



## A CROSS SECTIONAL STUDY OF MAGNITUDE OF DEPRESSION AMONG ANTENATAL WOMEN ATTENDING ANTENATAL CLINIC

### Psychiatry

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### ABSTRACT

**Introduction :** Pregnancy is a time of transformation in a woman's life. Many physical, physiological, and psychological changes take place. Antenatal depression is of immense public health importance, as it can adversely affect both the mother and the child. Many studies have been conducted on post partum psychological disorders but Antenatal psychological morbidity has received less attention. This study will help identify antenatal depression for early identification and management. **Material And Method :** Present cross sectional study was conducted among the pregnant women attending the OPD & IPD, of O & G department, AVMC, between December 2020 to September 2022. Appropriate IRC & IEC clearance was obtained from the institution. After obtaining informed written consent from each patient, Antenatal women between age group 18-40, of any trimester, without pre existing psychiatric, medical illness were included. Socio demographic data was collected by using a proforma and scales was administered (Edinburgh postnatal depression scale, Life distress inventory scale, Hamilton Depression Rating scale) during the period of study. All the data were collected in proforma and entered in excel sheet for analysis. The data were summarised as frequency, percentage, mean and standard deviation. A p-value of <0.05 was considered statistically significant and analysis was performed using SPSS v21 operating on windows 10. **Result :** In present study total of 168 patients fulfilling inclusion criteria are included with mean age of 22.89±3.36yrs of age. Prevalence of depression among antenatal women was found to be 11.9%. The mean scores between the group, the mean level of HDRS, EPDS and LDIS were significantly higher in assisted labour compared to spontaneous labour among participants ( $p < 0.05$ ). No significant association was found between new onset medical comorbidities (Hypothyroid, Gestational Diabetes, Hypertension) and depression. **Conclusion :** The present study proved a higher level of the depression among the antenatal women, and found no significant association with new onset of comorbidities among the pregnant women. The study also documented the presence of significant higher mean score of the scales among the assisted mode conception compared to the spontaneous mode of conception. This study highlights the extent of depression in antenatal women gives us an insight about the importance of an early diagnosis and appropriate intervention.

### KEYWORDS

Antenatal, Depression, New onset medical comorbidities, Mode of conception, Hamilton Depression Rating Scale, Life Distress Inventory Scale, Edinburgh Postnatal Depression scale

#### I. INTRODUCTION

Pregnancy is a time of transformation in a woman's life. Many physical, physiological, and psychological changes are taking place in her. Despite the fact that this is typically seen as a phase of mental well-being, pregnancy can cause or worsen emotional issues. This may have an adverse effect on the pregnancy as well as the postpartum period. The prenatal period is regarded as a high risk phase for both pre-existing and newly diagnosed mental problems. Antenatal depression is of immense public health importance, as it can adversely affect both the mother and the child.

There is a need to understand antenatal depression in terms of its prevalence, and the risk factors, that could be used to identify it. Some women dread and avoid childbirth despite desperately wanting a baby. There are a few epidemiological investigations of maternal depression in developing countries and especially those restricted to primigravidae. Pregnancy related depression has been less researched as compared to postpartum depression.<sup>1</sup> Pregnancy may be a time of considerable anxiety with symptoms escalating in the third trimester. Over 20% of pregnant women report fear and 6% describe a fear that is disabling.

Antenatal period provides an ideal time to screen and assess the first onset of depression along with the routine check up. Prevalence of depression in pregnancy ranges from 6% to 25%.<sup>2</sup> A systematic review of depression in pregnancy showed a prevalence rate of 7.4% in the first trimester, 12.8% in the second trimester and 12% during the third trimester.<sup>3</sup> The two Indian studies on antenatal depression reported prevalence rates of 9.8%, 6 and 17%.<sup>4</sup>

This study aims to establish the prevalence of depression among antenatal women, to study the association between antenatal depression and new onset medical comorbidities and to determine association between nature of conception and depression in antenatal women.

#### II. MATERIAL AND METHODS

This cross sectional study was conducted in Obstetrics & Gynaecology and Psychiatry department, AVMCH after getting institutional ethical clearance from December 2020 to September 2022. The study included Antenatal women aged 18-40 years attending OPD & IPD services during the study period mentioned after obtaining informed written consent. The study excluded patients with pre-existing psychiatric, medical illness.

Patients were recruited from Antenatal clinic. Antenatal clinical profile and socio-demographic data of participants were collected. Patients were screened for depression using Edinburgh Postnatal Depression Scale and Stressful life events were assessed using Life Distress Inventory scale. Patients who score 10 or above on Edinburgh Postnatal Depression scale screening were further evaluated for severity of depression using Hamilton Depression Rating scale. All data were collected by investigator and was analysed statistically using SPSS v21 windows 10.

#### Tools :

##### Edinburgh Postnatal Depression Scale<sup>5</sup>

The 10-question Edinburgh Postnatal Depression Scale (EPDS) is a valuable and efficient way of identifying patients at risk for "perinatal" depression. The EPDS is easy to administer and has proven to be an effective screening tool.

Mothers who score above 13 are likely to be suffering from a depressive illness of varying severity. The scale indicates how the mother has felt during the previous week.

##### Life Distress Inventory Scale<sup>6</sup>

It is a self rating scale. It contains 18 items under four domains of social functioning, life satisfaction, finances and employment and marital life.

##### Hamilton Depression Rating Scale<sup>7</sup>

The HDRS (also known as the Ham-D) is the most widely used clinician-administered depression assessment scale. The original version contains 17 items (HDRS17) pertaining to symptoms of depression experienced over the past week. Method for scoring varies by version. For the HDRS17, a score of 0–7 is generally accepted to be within the normal range (or in clinical remission), while a score of 20 or higher (indicating at least moderate severity) is usually required for entry into a clinical trial.

### III. Statistical Analysis

All the data were entered in excel sheet and analysed using SPSS v21 operating on windows 10. The data were summarised as frequency, percentage, mean and standard deviation. The mean difference between continuous variables was analysed using student's t-test and categorical variables using chi-square test. A p-value of <0.05 was considered statistically significant

### IV. RESULTS

In present study total of 168 patients fulfilling inclusion criteria are included. The mean age of participants was found to be  $22.89 \pm 3.36$  yrs of age. By education, majority were higher secondary (31.5%) followed with 16.7% with class 10. With respect to occupation, 76.8% were homemakers, 11.3% were farmers, 9.5% were labourer in the study. 74.4% were living in joint family, 19.6% were nuclear family and 6% were single.

In the study, majority were with first trimester (51.8%), followed with 30.4% second trimester and 17.9% were third trimester. The mode of conception, 86.3% were with spontaneous and 13.7% with assisted. Prevalence of depression among antenatal women was found to be 11.9% - while screening with EPDS Scale, which was found to be consistent when HDRS was applied. The mean scores between the group, the mean level of HDRS, EPDS and LDIS were significantly higher in assisted labour compared to spontaneous labour among participants. ( $p < 0.05$ )

No significant association was found between new onset medical comorbidities such as Hypothyroid, Gestational Diabetes, Hypertension and antenatal depression.

**Table 1 : Showing The Mean Level Of Scores Between The Mode Of Conception**

|                                      | Mode of conception |      |             |      | p-value |
|--------------------------------------|--------------------|------|-------------|------|---------|
|                                      | Assisted           |      | Spontaneous |      |         |
|                                      | Mean               | SD   | Mean        | SD   |         |
| Hamilton depression rating scale     | 9.1                | 7.6  | 7.6         | 6.4  | 0.01*   |
| Edinburgh Postnatal depression scale | 9.4                | 5.2  | 7.9         | 4.6  | 0.01*   |
| Life Distress Inventory scale        | 41.7               | 23.7 | 34.7        | 20.7 | 0.01*   |

The mean scores between the group, the mean level of HDRS, EPDS and LDIS were significantly higher in assisted labour compared to spontaneous labour among participants. ( $p < 0.05$ )

### V. DISCUSSION

Antenatal depression is of immense public health importance, as it can adversely affect both the mother and the child. Antenatal period provides an ideal time to screen and assess the first onset of depression along with the routine check up.

In present study a total of 168 patients fulfilling inclusion criteria are included with mean age of  $22.89 \pm 3.36$  yrs of age. By education, majority were higher secondary (31.5%) followed with 16.7% with class 10. The socio economic status of the patients showing 57.2%

were upper lower class, 34.5% with lower middle class, 8.3% with upper middle SES. The period of pregnancy may be vulnerable to socio environmental variables that cause depression, such as a partner's lack of emotional support. The depression prevalence rate of 12% recorded in the third month postpartum is comparable to research from other countries as documented in Da-Silva study.<sup>8</sup> Prevalence of antenatal depression in this study was found to be 11.9%.

The mode of conception, 86.3% were with spontaneous and 13.7% with assisted. In the study, 94.6% of participants were on supplement of iron and folic acid. In majority of the pregnancy, routine USG scans were done in 96.4% of the patients regularly. The mean scores between the group, the mean level of HDRS, EPDS and LDIS were significantly higher in assisted labour compared to spontaneous labour among participants. ( $p < 0.05$ )

Depression is common, especially during the second and third trimesters of pregnancy. There is a need for clinical and economic research to quantify the maternal and foetal implications.<sup>9</sup> There is a need to develop ways for detecting and treating prenatal depression in the context of locally relevant risk factors in order to enhance both mother and child outcomes.<sup>10</sup>

The correlation of sociodemographic factors, obstetric factors, LDI, and LESS with EPDS scores revealed statistical significance for unplanned pregnancy, relationship distress, physical health, financial situation, social life, presence of personality disorder, homemaker status, and higher educational status. The study discovered a significant frequency of depression as well as risk factors.<sup>11</sup> In study by Golbasi Z et al., the EPDS score and perceived social support score had a significant negative moderate connection ( $r = -0.43$ ;  $P = 0.000$ ). Women with unexpected pregnancies had higher EPDS scores than women with planned pregnancies ( $P = 0.006$ ).

Nurses in perinatal settings, in particular, are in a unique position to diagnose antenatal depression. Nurses must keep an eye out for depressed symptoms in pregnant women, especially those who are at a higher risk of developing depression.<sup>8</sup> Ashley JM et al stated that minor depression was more common in pregnant women (16.6 percent) than in non-pregnant women (11.4 percent; adjusted PR = 1.5, 95 percent CI 1.2 and 1.9).<sup>12</sup> Identification of depression during pregnancy is crucial since depression can have a negative impact on delivery outcomes and neonatal health and, if addressed, can remain beyond birth

Untreated postpartum depression can have a negative impact on mother-infant bonds as well as cognitive, emotional, and behavioural effects for children.<sup>1</sup> Depression is different from usual mood fluctuations and short-lived emotional responses to challenges in everyday life.<sup>13</sup> According to a review by Frazier et al., acute and chronic stress during pregnancy might impair appropriate immune function and possibly produce spontaneous abortion.<sup>14</sup>

Antenatal depression has a multifaceted aetiology, necessitating a multimodal approach to prevention and therapy. Routine prenatal screening for depression must be combined with community-wide initiatives to create strong family, peer, and social support.<sup>15</sup>

### VI. CONCLUSION

The present study found a higher level of the depression among the antenatal women, and no significant association was found with new onset of comorbidities among the pregnant women. The study also documented the presence of significant higher mean score of the scales among the assisted mode of conception compared to the spontaneous mode of conception. This study highlights the extent of depression in antenatal women, gives us an insight about the importance of an early diagnosis and appropriate intervention.

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