ORIGINAL ARTICLE

FACTORS ASSOCIATED WITH DEPRESSIVE AND SYMPTOMS OF ANXIETY DURING THE PUERPERIUM IN THE COVID-19 PANDEMIC

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ABSTRACT

Objective: to identify the presence of symptoms of postpartum depression, anxiety and associated factors in women who had children during the COVID-19 pandemic. **Method:** a cross-sectional study, based on an online survey, conducted between August 2021 and January 2022, with women, followers of a social network, who were between 30 and 40 days postpartum. To identify symptoms suggestive of postpartum depression, the Edinburgh Postnatal Depression Scale and the Generalized Anxiety Disorder 7 were used for symptoms of anxiety. In the analysis, chi-square and Fisher's exact tests were applied, and variables with a p-value <0.20 were inserted into the Poisson regression model with robust variance. **Results:** the sample consisted of 50 postpartum women, of whom 18 (36%) reported COVID-19 infection. A mean score of 9.9 ± 5.6 points was obtained on the Edinburgh Postnatal Depression Scale, and 50% had symptoms of postpartum depression. The mean score obtained for symptoms of anxiety was 7.9 ± 5.9 points, and 34% had moderate or severe anxiety. In the bivariate analysis, an association was found between symptoms of postpartum depression and lower education (p = 0.010), symptoms of anxiety (p <0.001) and anxiety in moderate or severe intensity (p = 0.002). Obesity justified the symptoms of postpartum depression (p <0.001) by the Poisson regression model with robust variance. **Conclusion:** changes in postpartum women's mental health were observed during the pandemic, and obesity was associated with depressive symptoms. This highlights the urgent need for healthcare professionals to pay attention to and intervene in the face of symptoms of anxiety and postpartum depression.

Keywords: Anxiety. COVID-19. Depression, Postpartum. Postpartum Period. Mental Health.

INTRODUCTION

First detected in Wuhan, China, in late December 2019, SARS-CoV-2 was the agent responsible for the COVID-19 pandemic, declared by the World Health Organization on March 11, 2020, which lasted until May 5, 2023.

With proportions never before estimated, it infected more than 775 million people[1], and led to the deaths of around seven million people worldwide[2]. In Brazil, more than 37.5 million cases were detected, and there were approximately 702 thousand deaths, occupying the seventh place in the world in the number of cases and the second in the number of deaths[1,2].

Concerning the obstetric population, most cases in pregnant and postpartum women were described as mild or moderate cases of infection, with the need for care in an Intensive Care Unit (ICU) and/or ventilatory support globally, varying between 1% and 5%[3,4]. On the other hand, in the national scenario, there are around two million cases of infection and more than 2,000 deaths among pregnant women and postpartum women, of which 702 (15.1%) occurred in the postpartum period[4].

The postpartum or puerperium period begins after the placenta detaches, and its end is undetermined and individually variable, characterized by a period of changes and adaptations[5]. The repercussions generated by pregnancy and childbirth can be present in women up to a year after giving birth and promote changes in women's body, mind and social aspects, making

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them susceptible to the emergence of problems during this period[5], including emotional and psychological problems.

When experiencing the puerperium, women enter a new experience that can affect their quality of life, with frequent symptoms such as tiredness, fatigue, loss of libido, sleep disorders, vulnerability and emotional instability, and adaptations and adjustments to breastfeeding until it is optimally established[6], capable of causing great emotional lability.

In addition to the vulnerability caused by the experience of the postpartum period, there were concerns about COVID-19 and its complications, with the emergence or exacerbation of emotional and psychological symptoms, including the exacerbation of symptoms such as anxiety and depression[7].

A study found that women who gave birth during the COVID-19 pandemic were twice as likely to develop symptoms of depression[8]. The onset of symptoms of postpartum depression is multifactorial, but the COVID-19 pandemic may have contributed to the increase in this diagnosis during the period[9].

Due to the intense physiological and emotional changes of the pregnancy-puerperal cycle, one in five women experience symptoms of depression[10]. However, a multicenter study indicated an increase in symptoms of anxiety in the postpartum period experienced during the pandemic, reaching rates higher than 26%, and the rates were associated with the woman's country of residence, with a higher prevalence in Brazil and Chile[11].

It is worth noting that studies show that changes in maternal mental health have an impact on both the well-being and health of the woman herself, but also have important impacts on child development[10-11].

Due to the magnitude of COVID-19 and its possible impacts and contributions to the increase in maternal mental health changes in the postpartum period, in addition to the possible harm these changes may have on maternal health and child development, this study is justified, which seeks to identify the prevalence of these changes as well as factors associated with them.

The study's guiding question was: what is the prevalence of symptoms of postpartum depression and anxiety in women who experienced the postpartum period during the pandemic and what factors are associated with these changes?

Thus, this study aimed to identify the presence of symptoms of postpartum depression, anxiety and associated factors in women who had children during the COVID-19 pandemic.

METHOD

This is a cross-sectional study, carried out in accordance with the STrengthening the Reporting of OBservational studies in Epidemiology (STROBE) recommendations[12] and using the Checklist for Reporting Results of Internet E-Surveys (CHERRIES)[13]. The study setting was the virtual (online) environment of the social networks of an extension project, whose collection took place between August 2021 and January 2022.

To put this into context, in mid-July 2020, a group of researchers conducted review studies on the impact of COVID-19 on pregnancy, childbirth, and the postpartum period. In early November 2020, this group decided to bring together members of the student body (academics and graduate students) from the two partner universities that originated the extension project. The social networks Instagram® and Facebook®, a product of the extension group, feature posts based on scientific evidence, with clear, accessible, and illustrated language, but with reference to the evidence used in text preparation. The account, with 230 posts on Instagram® and Facebook®, has reached more than 3,000 followers and currently has around 2,500 subscribers on both networks.

The sample was convenience-based, not probabilistic, and the invitation link for the study was made available on these social networks. The consent form and the form built on Google Forms® were made available through the link provided, and all participants who met the criteria within the period established for data collection were included.

The inclusion criteria were women who were between the 30th and 40th day postpartum, who had access to the internet, were over 18 years old, literate and who filled out an online Google Forms® form after consenting to participate. The choice of the puerperal period was made due to the indication of application of the test suggestive of depressive symptoms, which should be carried out

after 30 days, when the differential diagnosis of mental health changes and hormonal changes caused by the puerperium itself is made[14-16].

Exclusion criteria included forms that did not have complete information on the variables of interest (depressive and symptoms of anxiety), which were excluded from the analysis. It should be noted that no participant was excluded, as all forms were completed completely.

The form, part of a larger study, was divided into sections. When women agreed to participate in the study, they were directed to a questionnaire with sociodemographic data (age, race, whether they lived with a partner, occupation, state of residence, and health system used - supplementary or Brazilian Health System). Subsequently, the respondent marked the option of pregnant or postpartum and, in these cases, continued to the second questionnaire, indicating clinical and obstetric data (number of pregnancies, previous diseases or diseases acquired during pregnancy). Afterwards, they were asked whether they had been infected with COVID-19 and, if they answered yes, they were directed to an additional form about the disease. At the end, if the participant declared that they were in the postpartum period, they were asked about their birth data, time since postpartum, whether between 30 and 40 days, and then they were directed to answer the forms that assessed symptoms of anxiety and depression.

The dependent variable of this study was the presence of symptoms indicative of postpartum depression, and independent variables were sociodemographic, clinical and obstetric variables, including those related to COVID-19 infection. It is noteworthy that the script with variables of interest was submitted to apparent and content assessment by three experts on the subject.

To identify symptoms of postpartum depression, the Edinburgh Postnatal Depression Scale was used. The scale is internationally validated, self-administered, translated into Brazilian Portuguese, consisting of ten items, and aims to measure the presence and intensity of depressive symptoms in the postpartum period, with its own syntax. The cut-off point for screening purposes for postpartum depression is considered to be a sum of more than ten points, with a sensitivity of 83.8% and a specificity of 74.7%[14-16].

The Generalized Anxiety Disorder 7 (GAD 7) scale was used to identify symptoms of anxiety. It is a questionnaire consisting of seven questions, with its own syntax. A total of five to nine answers indicates symptoms of mild anxiety, ten to 14 points indicates moderate anxiety, and 15 or more indicates severe anxiety. The questionnaire is internationally validated, and aims to identify the presence of generalized symptoms of anxiety. The validated instrument is indicated in the literature with sensitivity and specificity above 80%[17].

The data collected through Google Forms® were imported into a Microsoft Excel® spreadsheet and then into the Statistical Package for the Social Sciences version 23.0. Chi-square and Fisher's exact tests were applied, considering a significance level of 5%. The prevalence ratios and respective 95% confidence intervals were calculated. Multiple analysis was applied using Poisson regression, with robust variance, including variables with a p-value <0.20 in the bivariate analysis in the model.

It is important to note that all recommendations for quality and transparency of health research from the Enhancing the QUAlity and Transparency of Health Research (EQUATOR) Network were followed in the execution of this study, respecting all ethical precepts provided in Brazil for research with human beings, including Resolution 466/2012[18] and the "Guidelines for research in a virtual environment" determined by the Brazilian National Commission for Research Ethics (In Portuguese, *Comissão Nacional de Ética em Pesquisa* - CONEP) in 2021. The project was approved by Opinion 4.649.652 of April 14, 2021, contemplated as an objective contained in the larger approved project entitled "Birth and COVID-19 Survey".

It is worth noting that, after changes in the scores of both scales were detected, the women were contacted via the email address provided and contact was made and guidance was given to them to seek psychological support. All of those who received guidance sought support, reporting the follow-up to the researchers via email.

RESULTS

Sample characterization

The study included 50 women who were

between 30 and 40 days postpartum, whose ages ranged from 19 to 42, with an average of 31.6 ± 5.9 years. The majority declared themselves to be white (66%), married (68%), with more than a college degree (56%), engaged in paid work activities (84%), residing in the Southeast region (68%) and having health insurance (86%), although 58% used the Brazilian Health System.

The majority were primiparous (55%), did not have any type of previous chronic disease (74%), with a higher frequency of description of obesity (46%), and did not develop any disease during pregnancy (86%). Moreover, four reported gestational diabetes, and two, hypertensive syndromes of pregnancy.

Thus, 18 postpartum women (36%) reported COVID-19 infection; 28% were unable to specify in which gestational period it occurred; 28% of infections were detected in the third trimester; 17% of infections were detected in the second trimester; 11% of infections were detected in the first trimester; and one (5%) was diagnosed in the postpartum period. Of the 18 infected women, only one (5%) had to be hospitalized for treatment, but her condition did not progress seriously.

Concerning immunization against COVID-19, at the time of the survey, 60% had been vaccinated, however 34% did not answer the question. Among those who were vaccinated, 70% had received the complete schedule provided for Brazil at the time.

Most women underwent cesarean sections (64%), and of these, 19% were indicated as an emergency, but not justified by COVID-19. Most births occurred at term (96%), and newborns had an appropriate weight for gestational age (92%). Women had a companion present (96%), and all had skin-to-skin contact with their babies in the delivery room.

Five (10%) infants had complications, with two cases of jaundice requiring phototherapy, one case of hypoglycemia, one case of meconium aspiration, and one case of esophageal stenosis. Three infants were referred to the ICU due to respiratory distress, and two due to prematurity, none related to COVID-19, and all had negative C-reactive protein (CRP) results for COVID-19.

The majority of postpartum women (80%) classified childbirth as a positive experience, and the same percentage reported satisfaction with care and birth.

As for breastfeeding, 98% breastfed the newborn; 90% started breastfeeding in the hospital; 62% started breastfeeding within the first hour of life; and 92% continued breastfeeding the baby, with 65% maintaining exclusive breastfeeding.

The mean score obtained by applying the Edinburgh Postnatal Depression Scale was 9.9 ± 5.6 points; 50% of postpartum women had a score equal to or higher than the cut-off point (10 points); 24% reported that they often felt guilty and anxious/worried; and 20% reported being overwhelmed. Two postpartum women reported suicidal ideation at times, and they were advised to seek psychological support, which they complied with, with improvement after the recommendation. Table 1 presents the data on scale items.

Table 1. Absolute and relative frequencies of responses to items on Edinburgh Postnatal Depression Scale. Brazil, 2022

Edinburgh Postnatal Depression Scale items	n (%)
1- I have been able to laugh and see the funny side of things	
As much as I always could	24 (48)
Not quite so much now	23 (46)
Definitely not so much now	03 (06)
2- I have looked forward with enjoyment to things	
As much as I ever did	25 (50)
Rather less than I used to	20 (40)
Definitely less than I used to	03 (06)
Hardly at all	02 (04)
3 – I have blamed myself unnecessarily when things went wrong	
No, never	05 (10)
Not very often	10 (20)
Yes, some of the time	23 (46)
Yes, most of the time	12 (24)

4 – I have been anxious or worried for no good reason	
No, not at all	15 (30)
Hardly ever	09 (18)
Yes, sometimes	14 (28)
Yes, very often	12 (24)
5- I have felt scared or panicky for no good reason	
No, not at all	23 (46)
No, not much	09 (18)
Yes, sometimes	14 (28)
Yes, quite a lot	04 (08)
6- Things have been getting on top of me	
No, I have been coping as well as ever	05 (10)
No, most of the time I have coped quite well	13 (26)
Yes, sometimes I haven't been coping as well as usual	22 (44)
Yes, most of the time I haven't been able to cope at all	10 (20)
7 – I have been so unhappy that I have had difficulty sleeping	
No, not at all	33 (66)
Not very often	10 (20)
Yes, sometimes	06 (12)
Yes, most of the time	01 (02)
8 – I have felt sad or miserable	
No, not at all	18 (36)
Not very often	20 (40)
Yes, quite often	10 (20)
Yes, most of the time	02 (04)
9 – I have been so unhappy that I have been crying	
No, never	13 (26)
Only occasionally	28 (56)
Yes, most of the time	01 (02)
Yes, quite often	08 (16)
10 – The thought of harming myself has occurred to me	
Never	48 (96)
Hardly ever	01 (02)
Sometimes	01 (02)

Source: prepared by the authors.

The mean score obtained for assessing symptoms of anxiety was 7.9 ± 5.9 points; 34% had moderate or severe symptoms of anxiety; 20% responded that they felt nervous, anxious and irritable almost every day. Table 2 shows the responses regarding symptoms of anxiety.

Table 2. Absolute and relative frequencies of responses to items of Generalized Anxiety Disorder – 7, Brazil, 2022

Generalized Anxiety Disorder Items – 7	n (%)
1- Feeling nervous, anxious or on edge	
Nearly every day	10 (20)
Several days	26 (52)
More than half the days	04 (08)
Not at all	10 (20)
2- Not being able to stop or control worrying	
Nearly every day	07 (14)
Several days	18 (36)
More than half the days	08 (16)
Not at all	17 (34)
3- Worrying too much about different things	
Nearly every day	06 (12)

Several days	09 (18)
More than half the days	20 (40)
Not at all	15 (30)
4 – Trouble relaxing	
Nearly every day	09 (18)
Several days	21 (42)
More than half the days	06 (12)
Not at all	13 (26)
5 – Being so restless that it is hard to sit still	
Nearly every day	04 (08)
Several days	12 (24)
More than half the days	10 (20)
Not at all	24 (48)
6- Becoming easily annoyed or irritable	
Nearly every day	08 (16)
Several days	18 (36)
More than half the days	10 (20)
Not at all	14 (28)
7 – Feeling afraid as if something awful might happen	
Nearly every day	09 (18)
Several days	18 (36)
More than half the days	05 (10)
Not at all	18 (36)

Source: prepared by the authors.

In the bivariate analysis, an association was found between sociodemographic, clinical and obstetric variables and symptoms of postpartum depression, as shown in Table 3. A statistically significant association was observed with lower education (p = 0.010), symptoms of anxiety (p <0.001) and moderate or severe intensity of anxiety (p = 0.002).

Postpartum women with lower levels of education had a prevalence of symptoms of postpartum depression 3.21 times higher than women with higher education. Postpartum women with symptoms of anxiety had a prevalence 2.94 times higher than those without these symptoms, and when they had moderate or severe symptoms, the prevalence of symptoms of postpartum depression was 2.47 times higher.

Table 3. Association between sociodemographic, clinical and obstetric variables and symptoms of postpartum depression. Brazil, 2022

Variable	Symptoms of postpartum depression		PR	p-value*
	Yes (%)	**No (%)**		
Age under 35	16 (32.0)	13 (26.0)		
Over 35 years	09 (18.0)	12 (24.0)	0.777	0.567
White	16 (32.0)	09 (18.0)		
Not white	17 (34.0)	08 (16.0)	1.095	1.000
Lives with a partner	19 (38.0)	22 (44.0)	0.695	0.463
Does not live with a partner	06 (12.0)	03 (6.0)		
Education above higher education	10 (23.1)	18 (41.8)		
Below higher education				
	06 (27.1)	03 (7.0)	3.214	**0.010**
Has a paid job	19 (39.6)	23 (47.9)		
Does not have a paid job	05 (10.4)	01 (2.8)	3.286	0.188
Primiparous	13 (26.5)	14 (28.5)	0.963	1.000
Multiparous	11 (22.4)	11 (22.4)		
Have health insurance	19 (38.0)	24 (48.0)	0.516	0.098
No insurance	06 (12.0)	01 (2.0)		

Uses the SUS for care	16 (32.0)	13 (26.0)	1.287	0.567
Does not use	09 (18.0)	12 (24.0)		
Have a chronic illness	07 (14.0)	06 (12.0)	1.107	1.000
No	18 (36.0)	19 (38.0)		
Obese	05 (10.0)	01 (2.0)	1.803	0.189
Not obese	20 (40.0)	24 (48.0)		
Disease during pregnancy	05 (10.0)	01 (2.0)	1.833	0.189
Absence of disease	20 (40.0)	24 (48.0)		
Hypertensive syndrome during pregnancy	02 (4.0)	-	2.087	0.490
No increase in blood pressure	23 (46.0)	25 (50.0)		
Gestational diabetes	03 (6.0)	01 (2.0)	1.568	0.609
No glycemic alteration	22 (44.0)	24 (48.0)		
COVID-19 Immunization	17 (51.5)	13 (39.4)	1.700	0.579
Not immunized	01 (3.0)	02 (6.1)		
Complete immunization	13 (43.3)	08 (26.7)	1.393	0.443
Incomplete immunization	04 (13.3)	05 (16.7)		
COVID-19 diagnosis	07 (14.0)	11 (22.0)	0.691	0.377
Did not have COVID-19	18 (36.0)	14 (28.0)		
Vaginal delivery	10 (20.0)	08 (16.0)	0.837	0.769
Cesarean section	15 (30.0)	17 (34.0)		
Companion during childbirth	23 (46.0)	25 (50.0)	0.479	0.490
No companion	02 (4.0)	-		
Breastfeeding in the first hour	13 (26.5)	18 (36.7)		
Did not breastfeed in the delivery room	12 (24.5)	06 (12.2)	1.742	0.140
Positive experience with childbirth	17 (34.0)	23 (46.0)	0.809	0.074
Negative experience	08 (16.0)	02 (4.0)		
Satisfaction with care	18 (36.0)	22 (44.0)		
Dissatisfaction	07 (14.0)	03 (6.0)	1.833	0.289
Premature	01 (2.0)	01 (2.0)	1.000	1.000
Full term	24 (48.0)	24 (48.0)		
Newborn weight less than 2,500 grams	01 (2.1)	01 (2.1)	1.000	1.000
Weight greater than 2,500 grams	23 (27.9)	23 (47.9)		
Neonatal complication	04 (8.5)	01 (2.1)	1.768	0.188
No complications	19 (40.5)	23 (48.9)		
Newborn referred to neonatal ICU	02 (4.1)	01 (2.1)	1.333	1.000
Rooming-in	23 (46.9)	23 (46.9)		
Initiation of breastfeeding in the hospital	21 (42.9)	24 (49.0)	0.467	0.110
Initiation of breastfeeding after discharge	04 (8.1)	-		
Exclusive breastfeeding	14 (31.8)	16 (36.4)	1.867	0.195
Mixed breastfeeding	10 (22.7)	04 (9.1)		
Absence of anxiety	04 (8.0)	17 (34.0)		
Anxious symptoms	21 (42.0)	08 (16.0)	2.935	**<0.001**
Moderate/severe anxiety	14 (38.0)	03 (6.0)	2.471	**<0.002**
Mild or absent symptoms	11 (22.0)	22 (44.0)		

* Chi-square and Fisher's exact tests; SUS – *Sistema Único de Saúde* (Brazilian Health System); ICU – Intensive Care Unit.
Source: prepared by the authors.

The variables with p-values <0.200 in the bivariate analysis were included in the robust Poisson regression model, namely: lower level of education (p = 0.010); not having a paid job (p = 0.188); having a health plan/insurance plan (p = 0.098); obesity (p = 0.189); illness during pregnancy (p = 0.189); not having breastfed in the delivery room (p = 0.140); not having initiated breastfeeding during admission (p = 0.110); mixed breastfeeding (p = 0.195); neonatal complication (p = 0.188); negative experience with childbirth (p = 0.074); symptoms of anxiety (p <0.001); and moderate/severe anxiety (p = 0.002). The variable having been infected with COVID-19 was

included in the model, as it is a variable of interest to the study. Table 4 presents the standard error, confidence intervals (95%) and p-values.

Table 4. Robust Poisson regression model between symptoms of postpartum depression and sociodemographic, clinical and obstetric variables. Brazil, 2022

Variable	Standard error	95% CI	p-value
Lower level of education	0.106	(-0.109) – 0.306	0.353
Not engaged in paid work	0.141	(-0.190) – 0.363	0.540
Having a health insurance plan/insurance plan	0.192	(-0.320) – 0.433	0.770
Obesity	0.088	(- 0.607) - (-0.263)	**<0.001**
Gestational illness	0.152	(-0.382) – 0.215	0.584
COVID-19 infection	0.064	(-0.075) – 0.176	0.428
Not having breastfed in the first hour	0.107	(-0.160) – 0.261	0.640
Not having initiated breastfeeding during hospitalization	0.177	(-0.183) – 0.511	0.353
In mixed breastfeeding	0.795	0.227 – 0.797	0.372
Negative experience with childbirth	0.115	(-0.032) – 0.418	0.093
Neonatal complications	0.129	(-0.047) – 0.035	0.091
Symptoms of anxiety	0.888	(-0.111) – 0.237	0.480
Moderate/severe anxiety	0.133	(-0.491) – 0.031	0.085

Source: prepared by the authors.

Only the obesity variable justified the presence of symptoms of postpartum depression (p <0.001).

DISCUSSION

The results showed that half of postpartum women had symptoms of depression and 34% had moderate or severe anxiety.

There was a wide variation in the frequency of mental health changes in the postpartum period during the pandemic, with lower rates of postpartum depression (10.7%), reported in a study carried out in Japan[19], and higher scores (47.2%) in a sample of Brazilian postpartum women[20]. The reported rates of depressive symptoms in this study were higher than those in studies carried out in a Brazilian sample[20] and in southeastern Brazil (38.8%[21]), as well as in international studies carried out in Japan (10.7% to 15.4%[19]), the United States (17.7%[22] and 18.1%[23]), Canada (35.2%[24]), China (39.3%[25]) and the United Kingdom (43%[26]), as well as the prevalence reported in meta-analyses on postpartum depression during the pandemic, which showed an average of 17%[24] to 28%[11].

In relation to symptoms of anxiety, a wide variation in occurrence was identified in postpartum women during the postpartum period, being detected in 26.6% in a multicenter sample[20] and in 61% of English postpartum women[26]. Thus, the result of this study is within the indices found globally, with the following frequencies reported: 31.4% in Canada[24]; 56.3% in China[25];

and 61% in the United Kingdom[26].

Even with rates lower than those reported in the study, studies have shown a significant increase in cases of postpartum depression during the pandemic period[20,24], as well as an increase in anxiety during the postpartum period[20,24], indicating the influence of the pandemic on maternal mental health.

Obesity explained depressive symptoms in postpartum women in the study based on Poisson regression. Postpartum depression is a complex and multifactorial problem, but obesity is considered a relevant risk factor for its occurrence, as already reported in quantitative and meta-analysis studies[27-28]. This variable demonstrates that the perception of self-image disorders can pose risks to postpartum women's psychological balance, due to the search for the perfect body, so widespread in social media and which can generate intense psychological suffering.

It is also important to emphasize the complexity of the postpartum period and its contribution to the maternal mental burden. A study showed that the focus of care in the postpartum period is limited to care for newborns' health and well-being, and does not encompass postpartum women's needs and particularities. Thus, they identify the discrepant divergence between prenatal care that they define as systematized care and the abandonment experienced to which they summarize puerperal

care[29]. Given this, it is necessary to rethink postpartum care, focusing on women and their mental health.

Finally, a Belgian study[30] and a multicenter study[23], which assessed mental health in the postpartum period, with a similar methodology and online data collection, as in the present study, highlighted the sample characteristics as a limitation, as the majority of women declared themselves to be white[30], lived with a partner and had a high level of education, in addition to mentioning that the responses were based on self-reports[23,30]. These same limitations were present in the study, as well as the small sample size, and like the authors, it was pointed out that they compromise the generalization of the results, as they do not represent postpartum women in vulnerable conditions.

It is worth noting that, in the present study, questionnaires that indicate changes in mental health (postpartum depression and anxiety) were used. However, altered scores do not exempt the need for professional assessment for diagnosis and treatment, and the results of the questionnaires are indicative.

Another limitation present in this study is that there was no comparability of the previous period to identify the impact of the pandemic on the occurrence or justify the increase in cases of postpartum depression.

However, the study advances by pointing out the prevalence of depressive and anxious symptoms among postpartum women and possible associated factors, which may contribute to care practices and which is little explored in the literature.

CONCLUSION

High rates of symptoms of postpartum depression were identified in the study sample, affecting half of participants. Lower levels of education, presence of symptoms of anxiety, moderate or severe anxiety, and maternal obesity were associated with the occurrence. Similarly, high rates of moderate or severe anxiety were observed.

Thus, the results reinforce the relevance and urgency of healthcare professionals to adopt an attentive presence to symptoms of postpartum anxiety and depression, offering support and interventions in a timely manner, especially for women who are obese and have a lower level of education.

FATORES ASSOCIADOS A SINTOMAS DEPRESSIVOS E DE ANSIEDADE DURANTE O PUERPÉRIO NA PANDEMIA DE COVID-19

RESUMO

Objetivo: identificar a presença de sintomas de depressão pós-parto, ansiedade e fatores associados em mulheres que tiveram filhos durante a pandemia de COVID-19. **Método:** estudo transversal, a partir de inquérito *online*, realizado entre agosto de 2021 e janeiro de 2022, com mulheres, seguidoras de uma rede social, que se encontravam entre 30 e 40 dias pós-parto. Para identificar sintomas sugestivos de depressão pós-parto, utilizaram-se a *Edinburgh Postnatal Depression Scale* e a *Generalized Anxiety Disorder 7* para sintomas ansiosos. Na análise, foram aplicados os testes qui-quadrado e exato de Fisher, e variáveis com valor de p <0,20 foram inseridas no modelo de regressão de Poisson com variância robusta. **Resultados:** amostra foi composta por 50 puérperas, das quais 18 (36%) relataram infecção pela COVID-19. Obteve-se escore médio de 9,9±5,6 pontos na *Edinburgh Postnatal Depression Scale*, e 50% apresentavam sintomas de depressão pós-parto. Escore médio obtido para sintomas ansiosos foi de 7,9± 5,9 pontos, e 34% apresentavam ansiedade moderada ou severa. Na análise bivariada, verificou-se associação entre sintomas de depressão pós-parto e menor escolaridade (p= 0,010), sintomas ansiosos (p <0,001) e ansiedade em intensidade moderada ou severa (p = 0,002). A obesidade justificou os sintomas de depressão pós-parto (p <0,001) pelo modelo de regressão de Poisson com variância robusta. **Conclusão:** observaram-se alterações na saúde mental das puérperas durante a pandemia, e a obesidade foi associada a sintomas depressivos. Aponta-se a premência dos profissionais de saúde em atentar-se e intervir diante de sintomas de ansiedade e depressão pós-parto.

Palavras-chave: Ansiedade. COVID-19. Depressão pós-parto. Período pós-parto. Saúde mental

FACTORES ASOCIADOS A SÍNTOMAS DEPRESIVOS Y DE ANSIEDAD DURANTE EL PUERPERIO EN LA PANDEMIA DE COVID-19

RESUMEN

Objetivo: identificar la presencia de síntomas de depresión postparto, ansiedad y factores asociados en mujeres que tuvieron hijos durante la pandemia de COVID-19. **Método**: estudio transversal, a partir de una encuesta *online*, realizada entre agosto 2021 y enero 2022, con mujeres, seguidoras de una red social, que se encontraban entre 30 y 40 días postparto. Para identificar síntomas sugestivos de depresión postparto, se utilizaron la *Edinburgh Postnatal Depression Scale* y *Generalized Anxiety Disorder 7* para los síntomas ansiosos. En el análisis, se aplicaron las pruebas chi-cuadrado y exacta de Fisher, y variables con valor de p <0,20 fueron insertadas en el modelo de regresión de Poisson con varianza robusta. **Resultados**: la muestra estaba compuesta por 50 puérperas, de las cuales 18 (36%) informaron infección por COVID-19. Se obtuvo una puntuación media de 9,9±5,6 puntos en la *Edinburgh Postnatal Depression Scale*, y el 50% presentaba síntomas de depresión posparto. La puntuación media obtenida para los síntomas de ansiedad fue 7,9±5,9 puntos, y 34% presentaban ansiedad moderada o severa. En el análisis bivariado, se comprobó la asociación entre síntomas de depresión postparto y menor escolaridad (p= 0,010), síntomas ansiosos (p<0,001) y ansiedad de intensidad moderada o severa (p=0,002). La obesidad justificó los síntomas de depresión postparto (p <0,001) por el modelo de regresión de Poisson con varianza robusta. **Conclusión**: se observaron cambios en la salud mental de las puérperas durante la pandemia, y la obesidad fue asociada con síntomas depresivos. Se señala la premura de los profesionales de salud en atenerse e intervenir ante síntomas de ansiedad y depresión postparto.

Palabras clave: Ansiedad. COVID-19. Depresión postparto. Período postparto. Salud mental.

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