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**IMPACT OF STRESS, ANXIETY AND DEPRESSION IN PREGNANCY ON  
UPCOMING GENERATIONS: A PSYCHOLOGICAL PERSPECTIVE**

**Taj Uddin Hashmi<sup>1</sup>, Dr. Naseem Ahmad<sup>2</sup>**

**Department of Psychology**

**<sup>1,2</sup>Shri Venkateshwara University, Gajraula (Uttar Pradesh)**

**ABSTRACT**

The present circumstance of Stress is a psychological term that represents tension, anxiety, depression and sometimes aggression. This is a phenomenon that is not good for anyone, but when it comes to a pregnant lady, stress is a very harmful mental condition which adversely affects the mother as well as the child. It has been stated in many studies that the women who are rated with high level of distress during pregnancy are more likely to experience adverse reproductive outcomes. In the thesis, we will study in detail about stress, anxiety during the pregnancy term and what ill-effects it can result in the reproductive outcome. Depression interferes with parenting. Depression in mothers of young children is significantly associated with more hostile, negative, and disengaged (withdrawn) parenting. Maternal depression is significantly associated with less positive parenting (warmth). The investigation began with the figuring of basic expressive insights and frequencies of socio measurement, lifestyle, and other significant factors that were relied upon to get a starter understanding of the examination masses. These factors included age, conjugal status, instruction, ethnicity, pay, history of psychological maladjustment, treatment for manner issue, and duty in physical development. Hazard factors, for instance, smoking, alcohol, and medicine use were additionally dissected.

**1. INTRODUCTION**

Anxiety, depression, and stress in pregnancy are chance variables for adverse outcomes for mothers and children. Anxiety in pregnancy is associated with shorter incubation and has adverse ramifications for fetal neurodevelopment and child outcomes. Anxiety about a specific pregnancy is particularly intense. Interminable strain, introduction to bigotry, and burdensome symptoms in mothers amid pregnancy are associated with lower birth weight infants with ramifications for newborn child development. These recognizable hazard factors and related pathways to unmistakable birth outcomes justify further examination. For over ten years, psychiatry and related orders have been worried about women encountering symptoms of anxiety and depression amid pregnancy and in the months following a birth. Flow Opinion in Psychiatry alone distributed significant surveys in 1998, 2000, 2004, 2007, 2008, 2009, and 2011, more often than not tend to the clinical administration of postpartum depression or the impacts of stimulant use on mothers and their babies.



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Then, parallel writing has developed quickly in other wellbeing disciplines, particularly conduct drug, wellbeing brain research, and social the study of disease transmission, concerning stress in pregnancy and the suggestions for mothers, infants, and development over the existing course. The motivation behind this article is to quickly survey consequences of the most recent research on impacts of negative full of feeling states (alluding all through to anxiety and depression) and stress exposures in pregnancy, essentially concerning consequences for birth outcomes. We coordinate consideration particularly to ongoing research on pregnancy anxiety, a more up to date idea that is among the most strong maternal hazard factors for adverse maternal and child outcomes[1]. By featuring these developments, we would like to energize amalgamation and new bearings in research and to encourage proof based practices in screening and clinical conventions.

## **2. REVIEW OF LITERATURE**

**Astrid C RF, Claude De et al. (2013)** Pregnancy is a standout amongst the essential occasions in women's lives. Being charming, it is a standout amongst the most stressful occasions in a lady's life, as clinicians have referred to, pregnancy as a passionate emergency. On the off chance that this emergency isn't appropriately overseen and controlled, it will transform into a delayed emergency and will leave innumerable unwanted results on mother and her child. The predominance of anxiety issue during pregnancy, in created and creating nations are 10% and 25%, separately.

**Bayrampour H, Salmon C et al. (2015)** High dimensions of anxiety, during pregnancy, have an adverse impact on mother and infant. Anxiety, in early pregnancy, results in loss of embryo and the second and the third trimester prompted a diminishing in birth weight and expanded movement of the Hypothalamus – Hypothesis– Adrenal hub. It causes a change in steroid genesis, annihilation of social conduct and fruitfulness rate in adulthood. Likewise, anxiety during pregnancy is joined by passionate issues, hyperactivity issue, decentralization and unsettling influence in the subjective development of children. An examination recommended that the dimension of the pulse changeability in the posterity of on edge mothers be not exactly the control gathering. Such children indicate more dread in managing ordinary occasions in their life. Mother's anxiety, during pregnancy, is likewise associated with poor maternal-child cooperation. Along these lines, it's accounted for that anxiety, and negative inclination of the mother has been expressed as one of the systems of this issue.

**Glover V. Springer (2015)** The abnormal state of maternal anxiety has a critical connection with mental scattered, passionate issues, the absence of focus and hyperactivity and weakened

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subjective development of children. Along these lines, it's referred that expanded stress hormones like Corticotrophin especially Cortisol and androgens which instigate anxiety could prompt subjective changes, changes in dialect development, capacity to order the substance and discourse in young ladies. The increment of these hormones has a huge connection with carefully in preschool young men as well. The aftereffects of these examinations demonstrate that extraordinary anxiety in pregnancy will go with the proliferation of excessive neuroblasts and furthermore schizophrenia and dyslexia.

**Martini J, Petzoldt J. et al. (2015)** Anxiety is one of the across the board health issues, particularly during pregnancy. Thinking about its high frequency and genuine complexities, no recognizable proof and screening happen in pre-birth care during pregnancy. As per the outcomes, serious anxiety significantly affects natural pointers of a newborn, for example, tallness, weight, and head boundary. Along these lines it's accounted for that perpetual or extraordinary maternal anxiety may likewise cause changes in the bloodstream to the child, making it hard to convey oxygen and other critical supplements to the infant's creating organs. Likewise, incessantly or seriously on edge mothers may feel overpowered and exhausted which may affect their eating routine and rest propensities and consistency of pre-birth care. These elements may help clarify how maternal anxiety during pregnancy can have long-haul consequences for the unborn child.

**Grote NK, Bridge JA et al. (2010)** Research has recognized that among women who encounter mental difficulties during pregnancy there is a pattern towards imperfect birth outcomes, including mortality and dreariness, shorter growth, and lower birth weight. As indicated by the World Health Organization, 2009, preterm birth (PTB) is the main source of newborn child mortality and, horribleness. Infants born preterm (>37 long stretches of finished growth) are at more danger of different health and developmental issues, and present an impressive passionate and monetary expense to families, and also huge ramifications for open part benefits. Notwithstanding many years of investigation, the occurrence of preterm birth has not declined, and its etiology stays unexplored.

### **3. METHODOLOGY**

There were 649 (100%) participants who finished the questionnaire at Time One (second trimester), 604 (93.1%) participants finished at Time Two (third trimester), and 596 (91.8 %) women finished at Time Three (early baby blues). Time One was finished at 17.37 ( $\pm$  4.95) mean gestational weeks, Time Two was finished at 30.63 ( $\pm$  2.67) mean gestational weeks, and Time Three was finished at 4.17 ( $\pm$  2.12) mean baby blues weeks. Five hundred and eighty-one



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(89.5%) participants finished every one of the three questionnaires. The age scope of the participants inside the examination was 15-44 years and the mean age was  $28.99 \leq 4.83$ .

#### **4. RESULTS & DISCUSSION**

**Study Question 1: Does the association between pregnancy complications and neonatal outcomes and major depression differ when the depression occurs episodically, compared to when it occurs continuously throughout pregnancy?**

The results that did not achieve hugeness are recorded in Appendix B with their individual p-qualities and odds ratios. Next, the models for the results recorded over that were essentially connected with major antenatal depression are exhibited.

Table 1 underneath demonstrates the consequences of the logistic regression model for the result gestational diabetes. The numerous logistic regression model for gestational diabetes included major depression in the second trimester, smoking in the second trimester, and summative enthusiastic help in the second trimester. Bolster was a summative variable that extended from 0-5. This was summed from the quantity of wellsprings of help a participant got amid their second and third trimester. The wellsprings of help incorporated their accomplice, mother, companion, female relatives, and other. In this specific model, just depression in the second trimester was incorporated in light of the fact that women are screened for gestational diabetes in the second trimester and hence, for most participants, depression in the third trimester would not affect gestational diabetes.

Major depression in the second trimester had an odds ratio of 3.518, demonstrating that women who experienced depression in the second trimester were 3.5 times bound to experience the ill effects of gestational diabetes contrasted with participants who did not encounter depression. Also, participants who smoked in the second trimester were three times bound to have gestational diabetes. At last, summative help and gestational diabetes had a negative relationship; as the enthusiastic help a participant got expanded, fundamentally diminished the probability of the participant encountering gestational diabetes essentially diminished. Connections were investigated with the variables in this model; be that as it may, none were observed to be critical.

**Table 1: Final Model from Multivariate Logistic Regression for Gestational Diabetes (n = 587)**

Variable	± (S.E.)	p-value	Odds Ratio	95% Confidence Interval
Depression				
2 <sup>nd</sup> Trimester <sup>a</sup>	1.258 (0.173)	0.002	3.518	1.560-7.936
Smoking				
2 <sup>nd</sup> Trimester <sup>b</sup>	1.104 (0.453)	0.015	3.017	1.241-7.332
Summative Support				
2 <sup>nd</sup> Trimester	-0.370 (0.173)	0.032	0.691	0.492-0.969

<sup>a</sup>Reference category is No Depression

<sup>b</sup>Reference category is Never Smoked or Quit Smoking

Table 2 underneath demonstrates the aftereffects of the logistic regression model for the result initiated work. In this model major depression was entered as a downright factor, where no depression was the reference class. Different classifications were depression in the second trimester just, depression in the third trimester just, and depression in the two trimesters. Participants who had major depression in the two trimesters continuously were 2.4 times bound to have actuated work contrasted with women who did not have depression in either trimester. Stress was a summative continuous variable, made up of a few potential stressors all through pregnancy, for example, financial issues and relationship issues. Stress had a positive affiliation; the more noteworthy the pressure the participants encountered, the more probable they were to have actuated work.

**Table 2: Final Model from Multivariate Logistic Regression for Induced Labour(n = 569)**

Variable	± (S.E.)	p-value	Odds Ratio	95% Confidence Interval
Depression				
2 <sup>nd</sup> Trimester <sup>a</sup>	-0.116(0.352)	0.741	0.890	0.447-1.774
3 <sup>rd</sup> Trimester <sup>a</sup>	-0.380(0.452)	0.401	0.684	0.282-1.661
Both Trimesters <sup>a</sup>	0.883(0.457)	0.053	2.417	0.988-5.916
Summative Stress				
3 <sup>rd</sup> Trimester	0.141(0.058)	0.015	1.152	1.028-1.290

<sup>a</sup>Reference category is No Depression

Table 3 underneath presents the outcomes for the swelling/edema result. In the swelling/edema model, there were five huge indicators, major depression, summative help, conjugal status, age, and exercise. Depression in the second trimester was noteworthy and had an odds ratio of 2.1,



showing that participants with depression were twice as liable to have swelling/edema amid their pregnancy. The reference classification for conjugal status was yes and its odds ratio was 0.504, so married participants were half more averse to encounter swelling/edema amid pregnancy, contrasted with participants who were not married. Summative help in the third trimester is a continuous variable that had a positive affiliation, showing that participants who had more help were bound to have swelling/edema. The age variable was dichotomous, where one classification was 15-28 years and the other was 29-44 years. In this model, age had an odds ratio of 1.43, meaning that participants in the more established class (29-were 1.43 times more probable than participants in the more youthful classification (15-28) to have swelling/edema amid pregnancy.

The last factor that was critical in the swelling/edema model was work out. The reference classification for exercise was each day and the model uncovered a portion reaction association with swelling/edema. In this circumstance, the more exercise an individual engaged in, the more uncertain they were to have swelling/edema, this affiliation expanded as the dimensions of activity expanded. The odds ratio for the classification once in a while or never was 2.90, meaning that participants who once in a while or never practiced were 2.90 times bound to have swelling or edema amid pregnancy contrasted with participants who practiced each day. This model was additionally investigated for potential associations, anyway no critical connections were found.

**Table 3: Final Model from Multivariate Logistic Regression for Swelling/Edema (n = 576)**

Variable	± (S.E.)	p-value	Odds Ratio	95% Confidence Interval
Depression				
2 <sup>nd</sup> Trimester <sup>a</sup>	0.0741(0.314)	0.018	2.099	1.134-3.885
3 <sup>rd</sup> Trimester <sup>a</sup>	0.189(0.307)	0.609	1.208	0.585-2.494
Both Trimesters <sup>a</sup>	0.600(0.463)	0.196	1.821	0.735-4.515
Summative Support				
3 <sup>rd</sup> Trimester	0.204(0.077)	0.008	1.226	1.055-1.424
Marital Status <sup>b</sup>	-0.684(0.335)	0.041	0.504	0.261-0.973
Age				
29-44 years <sup>c</sup>	0.358(0.177)	0.043	1.430	1.011-2.022
Exercise 2 <sup>nd</sup> Trimester				
2-3x a week <sup>d</sup>	0.397(0.252)	0.114	1.488	0.908-2.437
Occasionally/Never <sup>d</sup>	0.869(0.240)	0.000	2.385	1.491-3.817

<sup>a</sup>Reference category is No Depression

<sup>b</sup>Reference category is Married

<sup>c</sup>Reference category is 15-28 years

<sup>d</sup>Reference category is No Exercise



The last result related with major depression, antenatal bleeding/abruption, is sketched out in Table 4 beneath. In this model a slight portion reaction relationship can be seen between depression amid pregnancy and the result antenatal bleeding/abruption. Participants who experienced depression in the two trimesters were 2.7 times bound to encounter abruption or bleeding amid pregnancy. The other variable that achieved importance was continuous, summative support in the second trimester. The relationship with bleeding or abruption was negative, so the more support that participants had, the more uncertain they were to encounter bleeding or abruption. Support and depression were checked for potential collaborations; in any case, the test did not yield any huge outcomes.

**Table 4: Final Model from Multivariate Logistic Regression for Antenatal Bleeding/Abruption (n = 576)**

Variable	± (S.E.)	p-value	Odds Ratio	95% Confidence Interval
Depression				
2 <sup>nd</sup> Trimester <sup>a</sup>	-0.196 (0.411)	0.633	0.822	0.367-1.840
3 <sup>rd</sup> Trimester <sup>a</sup>	0.635 (0.415)	0.126	1.887	0.837-4.254
Both Trimesters <sup>a</sup>	1.003 (0.467)	0.032	2.727	1.092-6.812
Summative Support				
2 <sup>nd</sup> Trimester	-0.267 (0.099)	0.007	0.766	0.630-0.930

<sup>a</sup>Reference category is No Depression

**Study Question 2: Does the association between pregnancy complications and neonatal outcomes and mild depression differ when the mild depression is episodic compared to when it is continuous throughout pregnancy?**

Four complications/outcomes were significantly associated with mild depression:

- antenatalbleeding/abruption
- premature rupture of membranes(PROM)
- caesareanbirth
- vacuum/forceps

The results that did not achieve centrality can be found, alongside their individual p-qualities and odds ratios. The following four models clarify in detail the association between the above results and gentle depression. The main huge class of mellow depression was gentle depression in the second trimester. Participants whose scores were characteristic of gentle depression were



2.1 times bound to have antenatal bleeding or abruption contrasted with participants who did not have mellow depression in the second trimester. Participants who had encountered a past episode of depression were 1.9 times bound to have antenatal bleeding or abruption. In conclusion, the summative support variable had a negative association, demonstrating that the less support a participant had, the more probable their possibility of encountering antenatal bleeding or abruption. The variables in the model were tried for collaborations yet none were observed to be critical.

**Table 5: Final Model from Multivariate Logistic Regression for Antenatal Bleeding/Abruption (n =577)**

Variable	± (S.E.)	p- value	Odds Ratio	95% Confidence Interval
Mild Depression				
2 <sup>nd</sup> Trimester <sup>a</sup>	0.754(0.341)	0.027	2.125	1.089-4.144
3 <sup>rd</sup> Trimester <sup>a</sup>	-0.271(0.464)	0.559	0.763	0.307-1.893
Both Trimesters <sup>a</sup>	-0.499(1.078)	0.644	0.607	0.073-5.021
History of Depression <sup>b</sup>	0.663(0.227)	0.003	1.941	1.245-3.026
Summative Support				
2 <sup>nd</sup> Trimester	-0.260(0.099)	0.009	0.771	0.635-0.937

<sup>a</sup>Reference Category is No Mild Depression

<sup>b</sup>Reference Category is No History of Depression

Next, as introduced in Table 6, the untimely burst of films (PROM) model was tried with all conceivable covariates; however the main variable that stayed huge was mellow depression. In this circumstance, just mellow depression in the second trimester was huge. Participants who experienced gentle depression in the second trimester were 2.5 times bound to have PROM contrasted with participants who did not have mellow depression in the second trimester. In any case, note that the main time PROM is viewed as a major problem is the point at which it happens preceding 37 weeks gestation and in this manner results in preterm birth. In this postulation it was not recorded at what gestation PROM happened, anyway not all participants who detailed encountering PROM likewise revealed having a preterm birth, so this is imperative to think about when translating the odds ratio.



**Table 6: Final Model from Multivariate Logistic Regression for PROM (n = 570)**

Variable	± (S.E.)	p- value	Odds Ratio	95% Confidence Interval
Mild Depression				
2 <sup>nd</sup> Trimester <sup>a</sup>	0.918(0.450)	0.042	2.504	1.036-6.054
3 <sup>rd</sup> Trimester <sup>a</sup>	-1.052(1.029)	0.307	0.349	0.046-2.625
Both Trimesters <sup>a</sup>	0.606(1.077)	0.317	0.574	0.222-15.144

<sup>a</sup>Reference Category is No Mild Depression

The following model foreseeing impromptu cesarean birth had three huge variables: mellow depression in the third trimester, summative worry in the second trimester, and age. Participants with gentle depression in the third trimester were 70% less inclined to have an impromptu cesarean birth contrasted with participants who did not have plausible mellow depression in the third trimester. There was a positive association between summative pressure and impromptu cesarean birth, meaning that the more noteworthy measure of pressure a participant encountered, the more probable they were to have a spontaneous cesarean birth. Participants aged 29-44 were 1.8 times bound to have a spontaneous cesarean birth contrasted with more youthful participants (aged 15-28). This model was investigated for noteworthy cooperations, anyway none were found.

## 5. CONCLUSION

Within summarize, although extensive, strenuous analysis today shows the potential deleterious consequences of damaging affective states as well as stress during pregnancy on birth results, infant and fetal development, and family wellness, we don't however possess a clear grasp on the precise implications of these facts. Crucial problems for the following wave of investigation are as follows: disentangling the comorbid and independent consequences of various forms, pregnancy anxiety, anxiety symptoms, and depressive symptoms of pressure on infant and maternal results; much better understanding the idea of pregnancy tension and the way to target it scientifically; and further investigating influences of scientifically considerable affective disturbances on maternal and kid results, considering a mother's large socio environmental context. As the knowledge increases of ours, it is going to be important to determine diagnostic thresholds, symptoms, and the signs that warrant prenatal treatment and also to create effective, effective, along with ecologically legitimate intervention and screening methods being used commonly. If perhaps risk factors could be determined before pregnancy as well as interventions created for preconception, many think the window of opportunity is our greatest be.



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Interdisciplinary cooperation and research is essential, nonetheless, to meeting these goals and to be able to minimize the concern of maternal stress, depression, and strain in the perinatal period.

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