Section: Obstetrics and Gynecology

Original Research Article

ASSESSMENT OF POSTPARTUM DEPRESSION AND ANXIETY AMONG MOTHERS DELIVERING AT TERTIARY CARE HOSPITAL,TAMILNADU

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ABSTRACT

Background: Postpartum depression (PPD) and Anxiety is a mood disorder that begins after childbirth and mostly lasts beyond six weeks, depression is quite often combined with anxiety. The main objectives of this work were measuring the extent of postpartum depression and anxiety among the females of to explore the underlying factors of these disorders and find the role of progesterone level in it.Postpartum depression often associated with Anxiety.postpartum anxiety is mental health disorder along with feeling of anxious. When it occur one year after delivery called as post natal anxiety.The aim of the study is to find the incidence and factors associated with postpartum depression and anxiety.

Materials and Methods: A cross sectional study was conducted among 137 postpartum mothers delivering at Tertiary care hospital at the Chengalpattu medical college and hospital. Data was collected by a questionnaire interview which included data about socio- demographic, obstetric, past personal and family history for assessment of postpartum depression and anxiety.

Results: Results showed 13.9% of the studied females suffered from postpartum depression alone, 8% suffered from anxiety alone

Conclusion: It was concluded that postpartum depression and/or anxiety affect 21.9% of females in the Chengalpattu government hospital. Very low socioeconomic level, lower educational levels, past history of similar conditions, and low progesterone level are the significant predictions.

Keywords: Post-partum depression, Post-natal depression, Post-partum anxiety, Post-natal anxiety.

INTRODUCTION

The period of pregnancy is a fairy tale of every women's life. The mother is elevated with joy and excitement, dreaming to welcome her child into her arms as soon as possible. The beauty of a life giving experience for every mother in this world is impeccable. Maternal mental well-being during postpartum period is very important both for the mother and for a healthy well-being of the new born. However, such well-being is not a very usual matter, as at least one out of ten mothers suffer from such depression symptoms.

Peripartum onset leads to depressive illness known as Postpartum depression.The time during pregnancy upto four weeks after delivery is the peripartum onset.The postpartum depression may persist for a period of one or two years after delivery. As is disrupts the normal maternal and infant bonding and may have a negative impact for both short and long term in children development. Though many factors contribute to the development of postpartum depression by emotional, physical, social and genetic factors, the actual cause is not known.[1,2,3]

The changes in hormone plays an important roles in the mode during and after pregnancy. If the symptoms persist for more than two weeks than the women should be evaluated. The most common symptoms are Irritability,sadness and anxiety.E

mpty or hopeless ,sad present for majority of the days.In addition to it reduced appetite or weight loss,agitation feelings,loss of interest and change in sleep patterns and increased indecisiveness will present in the patients.[4]

The prevalence of postpartum depression was found to be 7.6% to 39%.The prevalence was more in developing countries ranging from 10% to 42% compared to developed countries.The risk of future depression ranges from 50% to 62% more in women who previously had an episode of depression.[5,6] .Postpartum anxiety was found to be alone or in combination with to postpartum depression. The overall prevalence was found to be 15% in one to 24 weeks postbirth in low income and middle income countries.[7,8] Addressing both the issues of postpartum depression and anxiety at an early stage may help to reduce the severity and chronicity of symptoms, as well as the impact on the child's health and development.

Knowledge of these factors influencing the risk of developing postpartum depression and anxiety may help early detection. These factors may be previously present in women who get pregnant, but may also arise during pregnancy, furthermore, implying opportunities for health care professionals to reduce risk factors at different stages, thereby preventing mothers from developing depression and anxiety.

Factors like history of depression, lack of social support, prenatal depression and life stress consistently emerged as contributors to the risk of postpartum depression

The aim of this study was to find the incidence and to identify risk factors for developing postpartum depression as well as anxiety.

Aims and Objectives

1. To study the incidence and factors associated with postpartum depression and anxiety
2. To identify the various socio demographic and medical factors associated with the development of postpartum depression and Anxiety.
3. To study the correlation between high risk pregnancy and psychiatric outcomes.

MATERIALS AND METHODS

The study was conducted from January 2021 to January 2022. The study was conducted on the 137 patients presented to the Department of Obstetrics and Gynaecology, Chengalpattu medical college.

Inclusion Criteria

>18 Years To <35 Years

Mothers delivered by Labour natural and Caeserian section.

Mothers delivered at Chengalpattu medical college and hospital and referred from primary and secondary health care centre.

Exclusion Criteria

<18 yrs

Those mothers who are not willing for concern.

Mothers who are seriously ill.

Patient Analysis

A detailed study was done regarding various socio-demographic factors, history regarding their personal life, present obstetric history, previous obstetric history, past medical history and family history. Hamilton depression rating scale and Hamilton anxiety rating scale. The data obtained from the above questionnaries.

Data Entry and Analysis

The collected data will be entered in the MS excel sheet Windows 10. The analysis was done using SPSS 23. Descriptive statistics was expressed in terms of mean values and percentages. Chi square test was done for comparison two categorical variables.Continuous variables was expressed in mean and standard deviation. Continuous variables were analyzed using unpaired t test and Anova test.

RESULTS

Table 1: Demographic variables

Variables	Normal N(%)	Disorder N(%)	P value
Age (yrs) 18-24 25-29 30-34 35-40	 50(46.7%) 42(39.3%) 15(14%) 0(0%)	 11(36.70%) 11(36.70%) 7(23.30%) 1(3.30%)	0.144
Residence Rural Semiurban Urban	 36(33.60%) 24(22.40%) 47(43.90%)	 5(16.7%) 9(30%) 16(53.3%)	0.195
Body weight Underweight Normal Pre obese obese	12(11.2%) 64(59.8%) 23(21.5%) 8(7.5%)	4(13.3%) 10(33.3%) 9(30%) 7(23.3%)	0.026
Education Illiterate	 18(16.80%)	 3(10%)	0.269

Primary schooling	13(12.10%)	9(30%)	
Middle school	13(12.10%)	2(6.70%)	
High school certificate	16(15%)	6(20%)	
Diploma	32(29.90%)	7(23.30%)	
Graduate	12(11.20%)	3(10%)	
Postgraduate	3(2.80%)	0(0%)	
Occupation			0.4
Home maker	43(40.20%)	11(36.70%)	
Unskilled worker	11(10.30%)	7(23.30%)	
Semi skilled worker	22(20.60%)	6(20.00%)	
Skilled worker	17(15.90%)	4(13.30%)	
Professional	14(13.10%)	2(6.0%)	
Income			
<2000	15(14.02%)	18(60%)	
2000 – 3999	31(28.87%)	10(33.34%)	<0.001
4000 – 6999	22 (20.56%)	1 (3.33%)	
7000 – 13000	39(36.55%)	1(3.33%)	
Marital status			
Married	98(91.60%)	23(76.70%)	0.03
Unmarried	0(0%)	0(0%)	
Divorced	9(8.40%)	6(20%)	
Spouse dead	0(0%)	1(3.30%)	
Type of marriage	65(60.7%)	16(53.3%)	
Arranged marriage	42(39.3%)	14(46.7%)	0.465
Love marriage			
Nature of Marriage	69(64.50%)	17(56.70%)	0.55
Nonconsanguinous marriage	0(0%)	0(0%)	
1st degree consanguinity	30(28%)	9(30%)	
2nddegree consanguinity	8(7.50%)		
3rddegree consanguinity		4(13.30%)	

Among the baseline characteristics the income and marital status found to be significantly associated with postpartum depression.

Table 2: Pregnancy and its associated variables

Variables	Normal N(%)	Disorder N(%)	Chi square	P value
GRAVIDA				
G2A1	13(12.10%)	4(13.30%)		
G2P1L0	0(0%)	3(10%)		
G2P1L1	23(21.50%)	6(20%)		
G3A2	0(0%)	1(3.30%)		
G3P2L2	9(8.40%)	2(6.70%)		0.002
G4A3	0(0%)	1(3.30%)	18.1	
G5A4	7(6.50%)	0(0%)		
G6A5	0(0%)	1(3.30%)		
PRIMI	55(51.40%)	12(40%)		
SPACING OF PREGNANCY	55(51.4%)	12(40.00%)		
NOT APPLICABLE	39(36.4%)	6(20.00%)		
LESS THAN A YEAR	13(12.10%)	9(30.00%)		
1 TO 2 YEARS	0(0.00%)	3(10.00)%		
2 TO 5 YEARS	0(0.00%)	0(0.00%)		
MORE THAN 5 YEARS			17.902	<0.001
CONTRACEPTIVE USE				
YES	91(85.00%)	21(70.00%)		
YES, FAILED	16(15.00%)	3(10.00%)		
NO	0(0.00%)	6(20.00%)	22.463	<0.001
NATURE OF CONCEPTION	61(57.00%)	15(50.00%)		
SPONTANEOUS, PLANNED	30(28.00%)	8(26.70%)	1.203	0.548
SPONTANEOUS,	16(15.00%)	7(23.30%)		

UNPLANNED ASSISTED REPRODUCTION				
BOOKED YES NO	95(88.80%) 12(11.20%)	26(86.70%) 4(13.30%)	0.102	0.75
HEALTH CARE VISIT NO VISIT LESS THAN 4 VISIT 4 TO 6 VISITS 6 TO 8 VISITS MORE THAN 8 VISITS	23(21.50%) 37(34.60%) 40(37.40%) 7(6.50%) 0(0.00%)	5(16.70%) 12(40.00%) 9(30.00%) 3(10.00%) 1(3.30%)	4.767	0.312
IFA SUPPLEMENTATION COMPLETED INCOMPLETE NO SUPPLEMENTATION	62(57.9%) 40(37.4%) 5(4.7%)	17(56.7%) 9(30%) 4(13.30%)	3.309	0.219
ANC COMPLICATIONS ANEMIA PREGNANCY RELATED COMPLICATIONS SYSTEMIC DISEASES STD OTHER INFECTIONS NO COMPLICATIONS	14(13.10%) 7(6.50%) 0(0.00%) 0(0.00%) 15(14.00%) 71(66.40%)	11(36.70%) 5(16.70%) 1(3.30%) 1(3.30%) 4(13.30%) 8(26.70%)	23.4	<0.001
MODE OF DELIVERY NORMAL VAGINAL DELIVERY ASSISTED VAGINAL DELVERY ELECTIVE LSCS EMERGENCY LSCS	48(44.90%) 31(29.00%) 11(10.30%) 17(15.90%)	10(33.30%) 5(16.70%) 7(23.30%) 8(26.70%)	6.616	0.085
OUTCOME SINGLE LIVE BIRTH BOTH TWIN ALIVE ONE TWIN DEAD STILL BIRTH INTRAUTERINE DEATH	107(100.00%) 0(0.00%) 0(0.00%) 0(0.00%) 0(0.00%)	24(80.00%) 0(0.00%) 2(6.70%) 3(10.00%) 1(3.30%)	22.38	<0.001
DURATION OF PREGNANCY PRE TERM TERM POST TERM	44(41.10%) 46(43.00%) 17(15.90%)	11(36.70%) 15(50.00%) 4(13.30%)	0.474	0.789
INTRAPARTUM COMPLICATIONS PROLONGED LABOUR NIL	27(25.20%) 80(74.80%)	9(30.00%) 21(70.00%)	0.275	0.6
SEX MALE FEMALE	78(72.89%) 29(27.11%)	8(26.66%) 22(73.34%)	21.429	<0.001

Gravida status, Spacing between children, contraceptive failure ,antenatal complications,Outcome of pregnancy and sex of the child significantly affect the disorder.

Table 3: Post Partum Period

The development of post-partum complications significantly alter the development of post-partum depression

Variables	Normal N(%)	Disorder N(%)	Chi square	P value
POSTPARTUM COMPLICATIONS	3(2.80%)	4(13.30%)		
WOUND INFECTION	8(7.50%)	3(10.00%)		
RETAINED PLACENTA	8(7.50%)	5(16.70%)	9.902	0.042*
POSTPARTUM HEMORRHAGE	37(34.60%)	5(16.70%)		
ICU ADMISSION	51(47.70%)	13(43.30%)		
NIL				
BREAST FEEDING				
YES	107(100.00%)	14(46.70%)		
PALADAI FEEDS	0(0.00%)	4(13.30%)		
NO	0(0.00%)	11(36.70%)		
NOT APPLICABLE	0(0.00%)	1(3.30%)	64.6 13	<0.00 1
FAMILY SUPPORT	107(100.00%)	15(50.00%)		
YES	0(0.00%)	15(50.00%)	60.07 8	
NO				<0.001
CURRENT CHILD				
ALIVE & HEALTHY	107(100.00%)	20(66.70%)		
TWINS	0(0.00%)	1(3.30%)		
BIRTH ASPHYXIA	0(0.00%)	3(10.00%)	38.475	<0.001
CONGENITALL	0(0.00%)	3(10.00%)		
DISEASE	0(0.00%)	3(10.00%)		
DEAD/STILL BIRTH	0(0.00%)	0(0.00%)		
ABORTIONS	0(0.00%)	0(0.00%)		
NOT APPLICABLE				
HOSPITAL STAY				
DURATION	62(57.90%)	1(3.40%)		
LESS THAN 3 DAYS	21(19.60%)	6(20.70%)		
3 TO 7 DAYS	24(22.40%)	9(31.00%)		
8 TO 12 DAYS	0(0.00%)	13(44.80%)	63.30 2	<0.00 1
>12 DAYS				
NICU ADMISSION				0.001
YES			45.732	
NO	3(2.81%)	15(50%)		
	104(97.19%)	15(50%)		
CHRONIC ILLNESS				
NONE	91(85%)			
COMMUNICABLE	0(0%)			
DISEASES	9(8.40%)	11(36.70%)		
HEART DISEASE	7(6.50%)	7(23.30%)		<0.001
THYROID DISEASE	0(0%)	1(3.30%)	53.892	
AUTOIMMUNE	0(0%)	7(23.30%)		
DISORDER		3(10%)		
CHRONIC INFECTIONS		1(3.30%)		

Postpartum complications, women using paladai and not breastfeeding, mother without family support, Women gave birth to twins ,congenital anomaly baby or with respiratory distress, women whose children is admitted in NICU and having a past history of chronic illness and who stays in long period in the hospital are tend to develop PPD significantly.

Table 4: Depressive Symptoms

DEPRESSIVE SYMPTOMS	Normal N(%)	Disorder N(%)	Chi square	P value
YES	0(0.00%)	11(36.70%)	42.65	
NO	107(100.00%)	19(63.30%)		<0.001

Depressive symptoms in current pregnancy is associated with a higher incidence of post-partum depression

Table 5: Psychiatric Illness in Family

	Normal	Disorder	Chisquare	P value
NONE DEPRESSION ANXIETY BIPOLAR DISORDER SCHIZOPHRENIA OTHERS	107(100%) 0(0%) 0(0%) 0(0%) 0(0%) 0(0%)	26(86.7%) 1(3.3%) 0(0%) 2(6.7%) 1(3.3%) 0(0%)	14.696	0.002
SUICIDAL IDEATION YES NO	0(0%) 10(100%)	3(10%) 27(90%)	10.94	0.002
PARENTS BOTH ALIVE ONE ALIVE EITHER DEBILITATED BOTH DEAD	95(88.8%) 12(11.20%) 0(0%) 0(0%)	18(60%) 9(30%) 1(3.30%) 2(6.70%)	18.44 8	<0.001
PSYCHIATRIC ILLNESS IN FAMILY YES NO	0(0%) 107(100%)	3(10%) 27(90%)	10.94	0.001

The family history of psychiatric illness,past history of suicidal ideation,loss of one or both parents and women who have family history of psychiatric illness found to be significantly related to the development of post-partum depression and anxiety.

Table 6: HDRS Severity

	Normal	Disorder	Chisquare	P value
Mild **Moderate** **Severe** **No**	0(0%) 0(0%) 0(0%) 107(100%)	10(33.30%) 5(16.70%) 4(13.30%) 11(36.70%)	78.678	<0.001

In our study as per Hamilton depressive rating scale19 women out of 137 had significantly affected by postpartum depressive disorder.

Table 7: Hars Severity

	Normal	Disorder	Chisquare	P value
Mild **Moderate** **Severe** **No**	0(0.00%) 0(0.00%) 0(0.00%) 107(100.00%)	8(26.70%) 1(3.30%) 2(6.70%) 19(63.30%)	42.658	<0.001

In our study as per Hamilton anxiety rating scale 11 women out of 137 had significantly affected by postpartum anxiety.

DISCUSSION

This study has been conducted among postpartum female aged 18 to 35 years, with the benefits of investigating this age group using a standardized questionnaire.The mean age of women included in this study 25. 5 with a range of 18 to 35 years.In our study age variance did not significantly affect the development of postpartum depression and anxiety. Chengalpattu medical college is a referral hospital which receives patients from the surrounding rural areas. There is no significant difference in number of cases from rural, semi-urban and urban areas.BMI, literacy level, and occupation does not

significantly influence the disorder. Lower income & lower socio economical people are more prone for post partum disorder. They couldn't fulfil all their needs in their low income. Unmarried, divorced and widow women are more often the victims of postpartum depression and anxiety compared to married women.

Degree of consanguinity and type of the marriage do not significantly affect this disorder. In our study 49 % women were primigravida . Those who had many abortions and multigravida with no previous live children had a very strong predisposition to the development of postpartum depression and anxiety. More spacing between pregnancy increased incidence of this disorder. Pregnancy as a result of contraceptive failure were associated with higher rate of postpartum depression and anxiety. It reflect that our health care system should monitor those women using contraception whether they are regularly and properly using or not. Nature of the conception and booking also did not significantly affect this disorder.

The number of health care visit during pregnancy and utilising iron and folic acid also decreased the incidence. The pregnancy associated antenatal complication like anemia, heart disease, hypertensive disorder, other infection, sexually transmitted disease etc increased the occurrence of this disorder. This indicate that we need to provide a prophylactic measure to prevent postpartum depression and anxiety in women with significant ante natal problems. Mode of deliveries whether normal vaginal, assisted vaginal, elective lscs, and emergency lscs did not significantly affect the incidence of this disorder if their baby was alive healthy. But other pregnancy complications like stillborn, intrauterine death were more significantly causes of these postpartum depression and anxiety.

In our health system 85 % of women did not develop any intra partum complication. It reflect our tamilnadu health care system effectively give better health care service. The development of postpartum complications like postpartum haemorrhage, wound infection , and mother admitted in ICU were more significantly affected by this disorder. So we have to advise the mother to consume nutritionly rich diet and proper cleanliness and avoid unnecessary visitors during in the period of the hospital admission time These measures will decrease the postpartum complications,

Hospital stay for more than 7 days has significantly caused higher incidence of postpartum depression and anxiety. Depressive symptoms and suicidal thoughts during pregnancy were associated with significantly increased psychiatric morbidity. Mother those who are breast feeding were protective to the development of postpartum depression and anxiety. The reason could be the bonding of the mother and child during feeding and the feeling of satisfaction upon breast feeding the child.In our study the women who lacked family support structure were at a higher risk of developing postpartum depression and anxiety.

The outcome of current children like Birth asphyxia, congenital disease and dead born significantly increased postpartum depression and anxiety. Higher rate of development of postpartum depression and anxiety in women who gave birth to female baby. There is a prevalent opinion in the society that male children are better than female children because of decreased expenditure and more income and the notion that male children take care of the parents during old age .this has also reflected in the higher rates of development of postpartum disorder in women who gave birth to female baby.

If the baby admitted in NICU due to birth asphyxia, hypoxic ischemic encephalopathy, Respiratory distress syndrome those mother are naturally prone for psychiatric disorder.

- Women who were associated with psychiatric illness had increased rate of postpartum depression and anxiety.
- Since HDRS ,HARS scale were screening tools we have used in this study to analyse the postpartum depression and anxiety .women who scored more value were
- diagnosed to have postpartum depression and anxiety . They were referred to the department of psychiatrics or call over given to psychiatric department for more tests and better and proper mode of treatment.

CONCLUSION

People in our country are still considering that visiting a Psychiatrist and having a Psychiatric illness as a taboo. This also relates with the very little content about Post partum Depression and Anxiety in the Indian Books. In Postpartum Disorder, the Baby is affected more as the mother suffers from depression and Anxiety This indicates the significance to take the necessary action as a Healthcare provider towards Post Partum Disorder.

The initial steps which needs to be done is to identify the mothers who are at risk of developing depression and Anxiety to provide appropriate treatment. This is achieved only by a team of specialists which include an Obstetrician, Clinical Psychologists, Pediatric Psychiatrist and the paramedical workers. This can be done if the Health care providers first increase their knowledge about the disease and the various problems which the mother, the baby and the family members had to face.

The society should be educated about the manifestations of Postpartum blues, Postpartum Depression and Anxiety, Post Partum psychosis and the need to contact a health care provider when the symptoms occur. The pharmacokinetics and dynamics of the Antidepressants and Antianxiety and their interaction in breastfeeding the baby are to

be considered as the Breast milk is important in the Growth and development of the Baby.

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