

SHORT ARTICLE

Antenatal depression and its correlates - a cross-sectional study in an urban resettlement colony of Delhi

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Abstract

Background- Antenatal depression is affecting 10% pregnant women worldwide with higher prevalence in developing countries. This causes poor maternal and foetal outcome and also affects cognitive development of the child. **Aim and objective:** To estimate magnitude of antenatal depression and its risk factors. **Methodology-** A cross-sectional survey was done at the antenatal clinic of community health department catering to an urban resettlement colony, East Delhi. Estimated sample size was 216 (including 10% non-response rate). Pregnant women attending the ANC clinic from October 2019 to February 2020 were enrolled. EPDS questionnaire was used to assess depression during pregnancy. **Results-**The antenatal depression was found in 11.8% subjects as per EPDS score. Working female and belonging to Muslim religion, past history of abortion, complications in previous pregnancy, financial debt, physical violence and substance use in family showed significant association with antenatal depression. **Conclusion** –Depression was prevalent among antenatal women and was found to be associated with various risk factors.

Keywords

Antenatal Depression; Edinburg Postnatal Depression Scale; Socio-Demographic Factors; Obstetric Factors; Psychosocial Factors

Introduction

Depression, one of the most common mental illness is a leading cause of ill-health and disability worldwide. (1) Women are affected more by depression than men (5.1 % in females, 3.6% in males) (2). Globally around 20% of women get affected during their lifetime (3). Apart from other reasons; this might be due to various physiological changes like menarche, pregnancy, and menopause. Worldwide about 10% of pregnant women and 13% of postpartum women, experience a mental disorder, primarily depression (4). In developing countries, this is even higher, i.e., 15.6% during pregnancy and 19.8% after child birth (4). Various Indian studies quoted the prevalence of depression during pregnancy as 9.18-35.7%

(5-7) whereas the prevalence in the general population in India has been reported as 2.7%. (8) Mental illness during pregnancy is crucial risk factor for postpartum depression, increased maternal mortality and causes numerous adverse outcomes for the offspring, including maladaptive foetal growth and development, poor cognitive development and behaviour during childhood and adolescence (9).

Most of the studies conducted in India mainly catered to postpartum depression with very few studies on antepartum depression. So, there is dire need to assess the burden of depression during pregnancy to help policy makers to provide more comprehensive antenatal care and further reduce maternal and childhood morbidities.

Aims & Objectives

1. To determine the magnitude of antenatal depression.
2. To assess the clinical and psychosocial factors that can affect the mental health of antenatal women.

Material & Methods

Study type: Cross sectional study

Study population and area: Pregnant women attending antenatal clinic of Community Health Department (CHD) located in urban resettlement colony, Sunder Nagri, East Delhi.

Sample Size calculation: Sample size was calculated by formula z^2pq/l^2 taking the $z=1.96$ prevalence rate 15 % and absolute error 5%, which came out to be 196, taking non response rate as 10%, the total sample size came out to be 216.

Inclusion criteria: Pregnant women who attended the ANC Clinic (consecutive sampling) which runs once a week in CHD were assessed for enrolment in the study. The women who were willing to give consent were enrolled in the study.

Exclusion Criteria: Pregnant women with a history of psychotic illness, substance abuse or any chronic morbid condition were excluded from the study.

Strategy for collection and Study tools: Pretested self-designed semi-structured questionnaire and Edinburgh postnatal depression scale (EPDS). The questionnaire was designed to collect data on socio-demographic details, obstetric history, and psychosocial problems faced by pregnant women during current pregnancy which may be the possible determinants of antenatal depression among these women. Among psychosocial factors, details regarding substance use in the family, physical violence on the pregnant women, financial debt on the family, the perceived financial burden due to current pregnancy by the female and details on social support has been taken. EPDS is a tool used to screen for depression among postnatal women and has been validated for use among antenatal women also. It has been validated in India in various languages like Tamil, Konkani, Bengali, Marathi and Hindi (10). EPDS score ≥ 12 was taken as screen positive for antenatal depression. In various other studies, a score of 10 has been taken as cut off, but cut off point at 12 has >95% sensitivity and >95% specificity for detecting major depression. (11) Participants who came positive were given a referral slip for psychiatry OPD of a tertiary clinic hospital which is a referral centre for CHD. Further follow up of the patients could not be done.

Data analysis: The data was collected and entered in excel and was analyzed on the Statistical Package for the Social Sciences (SPSS) version-20 software. Proportions were calculated for categorical data and compared using chi-square. A P-value less than 0.05 was taken as statistically significant.

Ethical approval: The study from the Institutional ethics committee of the tertiary care hospital.

Consent: Patients were informed about the purpose of the study and written informed consent was taken. confidentiality and privacy of the patients were maintained.

Results

Out of 204 subjects, 80.8% were of the age group 20-29 years, whereas the rate of teenage pregnancy was 6.4% in our study. The Majority (54.4%) of subjects were Hindu and 44.1% were Muslim. Around 28.9% were illiterate and 28% of subjects were educated till high school and above. The majority (56.9%) of women belonged to the nuclear family. Maximum study subjects (94.1%) were homemakers. The majority (71.6%) belonged to the upper lower socioeconomic class whereas socioeconomic status was not assessed in 19(9.3%) subjects as required information was not given by them.

In our study, 24(11.8%) subjects screened positive for depression as per EPDS score cut off ≥ 12 . That means that they have a higher chance of having depression which needs to be referred for psychiatric evaluation. Table 2 shows, out of all sociodemographic factors, working pregnant women (p value<0.017) was found to be at higher risk of antenatal depression as compared to their non-working counterpart. [Table 1]

We assessed various obstetric factors in our study, out of which, past history of abortion (p value<0.015), complications in a previous pregnancy (p value<0.004), and history of stillbirth (p value < 0.047) have shown significant association with the presence of possible depression as per EPDS. Various Psychosocial factors were studied, out of which, significant association with possible risk of depression has been shown by presence of substance use in the family (p value<0.010), physical violence by husband (p value<0.017), and by any family member (p value< 0.015), financial debt in the family (p value<0.010) and perceived financial burden due to current pregnancy (p value<0.009). [Table 2]

Discussion

Early detection of distress and depression is very crucial for promotion of well-being of both mother and child. Peri-natal period is the time, when majority women visit health system, however, still detection of antenatal depression is very poor. This might be due to health personnel's poor understanding or knowledge about mental health issues in this vulnerable group. So, this study was conducted in a clinic setting to assess the magnitude of possible depression among antenatal women attending an ANC clinic using EPDS screening tool. In our study, the possible depression during pregnancy was found in 11.8% subjects (using the EPDS) whereas other Indian studies reported between 9.18 to 35.7% (5-7), the variation in magnitude of antenatal depression is due to use of different screening tool [Ajinkya et al (5), George et al (6)] or use of different cut off score if used EPDS as screening tool. Among various sociodemographic

factors, working pregnant women have shown a significant association with possible antenatal depression as per EPDS score (p value < 0.05). Ajinkya et al (5) and George et al (6) reported the association of depression with past history of abortions and obstetric complications in previous pregnancy which was found consistent with our study.

Various psychosocial factors like substance use in the family, physical violence on the female during pregnancy, financial debt, and perceived financial burden due to current pregnancy were found significantly associated with the presence of possible antenatal depression. Similar results were reported by George et al (6), focusing on financial difficulties and marital conflicts being a risk factor for antenatal depression. A systematic review conducted by Insan et al (7) has shown various factors like intimate partner violence, unplanned pregnancy, male preference, and poor relationship with in-laws which shows significant association with antenatal depression. In our study, there was a higher incidence of possible antenatal depression among females having son preference in the family though it was not found to be statistically significant.

Conclusion

We conclude here with the concern that, antenatal depression has come out to be considerably high among studied subjects with various risk factors found significantly associated with it like working female, past history of abortion, complications in previous pregnancy, substance use in the family, physical violence on female during pregnancy, financial debt and perceived financial burden due to current pregnancy. Focusing on these risk factors and assessing psychosocial condition during history taking in ANC clinic can help in identification of antenatal women at risk of depression. This emphasizes the special need for research in this cohort of the population.

Recommendation

This study has put a sincere effort to assess the magnitude of Antenatal depression in a primary level care facility but there is a definite need to conduct a large-scale community-based study and assesses the actual burden of depression among pregnant women using diagnostic criteria and predictors of depression. This will help in planning and developing Comprehensive antenatal care services including timely identification and management of pregnant women with depression with goal of improving overall maternal and child health.

Limitation of the study

This study had few limitations: 1. Use of only screening tool in the study to assess the antenatal depression which was not followed by detailed psychiatric interview. Suspected subjects were sent to psychiatric OPD but they could not be followed up. 2. EPDS only assess sign and symptoms of depression in last 7 days so we could detect current magnitude of depression only but this fails to tell whether the onset of depression was prior to current pregnancy as any detail of previous history of depression in general as well as in past pregnancy was not taken in this study.

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Tables

TABLE1. DISTRIBUTION OF SUBJECTS BASED ON THEIR EPDS SCORE AND SOCIODEMOGRAPHIC FACTORS.

	Socio demographic variables	Antenatal Depression		χ ²	P value
		Absent N=180 n(%)	Present N=24 n(%)		
Age (in years)	15-19	10 (5.6)	3 (12.5)	1.802	<0.615
	20-24	87 (48.3)	10 (41.7)		
	25-29	60 (33.3)	8 (33.3)		
	<30	23 (12.8)	3 (12.5)		
Education	Illiterate	50 (27.8)	9 (37.5)	7.351	< 0.196
	Primary	34 (18.9)	2 (8.3)		
	Middle	47 (26.1)	5 (20.9)		
	High	19 (10.6)	6 (25.0)		
	Intermediate	20 (11.1)	2 (8.3)		
	Graduate and above	10 (5.5)	0 (0.0)		
Working status of subjects	Working	8(4.4%)	4(16.7%)	5.714	<0.017
Family type	Nuclear	100 (55.6)	14 (58.3)	0.066	<0.796
	Joint	80 (44.4)	10 (41.7)		
Socio-economic status (N*= 185)		N** = 168n(%)	N***= 17n(%)	0.363	<0.948
	Lower class	2 (1.2)	0 (0.0)		
	Upper lower	132 (78.6)	14 (82.4)		
	Lower middle	33 (19.6)	3 (17.6)		
	Upper middle	1 (0.6)	0 (0.0)		

*Socioeconomic status could not be assessed in 19(9.3%) subjects, ** Number of study subjects with EPDS <12 with known socioeconomic status.
 *** Number of study subjects with EPDS ≥12 with known socioeconomic status

TABLE 2. OBSTETRIC FACTORS AND PSYCHOSOCIAL FACTORS BASED ON EPDS SCORE.

Obstetric factors	Antenatal Depression		χ ²	P value
	Absent N=180 n(%)	Present N=24 n(%)		
Primi Gravida	61(33.9)	12(50.0)	2.392	<0.112
Unplanned pregnancy	108(60.0)	15(62.5)	0.055	< 0.814
History of still birth	3 (1.7)	2(8.3)	3.936	0.047
History of abortion	25(13.9)	8(33.3)	5.905	< 0.015
Complications in current pregnancy	7(3.9)	2(8.3)	0.992	<0.319
Complications in past pregnancy	6(3.3)	4(16.7)	8.076	<0.004
Psychosocial factors				
Son preference in the family	65(36.1)	12(50.0)	1.57	0.209
Substance use in the family	45 (25.0)	12 (50.0)	6.574	< 0.010
Marital conflict due to substance use	28(15.6)	5(28.8)	0.435	<0.510
Physical violence by husband	16 (8.9)	6 (25.0)	5.713	< 0.017
Physical violence by other member	25 (13.9)	8 (33.3)	5.904	<0.015
Financial debt	19 (10.6)	7 (29.2)	6.596	< 0.010
Perceived Financial burden due to current pregnancy	4(2.2)	3(12.5)	6.75	<0.009
No social support	38 (21.1)	7 (29.2)	1.038	< 0.595