

2021

## Pregnancy in times of Pandemic: A look at Mental Health before and during the pandemic

César B. Cisneros Hilario

*Universidad Ricardo Palma, Lima-Perú, cbraulio.cisnerosh@gmail.com*

María P. Bedoya Castillo

Betsy A. Lázaro Huamán

Katia E. Mendoza Chávez

Evelin J. Cisneros Hilario

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### Recommended Citation

Cisneros Hilario, César B.; Bedoya Castillo, María P.; Lázaro Huamán, Betsy A.; Mendoza Chávez, Katia E.; and Cisneros Hilario, Evelin J. (2021) "Pregnancy in times of Pandemic: A look at Mental Health before and during the pandemic," *Revista de la Facultad de Medicina Humana*: Vol. 22: Iss. 2, Article 23.

DOI: <https://doi.org/10.25176/RFMH.v22i2.4802>

Available at: <https://inicib.urp.edu.pe/rfmh/vol22/iss2/23>

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# PREGNANCY IN TIMES OF PANDEMIC: A LOOK AT MENTAL HEALTH BEFORE AND DURING THE PANDEMIC

SER GESTANTE EN TIEMPOS DE PANDEMIA: UNA MIRADA DE LA SALUD MENTAL ANTES Y DURANTE LA PANDEMIA

César Braulio Cisneros Hilario<sup>1,2</sup>, María Paula Bedoya Castillo<sup>1</sup>, Betsy Alexandra Lázaro Huamán<sup>1</sup>,  
Katia Elizabeth Mendoza Chávez<sup>3</sup>, Evelin Juline Cisneros Hilario<sup>3</sup>

## ABSTRACT

**Introduction:** Pregnancy is a stage of physiological, psychological, personal, and social changes for women. The role of the emotional and psychological aspect covers the entire period because as fetal development progresses, the mother-baby relationship is strengthened, making the mother vulnerable. **Objectives:** Collect, describe and analyze relevant information on mental health in pregnant women, both at different stages of pregnancy and before and during the COVID-19 pandemic. **Methods:** A literature search was carried out through PubMed, Google Scholar, and Scielo using terminology compiled from MeSH and DeCs. **Results:** Pregnancy due to hormonal changes causes the presence of anxiety and feelings of depression that worsen as the stages of fetal development progress. These psychological disorders have greatly increased during the COVID-19 pandemic due to various reasons such as the relationship with a partner, uncertainty, fear, anguish, and growing phobia of contagion. **Conclusion:** Pregnant women are a vulnerable population whose mental health has always been affected and more than ever due to the pandemic, so they need better care in the health sector, such as providing reliable information on preventive measures to alleviate the burden of stressors, as they bear the burden of their health distress and that of the fetus.

**Keywords:** Gestation; Mental health; Emotions; COVID-19. (Source: MeSH NLM).

## RESUMEN

**Introducción:** El embarazo es una etapa de cambios fisiológicos, psicológicos, personales y sociales para la mujer. El papel del aspecto emocional y psicológico abarca todo el periodo debido a que conforme avanza el desarrollo fetal, la relación madre-bebé se fortalece volviendo vulnerable a la madre. **Objetivos:** Recopilar, describir y analizar la información relevante sobre la salud mental en mujeres embarazadas, tanto en las diferentes etapas de la gestación como antes y durante la pandemia de COVID-19. **Métodos:** Se realizó una búsqueda de literatura por medio de PubMed, Google Scholar y Scielo por medio de terminología recopilada del MeSH y DeCs. **Resultados:** El embarazo debido a los cambios hormonales ocasiona la presencia de ansiedad y sentimientos de depresión que se agravan conforme avanzan las etapas de desarrollo fetal. Estos trastornos psicológicos han incrementado en gran medida durante la pandemia de COVID-19 debido a varias razones como la relación en pareja, la incertidumbre, miedo, angustia y fobia creciente por el contagio. **Conclusión:** Las gestantes son una población vulnerable, la cual siempre ha visto afectada su salud mental y en la actualidad ha sido mucho más afectada debido a la pandemia, por ello necesitan de mejor atención en el sector de salud como brindarles información confiable sobre medidas para aliviar la carga de factores estresantes, ya que no solo cargan con la angustia de su salud sino también con la del feto.

**Palabras clave:** Gestación; Salud mental; Emociones; COVID-19. (Fuente: DeCS BIREME).

<sup>1</sup> Facultad de Medicina Humana. Universidad Ricardo Palma, Lima-Perú.

<sup>2</sup> Universidad César Vallejo, Chimbote- Perú.

<sup>3</sup> Asociación Peruana de Ciencia, Tecnología y Medio Ambiente Saludable, Chimbote- Perú.

Cite as: César Braulio Cisneros Hilario, María Paula Bedoya Castillo, Betsy Alexandra Lázaro Huamán, Katia Elizabeth Mendoza Chávez, Evelin Juline Cisneros Hilario. Pregnancy in times of Pandemic: A look at Mental Health before and during the pandemic. Rev. Fac. Med. Hum. 2022;22(2):495-501. DOI. 10.25176/RFMH.v22i2.4802





## INTRODUCTION

Pregnancy is one of the most important stages in a woman's life. It brings with it personally, family, and social changes where the emotional and psychological aspect plays an important role, which changes as it progresses through the gestation period.

The mother's attachment to the child begins with the news of being pregnant. The news can be received with a mixture of feelings: from happiness to feelings of insecurity, fear, or initial rejection<sup>(1)</sup>.

From the psychic point of view (Bydlowski 2001) considers pregnancy as a state of relative psychic transparency, in which feelings, conflicts, past memories, and fears rise to the surface of mental life more easily<sup>(1,2)</sup>.

If the memories are positive and healthy, a good bond with the baby is established. On the contrary, if the memories are traumatic, a bond full of fears, anxiety, or depression will be established and lead to the pregnancy's interruption.

Mental health at this stage is very important since vulnerability also extends to the newborn. The psychological dimension of the mother-baby dyad works together to facilitate the survival of the species<sup>(3)</sup>.

Confinement due to the COVID-19 pandemic has had a negative impact on the mental health of the population with an increase in symptoms of stress, depression, and anxiety, the latter seriously affecting pregnant women and resulting in adverse maternal and neonatal outcomes<sup>(4,5)</sup>.

Several studies have been conducted on the mental health of pregnant women during COVID-19. Sun et al. conducted a systematic review that included 15 studies on pregnant women that were conducted during the first wave of the pandemic. The results showed an overall prevalence of 30% (range 11-65%) for depression and 34% (range 18-56%) for anxiety, although significant heterogeneity was detected<sup>(6)</sup>.

Lebel et al., in a study involving 1987 pregnant women in Canada, found that 37% reported clinically relevant symptoms of depression and 57% anxiety. They also found that social isolation had the greatest effect on anxiety and depression symptoms and that physical activity and social support reduced the odds of anxiety and depression symptoms<sup>(7)</sup>.

Therefore, this review aims to collect, describe and analyze the relevant information on the influence of pregnancy on women's moods.

## METHODS

In this review article, a literature search was carried out through PubMed, Google Scholar, and Scielo using terminology compiled from MeSH and DeCs. As for the articles that were selected, it was respected that these coincided with different combinations of "pregnancy", "COVID," and "mental health." There was no language restriction. Articles with old publication time were excluded, and those that did not provide essential information and articles with restricted access. Of the 60 selected articles, only 42 were used after the filter: 1 in French, 17 in Spanish, and 24 in English.

## RESULTS

### Stages of pregnancy and the mother

's mental health When talking about maternal mental health, it should be considered that during the perinatal stage, that is, during pregnancy, childbirth, and the puerperium, there are different risk factors that could make a woman more likely to develop psychopathology<sup>(3)</sup> such as depression, anxiety, and trauma-related disorders, especially in the presence of stress conditions<sup>(8)</sup>.

**Pregnancy.** It consists of approximately 40 weeks, and the weeks are grouped into three trimesters:

**First trimester:** Refers to the first stage from 1 to 12 weeks of gestation<sup>(9)</sup> in which a large number of important hormonal changes occur in the symptomatology and physiological modifications of the mother's organism. This stage is also essential due





to the formation of the vital organs of the embryo<sup>(10)</sup>. Regarding what a pregnant woman can present at this stage, anxiety predominates due to several factors such as the lack of communication between the couple, the rejection of the pregnancy, and is also related to the low cultural level that leads to misinformation of the couple regarding this process of pregnancy; This anxiety causes women to frequently begin to manifest nausea, vomiting, fatigue, insomnia and on some occasions it can begin with depression, harming not only the quality of life of the pregnant woman but also the couple's relationship<sup>(11-16)</sup>.

Another important point of the possible origin of anxiety is the doctor-patient relationship formed by the mother with her doctor, in some instances, the pregnant woman may depend entirely on the decisions and approval of the doctor as a family figure. In these situations, the staff health should help train parents who may be first-timers and make them participate in the development and evolution of the birth<sup>(12)</sup>.

This stage in adolescent pregnancy is specifically a public health problem with psychological and physical consequences for the mother and the newborn and affects the social, economic, and cultural aspects. Therefore, in this first stage, some young women choose to hide their pregnancy due to the surprise, concern, low self-esteem and fear that it causes them. They are in a state of hypersensitivity and with varied positive or negative feelings in case the pregnancy was unwanted. The adolescent had to miss part of her school life, which caused her stress due to the change of assuming the role of mother at an early age when she did not have emotional maturity<sup>(17)</sup>.

**Second trimester:** This stage is between the 13th to 28th week of gestation<sup>(9)</sup>; the fetus is more developed, and the mother can perceive its movements. Thus, pregnant women can develop anxiety and paranoia regarding the being that is inside them, which is why in this second trimester, the rate of insomnia increases compared to the first trimester; and in certain cases, this feeling of paranoia can cause shortness of breath and palpitations<sup>(12,13)</sup>.

**Third trimester:** In this last stage, the most important signifier is separation, where the mother-baby bond

unites the woman; as delivery approaches, the child will no longer be an image but a reality, the limits become more present, the fantasies can intensify and create great anxiety due to the fear of what may happen to her and her child<sup>(12)</sup>. In this sense, there may be insomnia due to a fear of sleeping and not waking up; Here, changes in melatonin secretion are generated in pregnant women who sleep less than eight hours or have sleep disturbances, promoting various physiological changes in the mother and the baby<sup>(18)</sup>. Mothers can have dreams in which the son appears dead or, on the contrary, already an adult; This is highlighted as an expression of the fear of what may happen and the desire that everything has happened satisfactorily.

On the other hand, mothers with unplanned pregnancies are more likely to have greater psychological disorders at nine months of gestation. They present greater stress related to factors associated with socioeconomic position, such as increased economic pressures. of a new child and the psychological preparation for motherhood<sup>(19)</sup>.

**Childbirth.** It is a unique moment for the mother and the child since not baby is born and the mother. Several studies have linked the anxiety present during pregnancy with labor prodromes and labor pain<sup>(13)</sup>. In addition to the fear of separation that also intensifies anxiety, the loss of the child is felt as a loss of one's own body, fantasies can soon come true; hence if those of subnormality and death intensify, they can motivate premature or prolonged deliveries, in the first case, anxiety can cause the desire to expel it and in the second the fear that those fantasies will come true. In these cases, the action of the therapeutic team is essential since it can contain the woman's anxiety or, on the contrary, increase it if the intervention is not adequate<sup>(12)</sup>.

The woman needs to be aware at this time because, in this way, she will be able to elaborate on the separation from her son better and experience great satisfaction in experiencing that she is taking care of her son in these moments of great difficulty for both of them<sup>(12)</sup>.





**The puerperium.** It is the period from the end of childbirth until the appearance of the first menstruation. Once the child is born, feelings of loss and emptiness often arise in women, which may explain the frank depression or the more or less striking depressive symptomatology that some women experience at this stage<sup>(12)</sup>. For this reason, puerperal depression and puerperal psychosis are described in this period, is considered to be of greater risk during the first postpartum month.

In addition, one of the most frequent mental disorders in this period is sadness or "blues". It is present in 40-80% of puerperal women, with depressive symptoms that disappear in 7-10 days<sup>(20)</sup>.

Postpartum depression does not seem to be a different picture from major depression, which appears in 10-15% of postpartum women and manifests after the second week postpartum<sup>(20)</sup>.

It is common for ambivalent feelings to arise in relation to the child. Although you may have chosen it and you can imagine the joy of seeing it born after so many months of waiting for it, it also means other losses you will need to work on. In this sense, breastfeeding can be a great help since, through it, the woman offers him not only the food he needs but also gives him protection, affection, and care, feelings that will also help her to develop the separation from the son<sup>(12)</sup>.

### Anxiety in pregnant women

Regarding anxiety, it is prevalent in the three stages of pregnancy. The form of manifestation varies, being 5% the presence of anxiety disorder, 3% generalized anxiety, 6% obsessive-compulsive disorder, 13% social phobia and other phobias, and 10% post-traumatic stress<sup>(15)</sup>.

Regarding the causes of anxiety in pregnant women, the instability of the couple's relationship, predominant in the third trimester of pregnancy, refers to an 8.5 times greater risk that the mother suffers from anxiety<sup>(21)</sup>. Also, the presence of this pathology is associated with whether or not the pregnancy is desired. The rejection

of pregnancy causes mothers to tend to become uncomfortable and deny the physiological changes caused by the development of the embryo, becoming more sensitive to situations every day<sup>(21-23)</sup>.

In addition, the different situations in which the mother finds herself can cause fear due to the new experience they are experiencing. In the case of pregnant women who are bedridden due to premature rupture of membranes, they present anxiety, fear, stress, and concern due to their current situation<sup>(24-25)</sup>.

It should be added that anxiety has repercussions both for the mother during childbirth and for fetal development. Concerning childbirth, there is an increased risk of preeclampsia and low birth weight of the fetus at birth. Regarding fetal development, it presents a high risk of attention deficit, immature motor function; behavioral disorders, hyperactivity, and anxiety present predominantly in childhood<sup>(21)</sup>.

**Depression in pregnant women.** There is no specific cause for perinatal depression other than combinations of different genetic and environmental factors. Stress, physical demands, emotions of having and caring for a child, and hormonal changes during and after pregnancy also contribute to the progression of perinatal depression.

In the case of those mothers with an unplanned pregnancy, Factors Associated with Poor Relationship Quality Low levels of social support have previously been shown to be significantly associated with the risk of postpartum depressive symptoms. In addition, lack of support from family and friends acts as a link between stressful life events and postpartum depression/anxiety<sup>(19)</sup>.

Depression in pregnant women manifests itself with excessive physical and mental fatigue, sleep disturbances, loss of interest and self-esteem, anorexia, crying, and feelings of guilt<sup>(20-26)</sup>.

## DISCUSSION

The epidemic outbreak of SARS-CoV-2 disease (COVID-19), known in 2019, presents a significant risk to public health, including mental health<sup>(27-28)</sup>.





When the situation caused by COVID-19 began to spread throughout Wuhan, the rest of China, and internationally, A large part of the population experienced feelings of alarm and stress due to the little information they had about the new virus and its lethality<sup>(29)</sup>. That is why, in January 2020, the World Health Organization declared the global situation a global health emergency<sup>(30)</sup> government entities began to take preventive measures due to the increase in favorable cases, such as isolation, quarantine, and social distancing that cause in the population feelings of uncertainty, anxiety, fear, a feeling of loneliness, boredom, frustration, strand and concern for the unknown in relation to the infectious epidemic and other factors such as concern for the family and own health<sup>(31)</sup>.

**Before the Covid 19 Pandemic.** Depression and anxiety affect one in seven women during the perinatal period. They are associated with an increased risk of premature birth, reduced mother-child bonding, and delays in the baby's cognitive/emotional development, which may persist into childhood<sup>(32)</sup>.

It is estimated that the prevalence of depression among the perinatal population is between 11% and 26%, with subclinical levels of depression affecting between 20% and 49%<sup>(33)</sup>.

It is recommended to perform physical activity, exercises and practice yoga before, during, and after pregnancy, since they are not associated with greater risks, and it has also been shown that they benefit most women during the gestation stage, giving an improvement in the mental health and well-being of women and babies<sup>(33-35)</sup>.

**During the Covid 19 Pandemic.** Regarding the situation of pregnant women, because they face new experiences accompanied by the physiological changes that pregnancy entails, they are more likely to suffer from anguish in that period<sup>(36)</sup>. During the period of the COVID-19 pandemic, there are several studies that show the great impact it has on maternal mental health and the increase in symptoms of anxiety, stress,

and depression, among others<sup>(37)</sup>.

Currently, the predominant type of anxiety that pregnant women present is moderate to severe. This is also linked to depression. Both are influenced by factors such as obesity, the couple's relationship, uncertainty, and the stress generated during the pandemic. of SARS-CoV-2<sup>(37)</sup>. However, this scenario of increased anxiety and depression was not seen in all countries. This is confirmed by a study in the Netherlands in which it was found that the COVID-19 pandemic did not increase the prevalence of problems with maternal mental health, but it did increase stress only for women who attributed the cause to the COVID-19 pandemic<sup>(4,8)</sup>.

It should be added that pregnant women not only watch over their health and well-being, but also that the anguish, concern, and anxiety that they present to a certain degree is due to non-face-to-face prenatal control, uncertainty and fear of where to give birth due to the fear of contagion by COVID-19; <sup>(38,39)</sup> those constant mood swings of the mother are counterproductive because they increase the risk of presenting postpartum depression<sup>(40)</sup>.

Also, it is important to consider that during the pandemic, there are adverse scenarios such as perinatal mourning, premature births, and newborn diseases, among other circumstances that can increase the possibility of maternal psychopathology. In this sense, it is urgent to offer psychological support to these mothers, even if it is virtually.

Thus, in this situation, Yoga has been implemented as a healthy and safe measure for the pregnant woman that will benefit in the reduction and release of symptoms of depression, anxiety, and stress and will help change the sedentary lifestyle situation comfortably and not abrupt. This type of meditation also brings benefits to maternal health; for example, it prevents weight gain, reduces back pain, reduces the risk of obesity in the fetus, and reduces the incidence of gestational





Diabetes Mellitus and complications in childbirth<sup>(41,42)</sup>.

The impact of Yoga on the mental health of pregnant women is large-scale, so health centers can use it as a countermeasure to maternal psychopathology. The practice of Yoga has positive effects on pregnant women; it helps reduce fatigue, stress, anger, anxiety, depression, phobia, and fear that are predominant in the COVID-19 pandemic, therefore it can increase the quality of life of the pregnant woman because it is beneficial both in the mental part and in the healthy maintenance of the body<sup>(33-42)</sup>.

In conclusion, it is important to consider maternal health due to the increased risk of depression and anxiety, evidenced by the prevalence of psychological disorders during the gestation period and frequently highlighting the feelings of anguish, anxiety, and depression during pregnancy. Childbirth and puerperium; thus, pregnant women are considered within the high-risk population.

It should be added that, although before the pandemic there was a prevalence of depression and anxiety in pregnant women, this has increased due to feelings of uncertainty, the relationship with a partner, and the fears acquired due to the COVID-19 pandemic; which represent significant stress, anxiety and depression factor that increases anguish in pregnant women and the disposition to present postpartum depression.

Studies mention that people who were quarantined reported a higher prevalence of psychological distress. During quarantine, stressful factors greatly affect pregnant women, for example, its duration, fears of infection by COVID-19, frustration, inadequate information, financial problems, and stigma.

Finally, exercise and Yoga are suggested to prevent and relieve symptoms related to mental health and the body.

**Authorship contributions:** The authors participated in the genesis of the idea, project design, data collection and interpretation, analysis of results and preparation of the manuscript of this research work.

**Financing:** Self-financed.

**Conflicts of interest:** The authors declare that they have no conflict of interest.

**Received:** February 05, 2022

**Approved:** March 06, 2022

**Correspondence:** César Braulio Cisneros Hilario.

**E-mail:** cbraulio.cisnerosh@gmail.com

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