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# PSYCHOSOCIAL FACTORS CAUSING DEPRESSION DURING ANTENATAL PERIOD AND THEIR ASSOCIATION WITH PROGRESSION OF PREGNANCY

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**Abstract:**
***Objective:*** *To determine causes and risk factors leading to depression and mood swings among pregnant females visiting antenatal clinics of teaching hospitals in Lahore, Pakistan.* ***Methodology:*** *907 pregnant females were included in study, from antenatal clinics of teaching hospitals in Lahore, Pakistan during January to December 2016. Study follows descriptive, cross-sectional design. Demographic profile was recorded on a questionnaire. The measurement tool for depression was Beck Depression Inventory (BDI). Data analysis was done using descriptive statistics, linear regression and Chi- square test.* ***Results:*** *The women with mean age 26.4±4.4 were included in study. 80.5% females had depression during antenatal period. Depression score was calculated in each trimester and it was 67.9%, 83.5% and 85.8% respectively. There was significant increase in depression as pregnancy progresses (P value 0.001).The regression analysis showed the risk factors, patient's education (OR 4.67, 95% confidence interval, 1.97 to 11.07), husband's education ( OR 4.67, 95% CI, 1.9 to 11.07), husband's employment( OR 4.67, 95% CI, 1.9 to 11.07), , family size( OR 4.67, 95% CI, 1.9 to 11.07), , History of miscarriages( OR 4.67, 95% CI, 1.9 to 11.07), , number of pregnancies ( OR 4.67, 95% CI, 1.9 to 11.07).* ***Conclusion****: Depression is quite common among females during antenatal period, which increases as pregnancy progresses. The risk factors responsible for it are husband and wife's education, family size, number of pregnancies, history of abortions, monthly income and family financial status. Screening and diagnosis of depression and provision of special care to patient improves the healthy progression of pregnancy.*

***Key Words:*** *depression, pregnancy, females, causes.*

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## INTRODUCTION:

Depression among pregnant females has lead to several negative outcomes on mother and child health. The estimation of prevalence of this problem and the factors causing it are understudy around the globe. Scientist are paying attention towards measuring the extent of this problem in different countries and to figure out the ways to overcome the factors responsible for it in order to improve maternal and child health[1,3].

By keeping in view several studies done on this topic in past it has been observed that most common risk factors associated with this problem are alcoholism, poor social support, less public awareness, male dominance, domestic violence, history of miscarriages, family size, poverty etc [2].

Verbeek T, et al. in his study mentioned that 41% females suffer anxiety during pregnancy while depression rate is 57%, which is quite alarming[2]. In a rsearch study conducted on British Pakistani women, the depression amongst pregnant females was 16.8%[3].

In our culture, depression among pregnant females is far less than in Europe, due to our cultural norms and family support, mothers can share their stress with family members. It has been noticed that single mothers suffer this issue more commonly than those who live with family and in Asian culture [3]. However, both European and Asian societies have different risk factors leading to this cause. As Pakistan is a developing country, it's major problem is unemployment, Malnutrition, poor monthly family income, Desire to get a male child people avoid using family planning measures leading to inadequate spacing between pregnancies, domestic violence, male dominance, large family sizes, maternal education and awareness about maternal and child health is poor, inadequate provision of healthcare facilities etc. [4] Therefore, need was felt to figure out and estimate the prevalence of depression among pregnant females in Pakistan.

## MATERIALS AND METHODS:

907 pregnant females who visited antenatal clinics of teaching hospital of Lahore were studied by following descriptive, cross sectional study design. The study duration was from January to December 2016. Patients without any prior history of depression or psychic disorder before pregnancy, not taking any antipsychotic or anti-depressants, pregnancy is not high risk, without history of any loved one's death in last year, non-addict to alcohol or any drug. The proforma designed for collection of information was divided into two parts. First part had demographic information about patients, second part had information about possible risk factors for depression that is, educational status, family income, number of children, number of pregnancy, abortion history. Another questionnaire was Beck Depression Inventory (BDI). According to this inventory different scores are allotted to patients and depression status is judged in comparison to each score.

**Table 1: Beck Depression Inventory scoring.**

| Score | Depression |
|---|---|
| 0 to 15 | Absent |
| 16 to 30 | Mild |
| 31 to 45 | Moderate |
| 12 to 63 | Severe |

SPSS 18 was used for data analysis. Linear regression and chi-square tests were applied to predict associated factors for depression.

## RESULTS:

Mean age group of understudy population was 27.7±4.8 years, age range was 17 to 45 years. Average marital age was 21.1±4.08 years. 76% population was in urban areas. Mostly women had passed high school examination 42.7% and were house wives (90%). 80.5% husbands were employed, and were earning well. 39% had high school education. 50.4% population already had kids while 47.7% suffered abortion during first trimester. 86% females got pregnant without taking any medicines. 59.9% had normal child birth. 46.1% females had mild depression, 27.2% moderate, 7.2% had severe depression, 19.5% had no depression. The association of degree of depression with the trimester was calculated, it was found out that depression increases as pregnancy progresses. The linear regression results with independent variables clearly depicted that these are the risk factors for depression among pregnant females.

**Table: 2 Comparison of depression in all trimesters.**

| Trimesters | N=907 | | | | P value |
|---|---|---|---|---|---|
| | Yes | | No | | 0000 is p value Df 2 $X^2$ 33.8 |
| | N | Percentage | N | Percentage | |
| First | 171 | 67.9 | 81 | 32.1 | |
| Second | 193 | 83.5 | 38 | 16.5 | |
| Third | 351 | 85.8 | 58 | 14.2 | |
| Total | 730 | 80.5 | 177 | 19.5 | |

**Table: 3 Risk factors of depression.**

| | N in percentages | B | SE | P | OR | CI=95% |
|---|---|---|---|---|---|---|
| **Educational level** | | | | | 2.12 | 2.22-3.63 |
| uneducated | 0.9% (8) | .75 | .28 | .007 | | |
| primary | 20.9% (190) | | | | | |
| Secondary | 42.7% (387) | | | | | |
| Graduated | 35.5% (322) | | | | | |
| **Husband's education** | | .04 | .02 | .01 | 1.24 | .3 to 1.34 |
| Uneducated | 1.4% (13) | | | | | |
| Primary | 33.7% (306) | | | | | |
| Secondary | 38.9% (353) | | | | | |
| Graduated | 25.9% (235) | | | | | |
| **Husband's job status** | | .73 | 13.9 | 0.00 | 15.9 | 3.6 to 65.8 |
| Earning | 80.6% (731) | | | | | |
| Not earning | 19.4% (176) | | | | | |
| **Family size** | | 1.34 | 0.60 | .02 | .7 | .7 to 1.2 |
| 0 | 51.9% (470) | | | | | |
| 1 to 3 | 45.5% (414) | | | | | |
| More than 3 | 2.5% (23) | | | | | |
| **pregnancy** | | 1.25 | .48 | .006 | 2.81 | 1.3 to 5.7 |
| First | 48.5% (440) | | | | | |
| Second | 37.2 % (337) | | | | | |
| Third | 14.3 % (130) | | | | | |
| **Abortion history** | | 16.1 | .24 | .000 | 3.9 | 2.2 to 7.0 |
| Present | 22.55 (204) | | | | | |
| Absent | 77.5% (703) | | | | | |

## DISCUSSION:

Fan F, et al conducted a survey study on Chinese population and effect on maternal stress on child heart rate and blood pressure was studied. It was noticed that fetal stress is associated with maternal stress and such offspring are more prone to suffer long term cardiovascular problems [6]. Prevalence of depression among pregnant females was studied on Brazil population and it was 14%, according to a survey study conducted in 2009 by Pereira PK, et al [10] Similar studies have been conducted by many authors world wide [8,9].

In our culture, depression among pregnant females is far less than in Europe, due to our cultural norms and family support, mothers can share their stress with family members. It has been noticed that single mothers suffer this issue more commonly than those who live with family and in Asian culture. However, both European and Asian societies have different risk factors leading to this cause [5,7]. As Pakistan is a developing country, it's major problem is unemployment, Malnutrition, poor monthly family income, Desire to get a male child people avoid using family planning measures leading to inadequate spacing between pregnancies, domestic violence,

male dominance, large family sizes, maternal education and awareness about maternal and child health is poor, inadequate provision of healthcare facilities etc. therefore, need was felt to figure out and estimate the prevalence of depression among pregnant females in Pakistan.

## CONCLUSION:

Depression is quite common among females during antenatal period, which increases as pregnancy progresses. The risk factors responsible for it are husband and wife's education, family size, number of pregnancies, history of abortions, monthly income and family financial status. Screening and diagnosis of depression and provision of special care to patient improves the healthy progression of pregnancy.

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