

PREVALENCE OF DEPRESSION IN PREGNANCY AND ITS ASSOCIATION WITH FEAR OF CHILD BIRTH - A CROSS SECTIONAL STUDY

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ORIGINAL ARTICLE

ABSTRACT:

Background: Depression is a prevalent mental health concern among pregnant women, and its association with fear of childbirth has gained increasing attention in recent years. Fear of childbirth, also known as tokophobia, is a common concern among pregnant women and can significantly impact their mental health. Women with high levels of fear of childbirth may experience increased stress, anxiety, and depressive symptoms throughout their pregnancy journey. **Objective:** The primary objective of this research is to estimate the overall prevalence of depression among pregnant women and assess its association with fear of childbirth. Secondary objectives include identifying potential moderators that may influence this association, such as socio-demographic factors, cultural influences, and healthcare disparities.

Methodology: This cross-sectional study was conducted on pregnant women coming to Gynecology Department, CMH Lahore for their routine checkup. Depression and associated perception that is fear of child birth is established during pregnancy including all the three trimesters.

Sample size was calculated $n = 208$ using the Cochran formula with a prevalence of 50%, margin of error 5%, confidence level of 95%, as well as inclusion and exclusion criteria were taken into account. A Google form self-report online questionnaire was used to characterize the participants and Beck's depression Inventory scale used for data collection. **Results:** Among 208 participants, there was predominance of women with average age of 28.95. All were married and living with partners. Among the participants, 26% rarely experienced loss of interest in activities and 32.7% sometimes experienced loss of interest in activities. 38.9% never feel discouraged about the future and 32.2% sometimes feel discouraged. P value came out to be 0.475 with confidence interval of 0.682-2.25 which was not significant. **Conclusion:** In conclusion, as study shows that depression and mental illness is prevalent in pregnant women, although pregnancy is supposed to be a period of proper physical and mental health. We as health care providers should make efforts for proper counselling of patients regarding mental health and timely refer to psychologist if needed, can help patients and allow them to have healthy prenatal and postnatal period as well.

Introduction

Depression and anxiety during pregnancy are significant mental health concerns that can have implications for both maternal and infant well-being. Extensive research has explored the association between maternal psychological

distress and various obstetric, fetal, and neonatal outcomes, highlighting the need for a comprehensive understanding of these relationships.^{1, 2} Additionally, the impact of mental health issues on childbirth satisfaction and postnatal mental health has gained attention in recent years.³

Understanding the potential consequences of antenatal depression and anxiety is crucial for identifying at-risk individuals and implementing effective interventions. Studies have suggested that maternal depression and anxiety during pregnancy may increase the risk of adverse obstetric outcomes, including preterm delivery, low birth weight, and fetal death.⁴ According to research conducted at Aga Khan University Hospital, Depression that was prevalent among rural pregnant women of Pakistan is as high as 62%. Another study done at Karmaliani et al conducted in Hyderabad shows 18% of pregnant women were depressed. Furthermore, the effects of maternal psychological distress extend beyond the prenatal period, with implications for postpartum mental health and child development.⁵ A longitudinal analysis has indicated a link between maternal depression and child cognitive development.⁵ Various factors, such as advanced maternal age, have been explored in relation to risk perception and psychological well-being during pregnancy.⁶ However, there is still a need for a systematic review to identify the women most vulnerable to antenatal anxiety and depression.⁷ In addition to exploring the adverse outcomes associated with maternal psychological distress, research has also examined the prevalence and patterns of depression and treatment utilization among pregnant & postpartum women.^{8,9} Understanding these patterns is essential for developing targeted interventions and improving access to mental health services. To address these research gaps and contribute to the existing literature, the current study aims to examine the prevalence of anxiety and depression during pregnancy, the impact on obstetric and neonatal outcomes, as well as the factors influencing treatment-seeking behaviors, this research seeks to provide valuable insights into the complex interplay between maternal mental health and pregnancy outcomes.

Materials and Methods

Study design: Cross-sectional study

Department: Gynecology Department, CMH Lahore for their routine checkup.

Sample size: Sample size was calculated $n = 208$ using the Cochran formula with a prevalence of 50%, margin of error 5%, confidence level of 95%, as well as inclusion and exclusion criteria were taken into account. The inclusion criteria consisted of pregnant females who visited CMH Lahore irrespective of age.

Sample selection criteria

Inclusion criteria

- Pregnant woman aged 20-40 years
- Any parity
- Females visiting for antenatal checkup

Exclusion criteria

- Those Pregnant females who had current diagnosis of depression and other mental disorders or those who were using antidepressants and other psychotropics were excluded.

Data collection procedure

A Google form self-report online questionnaire was used to characterize the participants and Beck's depression Inventory scale used for data collection. Before study, we informed the patient about the study and consent was taken. The form addressed variables time since pregnancy, depression in pregnancy includes: difficulty in concentrating on things since pregnancy, recurrent nightmares during pregnancy, suicidal thoughts after pregnancy, and perception of fear of child birth includes fear about labor pain, thoughts of harming the baby, fear that child will be injured during labor, fear that labor will be extremely painful. The form was subjected to pilot test in which Cron's alpha test was applied to check the reliability which came out to be 0.82 (82%). Beck's depression inventory scale was used to score depression. The answers were scored ranging from 1-10 considered normal, 11-20 considered having mild depression, 21-30 considered having moderate depression, 31-40

considered having severe depression, and over 40 considered extreme depression.

Analysis Plan

For statistical analysis, we used the software Statistical Package For Social Sciences (SPSS). Chi-square test and T test were performed to access the relationship of various variables with depression and fear of child birth.

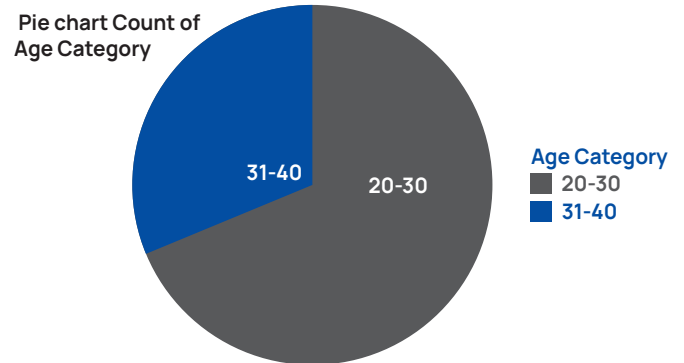
RESULTS

Among 208 participants, there was predominance of women with average age of 28.95. All were married and living with partners. Among the participants, 26% rarely experienced loss of interest in activities and 32.7% sometimes experienced loss of interest in activities. 38.9% never feel discouraged about the future and 32.2% sometimes feel discouraged. 21.6% women never had difficulty in concentrating on things while 35.1% sometimes had difficulty in concentrating on things. 18.8% women never took extra efforts to do something while 38.5% women sometimes took extra efforts to get started or doing something new work. 19.2% women never felt worried about their health while 36.1% sometimes felt worried about their health. 30.8% women sometimes felt worried that labor pain will be too intense while 32.7% women always felt worried about their labor pain. 35.1% women sometimes felt worried about complications during labor while 24.5% always felt worried about complications during labor. 31.7% never got worried about that their body will never be the same while 33.7% sometimes worried. 38.5% women never concerned about their unattractive appearance while 14.9% always concerned. 52.4% women never experienced recurrent nightmares during pregnancy while 20.7% sometimes had recurrent nightmares. 75.5% women never had suicidal thoughts while 3.4% always had suicidal thoughts during pregnancy. 50% women never had a fear that

their child will be injured during labor while 26% sometimes had a fear that their child will be injured during labor. 46% never thought labor to be extremely painful while 56% always thought labor to be extremely painful. 39.4% women never thought that they will be extremely deserted during labor while 30.3% sometimes thought that they will be deserted during labor.

Table # 1: Chi-square test to find statistically significant association between depression in pregnancy and different age groups

Age (Year)	Normal	Mild	p-Value	Odds	C-I
21-30	84	56	0.475	1.243	0.682-2.25
31-40	35	29	0.475	1.243	0.682-2.25



Fig# 1: Pie chart showing frequency of age of pregnant females

Table # 2 : Frequency of contributing factors related to depression

	Never	Rarely	Sometimes	Always
I have thoughts of harming baby	149	19	29	11
I have thoughts that I will not be able to take care of baby	123	50	25	10
I have a fear that my child will be injured during pregnancy	104	32	54	18
I have a decrease in appetite	79	52	45	31
I am now more irritated by the things than I ever was	44	36	64	63
I have fear about labor pain	44	28	65	71
I think I will panic when the time comes	60	59	60	29
I think I will totally lose control of myself when the time of labor comes	80	55	53	20

DISCUSSION

This study aimed to find the prevalence of depression among pregnant females. Among targeted population of 208 pregnant women, 32.7 % of females sometimes felt loss of interest in daily activities, 32.2% sometimes felt discouraged about their future. 21.6 % population had decreased appetite while 35.1% had mind fog leading to difficulty in concentration on simple tasks. Irritability increased during pregnancy in 30.8% women. As pregnancy cause different physiological changes in body, 38.5% women felt it difficult to get done with usual routine work. Increase in health concerns was primarily seen in primigravida, females having previous complications in pregnancy, previous abortions and complications in conception which make 36.1% while 24.5% felt worried about labor complications. First time mothers were usually scared of labor pain more than usual, 32.7% women felt this fear in our research population. 33.7% of females had concerns about their physical appearance as their body changed during pregnancy and it would require time and efforts to bring it back to normal. Nightmares showed that person was worried about particular matter more than usual, 20.7% of patients had recurrent nightmares. Suicidal thoughts occurred in rarely extreme cases, commonly in persons having other psychological issues as well, in 3.4% population only. Our research showed that females were more prone to have depressive episodes during their pregnancy which affect their daily life and inter personal relationships with family and friends. This study showed strong association between depression and physiological and hormonal changes during pregnancy. Previous studies on this topic also showed prevalence of depression among pregnant females. A study of South Africa showed that women who had higher number of births and children had more depression.¹⁰ These associations may be due to negative experiences

during previous pregnancies and births. A study was conducted in Vietnam to establish the prevalence of perinatal mental disorders and their determinants among pregnant women noted that parity was not significantly associated with the development of mental disorders, including depression.¹¹ Studies showed that women with anxiety or depression are more likely to fear childbirth than those without mental illness. A study conducted in South Africa¹² showed that the previous history of depression was a significant risk factor for the development of depression during pregnancy. In this study, 35.7% of pregnant women who had at least one mental disorder prior to pregnancy had depression during pregnancy, suggesting that pregnant women who have experienced a mental disorder before pregnancy are at high risk of relapse in prenatal care. One of the reasons that can explain this fact is the interruption of psychiatric treatment by pregnant women in early pregnancy fearing possible teratogenic risk to the fetus.¹³

LIMITATION:

Limitation of our study is that it does not address different factors including life style and relationship with spouse and family, economic status, occupation and delay in life goals of female due to pregnancy which can also cause depression. Domestic violence is humiliating experience for any person, especially during pregnancy when women have to think about future of their child too. This can be the serious cause of depression. Another limitation of this study is the cross-sectional design that does not allow a proper establishment of the cause-effect relationship of the surveyed data nor the temporal relationship of events¹⁴

CONCLUSION

In conclusion, as study shows that depression and mental illness is prevalent in pregnant

women, although pregnancy is supposed to be a period of proper physical and mental health. We as health care providers should make efforts for proper counselling of patients regarding mental health, providing proper guidance and timely refer to psychologist if needed, can help patients and allow them to have healthy prenatal and postnatal period as well. This would be part of the promotion of maternal and child health, and may reflect favorably on maternal outcomes and better conditions of newborn.

AUTHORS CONTRIBUTION

FZ: abstract, results, discussion, data collection, **WN:** data collection, questionnaire reliability, results, **US:** Methodology, data collection, **ZA:** abstract, introduction, data collection, **MA:** discussion, data collection, **SZ:** data collection, **KZ:** data collection

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