Descriptive Epidemiology and Risk Factors of Antenatal Depression among Women Visiting Tertiary Care Hospital in Lahore, Pakistan

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ABSTRACT

Background: Depression is a common and typical disorder, described by sadness, loss of interest or pleasure, feeling of guilt, disturbed sleep or appetite, feeling of tiredness and poor concentration. The most vulnerable time for depression in women is considered to be during pregnancy which ranges from 4%-20%.

Objectives: Objectives of this study was to analyze the descriptive epidemiology of antenatal depression and to assess the risk factor of antenatal depression among women.

Methods: A hospital based cross sectional survey was conducted in Lady Aitchison Hospital. Data was collected by using convenience sampling technique. The survey was conducted during the month of December 2016 to March 2017. Information regarding risk factors of prenatal depression in local language or using structured questionnaire and categorized for depression as following by using Edinburgh Postnatal Depression Scale (EPDS). Data was analyzed by using SPSS version 20 and applied chi square test to find out association between risk factors and depression.

Results: Data was collected from 300 pregnant women. Moderate antenatal depression found among 245 (81.6%) housewives, depression found among pregnant woman who lived with joint family were 243(81.0%), and mostly depression found among 3rd trimester of pregnancy. The unplanned vs. planned nature of the pregnancy were significantly associated with antenatal anxiety and depression.

Conclusion: All the women included in the study were found to have depression of varying degree by use of EPDS score. The risk factors identified like age, education of woman and husband, Family type, number of persons living in home, number of daughters, trimester of pregnancy, mode of delivery, fear from childbirth, Family Support found to be associated with antenatal depression.

Keywords: Antenatal, Perinatal, Prenatal, Postnatal depression, EPDS score

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INTRODUCTION

According to WHO mental health issues are one of the major public health problems in both developed and under-developed countries. Depression is a common and typical disorder, described by sadness, loss of interest or pleasure, feelings of guilt, disturbed sleep or appetite, feeling of tiredness and poor concentration. The likelihood of depression in women is double than that in men. The highest risk period in women is during their reproductive age. Mental health issues have been ranked higher than other medical and obstetrical issues faced by the females. Pregnancy is depicted as a glad time. However, it has been reported during childbearing years, women are at higher risk for depression than at any other time in their lives. It has been reported that women are at high risk of depression during pregnancy. The depression during pregnancy can be classified as antenatal or prenatal or perinatal depression while the one which is experienced following childbirth is known as the postnatal or postpartum depression. During pregnancy depression is a matter of public health importance due to 3 prime major reasons. I) During the antenatal period rate of depression is high. (ii) Which is the strongest indicator of postnatal depression, and in turn postnatal depression was the strongest predictor for parenting stress. (iii) It prompts to unfavorable and adverse maternal and fetal outcomes.[1]

Assessment of depression during pregnancy is crucial for identifying pregnant women in need of intervention in order to safeguard the well-being of mother and baby. The American College of Obstetricians and Gynecologists recommends that women during pregnancy be screened for depression. The 1990 Global Burden of Disease study ranked depression as the fourth leading cause of disease burden throughout the world after lower respiratory infections, diarrheal diseases, and conditions arising during the perinatal period. In the 2000 study, Global Burden of Disease the 3rd leading cause of disease burden behind lower respiratory infections and diarrheal diseases were depressive disorders. According to the 2010 Global Burden of Disease study, depressive disorders now rank 2nd in terms of global disability burden. The 2010 GBD study confirms that depressive disorders are a "leading direct cause of the global disease burden and show that MDD also contributes to the burden allocated to suicide and ischemic heart disease. A study conducted in a teaching hospital of Lahore, Pakistan, which has reported 34.5% woman face anxiety during their antenatal period and 25% were suffering from depression during pregnancy. Almost similar results were have been reported from a tertiary care hospital in Karachi, Pakistan. Increased risks of depression were found in rural women than the woman living in a urban city and male counterparts living in rural areas. Among South Asian rural women antenatal depression was found to be 16-33%. Lack of support from husband family and family pressure for a male child and violence by the husband, were reported to be significantly associated factors for antenatal depression.2

METHODOLOGY

Study design

A cross sectional study survey was conducted on outdoor patients seeking medical advice from the hospital.

Study area

The study area for this study was Lahore. A study was carried out in a tertiary care teaching Hospital named as "Lady Aitchison Hospital, Lahore" affiliated with King Edward Medical University.

Study duration

The survey was conducted during the month of December 2016 to March 2017.

Study population

The study population included the entire pregnant woman residing either within the city or its adjacent subareas.

Target population

Pregnant woman who visited the department of Obstetrics and Gynecology for routine Perinatal care of Lady Aitchison Hospital, Lahore.

Sample size

The convenience sampling technique was adopted and 300 pregnant women were interviewed.

Inclusion criteria

Pregnant women visited to the Obstetrics and Gynecology department for routine prenatal or perinatal care. Being a public sector health facility most of the patients belongs to middle; lower middle and poor class were included in this study.

Exclusion criteria

The pregnant women with any physical disabilities such as deafness and dumbness with a history of ongoing mental illness / retardation were excluded from the study.

Similarly the Pregnant woman who refused / not willing to participate were also excluded.

Approval of ethical committee

Permission to conduct study was taken from IRB of concerned University. Prior to the study approval

was sought from the competent authority of the hospital. Informed consent was taken from all study participants in written form. All ethical rights and safety of patients was taken care of.

Data collection

The data were collected in a predefined questionnaire by face to face interview in a local language. The data were collected from pregnant woman who came for a routine prenatal checkup. Information regarding risk factors of prenatal depression was collected by face to face interview in local language or using a structured questionnaire.

Assessment of depression

The collected data were categorized for depression as follows by using Edinburgh Postnatal Depression Scale (EPDS). The following severity ranges were established for the EPDS: none or minimal depression (0-6), mild depression (7-13), moderate depression (14-18), and severe depression (19-30).

Statistical design

Data was analyzed through SPSS 20.0 with 95% confidence interval. Descriptive epidemiology of participants as well as analysis of risk factors was calculated by using Chi-Square test. Frequency distribution and graphs was made.

RESULTS

Demographical characteristics of participants had involved in this study which also used as risk factors to find out association. The p value less than 0.05 showed association between depression and risk factors.

	Variable	Mild depression on EPDS (7-13)	Moderate depression EPDS (14-18)	Severe depression EPDS (19-30)	No of Individuals	P value
Age	<20 Years	22(43%)	26(50.9%)	3(5.8%)	51(17.0%)	0.007
	20-Years	62 (33%)	100(53.4%)	25(13.4%)	187(62.3)	
	>35 Years	34(54.8%)	27(43.5%)	01(1.61%)	62(20.7)	
Education	Illiterate	20(35.1%)	33(57.8%)	4(7.01%)	57(19%)	0.002
	Below Matric	44(44.0%)	47(47.0%)	9(9.0%)	100(33.3%)	
	Matric	38(41.8%)	50(54.9%)	3(3.3%)	91(30.3%)	
Working status	Employee	1(20%)	2(40%)	5 (1.66%)	1(20%)	0.162
	Private Job	23(46%)	5(10%)	50(16.6%)	23(46%)	
	Housewife	129(52.7%)	22(8.9%)	245(81.6%)	129(52.7%)	

Table 1. Demographical characteristics of the participants

In the study 300 pregnant women were included. Association found among various risk factors which showed below in table.

	Variable	Mild depression EPDS (7-13)	Moderate depression EPDS (14-18)	Severe depression EPDS (19-30)	No of individuals	P value
Family type	Nuclear family	14(24.6%)	36(63.2%)	7(12.3%)	57(19.0%)	0.04
	Joint family	104(42.8%)	117(48.1%)	22(9.1%)	243(81.0%)	
No of family members	Two	4(40%)	6 (60%)	0 (0.0%)	10 (3.3%)	0.029
	03-May	16 (25.4%)	36 (57.1%)	11(17.5%)	63 (21.0%)	
	06-Oct	58 (47.9%)	52(43.0%)	11(9.1%)	121(40.3%)	
	>10	40 (37.7%)	59 (55.7%)	7 (6.6%)	106 (35.3%)	
No of sons	NO	39 (45.3%)	38 (44.2%)	9 (10.5%)	86 (28.7%)	0.065
	One	62 (43.1%)	70 (48.6%)	12 (8.3%)	144(48.0%)	
	Two	16 (25.4%)	41 (65.1%)	6 (9.5%)	63 (21.0%)	
	>Two	1(14.3%)	4 (57.1%)	2 (28.6%)	7 (2.3%)	
No of daughters	No	28 (32.6%)	37 (43.0%)	21 (24.4%)	86 (28.7%)	0
	One	54 (54.4%)	84 (57.5%)	8 (5.5%)	146 (48.7%)	
	Two	5 (45.5%)	26 (45.6%)	0	57 (19.0%)	
	>Two	5 (45.5%)	6 (54.5%)	0	11 (3.7%)	
Medical history	Diabetes	15(55.6%)	11(40.7%)	1(3.7%)	27 (9.0%)	0.208
	Hypertension	37 (39.8%)	49 (52.7%)	7 (7.5%)	93 (31.0%)	
	Cardiovascular disease	8 (53.3%)	7 (46.7%)	0 (0.0%)	15 (5.0%)	
	Hepatitis	5 (41.7%)	7 (58.3%)	0 (0.0%)	12 (4.0%)	
	None of above	53 (34.6%)	79 (51.6%)	21(13.7%)	153 (51.0%)	

Table 2. Categories of depression and association among various risk factors

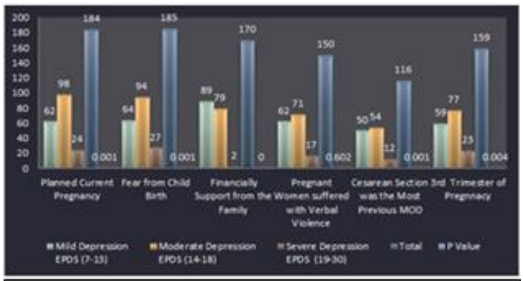

Figure 1. Categories of depression and association among various risk factors.

DISCUSSION

Age is strongly associated with the antenatal depression. There is a great risk of having antenatal depression in younger adult age as compared to older one. In this study 187 (62.3) were belonging to a group of 20-35 years of age. The results of this study are also related to the study, which conducted in the United States (US) by Rich-Edwards et al in 2006 for the purpose of determining Sociodemographic predictors of antenatal and postpartum depressive symptoms.[3] Young maternal age was associated with greater risk of antenatal and postpartum depressive symptoms. In our study association is found between depression and the ages of the pregnant woman as (P value=0.007) as like to a cross-sectional study was conducted in pregnant women attending antenatal clinics of The Aga Khan University Hospital in Karachi, Pakistan by Ali et al where the age of the study participant or responders (P value=0.049) showed an association between depression and the age of the pregnant woman. Lack of education was identified as a risk factor of antenatal depression in the study. In our study out of 300 cases 33.3% pregnant women were below matric. The p value was 0.002; therefore it's concluded that there was statistically significant association between depression and education of the women. The result of this study is not matched with the research study conducted by entitled Social environment and depression among pregnant women in rural areas of Sind, Pakistan in which total of 375 women 54 (62.8) were Illiterate, 10 (11.6) had primary education, 8 (10.3) had secondary education and 13 (15.1) were graduated. The p value 0.83 which was greater than 0.05 so this study showed education was insignificant. Lack of education of woman as a risk factor was also well known in other study entitled Antenatal depression: prevalence and risk factors in a hospital based Turkish sample. Illiteracy has been strongly associated with low self-esteem, feeling of worthlessness, and shame. The government should introduce literacy education to these illiterate or poorly educated pregnant women to improve or develop self-efficacy which has been demonstrated to lessen depression symptoms.[4]

The odd of depression was 2.57 times higher among housewives as compared to government employees. This is consistent/similar to a study conducted among Swedish mothers. Similarly, a systematic review conducted that protective effect of having a permanent job for antenatal depression among low and lower middle-income countries. This might support the mothers to have a good friend and to discuss information concerning issues with her pregnancy. Similarly, one study in Jamaica showed that being a housewife associated with the experience of antenatal depression and employment found to be a protective factor for depression. The results of our study showed that numbers of daughters were associated with depression. On the other way no of sons showed a protective factor. Parents consider their sons as bread-earners and agent/source of continuation of the family name, and view their daughters as an economic burden. This is mainly due to the tradition of providing a large dowry when daughters get married, especially in India and Pakistan. The dowry may be in the different form of land, money, jewelry or household items. Even after birth, preferences of sons are given over daughters with respect to access to health care and educational opportunities. In this context, the relationship between higher rates of depression and anxiety among pregnant women with more daughters makes perfect sense. In considering societal pressures, pregnant women who have already given birth to one or more daughters are not only concerned about their future offspring's gender, but are also related to harassment, taunting and stigmatization by their family and their relatives. Antenatal anxiety and depression in pregnant women because of a previous cesarean delivery or episiotomy may be due to concerns about her own health, fear regarding the well-being of her developing child and fears regarding another invasive procedure requiring stressful measures such as anesthesia and a relatively large incision.[5] This is in accordance with a study. In this study majority of the respondents had planned pregnancy and only 38.67% responder had not planned pregnancy. Unplanned pregnancy may have negative effects on the psychology during prenatal periods, and the woman may need more support. For this reason, women who report unplanned pregnancies during prenatal care must be educated of their increased risk; the provision of modern family planning education can prevent unplanned pregnancies and improve the level of psychological health of pregnant women. The unplanned vs. planned nature of the pregnancy were also significantly associated with antenatal anxiety and depression.

CONCLUSION

All the women included in the study were found to have depression of varying degree by use of EPDS score. The risk factors identified like age, education of woman and husband, occupation of husband, Husband's income, Family type, number of persons living at home, a number of children's, number of daughters, trimester of pregnancy, mode of delivery, pregnancy status, fear of childbirth, Bitter experience/complication in current/previous pregnancy and family support found to be associated with antenatal depression. This could be minimized by counseling.

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