Review Article

Prevalence Of Acute Depression Of Pregnancy Before And During The Covid-19 Pandemic

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Abstract:

Background: Depression is the most common psychiatric disorder during pregnancy and even after pregnancy. With the emergence of COVID-19 pandemic, the mental health status of the whole society has been thought to be threatened due to COVID-19 associated changes in daily life and even biological effects of the disease itself. In this study, we aimed at reviewing the trends of the pregnancy depression before and after the COVID-19 pandemic.

Methods: This was a narrative review study that quarried literature for pregnancy depression before COVID-19 pandemic in studies published on data before 2020 and compared those with studies during the pandemic.

Results: Research has indicated that depression spiked during the Corona epidemic and quarantine and that this was impacted by a multitude of reasons. Now, in addition to pregnancy raising the risk of depression, the COVID-19 pandemic from late 2019 has raised the risk of depression. According to research, those who had a history of mental illness before the pandemic era experienced worsening symptoms during the epidemic. The fear of sickness, the death of loved ones, and the virus's influence on the neurological system were the main concerns of individuals during this era.

Conclusion: In addition to more research on the problem, strategic plans to control and screen pregnant women should be developed. Because the signs of depression may not be visible, and COVID-19 may decrease the visits and screenings for this mental condition before and during the pregnancy.

Keywords: COVID-19, SARS-Cov-2, pandemic, pregnancy, pregnancy depression.

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Background:

In 2019, the outbreak of infectious disease, called COVID-19 by the world health organization (WHO) emerged in the whole world, so that most communities got affected by this disease. Especially during the quarantine and pandemic peak periods, society individuals' occupational, mental, and physical status and health got changed. The changes it brought about in the populations were often in the form of increased stress, depression, and other mental illnesses. People who had a history of mental illness before to the pandemic era became more severe during the pandemic period, according to studies (1). Most of the worries of people during this period were fear of disease, loss of loved ones and the effect of the virus itself on the nervous system (2).

Covid-19 and pregnancy health:

Covid 19, which is a new version of SARS-Cov, like its old version, has had a significant impact on pregnancy

period, pregnancy outcome, and the pregnant mother's mood after illness. It has been shown that the risk of developing a severe form of coronavirus is higher in people during pregnancy (3). Studies have also shown that during the Covid-19 pandemic, the level of stress and depression in pregnancy has increased, which has affected the health of the fetus, mother and pregnancy outcome, and these people may need psychological support from psychologists and relatives (4, 5).

Pregnancy depression:

One of the most common disorders that occur during and even after pregnancy is depression during pregnancy, and its simple definition is the occurrence of depression during pregnancy, which occurs under the influence of hormones and difficult pregnancy conditions. If not diagnosed in time, it will disrupt the emotional relationship between mother and child or will affect the mental and cognitive health of the child after birth (6).

Human studies show that depression during long-term pregnancy can cause depression and anxiety, low birth weight, decreased Apgar score, and reduced head circumference for long-term infants. Another disorder that may occur is Post-Partum Depression, which is a common clinical disorder that occurs in 15% of deliveries (especially in the second and third trimesters) and is referred to as it becomes one of the most common conditions that complicates pregnancy conditions. The same statistic is one in 8 pregnant women in the United States (7). Risk factors for postpartum depression include a personal or family history of depression, marital status, poor health performance of a pregnant woman, and alcohol consumption. Articles also show that women with a previous history of postpartum depression, especially those with bipolar disorder or psychosis, are at higher risk (8).

Environmental risk factors studied in this area include prenatal depression, prenatal anxiety, impaired infant-mother interactions, lack of social support, financial and / or marital stress, and adverse life events (7). However, it should be noted that other factors also play a role in the development of this disorder, such as high levels of beta-endorphins, low levels of platelet serotonin and low levels of vitamin D (8) and Omega 3 (9) in depression. Are involved after childbirth (10).

There are different hypotheses about the pathophysiology of possible postpartum depression, and most of these hypotheses are stress-based (both environmental and physiological), but studies have shown that this is a combination of genetics and hormonal changes. Factors that play a role in this field include the neuroendocrine system, the pituitary-hypothalamic-adrenal axis, and lactogenic hormones. It has also been shown that the sex hormones estradiol and progesterone can exacerbate depression and its occurrence in susceptible individuals by creating stressful conditions in the body after delivery. Another factor that has been studied in this field is the observation of the onset of depressive symptoms and its coincidence with the lack of milk production in the mother. In relation to oxytocin, it has been observed that the decrease of oxytocin in the third trimester, with an increase in depressive symptoms during pregnancy and postpartum (11). Another study found that placental corticotropin-releasing hormone (CRH) can be a good predictor of postpartum depression and is a reliable diagnostic criterion (12) that highlights the role of hormones.

Prevalence of pregnancy depression before the COVID-19:

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Depression, as the most common psychiatric disorder during pregnancy, has a prevalence of more than 13% during pregnancy (13), which is diagnosed based on valid criteria such as DSM-5 (14) and the Edinburgh Depression Scale (15). Due to its high incidence and recurrence in subsequent pregnancies, especially in people with a history of depression, the use of appropriate medication to control this disease is very important. This is because many drugs have a teratogenic effect and have a detrimental effect on fetal health and pregnancy outcome. However, it should be added that according to the latest guidelines, the first line of control for this disease is aerobic exercises, as well as yoga exercise, and drug therapy is in the next stages of treatment. In relation to the drugs used in this field, we can mention fluoxetine, which is a relatively low-complication drug, and other drugs belong to the group of serotonin reuptake inhibitors (14). However, several studies have shown that people who use this class of drugs during pregnancy are at higher risk for preterm delivery (15).

Prevalence of depression after COVID-19 pandemic:

Numerous studies have shown that depression has increased dramatically during quarantine and the Corona pandemic, and this has been influenced by a variety of factors. Now, pregnancy itself increases the chances of depression, it has increased with the Corona pandemic in 2019 onwards (16-18). This information has been based on the increase in the severity and symptoms of depression in recent years by the mother and the increase in postpartum problems for children as well as the increase in the occurrence of preterm births (19).

A study by Oskovi-Kaplan and colleagues (20) found that more people were referred to the hospital during and after pregnancy due to COVID-19 due to depression, and their research showed that appropriate support and separation of patients from other patients Creates positive effects. Another study conducted in China at the beginning of the release of Covid 19 on pregnant women reported a prevalence of postpartum depression of about 33% (one-third of mothers), which is a very high statistic of its kind. The study also found that long-term fevers at the time of the onset, as well as a lack of strong communication with others and lack of emotional support, had the greatest effect on the incidence and chance of postpartum depression (20). These problems are not limited to depression during Covid 19, because even studies have shown that maternal satisfaction decreases during Covid 19, which also has a direct effect on postpartum depression (21). People who had a history of mental illness before the pandemic era became more severe during the pandemic period, according to studies (22).

Other factors that have a significant impact on the occurrence of postpartum depression include delivery in the hospital, such as delivery in the treatment environment due to lack of proper use of support from relatives due to COVID-19conditions and stress in the treatment environment. Increases after childbirth (23). Post-pregnancy depression, as mentioned, is a very important factor in postpartum satisfaction that affects personal life, child-rearing, employment status as well as health's, so it is very important to have a good plan to support These people should be emotionally and emotionally disturbed, because lack of control over depression in the prenatal period is

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directly related to depression and its severity after delivery, and the pandemic condition of Covid-19 has a very clear effect on the high prevalence of this disorder (24).

Conclusion:

According to our review, depression rate seems to been increased during the Corona pandemic and quarantines compared to before the pandemic; while exact stats are not available for detailed comparison. Researches show that this increase in pregnancy depression rate was due to a variety of factors. In addition to pregnancy increasing the chance of depression, the COVID-19 pandemic, which started in late 2019, has also increased the risk of depression. Those who had a history of mental illness before the pandemic era suffered increasing symptoms during the outbreak, according to study.

in addition to the need for further studies on this subject, programs should be prepared to control and screen pregnant women. Because in many patients, the symptoms of depression may not be obvious, and those around the person may not know about it, and it may overshadow the person's life.

References:

1. Vindegaard N, Benros ME. COVID-19 pandemic and mental health consequences: Systematic review of the current evidence. Brain, Behavior, and Immunity. 2020;89:531-42.

2. Cullen W, Gulati G, Kelly BD. Mental health in the COVID-19 pandemic. QJM: An International Journal of Medicine. 2020;113(5):311-2.

3. Wastnedge EAN, Reynolds RM, Boeckel SRv, Stock SJ, Denison FC, Maybin JA, et al. Pregnancy and COVID-19. Physiological Reviews. 2021;101(1):303-18.

4. Durankuş F, Aksu E. Effects of the COVID-19 pandemic on anxiety and depressive symptoms in pregnant women: a preliminary study. The Journal of Maternal-Fetal & Neonatal Medicine. 2022;35(2):205-11.

5. Preis H, Mahaffey B, Lobel M. The role of pandemic-related pregnancy stress in preference for community birth during the beginning of the COVID-19 pandemic in the United States. Birth. 2021;48(2):242-50.

6. Ryan D, Milis L, Misri N. Depression during pregnancy. Canadian Family Physician. 2005;51(8):1087.

7. O'hara MW, McCabe JE. Postpartum depression: current status and future directions. Annual review of clinical psychology. 2013;9:379-407.

8. Robinson M, Whitehouse AJ, Newnham JP, Gorman S, Jacoby P, Holt BJ, et al. Low maternal serum vitamin D during pregnancy and the risk for postpartum depression symptoms .Arch Womens Ment Health. 2014;17(3):213-9.Yim IS, Glynn LM, Dunkel-Schetter C, Hobel CJ, Chicz-DeMet A, Sandman CA. Risk of postpartum depressive symptoms with elevated corticotropin-releasing hormone in human pregnancy. Arch Gen Psychiatry. 2009; 9 (2), 66-162.

10. Yim IS, Glynn LM, Schetter CD, Hobel CJ, Chicz-Demet A, Sandman CA. Prenatal beta-endorphin as an early predictor of postpartum depressive symptoms in euthymic women. J Affect Disord. 2010;125(1-3):128-33.

11. Mughal S, Azhar Y, Siddiqui W. Postpartum Depression. StatPearls. Treasure Island (FL): StatPearls Publishing

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12. Ostacoli L, Cosma S, Bevilacqua F, Berchialla P, Bovetti M, Carosso AR, et al. Psychosocial factors associated with postpartum psychological distress during the Covid-19 pandemic: a cross-sectional study.

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[DOR: 20.1001.1.23222913.2022.11.1.13.4]

BMC Pregnancy and Childbirth. 2020;20(1):703.
13. Bennett HA, Einarson A, Taddio A, Koren G, Einarson TR . Prevalence of Depression During Pregnancy: Systematic Review. Obstetrics & Gynecology. 2004;103(4).
14. Tolentino JC, Schmidt SL. DSM-5 criteria and depression severity: implications for clinical practice. Frontiers in psychiatry. 2018:450.
15. Eberhard-Gran M, Eskild A, Tambs K, Opjordsmoen S, Ove Samuelsen S. Review of validation studies of the Edinburgh Postnatal Depression Scale. Acta Psychiatrica Scandinavica. 2001;104(4):243-9.
16. Ng QX, Venkatanarayanan N, Loke W, Yeo WS, Lim DY, Chan HW, et al. A meta-analysis of the effectiveness of yoga-based interventions for maternal depression during pregnancy. Complement Ther Clin Pract. 2019;34:8-12.
17. Martínez-Paredes JF, Jácome-Pérez N. Depression in Pregnancy. Rev Colomb Psiquiatr (Engl Ed). 2019.
18. Eke AC, Saccone G, Berghella V. Selective serotonin reuptake inhibitor (SSRI) use during pregnancy and risk of preterm birth: a systematic review and meta-analysis. Bjog. 2016;123(12):1900-7.
19. López-Morales H, del Valle MV, Canet-Juric L, Andrés ML, Galli JI, Poó F, et al. Mental health of pregnant women during the COVID-19 pandemic: A longitudinal study. Psychiatry Research. 2021;295:113567.
20. Oskovi-Kaplan ZA, Buyuk GN, Ozgu-Erdinc AS, Keskin HL, Ozbas A, Moraloglu Tekin O. The Effect of COVID-19 Pandemic and Social Restrictions on Depression Rates and Maternal Attachment in Immediate Postpartum Women: a Preliminary Study. Psychiatric Quarterly. 2021;92(2):675-82.
21. Liang P, Wang Y, Shi S, Liu Y, Xiong R. Prevalence and factors associated with postpartum depression during the COVID-19 pandemic among women in Guangzhou, China: a cross-sectional study. BMC Psychiatry. 2020;20(1):557.
22.. Mariño-Narvaez C, Puertas-Gonzalez JA, Romero-Gonzalez B, Peralta-Ramirez MI. Giving birth during the COVID-19 pandemic: The impact on birth satisfaction and postpartum depression. International Journal of Gynecology & Obstetrics. 2021;153(1):83-8.
23. Terada S, Kinjo K, Fukuda Y. The relationship between postpartum depression and social support during the COVID-19 pandemic: A cross-sectional study. Journal of Obstetrics and Gynaecology Research. 2021;47(10):3524-31.
24. Usmani S, Greca E, Javed S, Sharath M, Sarfraz Z, Sarfraz A, et al. Risk Factors for Postpartum Depression During COVID-19 Pandemic: A Systematic Literature Review. J Prim Care Community Health. 2021;12:21501327211059348.

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