

## Types of Maternal Stress during Pregnancy

Michel Tang\*

Department of Ecosystem Science and Management, Pennsylvania State University, Penn State, USA

### ABSTRACT

It is clear that psychosocial, cultural, and environmental stressors experienced during gestation can be detrimental to pregnancy and maternal and foetal health, and recent studies suggest that prenatal stress can have consequences that span generations. Prenatal stress can range from severe (e.g. trauma) to moderate (e.g. life event changes) to mild (e.g. experience of daily hassles), and although some early studies showed minimal stress effects on pregnancy, the majority of human studies show that mild, moderate, and severe stress can have negative influences on pregnancy outcome and the behavioural and physiological development of offspring.

**Keywords:** Prenatal stress; Pregnancy; Physiological; Consequences

### DESCRIPTION

Several conceptualizations of "prenatal stress" are evident in the human literature, reflecting the diversity of stressors that may be experienced during gestation [1]. The concept of a psychosocial stressor encompasses changes in, for example, personal life, job status, housing, domestic violence, and family makeup that require adaptive coping behaviour on the part of the affected individual [2]. Whereas "psychosocial stress" refers to stressful things that happen whether a person is pregnant or not (daily hassles, financial or marital strain, social stress), "pregnancy specific" distress and anxiety refer to worries about things that are directly connected to the pregnancy itself, such as concerns about the outcome of prenatal screenings, fears about infant health and development, and uncertainty about the life changes that will come with motherhood [3]. Studies show that both psychosocial stress and pregnancy-specific stress can have significant impacts on pregnancy and human development [4].

### ABOUT THE STUDY

#### Motor development

Some authors have concentrated their studies in this area and concluded that higher maternal hair cortisol levels during the first and second trimesters of pregnancy may be associated with lower motor development [5,6]. This may be due to the effect of glucocorticoids on cerebellar function.

#### Behavior

During pregnancy, it is natural to feel stressed. Physical aches and pain, changes in your everyday life, can induce stress during pregnancy. Some forms of stress can lead to health concerns such as high blood pressure and early delivery. The sources of stress vary for each woman, but here are a few that are typical throughout pregnancy: People experiencing pregnant discomforts such as morning sickness, constipation, fatigue, or backache. Hormonal changes might affect mood. These mood fluctuations can make it difficult to deal with stress. The effects of positive mental health during pregnancy were investigated using the screening tools State Trait Anxiety Inventory (STAI) and Anxiety SubScale CrownCrisp Experiential Index, and it was concluded that positive mental health can improve social behavior. Acute stress can cause behavioural changes, future behavioural disorders, and anatomical and functional changes associated with the development of prepubertal anxiety. Other studies measure workplace stress levels in relation to behavioural changes. They were also evaluated by the mother and teacher of the child and showed a slight increase in the likelihood of emotional problems in boys and hyperactivity and emotional problems in girls. Each study yields different results for the most vulnerable stages of pregnancy. However, some studies confirm that it should be displayed first.

**Correspondence to:** Michel Tang, Department of Ecosystem Science and Management, Pennsylvania State University, Penn State, USA, E-mail: MichelTang@gmail.com

**Received:** 04-Feb-2022, Manuscript No MPN-22-15604; **Editor assigned:** 07-Feb-2022, Pre QC No. MPN-22-15604 (PQ); **Reviewed:** 21-Feb-2022, QC No. MPN-22-15604; **Revised:** 26-Feb-2022, Manuscript No. MPN-22-15604 (R); **Published:** 05-Mar-2022, DOI: 10.35248/2472-1182.22.7.155

**Citation:** Tang M (2022) Types of Maternal Stress during Pregnancy. *Matern Pediatr Nutr.* 7: 155.

**Copyright:** © 2022 Tang M. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

## Temperament

One study measured maternal stress during pregnancy and in vivo cortisol levels, and changes in the child's temperament were primarily associated with the mother's perceived psychological stress, but plasma cortisol levels were not, indicates that it is not related. Therefore, high levels of stress can lead to the development of difficult temperaments associated with negative humour and maladaptive difficulties. Other authors confirmed that their study did not show definitive results and therefore could not clearly establish a relationship between a mother's stress and a child's temperament. High cortisol levels affect the foetal hippocampus and can reduce neurogenesis and neuronal density, thus explaining the correlation between maternal stress and changes in memory and learning abilities. Some researchers have pointed out that changes in memory can have a significant impact on girls, while boys can show improved math and reading skills. Examining the correlation between this stress and visuospatial memory, it was concluded that this type of memory can be impaired in both boys and girls.

## CONCLUSION

We know little about the long-term effects of a prenatal mother's stress and anxiety on the foetus and children. The effects of structural teratogenicity are a major concern, but little attention is paid to the potential for behavioural teratogenicity. Animal

studies suggest that this is quite likely. We know that a developing foetus is very sensitive to the effects of certain drugs. The developing nervous system may also be affected by its hormonal environment. Unlike other mental health strategies, programmes that reduce stress and anxiety in pregnant mothers are relatively easy to implement. The research here could clearly be rewarded.

## REFERENCES

1. Rich, KM, Perry BD. Anxiety, depression and stress in pregnancy: Implications for mothers. *Curr Opin Psychiatry*. 2010; 101(4): 133-147
2. Abera Z, Degefu H, Gari G, Kidane M. New data about embryonic and fetal neurodevelopment and behavior obtained by 3D and 4D sonography. *J Perinat Med*. 2015;11(1): 1-9.
3. Balinsky CA, Delhon GU, Smoliga G, Prarat ME, French RA, Geary SJ, et al. Stress, preterm birth, and gestational age among high-risk young women. *Health Psychol*. 2008; 46(2): 438-42.
4. Irland D, Binopal Y. Stress during pregnancy affects general intellectual and language functioning in human toddlers. *Pediatr Res*. 1998; 74(1): 1-7.
5. Rakers F, Rupperecht S. Transfer of maternal psychosocial stress to the fetus. *Neurosci Biobehav*. 2016;11(2):1-8.
6. Beijers R, Buitelaar J. Mechanisms underlying the effects of prenatal psychosocial stress on child outcomes: Beyond the HPA axis. *Eur Child Adolesc Psychiatry* 2014; 23(5): 943-956.