Prevalence of Antenatal Depression and its Associated Risk Factors: A Community Based Longitudinal Study in the Rural Area of Amroha District

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Abstract

Background: Maternal mental health is the leading ignored problem in the Indian population. Considering the high prevalence of antenatal and postpartum depression, mental health assessment and screening of high-risk cases should be a part of routine antenatal care.

Aim: The study aims to estimate the prevalence of Antenatal depression among pregnant women in the rural Amroha district and to assess risk factors associated with it.

Method: Three hundred (300) Antenatal women were interviewed using validated Hindi version of Edinburgh Postnatal Depression Scale (EPDS) to measure Antenatal depression. All the registered antenatal women in their first trimester were included in the study and were followed up to delivery of mother. The collected data was entered in Microsoft office excel sheet and this was analysed by using SPSS Version 20.0 software. To test the association chi-square test was used for categorical variables and $p<0.05$ was considered statistically significant.

Results: Prevalence of Antenatal depression was 10.7% Thirty two out of 300 women scored ≥ 10 on the EPDS. Age, Education, order of delivery and pallor were found to have a statistically significant with Antenatal depression.

Conclusion: Antenatal depression is prevalent and serious problems with changing courses. Continuous assessment over the course of pregnancy is warranted. The findings in our study implicate policy makers to include maternal mental health screening as a part of maternal and child care programs.

Keywords: Antenatal Depression, Pregnancy, Edinburgh Postnatal Depression Scale, Risk Factors.

Introduction

Pregnancy is a time of enjoyment and fulfilment for women, however, evidence indicates that there is an increase in psychiatric morbidity, particularly depression and anxiety, during this period.

Depression related to child bearing can occur during pregnancy or after birth or both. Antenatal Depression in pregnancy may diminish one's capacity for self-care, drug or alcohol abuse and poor antenatal

clinic attendance, all of which affect woman's physical and mental health and may restrict the growth and development of the foetus. [1]

Depression during the antenatal period is the strongest predictor of postnatal depression, and is associated with intrauterine growth retardation, low birth weight and preterm delivery. Depression during the antenatal period is often not recognized and hence lowers treatment rates. Risk factors for antenatal depression include past history of depression, presence of anxiety, marital difficulties or lack of a partner, low levels of social support and recent major life events. Other factors include poverty, substance abuse, previous abortion, unplanned pregnancy, family violence, ambivalence towards the pregnancy and history of abuse. [2]

Postpartum depression received increased attention in the past decades. In contrast, studies on antenatal psychological morbidity are only beginning to flourish. [3] Identification of patients with antenatal anxiety and depression is made difficult by the similarity between somatic symptoms of anxiety and depressive disorders and somatic complaints commonly found in the normal course of pregnancy, [4]

Antenatal depression highlights the need for more prominent position in research. The purpose of the study was to determine the prevalence of antenatal depression in women from rural area of Amroha and to determine its associated risk factors.

Material and Methods

This is a community based observational longitudinal study to find the burden of Antenatal depression in females from rural area of Amroha and to assess to its related risk factors. This study was conducted from April 2019 to October 2019. It was done among pregnant female resident aged 15-49 years in their first trimester who were permanent residents of the rural area. Unmarried females, visitors in the study area and not willing to participate in the

study were not included. Women on anti-depressants, documented CNS disorders were excluded from the study. Sample size was estimated based on prevalence of antenatal depression about 20%[6] which is 300. Abortion has been considered has confounding factor For study purpose all 29 villages under rural field practice area of department of community medicine Teerthanker Mahaveer university & research centre were included. A list of all registered antenatal women in their first trimester was procured from anganwadi centre the women were contacted individually at their home and were recruited in the study PPS was applied and the required number of women from each village were accordingly recruited in the study. EPDS (Edinburgh postnatal depression scale) [5] scale was translated in to Hindi and was administered on study subject at time of induction in the study. A cut off score of >10 was applied to identify women at risk of depression. A structured questionnaire included socio-demographic details such as socioeconomic status, occupation, family structure, relationship with husband and mother in-law, past obstetric history and gender of past delivery. During the follow up women were assessed for depression using EPDS scale. The collected data was interred in Microsoft office excel sheet SPSS version 20.0 software. To test the association chi-square test was used for categorical variables and $p<0.05$ was considered statistically significant.

Results

Table 1 depicts socio demographic profile of study participants. Thirty two (.10.7%) women in our study were found to be having antenatal depression. (Table 2) Among 300 pregnant women who participated in the study 126 (42%) belonged to 25 to 29 years age group. All women were Hindus 244 (81.3%) by religion and only 61 (20.3%) were illiterates, 124 (41.7%) belonged to low standard of living index. One hundred and

twenty (40%) women had one child and 72 (24%) had more than three children. Majority 257(85.6%) of the women in the study were having pallor. (Table 1)

Table 3 shows the association of risk factors with antenatal depression in the women in our study. Maternal age, birth order and pallor were found to be statistically significant associated risk factors.

Table 1: Socio-demographic profile of pregnant women in first trimester (n= 300)

Socio-demographic variables	Frequency	Percentage (%)
Age		
15-19	12	4%
20-24	114	38%
25-29	126	42%
30-34	40	13.3%
35-49	8	2.7%
Religion		
Hindu	244	81.3%
Muslim	56	18.7%
Education		
Illiterate	61	20.3%
Read &Write	18	6%
Primary school	40	13.3%
Middle school	25	8.3%
High school	38	12.7%
Intermediate	54	18%
Graduate &Above	64	21.3%
Standard of living Index		
Very high ($\geq$76)	16	5.3%
High (51-75)	50	16.7%
Medium (26-50)	110	36.7%
Low ($\leq$25)	124	41.7%
Birth Order		
1	120	40%
2	108	36%
3	51	17%
4	18	6%
>5	3	1%
Pallor		
Present	257	85.6%
Absent	43	14.4%

Table 2: Prevalence of antenatal depression among the study participant

Antenatal depression	Frequency	Percentage (%)
Present	32	10.7%
Absent	268	89.3%
Total	300	100%

Table 3: Factors associated with antenatal depression

Variable	Antenatal depression n (%)		χ2	p value
	Present	Absent		
Age group				
15-19	4 (12.5)	9 (3.35)		
20-24	6(18.75)	108 (40.29)		
25-29	7 (21.87)	117 (43.65)	39.9434	0.00001
30-34	10 (31.25)	30 (11.19)		
35-49	5 (15.62)	4 (1.49)		
Education				
Lliterate	7 (21.87)	54 (20.14)		
Read &Write	1 (3.12)	17 (6.34)		
Primary school	4 (12.5)	36 (13.43)		
Middle school	2 (6.25)	23 (8.58)	1.32605	0.97020
High school	5 (15.62)	33 (12.31)		
Intermediate	5 (15.62)	49 (18.28)		
Graduate & above	8 (25)	56 (20.89)		
Birth Order				
1	11 (3.43)	109 (40.6)		
2	6 (18.75)	102 (38.5)		
3	4 (12.5)	47 (17.53)	42.7688	0.00001
4	9 (28.12)	9 (3.35)		
>5	2 (6.25)	1 (.4)		
Pallor				
Present	24 (75)	19 (7.9)	107.3687	<0.05
Absent	8 (25)	249 (92.91)		

Discussion

Depression has been recognized as a cause of maternal morbidity and mortality in the West, and screening as a part of routine antenatal and postnatal care of women has been recommended. [7] Depression which is not treated can lead to short and long term complications both in mother and infants which has been proved by research done in developed countries. [8] and very few studies have been done in India to assess the problem of antenatal and postpartum depression.

Majority of participants in our study belonged to age group of 20 – 29 years which was similar to the study by Hashima et al [6] (20-34 years, 69.9%) and literacy rate (58.9%) [6] was also similar in both the studies. In our study majority of the women were having pallor and the study by Kaaya et al [12] had similar findings 67.2% had haemoglobin less than 11g/dl

An EPDS cut-off of ≥ 10 has been used in our study as it has been suggested that a score ≥ 10 has the highest sensitivity for research work. The prevalence of antenatal depression in our study was 10.7% is similar to other studies such as Dubey et al [8] (6%), Chandran et al [9] (16.2%) and Divakar et al. (2008) found a higher prevalence (56%) in a different sociocultural setting (private hospital) in Bangalore. [10] This suggest that maternal mental health needs special attention. This indicates the need for screening ante-natal and postnatal women, so that those found at higher risk of depression may be followed up and referred for specialist care if needed.

The American College of Obstetricians and Gynaecologists recommends that women be screened at least once in each trimester and at two weeks, six weeks and six months postpartum [11]

Many factors under study were associated with antenatal depression such as maternal age, birth order and pallor and was found to be statistically significant but in contrast there was no significant association between age and parity of mother with antenatal depression in the study by Hashima et al [6]. Educational status of mother was significantly associated in the study by Hashima et al [6] but our study findings suggest that there is no significant association of literacy with antenatal depression. 75 % of the participants with depression were having pallor and it was statistically significant but the findings of the study by Kaaya et al [12] showed that only 32% were anaemic and had depression and the association was not statistically significant. [13]

The strengths of this study are that, community based longitudinal study was conducted, a structured clinical interview with follow up till the last trimester was employed for assessment of depression in our study

Conclusion

Strategies for developing feasible community-level screening in pregnant high-risk women are probably likely to be effective in reducing morbidity. Shorter, time efficient and accurate screening methods that can be employed by health care workers at the primary level or community, while screening for obstetric and infant-related adversities need to be developed. Improvements in maternal mental health require a multi-sectoral response addressing poverty reduction, social protection, violence prevention, education and gender disadvantage. The findings of this study reiterate the need for a social response with, or even above, health responses to maternal issues

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