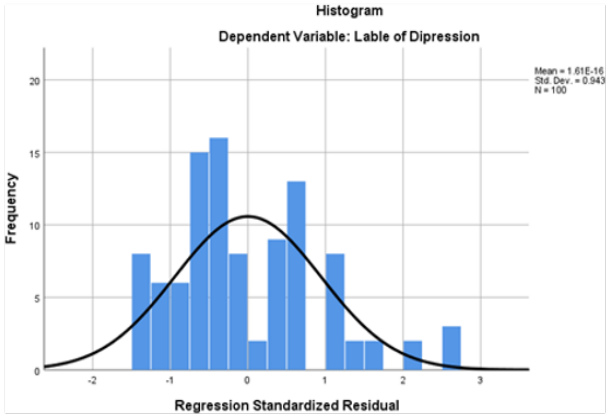

Figure 1: Histogram for NVD

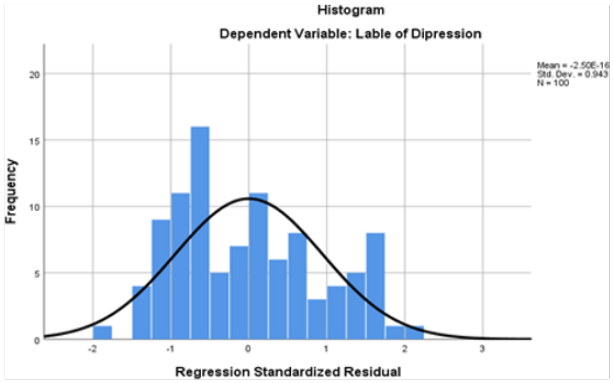

Figure 2: Histogram for LSCS

Severely depressive mothers have suicidal thoughts & also thoughts of harming their own children if neglected (Paris *et al.*, 2009). Somewhere there is lacuna till day that the mothers, their family members neither the healthcare providers are aware of the harshness of postnatal depression & its impact on both mother & baby.

In India, the rate of maternal mortality is sharply declining, which is why the focus on mortality due to mental illness may also shift. Also, there is a lack of strong research evidence on the overall burden of the postpartum depression along with its associated factors (Organization and UNICEF, 2015). Hence for the researcher has chosen the topic to establish an overall burden & contributing factor for postnatal depression in Odisha to a possible extent.

MATERIALS AND METHODS

The current study is a comparative descriptive study under a quantitative approach where a total of two hundred numbers of the sample were taken, out of which 100 were Normal vaginal delivery (NVD) & rest 100 were lower segment caesarean section (LSCS) mothers. The data were collected by using self-structured demographic Performa & Edinburgh Postnatal Depression Scale Score (EPDS) from the postnatal ward of IMS & SUM Hospital, BBSR, Odisha from 7^{th} January to 30^{th} March 2019. Institutional permission & informed consent were taken prior to data collection. Information gathered through a face to face interview with the mother within the first 72hr of delivery by using a convenient sampling technique. The interview took around 20min. The data were analyzed using SPSS version 20.

RESULTS AND DISCUSSION

A total of 200 mother participated in the study. The mean age of the normal delivery mother was 21.5yr, whereas the mean age for the caesarean mothers were 30.5yrs. Maximum of NVD mothers were primigravida (66%), delivered to male child(66%), completed primary education(44%), housewife(72%), Hindu(90%), belong to joint family(63%), had planned pregnancy(51%), having no paternal history of depression(90%) & are getting family support(88%) whereas in caesarean mothers all criteria are same with NVD except for higher educational qualification of graduation & above(40%) Table 1.

The prevalence of postnatal depression in NVD & LCSC mothers are 16% & 20% respectively (Table 2). Data on the level of depression shows in NVD, 14%, 13% & 21% were having mild, moderate & severe depression respectively, whereas in cesarean section mothers 20%, 10% & 31% were having mild, moderate & severe depression respectively (Table 3).

In Independent sample test level of postnatal depression shows the significant difference with education, occupation, the gender of baby, reli-

Table 1: Socio-demographic data

Age (Yr)	NVD Mothers (%)	LSCS Mothers (%)
18-25	49	38
26-35	47	60
>35	4	2
Order of pregnancy		
1^{st}	66	64
2^{nd}	26	26
3^{rd} or more	8	10
Gender of child		
Male	66	60
Female	34	40
Education of mother		
Primary	44	28
Secondary	27	28
Graduation & above	29	40
Illiterate	0	4
Occupation of mother		
Housewife	72	80
Daily wages	4	0
Govt. Employee	8	12
Private Employee	16	8
Housewife	72	80
Religion		
Hindu	90	90
Muslim	8	6
Christian	2	4
Type of family		
Nuclear	37	42
Joint	63	58
Planned pregnancy		
Yes	51	60
No	49	40
Paternal h/o depression		
Yes	10	7
No	90	93
Getting Family support		
Yes	88	80
No	12	20

Table 2: Data on level of depression

Level of depression	NVD (%)	LSCS (%)
No depression	52	39
Mild	14	20
Moderate	13	10
Severe	21	31

Table 3: Data on independent sample t test

Demographic variable	NVD (P value)	LSCS ((P value))
Age	.349	.981
Order of pregnancy	.102	.066
Gender of baby	.315	.000
education	.015	.235
Occupation	.017	.026
Religion	.008	.640
Type of family	.179	.263
Economic status	.024	.000
Planned pregnancy	.309	.613
Paternal h/o depression	.000	000
Family support	.000	.000

Table 4: Data on chi square test

Demographic variable	NVD		LSCS	
	χ^2 value	P-value	χ^2 value	P-value
Age	65	.004	75.2	.004
Order of pregnancy	76.6	.000	62.8	.050
Gender of baby	62.6	.000	34.4	.058
education	79	.000	104.8	.003
Occupation	111.9	.000	72.3	.008
Religion	46.8	.153	105	.000
Type of family	33.4	.021	34.7	.055
Economic status	51.4	.000	55.6	.000
Planned pregnancy	26.7	.110	22.7	.457
Paternal h/o depression	74	.000	47.1	.002
Family support	65.2	.000	50.2	.001

Table 5: Regression analysis for NVD mothers

Mode		R Square	Adjuste	Std. Th	R Squa	Change Statistics				Durbin-Watson
I	R					F Change	df1	df2	Sig. F Change	
1	.666	.444	.374	.970	.444	6.385	11	88	.000	2.176

Table 6: Regression analysis for LSCS mothers

Mode		R	Adjusted	Std. The	R Squar	Change Statistics				Durbin-Watson
I	R	Square	R Square	error of the Estimate	Change	F Change	df1	df2	Sig. F Change	
1	.489	.240	.144	1.184	.240	2.520	11	88	.008	1.552

a. Predictors:(Constant), Family Support, Religion, Education, Age, Type of Family, EconomicStatus, Gender of the child, Planned Pregnancy, Order of Pregnancy, Occupation,Paternal h/o depression
b. DependentVariable: Level of Depression

gion, economic status, paternal history of depression, family support among NVD & LSCS mothers (Table 4).

Chi-square analysis shows strong association of level of depression with all except for religion & planned pregnancy in normal delivery. In caesarean section, age, occupation, religion, education, economic status, paternal h/o depression, gets family support show significant association with the level of depression (Table 5).

Finally, Multiple regression analysis In normal delivery cases revealed that after adjusting for Family Support, Religion, Education, Age, Type of Family, Economical Status, Gender of Child, Planned Pregnancy, Order of Pregnancy, Occupation, Paternal h/o depression for 44% the level of depression changes significantly (R^2=44.4%; Std Err= 0.97; p=0.001; CI 95%) (Table 6), (Figure 1). In addition, for c section delivery the level of depression changes for 24% (R^2=24%; Std Err= 1.18; p=0.008; CI 95%) (Figure 2). The findings suggest that high demographic changes in normal delivery would express depression while the low change in demographics of patients undergone c section would express more depression.

In the current study, the prevalence of depression was found out to be high among caesarean mothers (20%) than normal delivery (16%), which shows some similarity with a study by Saldanha D, where the overall prevalence of depression among all postnatal mother was 21.51% (Almond, 2009). In another study, the maternal psychological distress in Odisha was 11.5% (Prost *et al.*, 2012).

The mean age of NVD & LSCS mothers were 21.5yr & 30.5yr resp. This finding is nearly similar to two studies, where the mean age of the sample was 24.5 (Shriraam *et al.*, 2019; Gupta *et al.*, 2013).

In current study, 14%, 13% & 21% of NVD cases were having mild, moderate & severe depression respectively, whereas in caesarean section 20%, 10% & 31% were having mild, moderate & severe depression respectively which is contrast in a study done by Shriraam V (level of moderate to severe depression is 11% & 7.4% resp.) (Shriraam *et al.*, 2019).

The risk of postnatal depression shows a strong association with a primigravida, having a female baby, low educational and economic status, having a positive family history of depression, complications in the antenatal period, not getting any family support during the perinatal period. The current study shows similarity to Bener A, 2017, showing financial difficulties, poor family support & dissatisfaction in marital life, pregnancy complications are the major predictor of depression in postnatal mother (Bener *et al.*, 2012; Gupta *et al.*, 2013).

CONCLUSIONS

The present study confirms a high prevalence of depression in all postnatal mothers, a bit high among caesarean section cases. Simultaneously the health-seeking behavior for maternal depression is demonstrated to be very low. Henceforth, this is the high time for the health care providers to take necessary steps to include maternal mental health in reproductive and child health programs.

Postnatal depression cannot be neglected & the mothers should be educated on the same since antenatal period so that the incidence & complication to depression can be reduced. And most importantly, the EPDS scale must be used for every mother routinely after delivery in postnatal wards for the early detection of depression. The training necessary to raise awareness among healthcare providers for early detection should be a part of the hospital policy.

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Conflict of Interest

None.

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