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Anxiety in Pregnant Women during the COVID-19 Pandemic who go to a Hospital for their care in Lima

Ansiedad en Mujeres Embarazadas durante la Pandemia del COVID-19 que acuden a un Hospital para su atención en Lima

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ABSTRACT

Introduction: pregnancy is one of the stages where women are affected by factors that alter their mental health, one of them anxiety, due to physiological and vital changes during their pregnancy, therefore, the objective of the study is to determine anxiety in pregnant women during the COVID-19 pandemic who come to a hospital for their care in Lima.
Methods: it is a quantitative, descriptive-transversal study, made up of 660 pregnant women in the study, with the questionnaire of sociodemographic aspects and the anxiety scale as a trait and state.
Results: the results show that 13,5 % have high anxiety, 84,1 % medium anxiety and 2,4 % low anxiety.
Conclusions: in conclusion, continuous monitoring of pregnant women should be carried out virtually or in person as a priority of attention.

Keywords: Anxiety; Pregnant Women; Mental Health; Pandemic.

RESUMEN

Introducción: el embarazo es una de las etapas donde la mujer se ve afectada por factores que alteran su salud mental, uno de ellos la ansiedad, debido a los cambios fisiológicos y vitales durante su gestación, por lo tanto, el objetivo del estudio es determinar la ansiedad en gestantes durante la pandemia de COVID-19 que acuden a un hospital para su atención en Lima.
Métodos: es un estudio cuantitativo, descriptivo-transversal, conformado por 660 gestantes en estudio, con el cuestionario de aspectos sociodemográficos y la escala de ansiedad como rasgo y estado.
Resultados: los resultados muestran que el 13,5 % tiene ansiedad alta, el 84,1 % ansiedad media y el 2,4 % ansiedad baja.
Conclusiones: en conclusión, el control continuo de las embarazadas debe realizarse de forma virtual o presencial como prioridad de atención.

Palabras clave: Ansiedad; Embarazadas; Salud Mental; Pandemia.

INTRODUCTION

The coronavirus (COVID-19) pandemic not only carries risk and death from infection, but also has significant psychological consequences.[1] According to the World Health Organization (WHO) it defined mental health as "a state of well-being in which each individual develops his or her potential, can cope with the stresses of life, can work productively and fruitfully, and can contribute something to his or her community".[2]

The severity of the problem itself is that during a viral outbreak such as the COVID-19 Pandemic, a person with severe anxiety may misinterpret mild muscle pain or coughing as a sign of infection and may engage in inappropriate behaviors such as compulsive hand washing, social distancing, and panic shopping, which can have negative consequences for the individual and their community.[2] For example, a sense of urgency about the products needed for quarantine can lead to overspending on resource collection and harm communities that need these resources for other purposes, including health care.[3]

Mental health as it relates to a person's emotional, psychological, and well-being; It can affect a woman's emotions and behavior during pregnancy or after childbirth.[4] However, according to the Center for Disease Control and Prevention (CDC) revealed that: People who have COVID-19 during pregnancy are also at increased risk for complications that can affect the pregnancy and the unborn baby. For example, COVID-19 during pregnancy increases the risk of preterm birth (before 37 weeks) and/or stillbirth.[5]

As a result, during the first and second waves of COVID-19, pregnancy-related life changes make women more susceptible to mental health problems. In many countries, up to 1 in 5 first-time mothers experience some form of mood and anxiety disorder during the perinatal period. These problems often go unnoticed because the health system lacks specialized psychological care for mothers, leaving them untreated, with tragic short- and long-term consequences for both mother and child or.[6]

According to the Association of Prenatal Maternal Anxiety With Fetal Regional Brain Connectivity, it tells us that anxiety in pregnant mothers can affect the course of brain development in their fetuses, changing neural connectivity in the womb, explaining that the long-standing links between maternal anxiety and neurodevelopmental disorders in their children; Thus anxiety during pregnancy affects the brain of the fetus, demonstrating that stress, anxiety or depression in pregnant mothers is associated not only with poor obstetric outcomes, but also with social, emotional and behavioral problems in their children.[7]

The United Nations explained that anxiety during the pandemic affected women more than men, and young people, especially those between 20 and 24 years old, more than older adults, highlighting that during the first year of the pandemic the global prevalence of anxiety and depression increased by 25 %.[8]

In North America, a study conducted in Canada detailed that the COVID-19 Pandemic has had a negative impact on mental health during pregnancy and the puerperium. Depression, anxiety and stress have increased significantly in the second wave of the pandemic and, so far, have been more crippling for pregnant women than in previous crises.[9]

In Cuba, a study showed that the prevalence rate of psychopathological antecedents in the pregnant women studied was relatively high. In contrast, the estimate of the prevalence of mental disorder during hospitalization was judged low. However, a relatively high prevalence of anxiety was evidenced.[10]

A study conducted in Mexico noted that anxiety is one of the most shocking emotions in pregnant women increasing more during the COVID-19 pandemic stage, fearing complications in them and their baby.[11]

In Europe, Scotland, in 2022 reported that anxiety through STAI scores during pregnancy and perinatal stage was significantly higher during the COVID-19 pandemic, unlike depression according to EPDS score was not as significant even if it was in the non-pandemic stage.[12] And in Spain, an investigation that was carried out during the first wave of COVID-19, registering 695 pregnant women residing in Spain during confinement, an average level of prenatal stress of 16,98 % and a high level of anxiety of 25,2 % were observed. Where socio-health restrictions and the consequent confinement gave rise to the emergence of significant concerns of the pregnant population.[13]

In Asia Pacific, a study conducted in Turkey indicated that anxiety status is reflected in pregnant women due to the COVID-19 pandemic and reported high levels of trait anxiety. They conclude that pregnant women showed high levels of anxiety during the COVID-19 pandemic.[14]

A study in 2 departments of Colombia showed that 244 pregnant women had a depression rate of 24,6 %; and anxiety 25,8 %. corresponding to 63 women. 96,8 % of this group was between the 2nd and 3rd trimester of pregnancy. Evidencing anxiety as a comorbidity and prognostic factor commonly associated with depression during pregnancy. Because most of these variables are psychosocial and clinical.[15]

In Chile, a study revealed that symptoms of anxiety and perinatal depression are prevalent, with a prevalence of 41,3 % and 44,3 % of high anxious symptoms and 13,9 % to 20,9 % for high symptoms of depression.[16]

A study conducted in Peru; with a sample of 350 pregnant women attended in the area of gynecology and obstetrics. Regarding anxiety, 267 (76,3 %) of the pregnant women had moderate anxiety, followed by 50 (14,3 %) participants with mild level and 33 (9,4 %) participants with high level. The levels of anxiety show that the condition of pregnancy, added to the situation of uncertainty due to the pandemic, has been affecting the

participating pregnant women.[17]

Therefore, the objective of the research is to determine the anxiety in pregnant women during the COVID-19 pandemic who come to a hospital for their care in Lima.

METHODS

Research type and Design

The research work presents a quantitative approach, with descriptive-transversal and non-experimental methodology.[18]

Population and Sample

In the study, the population is made up of a total of 660 pregnant women who perform their care in a hospital center. All the participants included in this study signed the informed consent CIE IPSF 002-2023, as well as being aware of the objectives, the data collected and the purpose of the study.

According to the study, the survey was conducted census-wise, with a sampling bias of voluntary response of pregnant women, since the type of sampling in the research was for convenience.

Inclusion Criteria

- Pregnant women who present 20 weeks or more
- Pregnant women who have at least 3 prenatal check-ups in the hospital
- Surrogate mothers who agree to participate voluntarily(20)
- People who signed the inform consent CIE IPSF 002-2023. It was previously accepted by the institution.

Exclusion Criteria

- Participants with less than 20 weeks gestation
- Participants who do not have at least 3 prenatal checkups.
- Participants who have not signed the informed consent.

Technique and Instrument

The technique used is the survey, through the questionnaire or STAI data collection instrument which aims to measure anxiety in nursing students nationwide.

The state-trait anxiety scale (STAI) consists of 40 reagents, divided into two subscales with 20 content reagents in each of them, which evaluates anxiety as a state (S) and anxiety as a trait (T). In the subscale anxiety as a state (S) seeks to measure anxiety at a given time of the person, for this the score goes from 1 to 4 likert type, where 1 is "not at all", 2 is "a little", 3 is "enough" and 4 is "a lot". The anxiety as a trait subscale (T) seeks to measure permanent anxiety where the person relatively, as they generally perceive their anxiety, the score goes from 1 to 4 likert type where 1 is "never", 2 is "sometimes", 3 is "frequently" and 4 is "almost always". In order to obtain the total score of the subscale of anxiety (S) and anxiety (T) can vary by a minimum of 20 to a maximum of 80 depending on the reagents, that is, a score of 4 by 10 anxiety reagents (S) and 11 anxiety reagents (T) determines a high anxiety level, The same for the score of the remaining 10 anxiety reagents (S) and 9 anxiety reagents (T), in turn the marked scores 1, 2, 3 or 4 are reversed and 4, 3, 2 or 1 are scored to determine a low anxiety level respectively, the reagents that are inverted to determine a low anxiety level are:

For anxiety as a state (S): 1, 2, 5, 8, 10, 11, 15, 16, 19, 20

For anxiety as a trait (T): 21, 23, 26, 27, 30, 33, 34, 36, 39

We considered the score for each subscale a score of 20 to 39 to consider low anxiety, 40 to 59 medium anxiety, and 60 to 80 anxiety.[19]

The validity of the instrument was given by the sample adequacy of Kaiser-Mayer-Olkin obtained a coefficient of 0,934 (KMO > 0,5), while the Bartlett sphericity test obtained significant results (X2 approx. = 7437,138; gl = 780; p = 0,000).

The reliability of the instrument was determined with the Cronbach's Alpha statistical test, in which a coefficient of 0,808 (α > 0,6) was obtained for the items (i = 40).

Place and Application of the Instrument

For the research, firs the made the previous coordination with the head of the service in which the study will be carried out for the collection of data through the survey and also to provide them with knowledge about what is going to be done. Of which the follow-up of the study took place between August and March 2023.
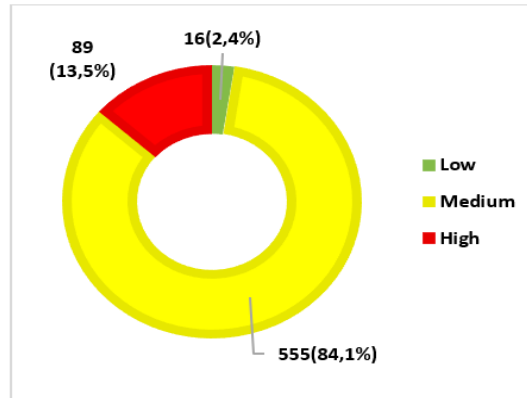
RESULTS

Figure 1. Pregnant women with anxiety during the COVID-19 pandemic who go to a hospital in Lima

As shown in figure 1, 2,4 % (n=16) of pregnant women have a low level of anxiety, 84,1 % (n=555) of pregnant women have a medium level of anxiety and 13,5 % (n=89) of pregnant women have a high level of anxiety.
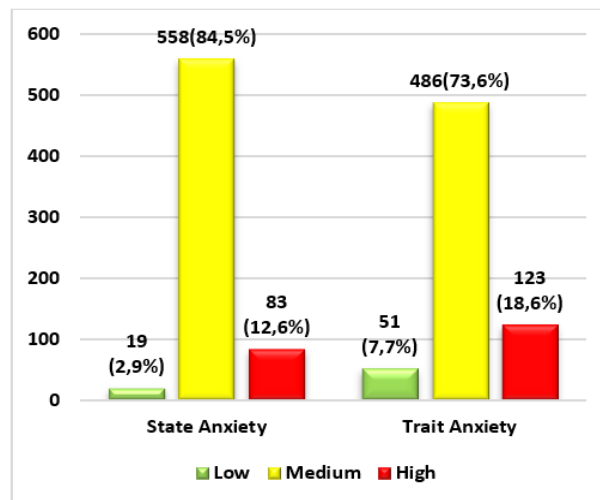
Figure 2. Anxiety in pregnant women in relation to their dimensions during the COVID-19 pandemic who go to a hospital in Lima

In figure 2 we can see that, in the dimension state anxiety, 2,9 % (n=19) of pregnant women have low anxiety, 84,5 % (n=558) of pregnant women have medium anxiety and 12,6 % (n=93) of pregnant women have high anxiety. Regarding the dimension trait anxiety, 7,7 % (n=51) of pregnant women have a low anxiety level, 73,6 % (n=486) of pregnant women have a medium anxiety level and 18,6 % (n=123) of pregnant women have a high anxiety level.

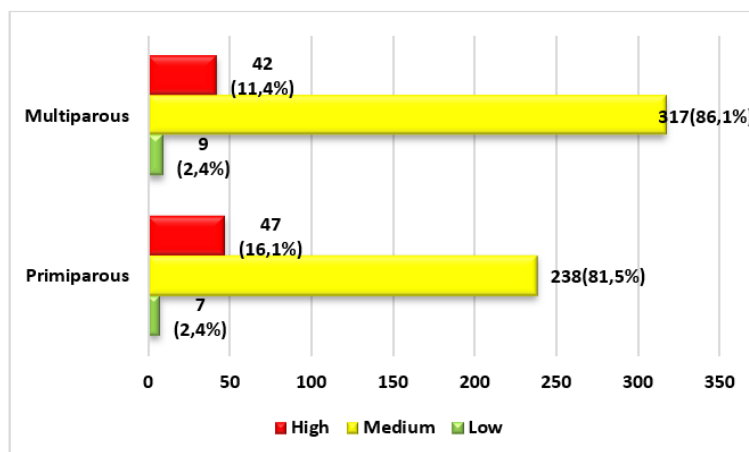**Figure 3.** Anxiety in pregnant women regarding their parity number during the COVID-19 pandemic who go to a hospital in Lima

We can see in figure 3 that 2,4 % (n=7) of primiparous pregnant women have a low anxiety level, 81,5 % (n=238) have a medium anxiety level and 16,1 % (n=47) have a high anxiety level; As for multiparous pregnant women, 2,4 % (n=9) have a low anxiety level, 86,1 % (n=317) have a medium anxiety level and 11,4 % (n=42) have a high anxiety level.

DISCUSSION

The present research is based from the perspective of mental health in relation to pregnant women during the COVID-19 pandemic, where the promotion and prevention of mental disorders is sought through coping strategies and that do not affect the mother and fetus in the short or long term.

In the results with respect to the main variable anxiety, we see that pregnant women have an average anxiety, this, we can interpret it in terms of the psychoemotional changes that the pregnant woman presents, since when she is pregnant there are alterations in her emotional state, where depression, anxiety and stress are the main factors that occur in pregnant women, and that occurs even more if the surrogate mother is first-timer.[20,21]

Regarding the results of state-trait anxiety, it is observed that most pregnant women have medium anxiety, this is interpreted that, during the COVID-19 pandemic, anxiety rates have not only been increasing, given that in most pregnant women they have presented an imbalance in their mental state before becoming pregnant and during their pregnancy, and that this leads to a vulnerability of their mental health, where fear, worry, anguish and sadness, abound considerably in the pregnant woman, and these factors contribute more to the pregnant woman presenting anxiety pictures, although she also presents depression and anxiety.

With respect to the results of multi or primiparous mothers, it is observed that they have a medium level of anxiety, this is due to factors such as being a mother for the first time, the restrictions due to the COVID-19 pandemic, tend to give beginnings of anxiety pictures, so it affects their mental health, since when experiencing anxiety, Stress and depression during your prenatal period, you may continue to have these symptoms during your postnatal period either in the short or long term. Compared to multiparous mothers, where anxiety is present but not considerably because she is a mother again, but anxiety is more present in factors such as the COVID-19 pandemic, being infected within the hospital institution and fear of infecting your baby by COVID-19 if it was positive, are factors that compromise your mental health and anxiety symptoms tend to be more easily demonstrated in the mother.

That is why, during the constant monitoring and data collection, it resulted in anxiety during the time of the COVID-19 pandemic generating different increases in anxiety levels in pregnant women, given that when they are gestating they present low levels of anxiety, but that product of COVID-19, high levels of emotional instability have been generated, Given the results of our study, anxiety tended to increase in pregnant women, so coping with being a mother, fear of getting infected by COVID-19, fear that your child will not have a good life during the pandemic, are factors that cause the increase in anxiety in them.[22]

Finally, this study will give benefits to other studies in the future, since it will allow us to know how the mental health of pregnant women was triggered during COVID-19, if they were able to develop strategies that allow them to reduce anxiety to keep their mental health stable or if anxiety could have caused a mental disorder that may have compromised their pregnancy.

CONCLUSIONS

It is concluded that virtual care in pregnant women should be taken into account during their pregnancy planning, given that pregnant women are high priority people during the COVID-19 pandemic

It is concluded that mental health interventions should be carried out for pregnant women, and counseling should be provided on how to manage their mental health during pregnancy.

The limitation of the study was the access to pregnant women for data collection, since not all mothers intended to do the survey.

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CONFLICT OF INTEREST
The authors declare that there is no conflict of interest.

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