DEPRESSIVE SYMPTOMS IN PREGNANCY ONLY FREQUENCY AND ASSOCIATION AMONG WIVES OF DEPLOYED MILITARY SOLDIERS

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ABSTRACT

Objective: To determine the frequency and association of depressive symptoms during pregnancy among wives of deployed Military soldiers.

Study Design: Cross-sectional study.

Place and Duration of Study: Combined Military Hospital Kharian from Oct 2013 to Dec 2013.

Material and Methods: The sample population comprised of pregnant ladies who were wives of deployed military soldiers reporting for ante natal checkup at Combined Military Hospital Kharian. Beck Depression Inventory (BDI) was used to record the presence and severity of depressive symptoms. Age, gestation, parity, planned or unplanned pregnancy, education, level of family income, tobacco smoking, Family history of depression, Infertility treatments, previous pregnancy loss or complications, partner support and history of abuse or trauma were associated with depressive symptoms.

Results: Out of 188, 41.5% had no depressive symptoms, 25.5% had mild, 20.2% had moderate and 12.8% had severe depressive symptoms. Advancing age, family history of psychiatric Illness, partner abuse, low family income and education, lack of partner support, smoking, increasing parity and gestation age are all significantly related to presence of depressive symptoms.

Conclusion: This study showed a high frequency of depressive symptoms among wives of military soldiers during pregnancy. Special attention should be paid in elderly, multiparous and less educated ladies. Partner should avoid abuse and provide good support especially as the pregnancy advances.

Declaration of interest: No conflict of interest for any author.

Keywords: Depressive symptoms, Pregnancy, Prevalence.

INTRODUCTION

Depression is now recognized as a major public health problem. A growing body of research suggests a greater prevalence of depression among women than men in the United States[1]

Pregnancy is supposed to be one of the happiest times of a woman's life, but for many women this is a time of confusion, fear, sadness, stress, and even depression. It is one of the most frequently encountered medical complications during pregnancy and postpartum[2]. A study done in hungry revealed that 17.9% of pregnant women showed signs of depression, 1.0% of whom had severe depression. Depression and anxiety proved to be significantly more prevalent among unskilled workers, those with low incomes and unemployed women. Depression turned out to be significantly more prevalent among women under the age of 18, and those living in common-law relationships[3]. Sample of Brazilian population showed that Prevalence of ante natal anxiety and depression were high in women attending a private care setting. They were associated with similar socio-demographic and socio-economic risk factors, suggesting some common environmental stressors may be involved[4].

Another study showed that substantial number of pregnant women screened in obstetrics settings have significant symptoms of depression, and most of them are not being monitored while under treatment during this vulnerable time and this depressive symptomatology has been associated with adverse maternal and infant outcomes[5].

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A study done in peri-urban areas of South Africa showed that depressed mood in pregnancy was reported by 39% of mothers. The strongest predictors of depressed mood were lack of partner support, intimate partner violence, having a low household income, and younger age[6]. A population based study in rural Bangladesh showed that Prevalence of Ante natal depression was 18%. Women's literacy, poor partner relationship, forced sex, physical violence by spouse, and previous depression were found to be associated with Ante natal depression[7].

A study done in rural Sindh in Pakistan showed that Prevalence of depression among rural pregnant women is high (62%).Social conditions as compared to social relations are more important determinants for depression among rural pregnant women[8].

A woman who is depressed often does not have the strength or desire to adequately care for herself or her developing baby. Depression in pregnancy is associated with spontaneous pre-term births[9], low birth weight[10], and slower fetal growth[11].

In Military usually soldiers are deployed on border area duties and come home for few days after months so women had to bear all the family and social problems alone. So even during pregnancy a lady had to visit doctor and bear all the stress alone. A study published in 2008 concluded that deployment of a spouse during pregnancy may be a risk factor for depression[12].

Considering the possible adverse effects of depression in pregnant women, there is a need for information on the prevalence of antenatal depression and the factors associated with it especially among the wives of military personnel who lack support of their partner most of the time during pregnancy. This study was aimed at estimating the frequency of depression associated characteristics in wives of military personnel during pregnancy.

MATERIAL AND METHODS

This Cross-sectional study was conducted in Combined Military Hospital Kharian for duration of three month from 1st October 2013 to 31st December 2013.

Pregnant ladies of all ages from any socio economic background who were wives of deployed soldiers came for antenatal checkup and gave written consent, were included the study. Non consenting ladies or ladies with past or current history of any psychiatric illness, current psychoactive substance use and those who were unable to understand/ complete the required questionnaires were excluded from the study. Different cultures use various methods for screening questionnaires for depression or assessment of mental disorder.

Beck Depression Inventory (BDI) was used to assess the depressive symptoms among the subjects. The BDI-II (Beck, Steer, & Brown, 1996) is a standardized self-report measure that consists of 21 items assessing the presence and severity of affective, cognitive, motivational, vegetative, and psychomotor aspects of depression. All 21-items are rated on a 4-point scale (0 to 3).

The sample was drawn from pregnant ladies who were wives of deployed soldiers reporting for ante natal checkup at Combined Military Hospital Kharian. Permission and ethical approval was taken from the ethical committee of hospital. Subjects were interviewed before the antenatal check up in a separate room with complete reassurance of confidentiality. The subjects were provided with a detailed description of the study and were inducted into the study after written informed consent. The socio demographic data of the full sample of subjects participating in the research was entered in a structured Performa; keeping in mind the wish of some subjects for anonymity only initials of their names were kept as record. The confounding variables were taken care of by detailed history taking about any current or previous psychiatric illness and any current or previous evidence of illicit substance/drug use. Those subjects with confounding variables were excluded from the study. Beck's Depression Inventory (BDI) was applied to all subjects to assess the severity of depressive symptoms among them. The BDI scores were interpreted as follows:

Normal: (0-9), Mild depression: (10-18), Moderate Depression: (19-29), Severe Depression: (30-63)

Groups were identified under the categories of No depressive symptoms group, mild depressive symptoms group, moderate depressive symptoms group and severe depressive symptoms group based on the BDI score. Variables in this study included age, gestation, parity, planned or unplanned pregnancy, education, level of family income, tobacco smoking, Family history of depression, Infertility treatments, Previous pregnancy loss or complications, partner support and history of abuse or trauma . Between-group variances in categorical correlates were determined using chi-square.

All statistical analysis was performed using Statistics Package for Social Sciences version 20.0. Descriptive statistics were used to describe the characteristics of participants and the distribution of BDI score. Chi-square test was used and differences between groups were considered significant if *p*-values were less than 0.05.

RESULTS

For study population, 188 ladies included. Out of these, 20 (10.6%) were below the age of 20 years, 114 (60.6%) were between ages of 20 and 30 and 54 (28.7%) were above 30 years of age. Seventy eight (41.4%) had no depressive symptoms, 48 (25.5%) had mild, 38 (20.2%) had moderate and 24 (12.7%) had severe depressive symptoms. As shown in table-1 advancing age, family history of psychiatric Illness, partner abuse, low family income, less education, lack of partner support, smoking, increasing parity and gestation age are all significantly related to depressive symptoms (*p*-value <0.05) among the study participants. While planning of pregnancy, previous complication and infertility treatment were not found significant (*p*-value >0.05) in our study.

DISCUSSION

Pregnancy is generally considered a period of emotional well-being for the woman and her family. However, for many women, pregnancy and motherhood are times of increased vulnerability to psychiatric conditions. This is the first study to investigate the wives of deployed soldiers; therefore, it can bring an important contribution to the understanding of the depressive phenomenon during pregnancy among wives of deployed military soldiers.

Around participants 58.5% showed depressive symptoms, out of which 12.8% had severe depressive symptoms which is a very high number as compared to other studies done in pregnant women in general population (39% and 20.4%) in developed countries[5,13]. Studies done in similar setups in non-military wives showed less prevalence of ante partum depressive symptoms (18% and 48.4%)[7,14] which clearly identifies that being wife of a deployed soldier is a risk factor for depressive symptoms during pregnancy. Similar relation was proved in a study published in 2008 that the percentage of positive screening for women whose partners were deployed during the period of their pregnancy was 25.27% compared with 10.94% for an OR of 2.75 (p<0.001). Linear regression showed partner's deployment during pregnancy to be an independent predictor of depressive symptoms (p< 0.005)[12].

The strong predictors of depressed mood in pregnancy were advancing age, positive family history of psychiatric Illness, partner abuse, family income less than 12000, education less than matriculation, lack of partner support, smoking, increasing parity and gestation age.

The lower prevalence of depression among younger women was similar to the rate found in an American and Brazilian study[15,13] and differs from earlier evidence correlating youth and depression[16]. Educated ladies were found to be less depressed in our study similar to other studies done on ante natal depression[6]. In respect to the characteristics of pregnancy, women who had had a previous pregnancy loss or complication, who did not plan the pregnancy, who had infertility treatment, and a positive family history of psychiatric disorder had a greater probability of presenting a depressive episode in the antenatal period. Our results showed that previous loss or complications, infertility treatment and unplanned pregnancy have no impact on

women mental health but family history of psychiatric disorders was significantly associated with antenatal depression in our sample population. Pregnancy after Infertility treatment may be associated with a new hope for patient and a decrease in ongoing anxiety and depressive symptoms if any due to infertility.

Smoking, low socio economic status and history of physical abuse had a strong relation with depression in our study similar to many other similar studies[5,7].

Increased gestational age and parity in our study were associated with more depressive symptoms unlike findings of a similar study[5]. Another study showed increased parity as

Table: Characteristics of the study group and their Beck Depression Inventory scores.

Socio demographic factors Total	No depressive symptoms (0-9) N 78	% 41.5%	Mild Depressive symptoms (10-18) N 48	% 25.5%	Moderate Depressive symptoms (19-29) N 38	% 20.2%	Severe Depressive Symptoms (30-63) N 24	% 12.8%	*p*-value
Age									
<20	2	2.5%	8	16.7%	10	26.4%	0	0	
20-30	60	76.9%	28	58.3%	14	36.8%	12	50%	<0.001
>30	16	20.5%	12	25.0%	14	36.8%	12	50%	
Education									
<10	20	25.6%	24	50%	28	73.4%	18	63.2%	
10 or more	58	74.4%	24	50%	10	26.6%	16	36.8%	<0.001
Gestation									
1st trimester	22	28.2%	6	12.5%	12	31.6%	8	33.4%	
2nd trimester	16	20.5%	22	45.8%	16	42.1%	2	8.3%	0.002
3rd trimester	40	51.3%	20	41.7%	10	26.3%	14	58.3%	
Parity									
1	20	25.6%	14	29.2%	18	47.4%	6	25.0%	
2-4	50	64.1%	26	54.2%	12	31.6%	10	41.6%	0.015
>4	8	10.3%	8	16.6%	8	21.0%	8	33.4%	
Family income									
<Rs.12000	16	20.5%	28	58.3%	14	36.8%	10	41.7%	<0.001
Rs.12000 or more	62	79.5%	20	41.7%	24	63.2%	14	58.3%	
Tobacco smoking									
Smoker	0	0%	0	0%	4	10.5%	2	8.3%	0.005
Non smoker	78	100%	48	100%	34	89.5%	22	92.7%	
Planning									
Planned	46	59%	34	70.8%	30	78.9%	14	58.4%	0.1218
Unplanned	32	41%	14	29.2%	8	21.1%	10	41.6%	
Partner support									
Inadequate	20	25.6%	6	12.5%	10	26.3%	14	58.4%	
Adequate	58	74.4%	42	87.5%	28	73.7%	10	41.6%	0.001
Previous loss or complication									0.449
No	61	78.2%	34	70.8%	31	81.6%	16	66.7%	
Yes	17	21.8%	14	29.2%	7	18.4%	8	33.3%	
Family history of Psychiatric disorder									
Yes	0	0%	0	0%	6	15.8%	18	75%	<0.001
No	78	100%	48	100%	32	84.2%	6	25%	
History of physical abuse									
Yes	0	100%	0	0%	0	0%	20	83.4%	<0.001
No	78	100%	48	100%	38	100%	4	16.6%	
Infertility treatment									
No	66	84.6%	40	83.4%	32	84.2%	20	83.4	
Yes	12	15.4%	8	16.6%	6	15.8%	4	16.6%	0.997

significant in causing depressive symptoms but not the gestational age[13]. Increased parity means increase in family size which might be a big stressor in developing countries like ours[14-16].

Partner support being the most significant predictor of ante natal depression is the focus of our study as military wives unlike civil wives are deprived of this support during most of the times as their husbands are deployed on border areas. *p*-value of 0.001 shows that significant relation was found between presence and severity of depressive symptoms and adequacy of partner support. Similar results are shown even in studies done in civil populations[6, 8,17,18]. The absence of a spouse or domestic partner has been described as a risk factor for depression before[19-21] and is probably related to the lack of emotional and social support that can be provided by the presence of a companion. To the best of our knowledge, this is the first study in Pakistan to examine the prevalence and correlates of depressed mood in pregnancy among wives of deployed military soldiers. However, several important limitations should be noted. This study lacked clinical validation of the BDI, and is therefore subject to error that arises from false positives and negatives inherent when using screening tools. The cross sectional design of this study does not allow us to ascertain causality, and longitudinal prospective research is needed in Pakistan to fully understand the nature of social factors in antenatal depression among wives of military soldiers, and the impact of antenatal depression on maternal and child health. Future research might examine state of peace at place of deployment, communication of husband from place of deployment, threatening life events, and extreme societal stressors, which were not investigated in the current study, but might influence maternal depression . Finally research examining the relationship between antenatal depression and child health in Pakistan is needed.

Given the high prevalence of antenatal depressive symptoms, early intervention may have important child health implications. Antenatal depression heightens the risk of postpartum depression[22,23], and both antenatal and postnatal depression impact on child outcomes[24,25].

CONCLUSION

Ours is a country where army is busy on smany fronts and most of our soldiers remain deployed for most of the time of their service so findings of this paper highlight the importance of addressing mental health in antenatal care among wives of these deployed soldiers. Special attention should be paid to elderly, multiparous and less educated ladies. Partner should avoid abuse and provide good support especially as the pregnancy advances.

CONFLICT OF INTEREST

The authors of this study reported no conflict of interest.

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