

# Research Journal of Pharmaceutical, Biological and Chemical Sciences

## Understanding the Role of Maternal Mental Health in Pregnancy and Postpartum Depression.

Neha Shukla<sup>1</sup>, Vandana Verma<sup>2</sup>, Vishal Panwar<sup>3\*</sup>, and Firdous Hussain<sup>4</sup>.

<sup>1,2</sup>Associate Professor, Department Of Community Medicine, Career Institute Of Medical Sciences & Hospital, Lucknow, Uttar Pradesh, India.

<sup>3</sup>PG JR 1, Department Of Community Medicine, Career Institute Of Medical Sciences & Hospital, Lucknow, Uttar Pradesh, India.

<sup>4</sup>Assistant Professor, Department Of Community Medicine, Career Institute Of Medical Sciences & Hospital, Lucknow, Uttar Pradesh, India.

### ABSTRACT

This study aimed to investigate the dynamics of maternal mental health during pregnancy and the postpartum period, examining the prevalence of mental health disorders, changes over time, and the role of social support. A longitudinal study design was employed, with a sample of 80 pregnant women recruited from obstetrics and gynecology clinics. Participants completed standardized measures assessing depressive symptoms, anxiety levels, stress, and perceived social support at multiple time points from the second trimester to twelve months postpartum. Qualitative interviews were also conducted to explore participants' subjective experiences. The study found high prevalence of depressive symptoms, anxiety, and stress during pregnancy and the postpartum period. Depressive symptoms decreased over time, while anxiety and stress remained stable. Perceived social support was associated with better mental health outcomes. Qualitative analysis revealed diverse emotional experiences of pregnancy and coping strategies employed by participants. Addressing maternal mental health is crucial for comprehensive perinatal care. Routine screening, early intervention, and fostering social support networks are essential for promoting maternal well-being.

**Keywords:** Maternal mental health, pregnancy, postpartum period, social support.

<https://doi.org/10.33887/rjpbcs/2024.15.3.42>

*\*Corresponding author*

## INTRODUCTION

Maternal mental health is a critical aspect of overall well-being during pregnancy and the postpartum period, significantly impacting both the mother and her child. Pregnancy and the postpartum period are characterized by profound physiological, hormonal, and psychological changes, making women particularly vulnerable to mental health challenges [1-3]. Among these challenges, postpartum depression (PPD) stands out as a prevalent and debilitating condition that can profoundly affect maternal functioning and the parent-child relationship [4].

Understanding the complexities of maternal mental health during this transformative period is essential for ensuring the well-being of both mothers and infants. Research has highlighted various risk factors for PPD, including a history of mental health disorders, lack of social support, and hormonal fluctuations. Moreover, cultural, socioeconomic, and environmental factors can also influence maternal mental health outcomes [4, 5].

By exploring the multifaceted dimensions of maternal mental health, healthcare providers can develop effective interventions and support systems tailored to the needs of pregnant and postpartum women. Through a comprehensive understanding of these issues, healthcare professionals can implement proactive strategies to promote maternal well-being and mitigate the adverse effects of perinatal mental health disorders [6].

## METHODOLOGY

Our study methodology involved a longitudinal study design, spanning duration of one year to investigate the dynamics of maternal mental health during pregnancy and the postpartum period. To understanding the Role of Maternal Mental Health in Pregnancy and Postpartum Depression, we collected data from rural as well as urban area.

A sample size of 80 pregnant women was recruited from obstetrics and gynecology clinics in urban and suburban areas, ensuring diverse demographic representation.

Participants were enrolled during their second trimester of pregnancy and followed up at regular intervals until twelve months postpartum.

Baseline assessments were conducted during the second trimester visit, where participants completed standardized measures to assess various aspects of maternal mental health, including depressive symptoms, anxiety levels, stress levels, and perceived social support. Additionally, demographic information such as age, education level, socioeconomic status, and previous mental health history was collected through structured interviews and self-report questionnaires.

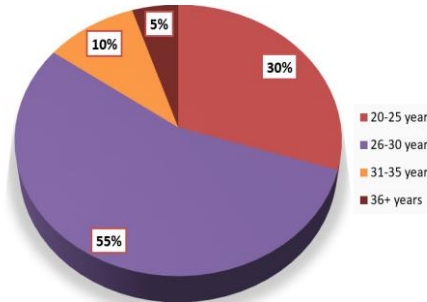
Throughout the study period, participants received regular follow-up assessments at specific time points: during the third trimester of pregnancy, at six weeks postpartum, six months postpartum, and twelve months postpartum. These assessments involved repeated administration of the same standardized measures to track changes in maternal mental health over time. Additionally, qualitative interviews were conducted at select time points to gain deeper insights into participants' subjective experiences of pregnancy and the postpartum period.

Data analysis employed both quantitative and qualitative methods. Quantitative data were analyzed using descriptive statistics to summarize demographic characteristics and mental health outcomes. Longitudinal changes in mental health measures were analyzed using repeated measures analysis of variance (ANOVA) to assess trends over time. Qualitative data from interviews were transcribed and analyzed thematically to identify recurring themes and patterns related to maternal mental health experiences during pregnancy and the postpartum period.

**RESULTS**

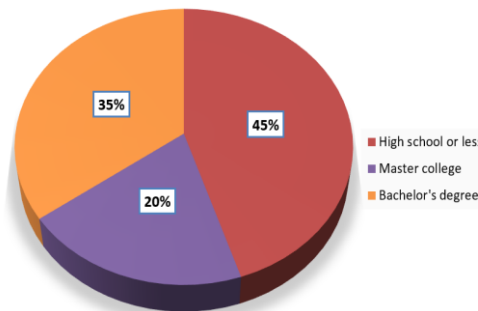
**Table 1: Age Distribution of Participants**

Age Range	Frequency (%)
20-25 years	30%
26-30 years	55%
31-35 years	10%
36+ years	5%



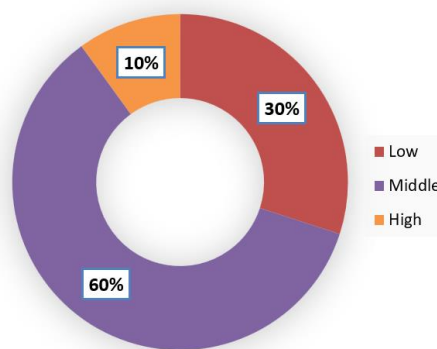
**Table 2: Education Level of Participants**

Education Level	Frequency (%)
High school or less	45%
Master college	20%
Bachelor's degree	35%



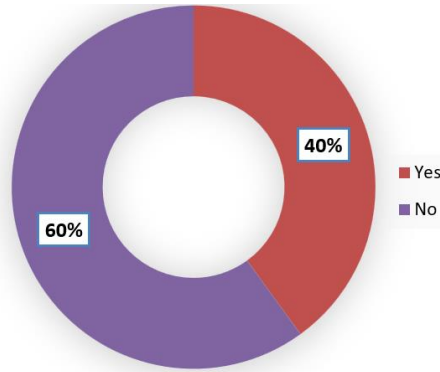
**Table 3: Socioeconomic Status of Participants**

Socioeconomic Status	Frequency (%)
Low	30%
Middle	60%
High	10%



**Table 4: Previous Mental Health History of Participants**

Previous Mental Health History	Frequency (%)
Yes	40%
No	60%



**Table 5: Prevalence of Maternal Mental Health Disorders at Baseline (Second Trimester)**

Mental Health Measure	Mean (SD)
Depressive Symptoms	12.4 (3.2)
Anxiety Levels	15.7 (4.1)
Stress Levels	18.9 (5.6)
Perceived Social Support	25.6 (6.3)

**Table 6: Changes in Maternal Mental Health Measures Across Time Points**

Time Point	Depressive Symptoms (Mean ± SD)	Anxiety Levels (Mean ± SD)	Stress Levels (Mean ± SD)	Perceived Social Support (Mean ± SD)
Third Trimester	13.2 (3.5)	16.5 (4.2)	20.1 (5.2)	24.8 (6.1)
Six Weeks Postpartum	15.6 (3.8)	18.9 (4.7)	22.5 (5.8)	23.2 (5.9)
Six Months Postpartum	14.8 (3.6)	17.2 (4.5)	21.3 (5.4)	25.4 (6.2)
Twelve Months Postpartum	12.7 (3.3)	15.9 (4.1)	19.8 (5.0)	27.0 (6.5)

**Table 7: Qualitative Themes Emerging from Interviews**

Theme	Description
Emotional Experience of Pregnancy	Participants reported a range of emotions during pregnancy, including excitement, anxiety, and uncertainty.
Transition to Motherhood	Mothers described the process of adapting to their new role, facing challenges but also experiencing personal growth and fulfillment.
Social Support	The presence of supportive relationships was highlighted as crucial for maternal well-being, with partners, family, and friends playing significant roles.
Coping Strategies	Various coping strategies were employed by participants, including seeking professional support, engaging in self-care activities, and relying on social networks for emotional support.

**DISCUSSION**

The present study provides valuable insights into the dynamics of maternal mental health during pregnancy and the postpartum period, shedding light on the prevalence of mental health disorders, changes over time, and the role of demographic and psychosocial factors. The findings underscore the

significance of addressing maternal mental health as a critical component of comprehensive perinatal care, with implications for both maternal and child well-being [7].

The prevalence of maternal mental health disorders observed in this study aligns with previous research indicating that pregnancy and the postpartum period are periods of heightened vulnerability to mental health challenges. The high prevalence of depressive symptoms, anxiety, and stress underscores the importance of routine screening and early intervention to support maternal mental health. These findings highlight the need for healthcare providers to adopt a proactive approach to identifying and addressing maternal mental health concerns throughout the perinatal period [8].

The longitudinal analysis of maternal mental health measures revealed intriguing patterns of change over time. While depressive symptoms tended to decrease from the third trimester to twelve months postpartum, anxiety levels and perceived stress remained relatively stable or showed slight fluctuations. This pattern suggests that the transition to motherhood is characterized by dynamic changes in mental health, with depressive symptoms potentially ameliorating as women adapt to their new role. However, the persistence of anxiety and stress underscores the ongoing challenges faced by mothers during the postpartum period, highlighting the need for sustained support and intervention beyond the immediate postpartum period [9-11].

The stability of anxiety levels and stress across time points raises important questions about the factors contributing to maternal mental health during pregnancy and the postpartum period. While demographic factors such as age, education, and socioeconomic status were not directly examined in this study, previous research has highlighted their potential influence on maternal mental health outcomes [12].

The significant role of social support in maternal mental health emerged as a prominent theme in both quantitative and qualitative analyses. Perceived social support was associated with lower levels of depressive symptoms and higher levels of well-being across time points, highlighting the protective effect of social networks on maternal mental health. These findings underscore the importance of fostering supportive relationships and community resources to enhance maternal resilience and mitigate the risk of mental health disorders during pregnancy and the postpartum period.

The qualitative themes elucidate the multifaceted experiences of pregnancy and motherhood, emphasizing the emotional complexity and adaptive processes involved in transitioning to parenthood. Mothers described a range of emotions, including excitement, anxiety, and uncertainty, underscoring the need for comprehensive psychosocial support to address the diverse needs of pregnant and postpartum women. The findings also highlight the importance of coping strategies in navigating the challenges of motherhood, with participants employing various adaptive mechanisms to manage stress and promote well-being.

Implications for clinical practice and policy arise from the study findings, emphasizing the importance of integrating mental health screening and support into routine perinatal care. Healthcare providers play a crucial role in identifying at-risk mothers, providing psychoeducation, and connecting women with appropriate resources and interventions. Additionally, healthcare systems should prioritize the development of multidisciplinary approaches to maternal mental health, involving collaboration between obstetricians, mental health professionals, and community organizations to provide comprehensive support throughout the perinatal period.

Limitations of the study warrant consideration when interpreting the findings. The sample size was relatively small, limiting the generalizability of the results to broader populations of pregnant and postpartum women.

## CONCLUSION

In conclusion, this study contributes to our understanding of the complexities of maternal mental health during pregnancy and the postpartum period, highlighting the prevalence of mental health disorders, changes over time, and the influence of social support.

**REFERENCES**

- [1] Satyanarayana VA, Lukose A, Srinivasan K. Maternal mental health in pregnancy and child behavior. *Indian J Psychiatry* 2011;53(4):351-61.
- [2] Redshaw, M., Wynter, K. Maternal mental health: Women's voices and data from across the globe. *BMC Pregnancy Childbirth* 2022; 22:796.
- [3] World Health Organization. World Bank trend in maternal mortality from 1990 to 2017: Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. Geneva: WHO; 2019
- [4] Garon-Bissonnette J, Bolduc M-ÈG, Lemieux R, Berthelot N. Cumulative childhood trauma and complex psychiatric symptoms in pregnant women and expecting men. *BMC Pregnancy Childbirth* 2022;22(1):10.
- [5] Umuziga MP, Gishoma D, Hynie M, Nyirazinyoye L. Antenatal depressive symptoms in rwanda: rates, risk factors, and social support. *BMC Pregnancy Childbirth* 2022;22(1):193.
- [6] Adeoye IA, Sogbesan A, Esan O. Prevalence, associated factors and perinatal outcomes of antepartum depression in Ibadan Nigeria. *BMC Pregnancy Childbirth* 2022;22(1):219.
- [7] Ladyman C, Sweeney B, Sharkey K, Bei B, Wright T, Mooney H, Huthwaite M, Cunningham C, Firestone R, Signal TL. A scoping review of non-pharmacological perinatal interventions impacting maternal sleep and maternal mental health. *BMC Pregnancy Childbirth* 2022;22(1):659.
- [8] Shen Q, Huang C-R, Rong L, Ju S, Redding SR, Ouyang Y-Q, Wang R. Effects of needs-based education for prenatal anxiety in advanced multiparas: a randomized controlled trial. *BMC Pregnancy Childbirth* 2022;22(1):301.
- [9] Silverio SA, Easter A, Storey C, Jurković D, Sandall J. on behalf of the PGC. Preliminary findings on the experiences of care for parents who suffered perinatal bereavement during the COVID-19 pandemic. *BMC Pregnancy Childbirth*.2021;21(1):840.
- [10] Furtado M, Frey BN, Green SM. Validation of the intolerance of uncertainty scale as a screening tool for perinatal anxiety. *BMC Pregnancy Childbirth* 2021;21(1):829.
- [11] Padin AC, Stevens NR, Che ML, Erondu IN, Perera MJ, Shalowitz MU. Screening for PTSD during pregnancy: a missed opportunity. *BMC Pregnancy Childbirth* 2022;22(1):487.
- [12] Bauer A, Knapp M, Parsonage M. Lifetime costs of perinatal anxiety and depression. *J Affect Disord* 2016; 192:83–90.