Original Research Article

Socio-Demographic and Obstetric Risk Factors Associated With Depression among Pregnant Women in A Rural Area of Belagavi

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ABSTRACT

Background: Maternal mental health problems stands unique to other maternal morbidities as it directly hampers the psychological support and protection offered by a mother to her child, family and the community. Among the mental health disorders related to pregnancy, depression is the commonest. A factor associated with depression is multi-factorial. Depression during pregnancy may lead to adverse obstetric outcomes. However antenatal depression has not been taken as a major issue by policy makers. Hence the present study was undertaken to determine the prevalence of antenatal depression and risk factors associated with it.
Objectives:
  1) To study the prevalence of depression in pregnancy.
  2) To identify the socio-demographic and obstetric risk factors associated with depression.
Materials and Methods: The study was done from December 1st 2014 to January 15th 2015 among all the pregnant women attending the antenatal clinic of a rural health centre under the field practice area of department of community medicine Belagavi. Data is collected using predesigned and pretested questionnaire and using "Edinburg Postnatal depression scale" (EPDS). Informed written consent is taken from every participant. Data analysis is done by using univariate and multivariate analysis.
Results: The prevalence of antenatal depression was found to be 20.08 % as (N=216). Age of the antenatal women, family type, gender preference, trimester, obstetric complication in present pregnancy and number of children showed significant association, while support from family and husband, being satisfied with pregnancy were associated with a reduced likelihood of depression.

Key words: Antenatal depression, Edinburg depression scale, rural, obstetric risk factors.

INTRODUCTION

Pregnancy is generally considered as a joyful event, however, for many women, it can be a stressful event. Mental health problems of women in child bearing age are increasingly being identified as a major public health problem in both developed and underdeveloped countries. [1] Among the mental health disorders related to pregnancy, depression is the commonest. Depression effects more than 20% of the women during their lifetime with females twice as likely to have experienced a major depressive episode as male. [2,3] During pregnancy

major psychological and social changes take place in the mother, which have been linked to symptoms of anxiety and depression. Depression during pregnancy is a matter of public health importance due to 3 prime reasons: Firstly, rate of depression during pregnancy is high during antenatal period. Secondly, it is the strongest risk factor for postnatal depression. Thirdly, it leads to adverse maternal and foetal outcomes. [4] Antenatal care traditionally focuses on physical health rather than on emotional health. Consequently, antenatal depression is regularly overlooked and under-diagnosed, locally and globally. [5] Recent data on prevalence of antenatal depression in low and middle income countries showed the mean prevalence of 15.6%. [6, 7]

Despite antenatal depression being one of the important public issue, most of the studies on maternal depression mainly focus on postnatal depression and there is less data available on antenatal depression. However antenatal depression has not been taken as a major issue by policy makers. Hence the present study was undertaken to determine the prevalence of antenatal depression and obstetric and socio-demographic risk factors associated with it.

MATERIALS AND METHODS

This cross sectional study was done from December 2014 to January 2015 among the pregnant women attending the antenatal clinic of a rural health centre under the field practice area of Department of Community Medicine Belagavi. All 216 participants who attended ANC clinic during the study period were included in the study. Antenatal depression was defined as onset of depressive symptoms anytime during the pregnancy. [7] Data was collected using predesigned and pretested questionnaire. EPDS ("Edinburg Postnatal depression scale") scale was used to detect the depressive symptoms and it has been

validated for both antenatal and postpartum use and also widely used as screening instrument for detecting symptoms of depression. EPDS scale has ten components in it. An EPDS score cut off of 13 was taken to calculate the prevalence of antenatal depression. [3,7] Informed written consent was taken from every participant. Data analysis was done by using SPSS 19 version.

RESULTS

Table 1: Distribution of study participants according to age (n=216)

Pregnant women age	Number	Percentage
15-19 years	33	15.3%
20-24 years	140	64.8%
25-29 years	43	19.9%

In this study the age of the pregnant women ranged between 14-29 years and 140(64.8%) of them belonged to the age group of 20-24 years.

The present study showed that antenatal women who had depressive symptoms (EDS$\geq$ 13) were 45(20.8%) and antenatal women who did not had depressive symptoms (EDS<13) were 171(79.2%).The prevalence of antenatal depression was found to be 20.8%.

In the present study, 22(15.7%) participants were in the age group of 20 to 24 years and 23(53.5%) in the age group of 25-29 years showed symptoms of depression with EPDS score $\geq$ 13,and among the religion 25(14.1%) Hindu and 20(51.3%) Muslim participants showed depressive symptoms. When we compared literacy status 2(40%) out of 5 illiterates and 43(20.4%) out of 211 literates showed depressive symptoms. 5(6.8%) out of 74 with nuclear family and 40(28.2%) out of 142 with joint family showed depressive symptoms. Pregnant women who were in third trimester showed more depressive symptoms i.e. 42(32.8%) out of 128 than women in second trimester. Pregnant women who had family support showed less

depressive symptoms when compared to those without family support. 42(38.9%) women. with male gender preference showed more depressive symptoms than that of female or either Age, religion, family type, trimester of pregnancy, family type and gender preference were found to be statistically significant(p<0.05) . (Table: 2)

Table 2: Socio-demographic characteristics among the study participants (N=216)

Characteristics	Depressed(EDS- $\geq$ 13)	Non-depressed(EDS<13)	Total	P valve	OR
Age:					
15 – 19 years	0	33	33		
20 – 24 years	22(15.7)	118	140	< 0.001	
25 -29 years	23(53.5)	20	43		
Religion:					
Hindu	25(14.1)	152	177	<0.001	1.56
Muslim	20(51.3)	19	39		
Literacy status:					
illiterate	2(40)	3	5	0.610	26.5
Literate	43(20.4)	168	211		
Family type:					
Nuclear	5(6.8)	69	74	<0.001	0.185
Joint	40(28.2)	102	142		
Socio economic status:					
Class ii and iii	0	20	20		
Class iv	36(22.1)	127	163	0.004	
Class v	9(27.3)	24	33		
Trimester:					
Second	3(3.4)	85	88		
Third	42(32.8)	86	128	<0.001	0.72
Family support:					
Yes	42(21.1)	157	199	<0.001	1.248
No	31(17.6)	14	17		
Gender preference:					
Male	42(38.9)	60	108	<0.001	22.273
Female or either	3(2.8)	105	108		

Table 3: Obstetric risk factors of study participants

Characteristics	Depressed(EDS- $\geq$ 13)	Non-depressed(EDS<13)	Total	P valve	O.R
Duration of married life:					
$\leq$ 5 years	30(15.5)	163	193	<0.001	0.098
>5 years	15(62.5)	8	23		
Unplanned pregnancy:					
Yes	0	27	27	0.004	1.31
No	45(23.8)	144	189		
Obstetric complication in previous pregnancy:					
Yes	21(75)	7	28	<0.001	20.5
No	24(12.8)	164	188		
History of abortion:					
Yes	4(19)	17	21	1	0.88
No	41(21)	154	195		
Age of first pregnancy					
$\leq$ 18 years	5(25)	15	20	0.847	1.3
>18 years	40(21)	156	196		
Gravida:					
Primigravida	24(24)	76	100	0.287	1.43
Multigravida	21(18.1)	95	116		
Number of children					
0	11(10)	99	110	<0.001	
1	18(21.7)	65	83		
2+	16(69.6)	7	23		

When we compared the obstetric risk factors of the study participants, participants with married life $\leq$ 5 years showed more depressive symptoms than that of >5 years married life which was found to be statistically significant. Out of 28 study participants who had obstetric complications in the previous pregnancy 21(75%) of them

showed more depressive symptoms than the participants with no complication in previous pregnancy. As the number of children increases, the participants showed increase in depressive symptoms i.e. participants with no child (10%), one child (21.7%) and two or more than two children (69.6%) showed depressive symptoms. (Table: 3)

Univariate analysis (unadjusted odds ratio) showed that risk factors such as age [O.R 7.89 (95% C.I 3.73-16.67) P< 0.001], religion [O.R 0.15(95% C.I 0.073-0.333) P< 0.001], family type [O.R 0.18(95% C.I 0.069-0.492) P< 0.001] and gender preference [O.R 22.27(95% C.I 6.63-74.2) P< 0.001] were associated with antenatal depression. Multiple logistic regression analysis (with adjusted odds ratio showed that only the gender preference [O.R

14.28(95% C.I 3.74 -54.6) P< 0.001] was independently associated with antenatal depression. (Table: 4)

Univariate analysis (unadjusted odds ratio) showed that obstetric risk factors such as trimester of pregnancy [O.R 0.07 (95% C.I 0.022-0.242) P< 0.001] , duration of married life [O.R 0.09(95% C.I 0.04-2.5) P< 0.001] , Obstetric complications in previous pregnancy [O.R 20.05 (95% C.I 7.87-53.61) P< 0.001] and more than two children [O.R 20.41(95% C.I 6.94-62.5) P< 0.001] were associated with antenatal depression. Multiple logistic regression analysis (with adjusted odds ratio showed that only the trimester of pregnancy [O.R 0.06 (95% C.I 0.01-0.23) P< 0.001] and more than two children [O.R 22.22 (95% C.I 3.03-142.85) P= 0.001], were associated with antenatal depression. (Table: 5)

Table 4: Analysis of socio-demographic factors related to antenatal depression

Characterstics	Unadjusted			Adjusted		
	Odds ratio	95% C.I	P value	Odds ratio	95% C.I	P value
Age($\leq$24 Vs $\geq$ 25)	7.89	3.73-16.67	<0.001	4.21	1.54-11.51	0.005
Religion(Hindu Vs Muslims)	0.15	0.073-0.333	<0.001	0.44	0.15-1.26	0.108
Family type(nuclear vs Joint)	0.18	0.069-0.492	<0.001	0.23	0.07-0.78	0.018
Gender preference(male Vs female/either)	22.27	6.63-74.22	<0.001	14.28	3.74-54.60	<0.001

Table 5: Analysis of Obstetric risk factors related to antenatal depression

Characteristics	Unadjusted			Adjusted		
	Odds ratio	95% C.I	p value	Odds ratio	95% C.I	p value
Trimester (2nd Vs 3rd)	0.07	0.022-0.242	<0.001	0.06	0.01-0.23	<0.001
Duration of married life($\leq$ 5 Vs >5 years)	0.09	0.04-2.5	<0.001	2.11	0.35-12.61	0.411
Obstetric complication in previous pregnancy(yes Vs no)	20.5	7.87-53.61	<0.001	17.64	5.68-54.2	<0.001
Number of children						
1	2.49	1.11-5.61	0.028	3.41	1.25-1.95	0.016
2+	20.41	6.94-62.5	<0.001	22.22	3.03-142.85	0.001

DISCUSSION

Antenatal depression meant to be a tragedy which creates a vicious cycle of complex social problems in the family context that result in life long suffering of individuals. Despite advances in understanding the causes of major depression the predictors of antenatal depression is poorly understood. [8] So, in our study we have made an attempt to study the prevalence and obstetric and socio-demographic factors associated with it.

In our study the prevalence of antenatal depression was 20.8% which is high when compared to 9% to 15% prevalence of antenatal depressive symptoms reported by other studies using EPDS. [9, 10] Whereas other studies, using a variety of depression assessment tools have reported antenatal depression prevalence 25%-50% for predominantly low income populations. [11-

[13] It should be noted that discrepancy in prevalence might be due to different scales used in different studies.

Women with more support from husband and family were less likely to develop depression has been shown in our study. Large number of antenatal women had preference for male child in our study which was found to be significantly associated with antenatal depression. Similar study conducted in Goa also showed similar results. [14] Studies conducted in few other countries also showed that women who desired son were more likely to have depression than the women who desired daughter or no gender preference. [15]

In the present study it was seen that presence of obstetric complications in the previous pregnancy was significantly associated with depression which was similar to findings of few other studies. [16,17] We have also found that the prevalence rate of antenatal depression was more among the third trimester women when compared to second and first trimester pregnant women and higher prevalence of depression was found among multigravida women than that of primigravidas. Similarly studies have showed that multigravidity is risk factor for antenatal depression. [6,18-21]

As the prevalence of antenatal depression is high, the women facing socio-economic hardship and those with poor pregnancy outcomes should be targeted for depression screening, prevention and treatment. The implications of this study for policy and practice are that mental health must be integrated into maternal health care in low income countries like India.

CONCLUSION

The present study showed prevalence of antenatal depression is high in pregnancy. Several socio-demographic and obstetric variables were found to be significantly associated with antenatal depression. This implies that simply asking a woman how she feels doesn't solve the problem, instead full diagnostic, psychiatric clinical interview should be done, proper counselling should be done to both women and her family, early detection and screening for depression should be a part of routine antenatal check-ups.

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