

A Retrospective Study to Identify the Causes of Post-Natal Depression among Post-Natal Mothers of a Selected Hospital at Bharuch, Gujarat

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"You do NOT have to suffer in silence or feel ashamed. Our babies need us to be healthy during a time when we are overwhelmed the most" - Brittany Willow Mayer

Abstract

The birth of a baby can trigger a jumble of powerful emotions, from excitement and joy to fear and anxiety. But it can also result in something you might not expect-depression. Post-natal depression is a type of depression that many parents experience after having a baby. It is a common problem, affecting more than 1 in every 10 women within a year of giving birth. Post-partum depression is not a character flaw or a weakness. Sometimes it is simply a complication of giving birth. In post-partum depression, prompt treatment can mitigate the symptoms and help develop bonds with baby. The aim of this study was to determine the causes of post-partum depression among post-natal mothers from selected hospital at Bharuch using Edinburgh Post-natal Depression Scale Score (EPDS). In this retrospective study endeavour was made to assess the level of post-natal depression among mothers; identify the causes of depression among post-natal mothers; find out the association between causes of post-natal depression with demographic variable. Cases were selected by probability sampling in which total enumerative sampling technique was used; total 60 samples were selected. EPDS was used to identify the causes of post-natal depression among mothers; 39 (65%) post-natal mothers had depression not likely; 12 (20%) had possible depression; 7 (11%) had fairly high possibility of depression; 2 (3%) had probably depression. Occupations of the husband, income and marital status have high association with level of depression. The major causes of post-natal depression were Number of pregnancies, Mode of delivery, Sex of baby, Health status of baby and Planned pregnancy. It was found that all factors are significant except planned pregnancy. To conclude, psychological support would enhance the attachment between mother and children; this will further reduce the impact of depression among the mothers.

The post-natal period is crucial to take care of medical mental health. In this period they are prone to mood disorders. There are three common forms of postpartum mood disorders. The postpartum blue is the frequently observed puerperal mood disturbance. Symptoms include fearfulness, mood liability, generalised anxiety, irritability, sleep and appetite disturbance. These conditions do not require any intervention.

Post-partum period is common among maternal morbidities after delivery. Among these postpartum blues has an incidence of 300-750 per 1000 mothers globally. This condition may resolve within few days to few weeks. the global prevalence postpartum psychosis ranges from 0.89 to 2.6 percent per 1000 births. Globally postpartum depression prevalence

in global has been estimated as 100-150 per 100 births. The researcher was curious to know about the prevalence and common causes of postpartum depression in selected hospital with a view to take preventive measures to avoid the post-partum depression and improve the women's mental health.

Depression is one of the most frequent psychiatric conditions among reproductive-age women; 20-40 percent of women in developing countries experience depressive symptoms during pregnancy and also after child birth as stated by WHO. Educational level, poverty, poor social support, and childbirth without the presence of relatives were factors that increased the risks of depressive symptoms after delivery. Apart from above factors, obstetric complication, previous history of depression, parous women, intimate partner violence, miscarriage, an unplanned pregnancy, poor woman autonomy, and stressful life events, were factors of postpartum depressive symptoms, which can have physical and mental health

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consequences for mothers and their families. Postpartum depression is an utmost feeling of sadness, hopelessness, the repeated thought of death, and risk of the mother hurting herself. Depressed mothers give poor care to their children, negative parenting behaviour, and present inadequate mother-infant bonding. Children of depressed mothers had impaired emotional, social, and cognitive development.

Yearly approximately 10-15 percent adult mothers are affected from postpartum depression. This study sought to determine the causes of post-natal depression among mothers. Episodes of postpartum depressive symptoms occurred within 4 weeks following delivery. Assessing postpartum depressive symptoms has a pivotal role in making sure that their mental health needs are met.

Objectives

The study was carried out to: (a) Assess the level of post-natal depression among post-natal mothers; (b) Identify the causes of postnatal depression among post-natal mothers; and (c) Find out the association between causes of post-natal depression with demographic variables.

Hypothesis: There will be significant association between post-natal depression among post-natal mother with socio-demographic variables.

Review of Literature

Casual mechanism of pre-natal depression among women in Gondai town, Ethiopia was study by Dadi et al (2020). With the application of a stress process model with generalised structural equation modelling, it was a cohort study of 916 pregnant women, who were assessed for depression in this second or third trimester of pregnancy. The subjects were reassessed two to eight weeks after birth. Between 7.77 percent and 2.1 percent of the women demonstrated symptoms of depression within the study period. Low birth weight and std reported labour complication (std B-0.32) with direct effect on PND scores.

Malik et al (2015) compared of post-natal depression in women following normal vaginal delivery and caesarean section in Departments of Obstetrics & Gynaecology of Lady Reading Hospital, Khyber Teaching Hospital and Hayatabad Medical Complex, Peshawar from November 2009 to January 2010. A total of 100 women were included; in women that underwent caesarean section (n=50), 29 (58%) were

Table 1: Interpretation of EDP scores and action

EPDS score	Interpretation	Action
Less than 8	Depression not likely	Continues support
9-11	Depression possible	Support, rescreen in 2 to 4 weeks. Refer primary care provider
12-13	Fairly high possibility of depression	Monitor, support and offer education; refer PCP
14 and higher	Probably depression	Diagnostic assessment and treatment by PCP or specialist
Positive score 1, 2, 3 on question 10	-	Immediate discussion required, Refer to PCP

Source: Cox ZL et al; development of the 10 items EDPS. *The British Journal of Psychiatry* 1987; 150(06): 782-86

found as having depressive illness while in the group of women that gave birth through normal vaginal delivery (n=50) while 12 (24%) were having depression (p < 0.001).

Methodology

In this study, a quantitative approach with co-relational design retrospective in nature was adopted. The research variable was causes of post-natal depression among post-natal mothers.

The research variables were: educational level of husband and wife, occupation, income, family history of psychiatric illness, type of family, residing place. The obstetrics factors were: number of pregnancies, mode of delivery, sex/health of baby, planned pregnancy. The study setting was Immunisation Department, Sevashram Hospital and Welfare Hospital, Bharuch.

The study population consisted of post-natal mothers in the selected Hospital, Bharuch. The sample size was 60 who met the inclusion criteria for present study. Sampling technique used was probability sampling in which total enumerative sampling technique was used.

Inclusion Criteria: 1. Post-natal mothers who were willing to participate in study, and present at the time of data collection; 2. Post-natal mother who were able to read Gujarati or English; 3. Mothers who were attending immunisation OPD; 4. Mothers after 4 to 6 weeks after delivery.

Exclusion criteria: Mothers who were suffering from any major illness and psychiatric problem.

Description of tool: Section-I: This part of questionnaire sought to find out the information of the post-natal mothers their age, education of husband and wife, occupation, income, marital status, family history of psychiatric illness, type of family, residing place.

Obstetrical variables include number of pregnancies, mode of delivery, sex of baby, health status of baby, planned pregnancy.

Table 2: Frequency and percentage of demographic variables (N=60)

S.No	Demographic variables	Number	Percentage
1	Age in years		
	• > 20	14	23.3
	• 21-30	30	50
	• 31-40	16	26.6
2	Educational status of husband		
	• Illiterate	09	15
	• Secondary	22	36.6
	• Higher Secondary	17	28.33
	• Graduate	12	20
3	Educational status of wife		
	• Illiterate	15	25
	• Secondary	14	23.33
	• Higher Secondary	20	33.3
	• Graduate	11	18.3
4	Occupational status		
	• Yes	48	80
	• No	12	20
5	Income (Rs)		
	• Less than 5000	11	18.3
	• 5001 to 10000	19	31.6
	• 10001 to 15000	13	21.6
	• More than 15000	17	28.3
6	Marital Status		
	• Single	06	10
	• Married	48	80
	• Widow	04	6.66
	• Separated	02	3.33
7	Family history of psychiatric illness		
	• Yes	06	10
	• No	54	90
8	Type of family		
	• Nuclear	46	76.66
	• Joint	14	23.33
9	Residing place		
	• Urban	33	55
	• Rural	27	45

Section-II: Edinburgh Postnatal Depression Scale Score (EPDS) contained 10 items with the options of carrying from 0 to 3. It is most likely Likert scale, the scoring of the scale being as in Table 1.

Data Collection Procedure

Permission from institutional ethical committee and the hospital authority was obtained. The purpose of study was explained to the post-natal mothers and written informed consent was obtained. The participants were assured that the information provided by them will be kept confidential.

Results

Frequency and percentage of demographic variables from postnatal mothers

Most of the post-natal mothers i.e. 30 (50%) belonged the age group 21-30 years. Majority of them (22, 33.3%) had completed higher education. Educational status of husband: 22 (36%) had completed secondary education; 48 (80%) had occupational status;

19 (31.6%) mothers had monthly family income Rs 10001 to 15000; and 46 (77%) belonged to nuclear family. Majority of mothers (48, 80%) were married; 54 (89.4%) had no family history of psychiatric illness; and 33 (55%) mothers were residing in urban area (Table 2).

Majority of mothers i.e. 27 (45%) were primi mothers; 36 (60%) had done caesarean section, 40 (66.6%) mothers had delivered female baby. Majority (47, 78%) had healthy baby; 42 (70%) were planned pregnancy (Table 3).

Level of depression among post-natal mothers

Fig 1 shows that 39 (65%) post-natal mothers had depression not likely; 12 (20%) had possible depression, 7 (11%) had fairly high possibility of depression and 2 (3%) post-natal mothers had probably depression.

Association between demographic variables and level of post-natal depression

In this study, occupation of the husband, income and marital status have high association with level

Table 3: Frequency and percentage of obstetrical factors

S.No	Obstetrical factor	Frequency	Percentage
1	No. of pregnancy		
	• 1	27	45
	• 2	16	26.66
	• 3	08	13.33
	• More than 3	09	15
2	Mode of delivery		
	• Vaginal	24	40
	• Caesarean	36	60
3	Sex of baby		
	• Male	20	33.33
	• female	40	66.66
4	Health of a baby		
	• Healthy	47	78.33
	• Sick	13	21.66
5	Planned pregnancy		
	• Yes	42	70
	• No	18	30

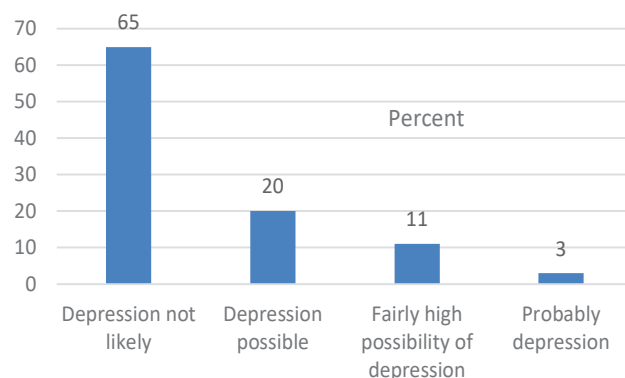


Fig 1: Level of depression among post-natal mothers.

Table 2: Frequency, distribution and association between demographic variable and level of post-natal depression (N=60)

S.No.	Particulars	Number	Percentage	Chi square value	Significant
1	Age in years • > 20 • 21-30 • 31-40	14 30 16	23.3 50 26.6	1.972	Non-significant (p=0.05)
2	Educational status of husband • Illiterate • Secondary • Higher Secondary • Graduate	09 22 17 12	15 36.6 28.33 20	0.768	Non-significant (p=0.05)
3	Educational status of wife • Illiterate • secondary • Higher Secondary • Graduate	15 14 20 11	25 23.33 33.3 18.3	0.637	Non-significant (p=0.05)
4	Occupational status of husband • Yes • No	48 12	80 20	8.527	Significant (P=0.05)
5	Income (Rs) • Less than 5000 • 5001 to 10000 • 10001 to 15000 • More than 15000	11 19 13 17	18.3 31.6 21.6 28.3	17.249	Significant (P=0.05)
6	Marital status • Single • Married • Widow • Separated	06 48 04 02	10 80 6.66 3.33	20.681	Significant (p=0.05)
7	Family history of psychiatric illness • Yes • No	06 54	10 90	0.827	Non-significant (p=0.05)
8	Type of family • Nuclear • Joint	46 14	76.66 23.33	1.259	Non-significant (p=0.05)
9	Residing place • Urban • Rural	33 27	55 45	0.826	Non-significant (p=0.05)

of depression. Age, education of husband, education of wife, family history of any psychiatric illness, types of family and residing place have no association with level of depression (Table 2 & 4).

Number of pregnancies, mode of delivery, sex of baby, health status of baby have significant association with level of postnatal depression except planned pregnancy.

Discussion

In this study 39 (65%) post-natal mothers had depression not likely; 12 (20%) post-natal mothers had possible depression; 7 (11%) post-natal mothers had fairly high possibility of depression. Only 2 (3%) post-natal mothers had probably depression based on EDPS scale.

The post-natal depression is hidden disorder among women and its prevalence is increasing day by day. When we compare the result with study by Dadi et al (2020), the magnitude is low maybe the

number of participants/samples were lesser than the actual sample size. Out of 3 percent of the depressive samples one person exhibited suicidal ideation. In this case the mother was referred to primary care provider for further evaluation and treatment. One person showed suicidal symptoms in this study which shows severity of post-natal depression among mothers. Similar study by Louiose M Howard et al demonstrated prevalence of suicidal ideation identified by the Edinburg Post-natal Depression Scale in post-partum women in primary care.

Identifying the causes of post-natal depression among postnatal mothers:

Based on second objective the causes of postnatal depression through obstetrical factors, it was found that all factors are significant except planned pregnancy. In this study 60 percent of women underwent caesarean section out of whom 2 women were affected with depressive symptoms.

In a study of 100 women, Malik et al (2015) found that out of 50 women who underwent caesarean 29 (58%) were found as having depressive illness while in the group of women that gave birth through normal vaginal delivery (n=50), 12 (24%) developed depression (p<0.001). The study concluded that post-natal depression is significantly more common in the females undergoing caesarean sections as compared to the normal vaginal deliveries. This may be due to high dependency after caesarean section and higher cost compared with vaginal delivery.

In this study, 40 (66.6%) had female baby out of 2 mothers were affected with post-natal depression symptoms. Similar study by Patel recruited pregnant mothers during their third trimester of pregnancy from a district hospital in Goa, India. The mothers were interviewed at recruitment, 6–8 weeks, and 6 months after childbirth. Interview data included presence of ante-natal and post-natal depression, obstetric history, economic and demographic characteristics, and gender-based variables (preference for male infant, presence of marital violence. The result showed higher risk of post-natal depression having a living female child: relative risk=1.8, 95% CI=1.2–2.7; $\chi^2=7.1$, df=1. This may be due to social custom that treats depict male child as an asset and female child as a burden for the family.

There was a significant correlation between the

Table 4: Association between obstetrical factors and level of post-natal depression

S.No	Obstetrical factor	Frequency	Percentage	Chi square value	Significance
1	No. of pregnancy			18.314	Significant (p=0.05)
	• 1	27	45		
	• 2	16	26.66		
	• 3	08	13.33		
	• More than 3	09	15		
2	Mode of Delivery			9.438	Significant (p=0.05)
	• Vaginal	24	40		
	• Caesarean	36	60		
3	Sex of baby			17.277	Significant (p=0.001)
	• Male	20	33.33		
	• female	40	66.66		
4	Health of a baby			10.842	Significant (p=0.05)
	• Healthy	47	78.33		
	• Sick	13	21.66		
5	Planned pregnancy			1.249	Non-significant (p=0.05)
	• Yes	42	70		
	• No	18	30		

level of post-partum depression and relationship quality. A greater severity of post-partum depression symptoms (sleeping/eating disturbances, anxiety/insecurity, emotional lability, mental confusion, loss of self, guilt/shame, suicidal thoughts) occurred in women who were less satisfied with their relationship. Women who declared deeper satisfaction with their relationship displayed a greater sense of mental well-being. No correlation was found between the occurrence of post-partum depression and socio-demographic factors (age, education level, place of residence) and factors associated with the subjects' childbearing history (number of children, history of miscarriage, family planning, prior diagnosis of depression).

Implications

Nursing practice: Nurse/Midwife can be motivated to the family members to give support to the post-natal mothers.

Nursing education: (1) Nurse education can create an awareness among family members and planned couples on warning signs of post-natal depression. (2) Nurse educator can educate the nursing students to identify the early warning signs of post-natal depression.

Nursing administration: (1) In-service education to clinical nurses and educators should be provided to enhance their knowledge on warning signs of post-natal depression and prevention method. (2) Nurse administrator should encourage video-based teaching to conduct awareness programme.

Nursing research: (1) The study findings help to motivate nurses to conduct research on identification of warning sign of post-natal depression and compare with DSM-V. (2) The study also can be conducted as experimental design to identify the effect of various therapies.

Recommendations: This study can be replicated on large samples. Also, similar study can be conducted

to assess the knowledge regarding post-natal depression among ante-natal mothers.

Conclusion

Occupation of the husband, income and marital status, number of pregnancy, types of delivery, sex of baby, health status of the baby were contributing factors of post-natal depression. The Ministry of Health needs to arrange training to the nurses, family members and community health workers on screening post-partum depressive symptoms among mothers. Prompt referral, early identification would also benefit in handling further complications. Psychological support would enhance the attachment between mother and children, this will further reduce the impact of depression among the mothers.

References

1. Miller ES, Hoxha D, Wisner KL, Gossett DR. The impact of perinatal depression on the evolution of anxiety and obsessive-compulsive symptoms. *Arch Womens Ment Health* 2015; 18(3): 457-61
2. Miller ES, Hoxha D, Wisner KL, Gossett DR. Obsessions and compulsions in postpartum women without obsessive compulsive disorder. *J Womens Health (Larchmt)* 2015; 24(10): 825-30
3. Vander Kruij R, Barreix M, Chou D, Allen T, Say L, Cohen LS. Maternal Morbidity Working Group: The global prevalence of postpartum psychosis: A systematic review. *BMC Psychiatry* 2017; 17(1): 272
4. O'Hara MW, Swain AM. Rates and risk of postpartum depression: A meta-analysis. *Int Rev Psychiatry* 1996; 8: 37-54
5. Beck CT, Records K, Rice M. Further development of the postpartum depression predictors inventory-Revised. *J Obstet Gynecol Neonatal Nurs* 2006; 35: 735-45
6. Dadi AF, Mwanri L, Woodman RJ, Azale T, Miller ER. Causal mechanisms of postnatal depression among women in Gondar town, Ethiopia: Application of a stress-process model with generalized structural equation modeling. *Reproductive Health* 2020; 17(1): 63. <https://doi.org/10.1186/s12978-020-00912-z>
7. Malik FR, Malik BB, Irfan M. Comparison of postnatal depression in women following normal vaginal delivery and caesarean section: A pilot study. *J Postgrad Med Inst* 2015; 29(1): 34-37
8. Lewis G, ed. The Confidential Enquiry into Maternal and Child Health (CEMACH). Saving Mothers' Lives: reviewing maternal deaths to make motherhood safer, 2003-2005. The Seventh Report on Confidential Enquiries into Maternal Deaths in the United Kingdom. 2007, London: CEMACH
9. Patel Vikram, Rodrigues Merlyn, MA Nandita De Souza, M.D Gender, Poverty, and post-natal depression: A study of mothers in Goa, India. *Am J Psychiatry* 2002; 159: 43-47
10. Malus A, Szylyk J, Galińska-Skok B, Konarzewska B. Incidence of postpartum depression and couple relationship quality. *Występowanie depresji poporodowej a jakość relacji w związku. Psychiatr Pol* 2016; 50(6): 1135-46. doi: 10.12740/PP/61569