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Original Research Article

Prevalence and risk factors for depression among antenatal women during third trimester of pregnancy in a tertiary care centre

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ABSTRACT

Background: With the rising incidence of Maternal deaths due to suicide as evident from reports of Kerala state confidential review of maternal deaths, there is a felt need for screening for depression in study antenatal population. Though there have been various screening tools used, a simplified tool validated in study population was not used in study antenatal women till now. The objective of this study was to estimate the prevalence of depression among antenatal women admitted in the department of obstetrics and gynecology, Government Medical College, Thrissur and also to study the risk factors associated with depression in the study population.

Methods: A questionnaire based cross sectional observational study was conducted among 100 antenatal women in their third trimester. PHQ-9 questionnaire was used to screen for depression and the information regarding risk factors was collected from the patient, her caregivers and from clinical records. Data analysis was done using EPI-INFO/SPSS software.

Results: Prevalence of depression among hospitalized mothers: 53%. Most cases (70%) had: mild depression (PHQ Score: 5-9). Only very few (2%) of them had severe depression (PHQ score: more than 20). 9% had: moderately severe depression (PHQ score: 15-19). 19% had: moderate depression (PHQ score: 10-14). Statistically significant risk factors identified in this study were fetal gender preference, anxiety about labour process, anxiety about labour pain, anxiety about making the baby a part of their life and anxiety about baby's health.

Conclusions: The prevalence of depression among hospitalized mothers using PHQ-9 scale is high (53%). Screening for depression was found to be feasible and can be made a part of routine antenatal care so that appropriate interventions can be provided to improve maternal mental health and thereby prevent the maternal mortality occurring due to suicides.

Keywords: PHQ-9 scale, Prevalence of depression, Risk factors of depression, Screening for antenatal depression

INTRODUCTION

Depression is more common among women.¹ It affects an estimated 10 to 20% of pregnant women worldwide and this is more so among mothers from low and middle-income countries.² Unrecognised and untreated antepartum and postpartum depression are important risk factors for suicide. Inadequate risk assessment and improper seeking of medical help has led to suicides among postpartum women.³

Maternal suicide is a 'direct cause' for maternal death according to ICD-MM developed by the WHO working group (2012) even if the diagnosis of postpartum depression or puerperal psychosis is not established.⁴ An important forerunner for suicide could be the presence of depression in the antenatal period. According to the data published from confidential review of maternal deaths of Kerala (CRMD-2012), suicide contributed to 3% of all maternal deaths.⁵ This is showing a rising trend as evident from unpublished data from CRMD from 2010

onwards. Therefore, it is important that we screen for the presence of depressive symptoms among antenatal women using appropriate screening tools. Early identification and timely intervention of depression during pregnancy is important to prevent suicides. Obstetricians should screen their patients for depression and anxiety at least once during the antenatal period using validated screening tools.⁶

Study proposed to estimate the prevalence of depression among antenatal women and study the associated risk factors using a population validated tool instead of usual scales like Edinburgh postnatal depression scale.

ACOG has identified various screening tools for the same of which the PHQ-9 scale is a 9 point scale which can be completed within a very short time (less than 5 minutes) and has 75% sensitivity and 90% specificity.⁶ It has already been validated in the native language and published in Asian journal of psychiatry in 2018.⁷

METHODS

It was a questionnaire based cross sectional observational study conducted in department of obstetrics and gynecology, Government Medical College, Thrissur.

Inclusion criteria

- Antenatal women at or more than 28 weeks of gestation admitted in the obstetrics ward of Government Medical College Thrissur during the study period (December 2019 to February 2020).

Exclusion criteria

- Antenatal women who are known to have a psychiatric illness were excluded from the study.

Convenience sampling

Antenatal women at or more than 28 weeks of gestation who knew how to read and write in Malayalam was contiguously recruited until a sample size of 100 was reached. Informed written consent was obtained from the study subjects. Data regarding risk factors of depression were collected from patient's records, her relatives and by using a structured questionnaire in Malayalam that can be filled by the patient herself. Depression in the study participants was assessed using PHQ-9 questionnaire. The study protocol was submitted to Institutional Research Committee and Ethical Committee (IRB) of Government Medical College Thrissur for approval and the study was conducted after obtaining approval.

Statistical analysis

Data was coded and entered into Excel sheets and analysed using Epiinfo/SPSS software.

RESULTS

Prevalence of depression among hospitalized mothers was found to be 53% (Figure 1). Most cases (70%) had mild depression (PHQ score: 5-9). Only very few (2%) of them had severe depression (PHQ score: more than 20). 9% had moderately severe depression (PHQ score: 15-19). 19% had: moderate depression (PHQ score: 10-14) (Figure 2).

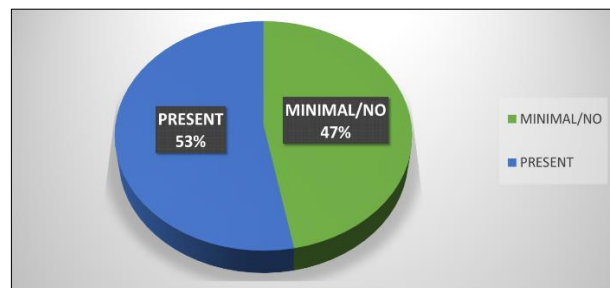


Figure 1: Prevalence of depression among study population.

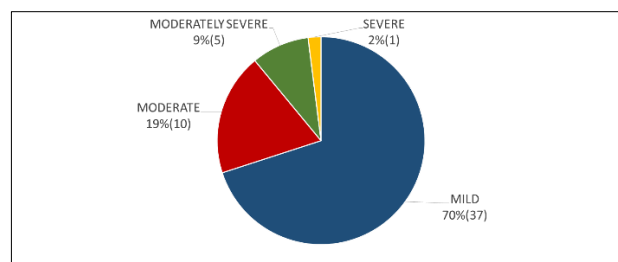


Figure 2: Grading of depression according to PHQ scale among those with depression.

The statistically significant risk factors for depression identified in the study population were fetal gender preference, anxiety about labour process, anxiety about labour pain, anxiety about making the baby a part of their life and anxiety about baby's health.

In Table 1 all the four risk factors studied were not found to be statistically significant, but presence of domestic violence, husband's addictions and marital conflicts was associated with an increase in percentage of women with depression-75%,61% and 62% respectively.

Among the risk factors in Table 2, fetal gender preference was found to have a statistically significant association with depression .82% of the women with fetal gender preference were found to have depression, while moral support from husband and family was not found to be a statistically significant risk factor.

All the 4 risk factors listed in Table 3 namely, anxiety about baby's health, anxiety about labour process, anxiety about labour pain and anxiety about making the baby a part of their life was found to be statistically significant.

Table 1: Risk factors for depression.

Risk factors	Depression	Chi-square	p value	Statistical significance	
Domestic violence	Present	75%	1.76	0.06	Not significant
	Absent	50%			
Husband addictions	Present	61%	1.2	0.26	Not significant
	Absent	46%			
Marital conflict	Present	62%	1.3	0.2	Not significant
	Absent	49.3%			
Planned pregnancy	Present	50%	0.3	0.5	Not significant
	Absent	56%			

Table 2: Risk factors for depression.

Risk factors	Depression	Chi square	p value	Statistical significance	
Moral support from husband	Present	50%	1.5	0.2	Not significant
	Absent	69.3%			
Moral support from family	Present	51%	1.02	0.3	Not significant
	Absent	66.5%			
Fetal gender preference	Present	82%	7.08	0.007	Significant
	Absent	47%			

Table 3: Risk factors for depression.

Risk factors	Depression	Chisquare	p value	Statistical significance	
Anxious about baby's health	Present	63.7%	16.09	0.00006	Significant
	Absent	25.7%			
Anxious about labour process	Present	72%	14.4	0.0001	Significant
	Absent	34%			
Anxious about labour pain	Present	70%	14.9	0.0001	Significant
	Absent	32%			
Anxious about making baby part of their life	Absent	87%	9.2	0.002	Significant
	Present	46%			

DISCUSSION

The prevalence of depression among the study population was found to be as high as 53%. This was found to be higher than the previous studies published about antenatal depression. In a study conducted by Joshi D et al in Nepal the prevalence was 18%.⁸ There they had used the EPDS scale for screening. According to a study published in Karnataka state of Kerala which used EDPS scale, the prevalence was found to be 35.7%.⁹ The high prevalence in this study might be due to the fact that the study was conducted among the inpatient antenatal women. There might also have been underreporting of cases previously due to lack of awareness, social stigma, social and family reasons, confusing symptoms with normal changes in pregnancy and inadequate screening.

Here we have used the PHQ-9 scale which is an already validated scale in this study native language and is a 9-point scale compared to EPDS scale which is a 10-point scale that is mostly used in postpartum depression.

The statistically significant risk factors for depression identified in this study population were fetal gender preference, anxiety about labour process, anxiety about labour pain, anxiety about making the baby a part of their life and anxiety about baby's health. Presence of domestic violence, husband's addictions, marital conflicts and previous pregnancy complications were associated with higher percentages of depression even though were not statistically significant.

In the previous studies maternal anxiety, history of depression, lack of social support, unintended pregnancy, domestic violence, lower income, lower education, smoking, single status, and poor relationship quality were some risk factors associated with antepartum depressive symptoms.¹⁰ The other risk factors identified were life stressors, lack of social support, and domestic violence.¹⁰

Some other major risk factors identified were health problems, early gestational age, sex preference, and spousal alcohol intake. Participants' apprehension on

birth outcome, a family expectation of male child, inadequate support from the family/husband and disturbed family environment were also other associated factors.⁸

Limitation of this study was conducted among inpatient antenatal women in third trimester only.

CONCLUSION

The prevalence of depression among the study population was found to be as high as 53%. Study could estimate the prevalence of depression using an easy and cost-effective screening tool which was also less time consuming. Thus, screening for depression was found to be feasible and it can be incorporated into routine antenatal care. This would help in the early identification of the problem and allow us to make timely intervention and thereby prevent suicides and save the lives of mothers.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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