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Risk Factors for Antenatal Depression among Women Attending Tertiary Care Hospitals in Coastal Part of South India

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ABSTRACT

Introduction: Antenatal depression has often been overlooked and under-diagnosed throughout the world, especially in developing nations like India. The study was conducted to assess the prevalence of antenatal depression among pregnant women in South India and to identify associated risk factors.

Methods: A cross sectional study was conducted over seven months on 201 pregnant women in Mangalore. A semi structured questionnaire using Edinburgh Postnatal Depression Scale **(**EPDS) was used. Data was analyzed using SPSS version 11.5.

Results: 201 pregnant ladies were evaluated for antenatal depression. Majority women (52.7%) belonged to the age group of 26-30 years. Using EPDS we found that 10.9% women were progressing towards antenatal depression. The risk of developing antenatal depression was statistically significant among the women (21.1%) who were married before 20 years of age (p= 0.027), who were multi-gravida (p=0.002) and who were facing pressure from in-laws (p<0.05).

Conclusion: Need for clinical efforts to focus on early recognition and effectively managing antenatal depression by screening, thus preventing progression to postpartum depression and its ill effects.

Keywords: Antenatal, Depression, South India

INTRODUCTION

Antenatal depression, an easily detectable and preventable medical condition, is associated with adverse obstetric, maternal and neonatal complications. Unfortunately it has often been overlooked and under-diagnosed throughout the world, especially in developing nations like India.[1]

According to the report published by World health Organization (WHO) in 2012, the prevalence of depression during antenatal period was found to be10% among pregnant women of high income countries[2]and 15.9% among pregnant women of low and lower-middle income countries.[3] A similar study in 2006 among Asian countries showed an overall prevalence of depression of 20% during pregnancy and 21.8% in postnatal period.[4]A study conducted in India showed that 16% of antenatal women had depression.[5]

In India women experience enormous anxiety and depression during antenatal and postnatal period, especially in the ante-partum phase of pregnancy.[1] If inadequately treated, it can have serious negative impacts on both maternal health and the health of her newborn child. Moreover antenatal depression itself predisposes the mother to develop post-partum depression. This in turn will potentially reduce the overall quality of life of the mother and the baby.[6,7]

Risk factors for antenatal depression can be grouped under individual characteristics, marital relationship, pregnancy-related issues, infant-related issues, and other psychosocial issues.[2,4] Financial hardships, unwanted pregnancy, low self-esteem, negative cognitive style, low income, lack of social support, uncaring attitude of husbands, non-cordial relations with in-laws, gender preference and history of abuse have been shown to be strongly associated with antenatal and postpartum depression.[3,7,8,9] Detection of antenatal depression in obstetric care is generally low, which deprives women of effective treatment and support. It could easily be prevented if screening for antenatal depression is done along with associated risk factors. In many obstetric settings, screening tools for depression are not applied routinely.

Limited literature is available regarding prevalence and associated risk factors for antenatal depression in India. Thus the present study aims at assessing the prevalence of antenatal depression and identifying the associated risk factors using effective screening tools like Edinburgh Postnatal Depression Scale **(**EPDS) scale .This will safeguard the quality of life of those women in need of interventions by early detection of antenatal depression.

MATERIALS AND METHODS

A hospital based cross sectional study using convenient sampling technique was conducted among pregnant women, either in 2nd or 3rd trimester who have willingly and voluntarily consented in writing to be part of this study. Pregnant women attending antenatal clinics or admitted at various teaching hospitals affiliated to Kasturba Medical College Mangalore were included in the study. It was carried out over a period of seven months. The sample size of 201 was calculated by considering the prevalence of depression among antenatal women at 37%[4] with an absolute precision of 7%, confidence interval of 95% and non-response error of 10%.Ethics committee approval was obtained from Institutional Ethics Committee (IEC) of Kasturba Medical College, Mangalore before the commencement of the study. Permissions were also obtained from the Medical Superintendent and District Medical Officer of concerned hospital. A pre designed semi structured questionnaire containing 4 sections namely demographic details, risk factors associated with antenatal depression, past/present obstetric complications and family/ environment factors was used. It incorporated the simplified translated version of Edinburgh Postnatal Depression Scale **(**EPDS) scale in regional vernacular language which has been proved as an efficient pre-screening instrument to rule out depression during antenatal period of pregnancy.[10] In case of any queries, participants were guided. Also those women who were unable to read or understand the questionnaire were interviewed. Data collected was then analyzed using statistical software SPSS version 11.5. Descriptive statistics like mean, standard deviation and percentages were used for expressing the results. Chi-square test was then applied to study the association between demographic, obstetric and social factors and the risk of antenatal depression. A p value of less than 0.05 was considered to be statistically significant.

RESULTS

Table-01 shows the proportion of pregnant women of our study with antenatal distress using EPDS scale. Of the total 201 women, a large proportion of ladies (n=141, 70.1%) had some amount of distress while (n=38, 18.9%) of them had discomforting distress experienced during the course of their pregnancy. Though small, but a significant number of women (n=22, 10.9%) had a higher chance of progressing towards depression and its ill effects, with need for timely and urgent intervention to ensure her safety and well-being.

Table-01: Proportion of Antenatal distress as per Edinburgh Postnatal Depression Scale (EPDS). (N=201)

Edinburgh scores	Frequency (%)
Some distress (0-9)	141 (70.1)
Discomforting distress (10-12)	38 (18.9)
Higher chances of depression (≥ 13)	22 (10.9)

Table-02 reveals the demographic factors associated with risk of depression during antenatal period of the participants. The risk of antenatal depression was assessed by interviewing 201 pregnant ladies of which majority participants (n=106,52.7%,) were in the age group of 26-30 years with mean age of 26.4 + 3.2 years. A significant proportion of the participants had studied only till 8th standard (n=81, 40.3%) while 69 women (34.3%) finished formal schooling till 10th grade. Majority of them lived in joint families (n=147, 73.1%) and belonged to lower socio-economic status (n=133, 66.2%) according to modified Kuppuswamy scale.

We have found that those women who were married before the age of 20 years were at higher risk of depression than the ladies married after the age of 20years (21.1% vs. 8.6%). This association between age at marriage and risk of antenatal depression was found to be statistically significant (P<0.05).

Table-03 depicts association of obstetric factors with depression among the antenatal mothers.

Table 02: Demographic Factors associated with risk of antenatal depression (n=201)

Variables	Risk of Antenatal Depression			P
	Present (n=22)	Absent (n=179)	Total (n=201)	value
Age (years)				
<25	04 (05.5)	069 (94.5)	073	0.061
>25	18 (14.1)	110 (85.9)	128	
Age at Marriage				
< 20	08 (21.1)	030 (78.9)	038	0.027
>20	14 (8.6)	149 (91.4)	163	
Socio-economic Status				
Upper-Middle	05 (07.4)	063 (92.6)	068	0.243
Lower-Middle	17 (12.8)	116 (87.2)	133	
Educational Status of Mother				
Illiterate	00 (00)	12 (100)	12	0.110
Primary	14 (17.3)	67 (82.7)	81	
Secondary	05 (07.2)	64 (92.8)	69	
Higher secondary	03 (12.0)	22 (88.0)	25	
Graduation	00 (00)	14 (100)	14	
Type of Family				
Nuclear	00 (00)	013 (100)	13	0.191
Extended	22 (11.7)	166 (88.3)	188	

Figure in the bracket indicate percentage.

Table 3: Obstetric Factors associated with risk of depression among antenatal mothers. (N=201)

Variables	Risk of Antenatal Depression			P
	Present (n=22)	Absent (n=179)	Total (n=201)	value
Gravida Status				
Primi-gravida	02 (02.5)	079 (97.5)	081	0.002
Multigravida	20 (16.7)	100 (83.3)	120	
Status of Current Pregnancy				
Planned	02 (04.1)	047 (95.9)	049	0.077
Unplanned	20 (13.2)	132 (86.8)	152	
History of Abortion				
Yes	12 (7.2)	154 (92.8)	166	<0.05
No	10 (28.6)	025 (71.4)	035	
Risk Status of Current Pregnancy				
High Risk	05 (04.8)	99 (95.2)	104	0.004
Normal	17 (17.5)	80 (82.5)	097	

Figure in the bracket indicate percentage.

Table-04: Social Factors associated with risk of antenatal depression. (N=201)

Variables	Risk of Antenatal Depression			P
	Present (n=22)	Absent (n=179)	Total (n=201)	value
Gender Preferences				
Yes	10 (13.0)	067 (87.0)	077	0.465
No	12 (09.7)	112 (90.3)	124	
In-law Pressure				
Yes	06 (54.5)	005 (45.5)	011	<0.05
No	16 (08.4)	174 (91.6)	190	

Figure in the bracket indicate percentage.

From our analysis we were able to deduce that multi-gravida ladies were at higher risk of developing antenatal depression in comparison to primigravida women (16.7% vs 2.5%) with this association found to be statistically significant with P<0.05. On the other hand, women who have had a history of abortion or a current high risk pregnancy were less likely to suffer from antenatal depression than women with no previous abortions or with normal present pregnancy.

Table 04 shows the association of social factors with antenatal depression. A greater risk of depression was found among antenatal women experiencing in-law pressure as against those women who were under no such pressure from their in-law pressure (54.5% vs. 8.5%). This association was found to be statistically significant (P<0.05). Ladies showing gender preferences had an increased risk of antenatal depression as compared to the women showing no such preferences (13% vs. 9.7%). However, this association was not found to be statistically significant (P>0.05).

DISCUSSION

Presence of depression among antenatal mothers is well documented. However various studies conducted across the globe has shown a wide variation in the prevalence of antenatal depression. Studies conducted in USA, Brazil, Australia, Turkey, South Africa have shown a prevalence of 09%, 14.2%, 16.9%,32.6%, & 47% respectively.[3,7,8,11,12].In our study the prevalence of depression among antenatal women was 10.9% which was similar to the observation made in a study conducted at Navi Mumbai.[13]

The proportion of women who had married at less than 20 years of age faced a greater risk of depression during their antenatal period of pregnancy than women married at an age more than 20 years (21.1% v/s 8.6%) in accordance to the data obtained in this study. A similar finding has been observed in a study conducted in America which has shown that as the maternal age increases the chances of antenatal depression decreases with the youngest mothers having 2-3 times more of depressive symptoms as compared to others.[3]

The risk of antenatal depression among multigravida ladies was much higher than among primigravida women (16.7% v/s 2.5%) as obtained in our study. Studies done at Turkey and Navi Mumbaialso showed similar findings of greater prevalence of depression among multipara and multigravida women (34% and13%respectively) in comparison to primi-para and primi-gravida women (13.2% and 4%).[8,13]In contrast to the above findings a study done in Chennai concluded that the risk of developing depression due to the antenatal stress experienced by pregnant women using EPDS was the same in both primi-gravidas and multigravidas.[1]

The reasonsfor antenatal depression also varies across different regions of the world owing to differences in socioeconomic and cultural factors. A study done in Brazil showed a higher chance of depression was among ladies with stressful life events like marital conflict and financial difficulties.[12] Research in turkey revealed that there was significant association between women lacking emotional support from the mother-in-law and persistence of antenatal depression. [8]Lack of self-esteem and social support, presence of antenatal stress and abuse was shown to be statistically significant with depression among antenatal women in a study conducted in Australia.[7]There was a greater risk of antenatal depression prevalent among those women who were facing stressful events in life like pressure from in-laws (54.5%) in the present study. Similar results were also concluded in various other studies conducted in other parts of the globe.[2,7,9,12]

In this study woman whose current pregnancy was unplanned had a higher riskof antenatal depression. Results were in accordance with the findings obtained in studies conducted at Braziland Navi Mumbai.[12,13]Regarding gender preferences, women who showed such preferences had an increased chance of depression than those who didn't in this study. A similar study conducted among Asian women too found that infant's gender had significant effect on the risk of developing perinatal depression.[4]According to this study, depression among participants with previous history of abortion was found to be 7.2% and among high-risk pregnancies was 4.8% while the study done at Navi Mumbai, it was 4% among history of abortion and 6% among high risk pregnancies.[13]

LIMITATIONS

Self-reporting of symptoms related to depression by the subjects and not diagnosing it clinically is one major drawback of the present study. Personality of an individual might also be a risk factor for antenatal depression which couldn't be assessed due to practical difficulties.

CONCLUSION& RECOMMENDATION

Depression is one of the common disorders during antenatal period. Several socio-demographic and obstetric factors have been found to be significantly associated with depression during antenatal period. There is a strong need for the formulating guidelines for screening and management of depression during antenatal period

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