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Postpartum Depression and Role of Social Demographic and Obstetric Factors

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Research Article

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Abstract

Objective: To determine the prevalence and psycho-socio-demographic predictors of postpartum depression.

Design: Hospital based descriptive observational prospective study.

Setting: Tertiary care hospital.

Population: Day 2 postpartum women.

Method: 800 women were selected randomly and divided into two groups. Group A consisted of women delivered by caesarean section and group B of women delivered vaginally. These women were screened with Edinburgh postnatal depression scale and were evaluated.

Result: Out of total, 22.5 % women in group A and 21.5% in group B were found to be depressed (overall incidence being 22%). In group A the main reason for depression was poor health or death of the child(58.14%). They were of age group 20-24 years (57.14%), para 2 (57.14%) and belonged to upper-lower socio-economic status (53.57%). In group B the reason was sex of the child (54.44%). They were of age group 25-29 years (75%), para 3 (75%) and belonged to upper-lower socio-economic status (75%). The history of depression in the family was not known to the women in both the groups.

Conclusion: Rate of postpartum depression is high. The causes can be multiple including ill health of the baby and mother, sex of the child, family problems in the form of poor marital relationship, low socioeconomic condition etc. Women should be screened and counseled during the antenatal and postnatal period. Family support should be encouraged.

Keywords: Depression; childbirth; Women

Introduction

It is a clinical condition associated with childbirth. It is defined as depression developing in first 4 weeks after childbirth and may last for many months to years. The prevalence is 5% -25% [1]. It can present with sadness, hopelessness, low self-esteem, guilt, exhaustion, social withdrawal, easy frustration, sleeping and eating disorders, feeling inadequate in taking care of the baby and decreased sex drive [2]. The severity may vary from

postpartum blues to psychosis (prevalence being 1-2 per 1000 childbirths). Various risk factors have been proposed in its development but no one is independently associated. The various risk factors that have been identified are birth related psychological and physiological trauma, changes in the hormone levels during pregnancy, previous history of depression, childcare stress, poor marital relationship, life stress, low social support, single marital status, low socioeconomic status, unplanned and unwanted pregnancy [3]. Edinburgh postnatal depression scale, a standardized scale can be used to identify depressed women [4]. Early identification and early psychological intervention after childbirth helps improves the long term prognosis of these women [5]. Women should be screened to determine the risk of developing postpartum depression. Proper exercise and nutrition helps improving the mood [6]. First prenatal visit should include screening for depression and psychological support should be provided.

Material and Methods

It is a hospital based descriptive observational prospective study conducted at a tertiary level hospital of Jaipur, India. Total 800 women were screened with the Edinburgh postnatal depression scale. Eligible selected populations were divided into two groups based upon the mode of delivery. Thus 400 women who underwent a caesarean section were included in group A and 400 of those who underwent a normal vaginal delivery were included in group B. These women were screened with a pretested predesigned structured questionnaire on 2nd day of post-delivery and were evaluated according to the above mentioned scale.

Statistical Analysis

Statistical analysis was performed with the SPSS, Trial version 20 for Windows statistical software package (SPSS inc., Chicago, il, USA). The Qualitative data was presented as percentages, 95% CI, to assess any significant association Chi Square test and Odd's ratio was used. Quantitative data was expressed as mean ≥SD. Significance level was set at $P < 0.05$.

Results

Table 1 presents the participant's sociodemographic and obstetrical characteristics. All participants were married. The most represented education level was professional school.

Age	Total	LSCS		NVD	
	No	No	%	No	%
15-19	14	6	42.86	8	57.14
20-24	436	202	46.33	234	53.67
25-29	288	164	56.94	124	43.06
30-34	46	20	43.48	26	56.52
35-39	16	8	50	8	50
>=40	0	0	0	0	0
Parity					
1	368	172	46.74	196	53.26
2	306	168	54.9	138	45.1
3	92	46	50	46	50
4	26	10	38.46	16	61.54
5	4	0	0	4	100
6	4	4	100	0	0
SocioEconomic Status					
Upper	0	0	0	0	0
Upper middle	44	36	81.82	8	18.18
Lower middle	58	26	44.83	32	55.17
Upper lower	56	14	25	42	75
lower	18	14	77.78	4	22.22
	176	90	51.14	86	48.86

Table 1: Sociodemographic and obstetrical data.

The mean age of the study population was 23.99±3.46 (Median 24 years). The mean age of LSCS cases were 24.07± 3.469 (median 24) and NVD cases were 23.91±3.458 (median 23 years).

Out of total, 22.5 % women in group A and 21.5% in group B were found to be depressed according to Edinburgh postnatal depression scale (the overall incidence being 22%) (Table 2). In the present study maximum women belonged to the age group 20-24 Years(50.5% in group A and 58.5% in group **B**) and primipara were (43% and 49% in group A and group B respectively), 38.5% in group A belonged to lower middle socio-economic status and 43.5% in group B to upper lower strata (Tables 2-4). The various reasons that were stated by the women for low mood were sex of the child, ill health or death of the baby, ill health of the mother and family problems in the form of poor marital relationship, low socio-economic condition and poor family support. In group B the main reason was poor health or death of the child (58.14%) while in group A it was sex of the child (54.44%) (Table 5). The history of depression in the family was not known to the women in both the groups. Most of the women in group A who felt low due to ill health or death of the baby were of age group 20-24 years (57.14%), para 2 (57.14%) and belonged to upper-lower socio-economic status(53.57%) according to Kuppuswamy scale. Those in group B who were depressed due to the sex of the child were of age group 25-29 years(75%), para 3 (75%) and belonged to upper-lower socio-economic status (75%). The prevalence of postpartum depression was 22 %. 21.5 % of the cases in NVD and 22.5 % in LSCS groups scored. There was no significant relationships between mode of delivery and postpartum depression (p>0.05) and a 1.06 risk for depression was seen in CS group (OR1.06) Table 2. Mode of delivery was not independently associated with postpartum depression.

Mode of delivery	LSCS(400)		NVD(N=400)	
Depressed women	n	%	n	%
Present	90	22.5	86	21.5
Absent	310	377.5	314	379

Odds ratio = 1.060 (95% confidence interval: 0.759 to 1.481)
Chi-square = 0.066 with 1 degree of freedom; P = 0.798
Table 2: Distribution of the cases according to depression status among the group.

Age	LSCS	depression	%	NVD	depression	%
15-19	6	6	100	8	0	0
20-24	202	36	17.82	234	44	18.8
25-29	164	46	28.05	124	36	29
30-34	20	2	10	26	6	23.1
35-39	8	0	0	8	0	0
>=40	0	0	0	0	0	0

Chi-square Test: 30.212 with 4 df; P <0.001 S 6.667 with 4 df; P = 0.155 NS
Table 3: Association of age groups with depression status in both the groups.

Parity	LSCS	depression	%	NVD	depression	%
1	172	26	15.12	196	31	15.8
2	168	26	15.48	138	21	15.2
3	46	30	65.22	46	28	60.9
4	10	4	40	16	6	37.5
5	0	0	0	4	0	0
6	4	4	100	0	0	0

Chi-squareTest: 73.802 with 4 df; P < 0.001 S 52.746 with 4 df; P = 0.000
Table 4: Association of parity with the mood of delivered women.

Cause of depression	Group A (N=90)		Group B(N=87)		Chi-square
	Depression	%	depression	%	
Sex of the baby	49	54.44	30	34.88	6.348 with 1 df; P = 0.012S
illness or death of baby	31	34.44	50	58.14	8.545 with 1 df; P = 0.003S
Family problems	4	4.44	4	4.65	0.098 with 1 df; P = 0.754NS
Ill health of mother	6	6.67	2	2.33	1.074 with 1 df; P = 0.300NS
Total	90	100	86	100	

Table 5: Causes of mood changes of delivered women.

Proportion of the LSCS cases with depression were more in 15 to 19 years of age (100%) followed by 25 to 29 years of age (28.05 %) while no significant difference was observed according to NVD cases with age (P=0.155NS) (Table 3).

Proportion of the LSCS cases with depression were more in parity 6 (100%) followed by parity three (65.22%) while Proportion of the NVD cases with depression were more in parity 3 (60.87%) followed by parity four (37.5%). Depression significantly increases with parity (Table 4).

Proportion of the LSCS cases with depression were more in Upper middle (42.86 %) followed lower (36.84%) while Proportion of the NVD cases with depression were more in lower (50%) followed by upper lower (24.14%). Lower socio-economic status has been found to be associated with PPD in NVD while upper middle SES was significantly associated in LSCS cases (Table 5).

Socio-economic status	LSCS	Depression	%	NVD	depression	%
Upper	16	0	0	8	0	0
Upper middle	84	36	42.86	62	8	12.9
Lower middle	154	26	16.88	148	32	21.62
Upper lower	108	14	12.96	174	42	24.14
lower	38	14	36.84	8	4	50

Chi-square Test: 37.510 with 4 degrees of freedom; P <0.001 S 9.475 with 4 degrees of freedom; P=0.05S
Table 6: Association of socio-economic status with depression status in both the groups.

Depression was significantly more in Group B cases with sex of baby as compared to group B (54.44% vs 34.88%) while illness or death of baby was significantly associated with group B as compared to group A (58.14% vs 34.44%) but no significant association was observed with family problems and ill health of mothers (Table 6).

Discussion

Postpartum depression is increasing in the present day society. Many hypotheses have been given but still no clear etiology has been described. In this entity both prevention and treatment plays a role. Where early identification and counseling of these women play a very important role, treatment is needed in severe cases not responding to counseling and those with psychosis. Family support and preparing the mother for arrival of a new member in the family can help. Positive attitude should be reinforced. Stuart, et al. and Takahashi, et al. [7] also stressed the need for support from family and community.

The incidence of postpartum depression in the present study was found to be 22% (Table 2). Study conducted by Abdollahi F, et al. in 2014 [8] found an incidence of 19.4% and Alasoom, et al. found the rate to be 17.8% in Saudi Arabia in 2014 [9]. The reported rate of depressed mood during pregnancy was 28.3% and 16.4% at 3 months postpartum by Verrault, et al. in 2014 [10]. Kirkan, et al. [11] on the other hand reported incidence as 35 % in 2014 in Turkey.

Adollahi, et al. found high rate of depression in women marrying at a younger age. Katon, et al. [12] also found a similar association. This result is also seen in the present study where the rate of depression is high in young women (42.86%) (Table 2) marrying early and particularly undergoing caesarean section.

Kirkan, et al. in 2014 found that women whose babies were not well and were not breastfeeding had high rate of depression which is also shown in the present study (57.14% in those undergoing caesarean section and 67.86% in those with normal vaginal delivery) (Table 6).

Conclusion

There is a growing concern of postpartum depression as a significant public health problem. It affects the future life of the mother, child and also the family. Women should be screened and proper counseling should be provided to them and the family members and family support should be encouraged. It is a preventable and treatable entity so complete counseling of women with the husband starting from the antenatal period should be encouraged.

Conflict of Interest: There is no conflict of interest among authors.

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