A Study on Postnatal Depression among Women Attending Tertiary Care Hospital in Davanagere, Karnataka

Sandhya Rani Javalkar[1], Vanitha S S[1]

Author's Affiliation:
[1]Assistant Professor, Community Medicine, JJM Medical College, Davanagere

Correspondence
Sandhya Rani Javalkar
sandhyaranijavalkar@gmail.com

ABSTRACT

Introduction: Postnatal depression (PND) is a public health problem as it arises as a common complication of childbearing and it significantly affects women and their families

Objectives: To determine the prevalence of postnatal depression among women attending a Tertiary Care Hospital in Davangere and identify the risk factors determining postnatal depression.

Methodology: A cross sectional study conducted in a Tertiary Care Hospital in Davangere district, Karnataka among 151 women in postnatal period. The Edinburgh Postnatal Depression Scale (EPDS) is used as screening tool identifying patients at risk for postnatal depression. Data is collected by interview method and analyzed using SPSS.

Results: This study revealed postnatal depression to be 23(15.2%) among the study participants according to EPDS score >10. Statistical Analysis revealed significant association of socio demographic factors like type of family, obstetric factors like mode of delivery, type of delivery, complications in pregnancy and other factors like Low mood during pregnancy.

Conclusion This study we found the prevalence of post partum depression to be 15.2%. Development of a routine screening program to screen all post natal women using a validated screening tool can be really helpful in timely interventions when needed.

Keywords: Postnatal Depression, Edinburg Postnatal Depression Scale (EPDS), Pregnancy, Riskfactors

INTRODUCTION

The postnatal period is well established as an increased time of risk for the development of serious mood disorders.[1] Postnatal depression(PND) is a public health problem as it is arising as a common complication of childbearing and it significantly affects women and their families.[2] Postnatal Depression is characterized by tearfulness, despondency, emotional liability, feelings of guilt, loss of appetite, and sleep disturbances as well as feelings of being inadequate and unable to cope with the baby, poor concentration and memory, fatigue and irritability[1] .

Beck described postnatal depression as a crippling mood disorder, historically neglected in health care, leaving mothers to suffer in fear, confusion, and silence[3]. Its effects on the mother, her marital relationship, and her children make it an important condition to diagnose, treat and prevent.[2]

The physiology of human pregnancy and childbirth is the same all over the world, but the prevalence of PND have been reported to be varying across the globe.[4,5] Several studies from India have documented significant rates of post-natal depression.[6,7] Thus, PND is influenced by various factors such as sociodemographic factors, economic status, pregnancy complications, mode of deliver, maternal violence, family support and the gender of the new born.[6-9]Screening for PND symptoms plays a vital role in early intervention and identification, to

reduce the sufferings of the mother and minimize its potential harmful effects on the newborn.[10]

Research on depression among postnatal women is limited especially in specified geographical area. Hence the present study was undertaken to determine the prevalence of depression among postnatal women attending a hospital in Davangere district and identify the risk factors that affect postnatal depression.

OBJECTIVES

Objectives of this study were to determine the prevalence of postnatal depression among women attending a Tertiary Care Hospital in Davangere and identify risk factors associated with it.

METHODS

A cross sectional study conducted in a Tertiary Care Hospital in Davangere district, Karnataka. All the women who came for postnatal follow up (i.e., within 42 days after delivery) during the study period and consented to participate in the study were included, excluding those women who were unable to comprehend/ previously diagnosed of any Psychiatric disorder including depression. A sample size of 151 was reached based on minimum estimated PND prevalence[6] of 11% with 5% precision, 95% confidence level and 5% using a OpenEpi version 3.01 .[11]

A pretested semi-structured questionnaire was used to elicit information pertaining to socio-demographic profile and obstetric outcome

Edinburgh Postnatal Depression Scale [12]

The 10-question Edinburgh Postnatal Depression Scale (EPDS) is an efficient way of identifying patients at risk for perinatal depression. The EPDS is well validated, easy to administer and a very effective screening tool. It gauges depression based on one week recall of mood and feelings, each item scored on a scale of 0 to 3, giving a total score with range of 0- 30. Seven of its items are reverse-scored. The scale was translated and back-translated into the local language (Kannada) for this study. Mothers, who score > 10, are likely to be suffering from depressive illness of varying severity. In this study mothers who scored 10 or above were considered to be positive for postnatal depression and were referred to further evaluation

Ethical approval for the study was obtained from the Institutional Ethics Committee, JJM Medical College, Davangere, Karnataka, India; with reference number: JJMMC/IEC/03-2017 Written informed consent was obtained from all participants prior to participation in the study. Anonymity of participants maintained to enhance participation rate and to ensure participants confidentiality.

Statistics: Data entered in Microsoft Excel and Data analysis done using SPSS Version 16.0. Descriptive statistics were used to calculate frequency distributions for socio-demographic characteristics and details of antenatal care and delivery. The prevalence of PND calculated as percentage of women who scored >10 in EPDS. EPDS scores were described in terms of means and standard deviations. Chi square/ Fischer Exact tests were used as required. P value<0.05 is considered to be statistically significant.

RESULTS

Of the 151 Study participants who were included in the study mean age was 25.51 ± 3.9 years (Range: 19–38 years) and mean duration of married life was 4.3 ± 3.1 years (range: 1–12 years). This study included study participants of both urban 83(55%) and rural areas 68(45%). Majority of the participants were Hindus by religion 136 (90.1%) and 123(81.5%) of the participants were home makers by occupation. 61(40.4%) of the participants belonged to joint family followed by 56(37.1%) belonging to nuclear families.

Table 1: Socio Demographic details of Study participants (N=151)

Variable	Number (%)
Age	
<20	21 (13.9)
20-25	74 (49)
>25	56 (37.1)
Education	
Illiterate	3 (2)
Primary School	13 (8.6)
Secondary School	84 (55.6)
Graduation /Postgraduation	51 (33.8)
Occupation	
Housewife	123 (81.5)
Employed	28 (18.5)
Religion	
Hindu	136 (90.1)
Muslim	15 (9.9)
Ration card type	
APL	61 (40.4)
BPL	63 (41.7)
Do not know/ Do not Posses	27 (17.9)
Family Type	
Nuclear	56 (37.1)
Joint	61 (40.4)
Three Generation	34 (22.5)
Parity	
1	76 (50.3)
2	71 (47)
3	4 (2.6)

Table 2: Association of Socio Demographic factors with Postnatal Depression (N=151)

Variable	Postnatal Depression		Total	p value
	EPDS<10 (n=23) (%)	EPDS>/=10 (n=128) (%)		
Maternal age				
<20	1(4.4)	20(15.6)	21	0.2*
>20	22(95.6)	108(84.4)	130	
Maternal Education				
Primary	0(0)	16(12.5)	16	0.06*
Secondary and Above	23(100)	112(87.5)	135	
Religion				
Hindu	22(95.6)	114(89.1)	136	0.4*
Muslim	1(4.4)	14(10.9)	15	
Mothers employment				
Unemployed	18(78.3)	105(82.1)	123	0.7*
Employed	5(21.7)	23(17.9)	28	
Type of Family				
Nuclear	14(60.9)	42(32.8)	56	0.01
Joint and Three Generation	9(39.1)	86(67.2)	95	
Percapita Income				
<5000	22(95.6)	104(81.2)	126	0.07
>5000	1(4.4)	24(18.8)	25	

*Fischer Exact test

Table 3: Association of Obstetric, Pregnancy Outcome and associated factors with Postnatal Depression (N=151)

Variable	Postnatal Depression		Total	p value
	EPDS<10 (n=23) (%)	EPDS>/=10 (n=128) (%)		
Parity				
1	12(52.2)	64(50.0)	76	1.0*
>1	11(47.8)	64(50.0)	75	
Mode of Delivery				
Normal	7(30.5)	70(54.7)	77	0.04
C section	16(69.5)	58(45.3)	74	
Type of Delivery				
Preterm	2(8.7)	29(22.7)	31	0.01*
Term	17(73.9)	94(73.4)	111	
Post term	4(17.4)	5(3.9)	9	
Complications				
Yes	6(26.1)	7(5.5)	13	0.005*
No	17(73.9)	121(94.5)	138	
Pregnancy Outcome				
Male Child	12(52.2)	58(45.3)	70	0.54
Female Child	11(47.8)	70(54.7)	81	
Mood swings				
Yes	5(21.8)	14(10.9)	19	0.17*
No	18(78.2)	114(89.1)	132	
Low mood				
Yes	4(17.4)	6(4.7)	10	0.04*
No	19(82.6)	122(95.3)	141	
Unhappy with in-laws				
Yes	1(4.4)	6(4.7)	7	1.0*
No	22(95.6)	122(95.3)	144	

*Fischer Exact test

Regarding Socio Economic Status, 61(40.4%) of the participants were Above Poverty Line ration card holders and 63 (41.7%) of the participants were Below Poverty Line ration card holders and 26(17.9%) of the participants were unaware of the type of card they hold/ do not hold a ration card. Socio economic class of the participants was determined by modified B G Prasad Classification and majority of the participants 93(61.5%) belonged to class II and class III.

Nearly half of the women 77 (51%) were primi gravida. Majority of the women 111(73.5%) delivered at term and nearly half of the women had C-section 74(49%). 81(53.6%) of women delivered a female baby; when more than half of the women

preferred for the male child 82(54.3%). 13(8.6%) of women stated that they faced complications during pregnancy / during delivery, These complications included pregnancy induced hyper-tension, gestational diabetes, Known medical conditions, previous caesarean section and others.

On other associated factors during postnatal period, 150 (99.3%) of the women stated that they had no family history of postnatal depression. 19 (12.6%) of women complained about mood swings and 7 (4.6%) complained about low mood during pregnancy.

This study revealed postnatal depression to be 23 (15.2%) among the study participants according to Edinburg Postnatal Depression Scale (EPDS score >10) and 7 (4.6%) participants reported about suicidal thoughts, who were counseled and referred appropriately.

Statistical Analysis revealed significant association of socio demographic factors like type of family, obstetric factors like Mode of Delivery (C section), Type of Delivery, complications in pregnancy and other factors like low mood during pregnancy variables with PND. We found no significant association between postnatal depression with maternal age, maternal education, parity, and employment and gender preference.

DISCUSSION

Depression is currently a huge public health issue and it's more common in women than men during the childbearing years. Postpartum depression is a major health issue for many women from different cultures, this state often remains undiagnosed. Postpartum depression leads to critical effects on the mother infant relationship, and infant's growth and development.[1]

This study was undertaken to determine the prevalence of depression among postnatal women in Davangere district and identify the risk factors associated with it. The Prevalence of Postnatal depression in this study is 15.2%, which is comparable with studies done by Gupta S[7] 15.7%, Suguna A et al[13] 18%. The Variation in the Prevalence of Postnatal depression in different studies[5-9] may be due to the scale used to measure depression, cut off levels, individual perceptions of mental health and other known risk factors of postnatal depression as Socio economic status, Education levels, Employment, Complications during perinatal period and availability of health care facilities.

In this study, the factors which were significantly associated with post-natal depression were socio demographic factors like type of family, obstetric factors like mode of delivery, type of delivery,

complications in pregnancy and other factors like low mood during pregnancy.

The present study showed significant association of type of family with postnatal depression similar to Shivalli S et al[14] and the prevalence of postnatal depression was more common among nuclear families similar to a study conducted by Kruthika K et al.[15] This may be due to the increased pressure among women to take care of the newborn alone and lack of parental/elderly support. Mode of delivery(C section) was significantly associated with postnatal depression, which was found similar to the study done by Suguna et al[13], which can be reasoned due to the pain and increased bed rest following C section. We found statistically significant association between complications during pregnancy and postnatal depression which was found similar to Shivalli S et al.[14] and contrary to other studies; [7, 8] this can be attributed to the physical and emotional stress experienced during pregnancy.

Low mood during pregnancy was found to be an associated factor for depression in this study, which was similar to Suguna et al[13]. However, 150(99.3%) of the women stated that they had no family history of postnatal depression, this could be due to poor knowledge and poor screening facilities available as a routine practice.

Few studies[7,9,14] found association of outcome of the pregnancy (Gender of the baby/ Preference to male child) to be strongly associated with postnatal depression which can be attributed to the male dominated society we live in; however in this study we did not find statistically significant association which can be reasoned to the socio-cultural norms of the study population like nearly half of the study population had the first child, preference towards a healthy child and postnatal care and support from the family.

Various risk factors were attributed by different studies. A similar study conducted by Shivalli S[14] reported postnatal depression is associated with poverty, birth of baby girl and occurrence of complications in pregnancy or known medical illness. A study conducted by Kruthika K et al [15]reported significant association between the age, socio economic status and literacy status of the women with the prevalence of postnatal depression

The similarity and differences in the agreement of risk factors among various studies can be due to the differences in geographical location, study tool, cut of levels and most importantly understanding the risk factors. This shows need for further large scale studies on this topic and screening of postnatal women for depression to avert any unfortunate outcome to the mother and child duo.

The limitations of the present study could be that it was carried out among women attending a single tertiary care hospital and women with still births and abortions were not included. The Edinburgh Postnatal Depression Scale was used to score depression which is a screening tool and not confirmatory. Lastly the scoring depended hugely on the comprehension of the questionnaire by the study participants and their self perceptions about their mental Health.

CONCLUSION

In this study we found the prevalence of post partum depression to be 15.2%. The other factors in the present study which were associated with postnatal depression were nuclear family, C section, complications during pregnancy and low mood during pregnancy.

Though there are several measures to detect postnatal depression symptoms in women, family members must be educated about the risk factors and symptoms of depression. Development of a routine screening program to all post natal women using a validated screening tool can be really helpful in timely interventions when needed.

REFERENCES

1. Stewart DE, Robertson E, Dennis C-L, Grace S, Wallington T: Postpartum Depression: Literature review of risk factors and interventions. Toronto. 2003

2. Robertson, E., Celasun, N., and Stewart, D.E. Risk factors for postpartum.2003. Available at www.who.int/mental_ **health**/ maternal-child/maternal_mental_**health**/en/ Last accessed on 26.10.17

3. Beck CT. Postpartum depression: It isn't just the blues. Am J Nurs 2006; 106: 40-50.

4. Chaaya M, Campbell O, El Kak F, Shaar D, Harb H, Kaddour A. Postpartum depression: prevalence and determinants in Lebanon. Arch Womens Ment Health 2002; 5(2): 65–72.

5. Regmi S, Sligl W, Carter D, Grut W, Seear M. A controlled study of postpartum depression among Nepalese women: validation of the Edinburgh postpartum depression scale in Kathmandu. Trop Med Int Health 2002; 7:378–82.

6. Chandran M., Tharyan P, Muliyil J, Abraham S. Postpartum depression in a cohort of women from a rural area of Tamil Nadu, India. Incidence and risk factors. Br J Psychi-atry 2002; 181:499-504.

7. Gupta, S., Kishore, J., Mala, Y. M., Ramji, S., & Aggarwal, R. (2013). Postpartum Depression in North Indian Women: Prevalence and Risk Factors. Journal of Obstetrics and Gynaecology of India, 63(4), 223–229.

8. Saldanha D, Rathi N, Bal H, Chaudhari B. Incidence and evaluation of factors contributing towards postpartum depression. Med J D Y Patil Univ 2014;7:309-16

9. Patel V, Rodrigues M, De Souza N. Gender, poverty and post-natal depression: a cohort study from Goa, India. Am J Psychiatry 2002;159:43-7.

10. Screening for Perinatal Depression. Committe opinion no. 630. American College of Obstericians and Gynaecologists. Obstet Gynecol 2015;125:1268-71

11. Dean AG, Sullivan KM, Soe MM. OpenEpi: Open Source Epidemiologic Statistics for Public Health, Version. www.OpenEpi.com, updated 2013/04/06, Last accessed on 2017/10/25.

12. Cox, J.L., Holden, J.M., and Sagovsky, R. 1987. Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. British Journal of Psychiatry 150:782-786

13. Suguna A, Naveen R, Surekha A. Postnatal Depression among Women Attending A Rural Mater-nity Hospital in South India. Ntl J of Community Med 2015; 6(3):297-301.

14. Shivalli S, Gururaj N. Postnatal Depression among rural women in South India: Do socio-demographic, obstetric and pregnancy outcome have a role to play? PLoS ONE. 2015;10(4):1-11.

15. Kruthika K, Udayar SE, Mallapur MD. An epidemiological study of postnatal depression among women availing maternal health services in rural areas of Belagavi, Karnataka, India. Int J Community Med Public Health 2017;4:759-63.