Original Article

Frequency of Antenatal Depression in Different Trimesters

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Abstract

Objective: To evaluate and assess the frequency of antenatal depression in different trimesters.

Methodology: This cross-sectional study was conducted simultaneously in Gynae department of ANTH and the Islamic International Medical College (Railway Hospital) from January 2022 to July 2022. The study included all expectant women who visited a prenatal clinic and had no prior history of depression. Demographic and other data were gathered using a thorough structured questionnaire. The BDI (Beck Depression Inventory) scale was utilised to evaluate depression. The Beck Depression Assessment (BDI), a self-report rating inventory with 21 items, assesses the typical attitudes and depressive symptoms. More severe depression symptoms are indicated by higher overall scores. All the collected data was entered and analyze with the help of SPSS v. 25.

Results: In this cross-sectional study, a total of 134 pregnant women were included. The mean age of the study sample was 27.26 ± 4.842 years. The majority (58.96%) of the women in study were housewives followed by the women (23.13%) who were doing private job. In the study sample (29.85%), (34.33%), and (35.82%) women were in their first, second, and third trimester of pregnancy at the time of enrollment in the study. The rate of overall depression during pregnancy was found to be 24.63%, showing a trend of Mild mood disturbance (11-18) in 8.96% women, Moderate depression (19-29) in 9.70%, Severe depression (> 30) in 5.97% of women. The comparison of depression levels among three trimesters of pregnancy showed that there was no statistically significant (p-value > 0.05) difference in the rate of depression among the three trimesters of pregnancy.

Conclusions: The first trimester of pregnancy has the highest incidence and prevalence of depression among all three trimesters. Therefore, it's critical to pay attention to pregnant women's psychological health, especially during first trimester screening, and to facilitate the necessary interventions.

Keywords: Antenatal Depression, Trimester, Pregnancy.

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Introduction

The most prevalent psychiatric condition that affects women globally during their prenatal period is depression. Pregnant women undergo role, physiological and psychological changes.[1] Physical and Psychological stress vary over the course of pregnancy but increases as the pregnancy progresses. In developing nations, maternal and child health initiatives frequently concentrate on enhancing nutritional status while placing less of an emphasis on a pregnant woman's emotional and mental well-being.[2] Even existing research on depression has been more focused on past partum and less focused on depression during pregnancy. Early diagnosis and treatment of prenatal depression are crucial. If this isn't done, it could later evolve into postnatal depression, which could potentially have a harmful impact on how a child is born and develops.[3]

Antenatal depression is a non-psychotic depressive episode that can affect a pregnant woman with mild to severe symptoms. Depression during pregnancy can

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have disastrous effects on the woman, the unborn child, and the entire family. A risk factor for unfavorable obstetric and birth outcomes, such as fetal growth restriction, a low Apgar score, preterm birth, low birth weight, and stillbirth, is recognized as antenatal depression. According to research, a pregnant woman's depression may directly affect the fetus. Their off-kilter sleep patterns cause their infants to be frequently cranky and tired. These newborns may develop into infants with behavioral issues, learning disabilities, and underweight.[4,5]

Pregnancy symptoms might be confused with some depression symptoms, such as changes in sleep patterns, energy levels, appetite, and libido. As a result, patients or even medical professionals may mistakenly believe that these symptoms are related to pregnancy rather than depression.[6]

Women may frequently be reluctant to share mood changes during pregnancy with their healthcare providers due to the stigma associated with depression. In order to alert the healthcare system to these psychological issues and help expectant mothers deal with the burden of depression, the current study aims to determine the prevalence of depression in this population. Monitoring pregnant women for depression will make it possible to pinpoint the most vulnerable times and the factors that relate to depression in each trimester. As a result, assistance would be provided more effectively and in accordance with the actual needs of expectant moms, preventing the melancholy state and its repercussions from continuing into the postpartum period.[7]

The aim of the study is early detection of symptoms of depression which could facilitate timely treatment and prevent ongoing depression severity and its consequences on maternal and fetal health and to see frequency of depression in different trimesters.

Methodology

This cross-sectional study was conducted simultaneously in the gynaecology department of ANTH and Islamic International Medical College (Railway Hospital). Patients coming to an antenatal clinic during pregnancy were included in the study. Informed written consent was taken from all the patients after briefly describing about the study. This study was conducted over a period of 6 months from January 2022 to July 2022. The sample size was calculated by using WHO sample size calculator with a 95% confidence level, Anticipated population proportion (prevalence of depression among pregnant women) P = 9.18 %[8] and absolute precision level of 5%, which estimated the sample size to be 129 participants. All pregnant patients attending an antenatal clinic with no prior history of depression were included in the study. Pregnant patients already taking treatment for any mental health disorder, patients in labor and postnatal patients were excluded from the study.

A thorough structured questionnaire was utilized to gather demographic data and other information relevant to the study's goal. The BDI (Beck Depression Inventory) scale was utilized to evaluate depression. The Beck Depression Assessment (BDI), a self-report rating inventory with 21 items, assesses depressive symptoms and typical attitudes (Beck et al., 1961). Results were included as mild moderate and severe depression. The standard cut-off scores were as follows:

0–9: indicates minimal depression

10–18: indicates mild depression

19–29: indicates moderate depression

30–63: indicates severe depression.

Higher total scores indicate more severe depressive symptoms. All the collected data was entered and analyze with the help of SPSS v. 25. Mean and standard deviation was calculated for quantitative variables like age and gestational age. Frequency and percentages were presented for qualitative variables like categories of BDI score. Chi-square test was applied to compare BDI score among three trimesters. All the results were presented in the form of tables and graphs. P-value ≤ 0.05 was considered significant.

Results

In this cross-sectional study a total of 134 pregnant women were included. The mean age of the study sample was 27.26 ± 4.842 years. Majority (58.96%) of the women in study were housewives followed by the women (23.13%) who were doing private job. Main bulk of the women (31.34%) in the study were educated till matric followed by women (23.88%) who had education till intermediate. Quite a handsome number of the women (20.90%) were illiterate in the study sample. Most of the women (48.51%) in the study sample were residents of rural urban area followed by women (28.36%) who were resident of rural area. Most the women (54.48%) were gravida in the study sample. Main bulk of the women in study sample belonged to middle income class having monthly income of 35000 – 70000

followed by lower income class having monthly income of < 35000 rupees. Some women (20.90%) presented with history of diagnosed depression in previous pregnancy. In the study sample (29.85%), (34.33%), and (35.82%) women were in First, second, and third trimester of pregnancy at the time of enrollment in the study. The rate of overall depression during pregnancy was found to be 24.63%, showing a trend of Mild mood disturbance (11-18) in 8.96% women, Moderate depression (19-29) in 9.70%, Severe depression (> 30) in 5.97% women as elaborated in table I.

Table I: Distribution of Demographic characteristics of the study sample

Characteristics	N	%
Age of the Patients		
Mean ± SD	27.26 ± 4.842	
Occupation of the Patients		
Govt. Job	24	17.91%
Private Job	31	23.13%
Housewife	79	58.96%
Education level of the Patients		
Illiterate	28	20.90%
Matric	42	31.34%
Intermediate	32	23.88%
Graduate	18	13.43%
Postgraduate	14	10.45%
Residence area		
Rural	38	28.36%
Rural urban	65	48.51%
Urban	31	23.13%
Parity		
Gravida	73	54.48%
Para	61	45.52%
Monthly income		
< 35000	42	31.34%
35,000 - 70,000	62	46.27%
> 70,000	30	22.39%
Past diagnosis of depression		
Yes	28	20.90%
No	106	79.10%
Trimester of Pregnancy		
First	40	29.85%
Second	46	34.33%
Third	48	35.82%
Any other medical illness		
Yes	26	19.40%
No	108	80.60%
Depression based on BDI Score		
No depression (1-10)	101	75.37%
Mild mood disturbance (11-18)	12	8.96%
Moderate depression (19-29)	13	9.70%
Severe depression (> 30)	8	5.97%

The distribution of depression showed that the highest depression rate was found in first trimester followed by third trimester and second trimester of the pregnancy. It was observed that 30.0%, 21.74% and 22.92% women had depression in first, second and third trimesters respectively.

The comparison of depression levels among three trimesters of pregnancy showed that there was no statistically significant (p-value > 0.05) difference in rate of depression among three trimesters of pregnancy in our study sample as elaborated in table II.

Table II: Comparison of depression among three trimesters of the pregnancy

Depression	First Trimester	Second Trimester	Third Trimester	P-value
No depression (1-10)	28	36	37	0.951
Mild mood disturbance (11-18)	5	4	3	
Moderate depression (19-29)	4	4	5	
Severe depression (> 30)	3	2	3	
Total	40	46	48	

Discussion

Antenatal depression has a complex etiology that is firmly rooted in sociocultural variables. The anxiety and stress of pregnancy are linked to antenatal depression. A recent study looked at 57 papers that related prenatal depression to risk variables. The researchers concluded that the most significant risk factors are stress in daily life, a history of depression, an unsupportive family, an unwanted pregnancy, domestic violence, low socioeconomic position, low literacy, smoking, and being a single parent.[9, 10]

During the dynamic period of pregnancy, a woman's emotional state may significantly shift. Regarding the severity of emotional disorders experienced during pregnancy, there are differing opinions.[11] While some researchers contend that pregnancy is a period of psychological adjustment that is particularly healthy, others have identified significant levels of psychiatric instability. The risk of psychological problems like depression and anxiety disorders in a pregnant woman may multiply during the perinatal period, according to the American College of Obstetricians and Gynecologists.[12]

The results of this present study showed that the mean age of the study sample was 27.26 ± 4.842 years which is like other studies [13], Majority (58.96%) of the women in study were housewives followed by the women (23.13%) who were doing private job. Main bulk of the women (31.34%) in the study were educated till matric followed by women (23.88%) who had education till intermediate, which is also parallel to the results of study by Petersen Williams P et al, who reported that about three-quarters of the respondents had at least a secondary education.[13, 14]

Antenatal depression (AD), a major depressive disorder during pregnancy that is characterised by depressive symptoms like sadness or low mood, despondency, sleep disturbance, changes in appetite, suicidal ideation, feelings of worthlessness, loss of interest or pleasure, etc., can have devastating aftereffects on an expectant mother and her family. Prenatal depression is estimated to be prevalent in high-income nations at 9.2% and low- and middle-income countries at 19.2%, respectively, according to a systematic review.[15] In publications that included patients in various trimesters, with varying demo-socio-economic status, and used diverse study techniques, the prevalence rate of AD among Chinese pregnant women ranged from 4 to 46.11%.[16]

The results of the present study showed that 30.0%, 21.74% and 22.92% women had depression in first, second and third trimesters respectively. These findings are consistent with previous research, such as a study by Huang X, which discovered that the prevalence of depression in the first trimester was the highest at 32.92%, the highest among the three trimesters studied in this study. The prevalence of depressive symptoms was then 19.79% and 20.46%, respectively, in the second and third trimesters. The first trimester had a considerably higher depression score than any other. There could be several causes. First off, it's common knowledge that pregnancy causes stress for many women due to the changes it causes in their lives. Second, women who are pregnant may experience discomfort or severe pregnancy sickness, such as nausea in the first trimester, hyperemesis gravidarum, which is brought on by changes in hormone release, etc.[17,18]

It is obvious from the result of this study that the depression levels among the three trimesters of pregnancy were not statistically significantly (p-value > 0.05) different on the basis of rate of depression among three trimesters of pregnancy in our study sample. These results are in accordance with previous studies.[19] Pregnancy can cause significant psychological changes, and while it is a typical psychosocial experience for women, it can also cause a string of depressive behaviors. The mood of depression during pregnancy has grown to be a significant issue, and current research has shown that it can be harmful to both the woman and her unborn child. Early detection and free folic acid administration during prenatal exams are crucial for preventing the onset of depression symptoms. Additionally, maternal examination records should be set up in order to pay attention to the psychological status of expectant women who had low levels of education, difficult family economic circumstances, an excessive amount of parental responsibility, and had been migrant workers.[20]

Conclusion

The first trimester of pregnancy has the highest incidence and prevalence of depression among all three trimesters. Therefore, it's critical to pay attention to pregnant women's psychological health, especially during first trimester screening, and to facilitate the necessary interventions. According to the study, it is important to build a strong marriage, feel comfortable giving birth, reduce depression symptoms during the entire pregnancy, and support both moms' and kids' wellbeing. High-risk pregnant women for mental disorders should receive appropriate psychological care. To the greatest extent feasible, prenatal psychological problems should be prevented by educating pregnant women, their families, and society as a whole about health issues.

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