

MANAGEMENT OF MATERNAL STRESS DURING PREGNANCY TOWARDS WELLNESS PROMOTION

Ifeme, C. C. & Maduneme, H. O.

*Dept. of Human Kinetics and Health Education. University of Port Harcourt,
constance144@yahoo.com, hapynonso@yahoo.com*

Abstract

Pregnancy is a major transition stage in a woman's life as it is accompanied not only by changes in virtually every organ in the body, but also changes in social role. Stress is a normal reaction to a major change (such as pregnancy). Stress is referred to as an individual's response to change to a threatening situation hence, maternal stress is the stress that mothers experience during pregnancy. This paper reviews stress challenges experienced during the pregnancy period, its health implication and how it can be managed. Maternal stress challenges include anxiety and depression. Addressing stress during pregnancy can prevent many complications. This paper recommends that prenatal women should be given health education and counselling on how to identify and manage stressors in their lives.

Key words: *Maternal stress, Pregnancy, Wellness promotion, Management.*

Introduction

Pregnancy is an important transitional stage in a woman's life. This transition is accompanied not only by changes in virtually every organ in the body, but also changes in social role. It is often perceived as an exciting milestone in a woman's life. However, it is a time fashioned with concern about her child, family health and wellbeing (Melender, 2002). Maternal stress also known as prenatal stress is the stress that mothers experience during her pregnancy (King, Dancause, Turcotte-Tremblay, Veru & Laplante, 2012). Hence, it is the stress that mothers experience while carrying out their daily routine tussle during pregnancy.

It is widely believed that heightened levels of stress during pregnancy increase maternal cortisol secretion to levels that become neurotoxic to the developing fetal brain, thereby resulting in less than optimal developmental outcomes during infancy and childhood (Avishai-Eliner, Brunson, Sandman & Baram, 2002). However, other mechanisms, such as maternal immune functioning, may also influence fetal development and subsequent postnatal functioning (Beijers, Buitelaar, & de-Weerth, 2014). In terms of infant temperament, mothers who experience a greater number of major life events during pregnancy, or who report higher levels of pregnancy-specific anxiety or depression, report their children as having more difficult temperaments (McGrath, Records & Rice, 2008; Huizink, de-Medina, Mulder, Visser & Buitelaar, 2002). Furthermore, high levels of maternal cortisol during pregnancy

have also been shown to be associated with poorer infant temperaments either directly (Davis, Glynn, Schetter, Hobel, Chicz-Demet & Sandman, 2007) or by its effect on birth weight (Baibazarova, van de Beek, Cohen-Kettenis, Buitelaar, Shelton & van Goozen, 2013).

Women are saddled with many responsibilities like family, professional career, financial and a broad range of other demands across life span, living in a constantly challenging environment/world. The changing attributes of her environs pose diverse degrees of challenges to her holistic wellbeing. A crucial resultant effect of these challenges is stress. Stress, according to University of Regina Counselling Services (1998), is an individual's response to change in circumstance or to a threatening situation. It is a personal reaction to an external or internal incident such as associated with pregnancy

Different types of prenatal stress have been shown to be associated with altered outcome for the child, these include maternal symptoms of anxiety and depression (O'Connor, Heron, Golding, Beveridge & Glover, 2002), daily hassles (Huizink, de Medina, Mulder, Visser & Buitelaar, 2002), pregnancy-specific anxiety (Huizink, et. al, 2002; Hompes, Izzi, Gellens, Morreels, Fieuws, Pexsters, Schops, Dom, Van Bree, Freson, Verhaeghe, Spitz, Demyttenaere, Glover, Van den Bergh, Allegaert & Claes, 2013), and a poor relationship with the partner (Bergman, Sarkar, O'Connor, Modi & Glover, 2007). Thus, stress is a common life experience resulting from various challenges posed to women by her environments and internal dispositions. Prenatal women appear to be more susceptible to stress than others because of the unique role they play in procreation. Addressing prenatal stress can prevent many complications, hence the need for this paper.

Maternal Stress during Pregnancy

According to Douglas Mental Health University Institute (2019), the types of stress that can create havoc during pregnancy are acute stress and chronic stress. Acute stress is a sudden stressful change in a mother's environment for example a heated argument with spouse which results in problem solving and resolution whereas chronic stress is a repeated and frequent exposure to threat/demands for instance repetitive ongoing marital discord without resolution. However persistent stress can lead to maternal anxiety. Chronic stress can cause many physical, emotional mental and social symptoms (James Madison university, 2018; Malachi, 2018) like chest pain, breathing difficulties, vision problems, rapid heartbeat, dizziness, fatigue, muscle aches, confusion, nightmare, memory loss, changes in sleeping pattern, irritability, loneliness, eating less, depression and anxiety. This paper limits itself to maternal anxiety and depression.

Maternal Anxiety

Maternal anxiety is a condition reflecting to fear about the health and wellbeing of one's baby, health care experiences (including one's own health and survival in pregnancy) forthcoming childbirth and its aftermath and of parenting or maternal role (Dunkel, 2010). All phases represent a particular emotional condition that is directly related to anxiety, Expectant mothers are more vulnerable to anxiety (Lee, Lam, Sze, Chong, Chui & Fong, 2007; Anderson, Sundstrom-poromaa, Bixo, Wulff, Bondestam & Astrom, 2003), hence it has been observed that occurrence of clinical level of anxiety in pregnant women are found to be high when compared to rate estimates of anxiety in non-pregnant women. Anxiety during pregnancy are concerned with a number of prenatal and perinatal complications, excessive anxiety causes the putative mechanism to engage in the excessive cortisol secretion in the mother leading to disruption of the developing hypothalamic-pituitary adrenal axis in the fetus (Weinstock, 2008).

Sociodemographic factors such as low levels of education attainment and living alone are associated with anxiety in childbearing (Anderson, Sundstrom-poromaa, Wulff, Ostrom & Bixo, 2006; Britton, 2008). Previous adverse pregnancy outcomes including a history of pregnancy loss, obstetrical complications and preterm birth are also related to symptoms of anxiety (Britton, 2008; Orr, Reiter, Blazer & James, 2007).

National and International report on anxiety indexes around 23% in Alberta maternal stress is average, Canada (Bayrampour, McDonald & Tough, 2015), 15.6% in Germany slightly moderate (Martini, Petzoldt, Einsle, Beesdo-Baum, Hofler & Wittchen, 2017), 49% in Pakistan are relatively high (Waqas, Raza, Lodhi, Muhammed, Jamal & Rehman, 2017). For some women, attending antenatal clinic and dealing with physical changes of pregnancy can be a stressful experience. Besides, they may feel they do not have enough resources to manage what they will be experiencing, resulting in depression.

Maternal Depression

Maternal depression is regarded as feelings of sadness, fatigue and loss of interest (World Health Organization, 2016). Depression is common in women living in low and middle income countries. (Bennett, Einarson & Taddio, 2004). Despite its high disease burden, maternal depression remain undertreated in many African Countries including Nigeria (Tomlinson & Lund, 2012; Tsai, Scott, Hung, Zhu, Matthew, Psaros & Tomlinson, 2013). Maternal depression is associated with adverse fetal and infant outcomes. Maternal depression during and immediately after pregnancy has obvious effects on a child physical health early in life and has been the cause of low birth weight, growth retardation and eating problem (Adewuya, Ola, Aloba, Mapayi & Okeniyi, 2008; Gold & Marcus, 2008). Also

maternal depression during pregnancy culminates in offspring physical health challenges through a number of different mechanisms which leads to negative health behaviours such as substance use and poor nutrition (Marcus, 2009), this could affect the developing fetus.

Eminently, prenatal depression predisposes mothers to higher rates of depression later in life, which can continue to impact on offspring development throughout early childhood (Raposa, Hammen, Brennan & Najman, 2014; McDermott, Mamun, Najman, Williams, O'Callaghan & Bor, 2008). Furthermore, depression has been linked to dysregulation in the hypothalamic-pituitary-adrenal (HPA) axis (Pariante & Lightman, 2008) and elevated inflammation (Maes, 2008; Haeri, Baker & Ruano, 2013), which can affect developing biological systems in the fetus. In support of this, reports have shown that mother's prenatal stress or depression leads to alterations in the development of hypothalamus-pituitary-adrenal axis and immune system in offspring (Field, Diego & Hernandez-Ruf, 2006; Mattes, McCarthy, Gong, Eekelen, Dunstan, Foster & Prescott 2009).

According to Health direct (2018), things that could cause stress in pregnancy include: waiting for the results of antenatal tests; previous negative experiences with a pregnancy, birth or motherhood such as a miscarriage or death of a baby; having a pregnancy that is unplanned; dealing with the physical changes of pregnancy; having a complicated pregnancy; experiencing difficulties in relationship, which could include family violence; experiencing financial difficulties; changes in job; grief, such as a death in the family; drug and alcohol problems.

Health Implications of Maternal Stress

According to the Office on Women's Health (2018), some of the health implications of maternal stress for example, stress can cause insomnia and also weakens immune systems. However there are other ways that stress affect pregnant women. They include:

1. *Headaches and migraines*: Long-term tension during pregnancy can lead to headache, migraine, and general body aches and pains. Tension-type headaches are especially common in pregnant women (Farooq & Williams, 2008).
2. *Gestational diabetes*: During pregnancy stress hormone such as cortisol increases the amount of sugar in the blood and high level of cortisol can cause diabetes (Diabetes.co.uk, 2019).
3. *Heart problems*: In pregnancy high stress level can raise a woman's blood pressure and heart rate. This puts a woman at risk of a serious condition called pre-eclampsia (abnormal state of pregnancy characterized by hypertension and fluid retention), premature delivery (before 37 weeks of

- pregnancy), and having a low-birth-weight infant (Office on Women's Health, 2018)
4. *Weakened immune system*: Maternal stress reduces the body lymphocyte (the white blood cells that helps to fight infection) level thereby predisposing pregnant mothers at risk of getting infection (Office on Women's Health, 2018).
 5. *Upset stomach*: Stress in pregnancy worsen stomach issues such as diarrhea or vomiting. It may lead to dehydration and life threatening for the baby, it also lead to irritable bowel syndrome (is a common functional disorder of the digestive system) symptoms such as constipation, gas and bloating are worsened. It increases the risk of miscarriage (Khashan, Quigley, McNamee, McCarthy, Shanahan & Kenny, 2012).
 6. *Obesity*: The link between stress and weight gain is stronger for pregnant women. According to Michopoulos (2016), stress increases the amount of hormone in the body called cortisol, which can lead to overeating in pregnancy and cause the body to store fat which makes a woman to deliver big babies or may not be able to deliver on her own.
 7. *Decreased sex drive*: Pregnant women with long-term stress may take longer to get aroused and may have less sex drive than women with lower levels of stress. It has been considerable examined that mothers with higher stress levels were more distracted during sex than other women.(Hamilton & Meston, 2013).

Stress Management towards Wellness Promotion

Given that stress is inevitable during pregnancy, its hostile effects can be curtailed by employing some astute management techniques. According to American Psychological Association (APA) (2018), reducing the level of stress during pregnancy can not only make a mother feel better, but will also protect her health and her baby with the following maternal stress techniques.

Fig1: Diagram below shows the techniques that can be used in managing stress during pregnancy.



Source: International Forum for Wellbeing in Pregnancy (2017).

1. *Identify your stressor:* Pregnant mothers should monitor their state of mind, thought and mood throughout the day. Outline causes of their stress, assess their priorities and then eliminate any tasks that are not absolutely essential.
2. *Build strong relationships:* Relationships can be a source of stress especially with one's spouse and avoid negative, hostile reactions with spouse that can cause immediate changes in stress-sensitive hormones (American Psychological Association, 2018).

Self-care

1. *Exercise:* Physical workout is a great tension releaser, it can be as simple as walking. Exercise can reduce anxiety, depression, and prevent common pregnancy discomforts distract mothers from their stressors. Pregnancy yoga with good breathing techniques could be valuable.
2. *Eat well (Diet):* A healthy nutritious diet is vital for physical and mental wellbeing of a mother and child. When going through a transition phase, diet is often necessary.
3. *Rest:* Taking adequate rest during pregnancy is essential, Stress keeps many pregnant mothers lying awake at night. To help ensure pregnant women get the recommended seven or eight hours of shut-eye, they need to remove their

mind from unnecessary distractions. Relaxation do not only help reduce stress, but also boost immune functioning (American Pregnancy Association, 2019).

Share feelings

1. *Get help:* Share feelings with your partner, family member, gynecologist, psychologist or other health provider who can help you learn how to manage stress effectively.

Financial planning

1. *Budget:* To alleviate financial stress pregnant mothers should source for affordable health providers for their antenatal care base on their financial strength (International Forum for Wellbeing in Pregnancy 2017).

Cognitive Behavioural Therapy

1. *Engage in positive self-talk:* encourage oneself with phrases that are positive rather than negative. Like assuring yourself that you can make it through pregnancy.
2. *Do not fight the inevitable/self-counselling:* Accept what you cannot change; and learn to live happily with it. For instance by accepting pregnancy as a natural life transition, women tend to become physically and mentally prepared to deal with it and its challenges thereby reducing the severity of its stress (International Forum for Wellbeing in Pregnancy, 2017).

Conclusion

From the foregoing it is evident that maternal stress is a natural human experience occasioned challenges. Women are faced with peculiar stress resulting from their gender or peculiar role in procreation, however stress is something that all pregnant mothers experience to a certain degree. Thus, excessive levels of stress cannot only affect the mother but also the unborn baby. The panacea is, pregnant mothers should be committed to childbirth education (antenatal class) to be knowledgeable of what to expect during parturition and when baby arrives and are to cut down on activities they do not need to do, to manage the stress in a healthy way not to cause any long-term damage.

To greatly alleviate maternal stress problem among pregnant women, the following suggestions are made:

1. Health counselors and public health nurses should give health education to educate prenatal women on health implications of stress at the primary health care.

2. Mass media such as radio, television, and newspaper should be used to create awareness about the health implications of maternal stress during pregnancy.
3. Schools and colleges of health should include in their curriculum the health implication of maternal stress during pregnancy.
4. Non-Governmental Organisations should indulge in regular campaign on awareness of maternal stress.
5. Pregnant mothers should be committed to childbirth education (antenatal class) to be knowledgeable of what to expect during parturition and when baby arrives.
6. During pregnancy mothers should cut down on activities they do not need to do.

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