

## Feelings experienced during pregnancy and parturition in COVID-19 times

*Sentimentos vivenciados no gestar e no parir em tempos da Covid-19*

*Sentimientos experimentados durante el embarazo y el parto en tiempos de COVID-19*

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### ABSTRACT

**Objective:** to identify the feelings experienced during pregnancy and parturition in COVID-19 times. **Method:** a qualitative and interpretive study in the light of Symbolic Interactionism, developed at 12 postpartum hours with multiparous puerperal women having no comorbidities or perinatal complications and who underwent their pregnancy and parturition during the COVID-19 pandemic in a maternity hospital classified as for habitual risk in Mato Grosso do Sul, in 2021. A total of 30 interviews were conducted, comparing them by means of Kleinheksel's conventional content analysis. The research protocol was approved by a Research Ethics Committee. **Results:** the analysis gave rise to two categories: "*I lived in fear*" and "*Other feelings experienced*". In addition to fear, other negative feelings were detected in the women's experiences during pregnancy and parturition in COVID-19 times. **Final considerations:** fear of fear itself was present in the women's daily routine while seeking prenatal and parturition care, and even in their social interactions during the COVID-19 pandemic.

**Descriptors:** Pregnancy; Parturition; Coronavirus Infections; Expressed Emotion.

### RESUMO

**Objetivo:** identificar os sentimentos vivenciados no gestar e parir em tempos da Covid-19. **Método:** estudo qualitativo, interpretativo, à luz do interacionismo simbólico, realizado em 2021 com puérperas múltiplas com 12 horas pós-parto, sem comorbidades ou complicações perinatais, que gestaram e pariram durante a pandemia da Covid-19, em maternidade classificada como de risco habitual, no Mato Grosso do Sul. Foram realizadas 30 entrevistas, cotejadas por análise de conteúdo convencional de Kleinheksel. O protocolo de pesquisa foi aprovado por Comitê de Ética em Pesquisa. **Resultados:** a análise originou duas categorias: "*Eu vivia com medo*" e "*Outros sentimentos vivenciados*". Além do medo, verificaram-se outros sentimentos negativos nas experiências das mulheres durante a gestação e o parto em tempos de Covid-19. **Considerações finais:** o medo de medo esteve presente na rotina diária, durante a busca de cuidados pré-natais e parto e, até mesmo, nas interações sociais durante a pandemia da Covid-19 foram identificados.

**Descritores:** Gravidez; Parto; Infecções por Coronavírus; Emoções Manifestas.

### RESUMEN

**Objetivo:** identificar los sentimientos experimentados durante el embarazo y el parto en el contexto de la pandemia de COVID-19. **Método:** estudio cualitativo e interpretativo, basado en el interaccionismo simbólico, realizado en 2021 con mujeres múltiples en las primeras 12 horas del puerperio, sin comorbilidades ni complicaciones perinatales, que concibieron y dieron a luz durante la pandemia de COVID-19, en un hospital de maternidad clasificado como de bajo riesgo, en Mato Grosso do Sul. Se realizaron treinta entrevistas cotejadas a partir del análisis de contenido convencional de Kleinheksel. El protocolo de investigación fue aprobado por el Comité de Ética en Investigación. **Resultados:** el análisis arrojó dos categorías: "*Vivía con miedo*" y "*Otros sentimientos experimentados*". Además del miedo, se observaron otros sentimientos negativos en las experiencias de las mujeres durante el embarazo y el parto en el contexto de la pandemia de COVID-19. **Consideraciones finales:** el miedo al miedo mismo estuvo presente en las rutinas diarias, en la búsqueda de atención prenatal y el parto, e incluso en las interacciones sociales durante la pandemia de COVID-19.

**Descriptores:** Embarazo; Parto; Infecciones por Coronavirus; Emoción Expresada.

## INTRODUCTION

Responsible for causing the Severe Acute Respiratory Syndrome (SARS) and called SARS-CoV-2, the Type 2 Coronavirus was identified in Wuhan (China) in December 2019 and spread quickly around the country to then affect the entire world<sup>1</sup>, giving rise to the COVID-19 pandemic with significant respiratory system impairments. In this context, the World Health Organization (WHO) classified pregnant and puerperal women as risk groups for COVID-19 due to higher morbidity and mortality levels<sup>2,3</sup>.

Along with the high dissemination and mortality rates, this global outbreak stimulated different levels of mental health problems, causing insecurity, concern, fear, stress and anxiety perceptions<sup>4,5</sup>. Previous epidemics/pandemics suggest that family members (mainly mothers) can be at higher risk<sup>6</sup>. Pregnant women represent a vulnerable population

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group that experiences both physiological and hormonal alterations<sup>7</sup>. Perinatal mental health disorders can become more prevalent during an acute crisis period<sup>8</sup>.

During the pandemic, women had to deal with the uncertainties inherent to their own pregnancies, with closure of institutions and social contact restrictions<sup>9</sup>. The specific concerns about COVID-19 in relation to the potential effects of the disease on pregnancy, the possibility of mother-fetus transmission and the effect exerted by COVID-19 on fetuses, in addition to the chances for increased risks of contracting the disease or presenting complications, were also evidenced in this group<sup>10</sup>. Consequently, with the uncertainties made implicit, women felt helpless during the pregnancy and parturition periods, and many of them stated that the merry pregnancy event suddenly became a moment surrounded by fear and stress due to COVID-19<sup>11</sup>.

There were fewer prenatal appointments; the most common reasons for non-attendance in primary care and hospitals were fear of the infection and of the newborns' becoming infected, respectively<sup>12</sup>. Health infrastructures were overloaded, women were more prone to losing their jobs due to the pandemic when compared to men, and the closure of daycare facilities and schools generated stress and destabilization mainly in women, who oftentimes carry the weight of the duties inherent to childcare on their shoulders<sup>13</sup>. Pregnant and puerperal women presented higher risks of mental health problems; in sixty four countries, the female gender was affected by more intense depression, anxiety and post-traumatic stress symptoms than most of the general population during the pandemic<sup>14</sup>.

The pandemic exerted a negative effect on maternal care provision, noticing a reduction in family engagement and emotional and physical support, in addition to impaired care standards due to overloaded teams<sup>15</sup>. Social support and involvement in regular physical activity seem to be protection factors capable of mitigating the effects exerted by the pandemic on maternal mental health<sup>11</sup>. However, a reduction in social support has been identified due to the restrictions imposed by the pandemic<sup>16</sup>. It is for this reason that Telehealth models that include remote social support opportunities are seen as an alternative<sup>17</sup>. Women state that the pandemic triggered a profound sensation of loss regarding what their pregnancy and postpartum period should have been like<sup>16</sup>.

Given the changes imposed by the pandemic period for pregnancy and puerperium, it becomes necessary to reflect on pregnancy and parturition in the COVID-19 pandemic time. The Symbolic Interactionism (SI) theoretical framework values the meaning a given phenomenon has for each person in a specific context and aims at understanding the deepest dimension of their actions and interactions in the search for these meanings. From the SI perspective, "things (objects, human actions, institutions, ideas, others' activities in everyday life) acquire meaning for a person in their interaction with others and, as they see the object consciously, they reflect and think about it to then interpret it"<sup>18</sup>.

Consequently, SI allows understanding the meanings of the feelings experienced by women during pregnancy and parturition in COVID-19 times. The *symbol* (S), the *self* (self-awareness), the *mind* (where a subject understands the other), the *human action* (an active decision-making process) and the *interaction* (communication and interpretation) make these women create their own path<sup>18</sup>.

In order to overcome the challenges permeating this context, the objective of this study was to identify the feelings experienced during pregnancy and parturition in COVID-19 times.

## METHOD

This study has a qualitative and interpretive approach and was developed at a philanthropic maternity hospital classified as specialized in habitual risk pregnancies, of a philanthropic nature and located in the state of Mato Grosso do Sul. The institution has 143 beds: 26 in the Neonatal Intensive Care sector and 12 in the Semi-Intensive Care area.

The puerperal women were chosen for convenience and by means of the data described in the birth log. All immediate puerperal women in the wards were invited to take part in the study. The inclusion criteria for the puerperal women were as follows: being multiparous; having got pregnant after the beginning of the pandemic; having given birth in the maternity hospital under study; being aged at least 18 years old; showing good handling of the Portuguese language; and demonstrating due logical discourse to answer the questions proposed. The puerperal women excluded were those whose deliveries were assisted by the lead researcher (so that there were no conflicts of interests), those with some comorbidity or those that had their newborns hospitalized in the neonatal ICU and those whose newborns had been applied some neonatal resuscitation procedure or evolved to death, in addition to indigenous and *quilombola* puerperal women.

The data collection script was developed by the lead researcher and included questions that addressed sociodemographic aspects (age, race, marital status, housing conditions, schooling, paid work), information about the current pregnancy (planned pregnancy, type of pregnancy, health conditions or diseases diagnosed, COVID-19 symptoms during pregnancy and puerperium, COVID-19 diagnosis during pregnancy or puerperium) and guiding questions about the experience of undergoing pregnancy and parturition in the COVID-19 pandemic time, the pregnancy experience, changes

due to the pandemic, the experience of undergoing the prenatal period and parturition, feelings experienced, repercussions on mental health and coping strategies.

The instrument was forwarded for reading and analysis by two nurses specialized in Obstetrics that worked at other institutions in direct assistance to normal deliveries and tested with two puerperal women that were not selected for the study, with a need to adapt the guiding questions in the final format.

The interviews were conducted by the lead research alone, who had been duly trained a week before. Meeting the ethical and biosafety recommendations for conducting research studies involving human beings at this COVID-19 pandemic moment, the researcher conducted one interview at the time, maintaining the safe two-meter distance and providing the necessary Personal Protective Equipment (PPE) free of charge to each woman and 70% alcohol gel for hand hygiene.

The interviews were developed individually in the Rooming-In office. Each interview was recorded with the aid of a digital recording device. Data saturation was used to define the total study sample. At the end of each interview, the lead researcher transcribed the testimonies to subsequently perform the preliminary analysis. This stage consisted in thoroughly reading the content to then implement the subsequent data collection procedures. The analysis followed the premises set forth in the conventional content analysis technique proposed in Kleinheksel et al<sup>19</sup>. The data were analyzed in three stages: the data were skimmed in the first one, evidencing and quantifying the words or content from the text. These word repetitions were flagged to understand their contextual use, defining the main topics found in the puerperal women's testimonies.

The participants provided their written consent. The data were collected through in-depth interviews that were conducted individually at the maternity hospital during the postpartum period between June and August 2021, after issuance of a favorable opinion by the Research Ethics Committee and once each parturient had agreed to take part in the study by reading and signing a Free and Informed Consent Form (FICF).

## RESULTS

The study participants were 30 multiparous puerperal women aged between 18 and 41 years old, living in the state of Mato Grosso do Sul and who got pregnant and gave birth after the beginning of the COVID-19 pandemic at a maternity hospital classified as specialized in habitual risk pregnancies. Most of them self-declared as brown-skinned (50%), were in stable unions (56.7%) and had Complete High School (46.7%) and no paid job (73.3%). The majority had unplanned pregnancies (70%), attended between one and five prenatal appointments (53.3%) and had a companion at the parturition moment (60%). During pregnancy, 90% did not present COVID-19 symptoms, and the reports were mild among those that did have symptoms such as sore throat, coughing, headache and taste loss.

It was possible to identify the feelings experienced during pregnancy and parturition in COVID-19 times from the interaction with elements, *mind*, *self*, things, symbols, human actions and symbolic interactions, which contributed to various interactions and resignification instances of pregnancy and parturition based on this new scenario, after the beginning of the aforementioned pandemic. If the setting had not included the challenges imposed by the COVID-19 pandemic, the women's feelings would have been focused on celebrating the arrival of their newborns and the parturition moment; however, they were in distress due to their interactions with things and symbols after the pandemic scenario, with feelings experienced in a negative way and fear as the most frequently felt sensation, which triggered other feelings such as concern, frustration, sadness, anxiety, loneliness, disappointment and depression.

It was possible to extract the feelings of the women that underwent pregnancy and parturition. "Fear" was one of the most repeated words, reported in its various facets and followed by other feelings experienced by the women during this period. The second stage consisted in taking notes from the first impressions, in generating relevant thoughts and in performing a data collection pre-analysis by means of the pre-coding and keywords process. The pre-codes or keywords emerged from an in-depth reading of each interview. In the third stage (with the interviews already pre-coded), the pre-codes were read to regroup them. Thus, the following categories emerged, expressing the pregnancy and parturition experience during the COVID-19 pandemic: (1) I lived in fear during pregnancy and parturition in the COVID-19 pandemic time; and (2) Other feelings experienced during pregnancy and parturition in the COVID-19 pandemic time.

### Category 1: I lived in fear during pregnancy and parturition in the COVID-19 pandemic time

The feeling that most stood out in the testimonies provided by the women who experienced pregnancy and parturition was fear. The women living in this pandemic context reported being afraid while going to work, of crowds in a simple row at bus stations, and of work activities. This stated fear was about contracting the disease and passing it on to the fetus. During pregnancy, fear modified people's daily routines in several ways. These changes were related to going out of the house to buy layette and to going to the supermarket and to the pharmacy; fear was also present in leisure activities such as going out for a stroll and meeting other people outside the house.

*Then it came the issue of the station rows, I had to stand up waiting for the bus and fear was always higher out to the service and from the service back home, due to the crowds I had to go through when leaving the service and at the time I used to go out of my house, I was in customer service at my job and I was very afraid. (I1)*

*Fear of catching the disease while pregnant, right? That's what I was afraid of and I was still working in the convenience store, I was very afraid of COVID there. (I13)*

*You're afraid all day long, of going shopping for anything, coming back with COVID and even infecting your whole family, right? (I9)*

*You go out to buy layette [...] it's no use going around in a shop, just like that thing you like about seeing one thing, seeing another, you don't have that anymore, because you're nervous about everything, you're afraid of everything. (I12)*

For being a phase marked by deeper vulnerability, pregnancy during the COVID-19 pandemic can contribute to experiencing all of the facets inherent to fear. The women's fear was also about developing depression, as they were afraid of being pregnant during this pandemic. They stated being afraid of contracting COVID during this period and passing it on to their children, of evolving to a possible premature birth or even of losing their newborns or of dying and leaving their children alone.

*Fear of losing my baby, of catching COVID and losing the baby, or of having a premature birth. (I2)*

*I have five children at home, then what I was most afraid of was catching COVID and passing it on to them, that was my biggest fear... (I3)*

*Fear of catching COVID, passing something on to my baby, or even having an early delivery and that I was going to die and leave my daughter alone in the world. (I24)*

It was also possible to notice feelings of fear while seeking care during the pregnancy cycle, when attending prenatal appointments or even while waiting to be served by the professionals. Fear made some women initiate their prenatal care late in time and even not attend their appointments, oftentimes motivated by the risk of contracting COVID-19. In the pandemic context, these women were instructed to await their appointments along with other people, in corridors that were always crowded. We collected reports about fear of being treated during the prenatal period by the same physicians that were in charge of COVID-19 patients, reinforcing that, even on the days designed as priority for the care of pregnant women, COVID-19 patients were always prioritized, generating feelings of abandonment and frustration. Another situation faced by the pregnant women during the prenatal period was the tough decision to adhere to immunization or not.

*Anyway, I said I was afraid of going at first, I attended my prenatal appointments when I was already five months pregnant and I started late, I was afraid of going to the health center. (I3)*

*I was afraid, afraid of going to the health center, of catching COVID, cos' they also treated COVID patients where I was served, then I was afraid. (I24)*

*What could I do? I had to get vaccinated, I ended up taking the Coronavac, I was somewhat afraid that it'd have some side effect, but I felt nothing. (I21)*

*I was very afraid as well, I even didn't take the COVID injection also for fear of it triggering some problem in my child. (I23)*

In the care context, it was also possible to identify fear while seeking in-hospital parturition services. Home birth was even considered in some cases due to fear of contracting COVID-19. This fright was related to the possibility of something happening to the neonate after its birth and to fear that it became infected, a criterion chosen by the women when seeking care at this maternity hospital, as this service was not a COVID-19 reference center and only served habitual risk pregnant women. Also in the in-hospital care scope, fear was manifested in the possibility that women would not have a companion during parturition, that they would have to undergo this parturition phase alone. What prevailed was lack of information about companions during delivery, which would be linked to them buying N95 masks because the maternity hospital did not provide them, in addition to not informing that having a companion was regulated by law and that the women had this same right in the restriction and isolation scenario imposed by COVID-19.

*I told my husband, "you don't let anyone take her, you put her on the scale", then I was afraid of catching COVID, of coming back from the hospital and infect someone. (I4)*

*I wanted my delivery at home, I had even talked to my husband about that, which is a feeling of fear. (I9)*

*Of being alone because of COVID, right? Because if you have COVID, you can't have a companion... (I2)*

*When my baby was born my blood pressure rose to eighteen because I was afraid, because I felt alone, my mum didn't enter with me. (I3)*

*You want the father to be there too, it wasn't possible due to the mask, I didn't know he had to have one because it was my first time here, then I didn't know and it was really bad. (I17)*

*I was very anxious, actually nervous, here alone, right? More worried, anxious about him coming, and he wouldn't show up. (I26)*

No reports about fear of COVID-19 during the immediate postpartum period were evidenced in the interviews, as there were changes in these women's hospitalization and discharge routines due to the pandemic: they were discharged early in time. The fear nuances were varied and intensified by the pandemic.

## Category 2: Other feelings experienced during pregnancy and parturition in the COVID-19 pandemic time

Other feelings experienced during this period stood out in this category, namely: concern, frustration, sadness, panic, intimidation, loneliness, anxiety, nervousness and even feelings of disrespect, depression and disappointment.

When discussing the feeling of concern (as was the case with fear), it was possible to notice various phases, such as concern about routines that were usual until then, like watching TV. At that time, the simple action of watching TV generated concern when assisting to news programs, as they made emphasis on news related to pregnant women that contracted COVID-19 and evolved to death. Another concern was related to waiting in halls at the health centers, where they were exposed to entering into contact with other people while waiting for their prenatal appointments. They were also concerned about the risk of contracting COVID-19 in the hospital at the parturition time, or even during the postpartum period and in the puerperium and childcare appointments. Feelings of disrespect were also oftentimes identified because there were no physicians available for prenatal monitoring continuity, or even for not prioritizing their assistance.

*That's what worried me the most, I watched a lot of news about pregnant mothers with their babies born already with COVID and hospitalized [...] You don't know who has it and who doesn't, then I worry, but even so I attended my prenatal, nothing happened, but I was worried about that thing of being around a lot of people without knowing if any of them had already caught it or not, right? (I3)*

*Because I think like this now: 'Darn, am I going to be able to schedule an appointment for my daughter, her first consultation, my first one after pregnancy?', that's what worries me now. (I4)*

*I felt disrespected, because I think they have to have a doctor in a basic unit, I think they should've had another doctor to keep care going, not only for me as a pregnant woman but also with the others too, because I wasn't the only one left unserved. (I24)*

The women also felt frustrated when discovering that they were pregnant during the pandemic, reported as a moment marked by financial hardships due to the difficulty not losing their jobs, which contributed to family separation. They were also frustrated for not being able to attend prenatal follow-up appointments and by lack of medications (such as folic acid and ferrous sulfate) in the pharmacies provided by the government. Another feeling reported was panic while watching news programs, or even at the possibility of contracting COVID-19 and passing it on to their newborns; they felt panic about dying due to this disease, reason why they underwent their pregnancies secluded.

*It was my birthday when I discovered that I was pregnant, and it frustrated me a little because it was in the midst of this pandemic and I was really withdrawn, I ended up losing my job and then things got complicated, we ended up having to leave our rented house, I went to live with my mum, and my husband went to live with his. (I11)*

*It was frustrating, in this case the government should've had this medication, which was for pregnant women in fact, and we had no access to it, then it was frustrating. (I24)*

Sadness was present in most of the reports. The women were restricted for not being able to schedule their prenatal appointments due to absence of medical professionals, for not having a companion at the parturition time due to not having the money to buy an N95 mask and, in other cases, for not being informed that they could have a companion if this person had an N95 mask. Another reason for sadness was having lost family members due to COVID-19 and not being able to attend their wake or say goodbye, as well as distancing from relatives during pregnancy, not having the possibility of throwing a Baby Shower and the fact that a Diaper Raffle cannot substitute the emotion of a Baby Shower.

*That really affected me, because I wanted to be able to be there with everyone, right? and I couldn't, and the family is important to offer support, right? Then I was sad. (I10)*

*I ended up losing my dearest stepfather, I couldn't go to his burial, I couldn't go to his wake, because I was pregnant and it was very sad. (I11)*

*It wasn't possible to throw the Baby Shower, the Diaper Raffle, nothing, as crowds were not allowed, then that made me really sad, because I was very happy, cheerful, then this pandemic came and put an end to everything, right? (I17)*

*I had no doctor, I understand it's because of this pandemic too, right? But I felt really bad, I was sad, but what could I do, right? (I19)*

The women faced frightening moments when facing various situations and for being pregnant during a pandemic; therefore, this feeling was described through reports of fear when discovering that they were pregnant. They were afraid

of having to spend time close to other people while waiting for their prenatal appointments, because they knew about the contagion risk and, oftentimes, of not being able to be vaccinated.

*As for this thing, this disease, this virus there, I was afraid because of it, right? of getting pregnant right now and I was afraid. (I19)*

*Ah, you're always with that thought in your head, ah you have to take care of yourself; otherwise, you your child will catch it, I was somewhat afraid, right? (I21)*

*Because many people were dying, children too and I couldn't get the COVID vaccine, then I was afraid because of that, because what if I catch COVID and harm my child too, right? Then I was afraid because of that. (I29)*

Even knowing about the importance of complying with social distancing and isolation, it was possible to identify that the women felt alone and in agony during pregnancy and parturition for not being allowed to go out of their house or having contact with other people; in addition, feelings of depression were reported in extreme cases and, oftentimes, of disappointment for not being able to have a companion in the consultations.

*I had to stay secluded, very depressive, then I couldn't see my friends, I couldn't see my dad, I almost couldn't spend time with my husband and I was sad, because I had to stay home, stuck and withdrawn. (I11)*

*I believed that, for being in a pandemic and that whole thing, I wasn't going to have my companion and that everyone would be alone and it ended up like what I saw, everybody had a companion and I ended up feeling alone. (I12)*

*It was like dying because I'm used to working, I live at an accelerated pace, right? Darn, I felt really bad about staying home. (I19)*

*I felt very lonely, because my husband worked, I was a housewife and I felt lonely, I had nobody to talk to, I had no way of going to another person's house because of the pandemic, it was complicated. (I24)*

## DISCUSSION

Symbolic Interactionism enabled describing the main feelings experienced by the participating women during pregnancy and parturition. Each individual is considered a social actor capable of interacting with themselves and with the world where they live, and the women that took part in this study experienced the COVID-19 pandemic (something new and unexpected) and were social actresses that underwent changes in their way of interacting with people and the world<sup>18,20</sup>.

The pregnant women that gave birth experienced the varied facets of fear in their everyday life. Other feelings emerged in addition to fear, namely: concern, frustration, sadness, panic, intimidation, loneliness, agony, anxiety, nervousness, fright, sorrow, shock, disrespect, depression and disappointment, which were common among women during the pandemic. Most of these results have also been identified in other population groups<sup>6,21,22</sup>. However, according to previous studies, women in the pregnancy-puerperal cycle around the world experienced deeper psychological distress during the COVID-19 pandemic<sup>23,24</sup>. Probably, this is the result of the economic, social and health-related complications that affect such cycle, as well as of the uncertainties about the effects of COVID-19 on fetuses<sup>25</sup>.

Research studies developed in Italy, Jordan and Indonesia indicated that puerperal women were concerned and afraid about contracting COVID-19 and passing it on to the fetus<sup>9,25,26</sup>. In addition to that, this study contributed advances in terms of feelings, as these women were multiparous and stated that their fear was more intense since, beyond being afraid of losing their child, they also felt fright and panic of dying and leaving their other children alone. Mothers with more children presented deeper psychological distress<sup>7</sup>. A study conducted with participants from 27 countries identified that the risks for loved ones were positively related to increased fear of COVID-19<sup>27</sup>. Pregnant and puerperal women centralized fear mainly on the consequences around their newborns' health, therefore focusing less on themselves<sup>16,28</sup>.

The puerperal women described that the pandemic unexpectedly changed the course of their life, expressing fear and concern when going out of the house to go to the supermarket or to the pharmacy, fear of going out for a stroll or to dine and even when having to buy layette, becoming hostages to their own fright. Recent research studies conducted with the United Kingdom population show that people were experiencing a psychological conflict between the wish to stay safe and the desire to lead a normal and pleasurable life<sup>29</sup>. As in the case of this study and even knowing about the importance of implementing social isolation, the women felt more lonely and in agony during pregnancy and parturition<sup>28</sup>. Pregnant women tend to further restrict their life and suffer the effects (mostly negative for their mental health) more, which was the cross-sectional topic in this study, also evidencing fear as a key factor (automatic motivation) to adhere to the Public Health pandemic guidelines<sup>30</sup>.

Also regarding changes in everyday routines, feelings of concern, panic and fear were observed in the mothers after the beginning of the pandemic, for example, when watching TV and listening to alerts and news about more intensive precautions, restrictions and an increasing number of COVID-19 cases around the world. In Jordan, the official news and social media coverage also played an important role in intensifying pregnant women's fears<sup>9</sup>. Although fear of the pandemic may activate protective responses, exaggerated fear of it can be more harmful than the disease itself<sup>31</sup>. Considering this, the way in which the pandemic is conveyed in the communication media and the words chosen in the news coverage can mitigate or exacerbate people's perceptions and responses<sup>32</sup>.

During this pandemic, women felt less enthusiastic around pregnancy<sup>33</sup>, and discovering it in this context triggered various negative feelings such as frustration, fright, intimidation, nervousness, anxiety and shock. Diverse evidence shows that maternal psychological distress is a risk factor for adverse outcomes in mother-newborn dyads, including higher risk of recurrent respiratory infections in the children<sup>34</sup>. The expectations about what pregnancy and even puerperium could have been like are frustrated and there is a feeling of loss for not being able to access important support from the family or to attend regular ceremonies and rituals during this period<sup>15</sup>. The participants included in our study implemented alternatives such as diaper raffles to substitute ceremonies and rituals like baby showers; however, these options failed to replace the moving moments inherent to these meetings with loved ones.

The working pregnant women that took part in the study stated being afraid while commuting to work, as they felt insecure due to crowds in the rows at bus stations and in public transportation services. In Canada, the participants included in a qualitative study described feelings of guilt for working in a risky physical environment; those not working in the health area felt the pressure to stop working and some of them were deeply affected from the financial point of view due to staff reductions<sup>15</sup>. The women included in this research reported losing their jobs, in addition to the financial impacts that drove family destructuring; they also experienced feelings of frustration. The literature reveals that women were more prone to sadness when they lost their jobs during the COVID-19 crisis<sup>13</sup>.

A qualitative study conducted in Turkey identified that pregnant women had the right to flexible working hours or to administrative leave periods, which seems to have contributed to balanced eating and to better focus on self-care and mental health<sup>35</sup>. In the United Kingdom, some pregnant women that were not able to work from their homes opted to resign from their jobs or to take anticipated medical or maternity leaves, as they preferred to worry about the financial consequences to putting themselves at risk, although leave and financial support schemes eased those decisions<sup>30</sup>. Although Public Health initiatives are implemented to preserve these people's safety, the social and emotional costs should be considered and assessed<sup>36</sup>.

In consonance with our study, other references in the literature identify that women emphasize the feelings of fear and concern when attending their prenatal control appointments, and that fear oftentimes stimulated late prenatal care initiation, its cancellation and even not attending the appointments<sup>36,38</sup>. The research study also contributed diverse evidence that the pregnant women's fear was linked to the fact of being served by the same physicians that provided care to COVID-19 patients. A qualitative study showed that, even when presenting complications during pregnancy, women were reluctant to seeking health care due to fear of contracting the infection and passing it on to the fetus<sup>9</sup>. A recent research study showed that female patients were open to alternative prenatal assistance models, including remote monitoring, as they oftentimes avoided accessing health services in person for fear of the COVID-19 infection<sup>39</sup>.

The biggest consternation of all the women included in a mixed-methods research study was frustration given lack of access to services and delays in appointments and tests, in addition to reporting that those delays and cancellations increased their anxiety levels<sup>40</sup>. This study contributed more detailed information about the feelings experienced during the prenatal period beyond those reported, such as sadness, disrespect and sorrow for not being able to schedule prenatal appointments and the sensation that people with COVID-19 were prioritized. The women also felt frustrated at lack of medications (folic acid and ferrous sulfate) in the pharmacies provided by the government, in addition to the higher number of people waiting in the halls of prenatal clinics<sup>28</sup>. That situation was also identified in our study and is described as a touching moment surrounded by concern due to the risk of contracting COVID-19.

With the COVID-19 pandemic in course, a descriptive and qualitative study revealed that interventions with technological approaches easing assistance to the pregnancy-puerperal cycle are fundamental to monitor fetal well-being<sup>24</sup>, as prenatal care has been negatively affected by the pandemic because women sought health services less in person, normally motivated by the COVID-19 infection risk<sup>13</sup>.

A recent research study conducted with pregnant women in Italy evaluated the distribution of basic emotions, physical experiences and psychological constructions related to parturition expectations before and after the COVID-19

pandemic, identifying that the participants were more prone to seeing parturition with joy before COVID-19, whereas fear was the prevailing feeling after the pandemic (98%)<sup>41</sup>. Women were concerned both about their own and their fetus' health and stated being afraid of contracting COVID-19 or of their infants becoming infected after being born in hospitals<sup>28</sup>. A transnational study with an analytical population comprised by 6,894 women living in 64 countries identified that many of the most usually reported concerns were related to parturition, with prohibition of family visits after parturition (59%), the possibility of neonates contracting COVID-19 (59%), absence of a support person during parturition (55%) and changes in the parturition plan (41%) standing out<sup>14</sup>.

In line with the result of this research, the feeling of fear of giving birth without a companion was identified<sup>9</sup>. A study shows that support from loved ones mediates fear at the parturition time<sup>42</sup>. In addition to fear, sadness was also present in our research in the case of parturient women that had no companion at the delivery time, most of the times justified for not having N95 masks or for lack of information regarding the pre-requisites for companions to enter the delivery room. A study with a mixed-methods approach identified that unclear communication regarding prenatal care information from hospitals was a considerable frustration source for most of the women<sup>40</sup>. Communicating the reasons for the changes to the patients with antecedents can promote satisfaction with the care provided<sup>16</sup>.

Our study showed that some mothers even considered the home birth option due to fear of in-hospital parturition services. According to a qualitative study conducted with women living in the county of Kilifi (Kenya), there was a rapid increase in the number of women that had their deliveries assisted by midwives at their homes due to several factors including fear of hospital-acquired infections. In this context, a reduction in the availability of Primary Care services was also verified as for deliveries in health units<sup>43</sup>.

Symbols are what we see, how we interpret things, our world is constructed through them and our reality is symbolic; it is through symbolic interaction that we assign meanings and make decisions as for what we will do. Before the pandemic, fear of parturition was associated with physical pain during labor, with delivery risk, with the emotion of finally seeing the child, in addition to joy, happiness, serenity and a sensation of impatience. After the beginning of the pandemic, the changes in response to fear of parturition were correlated to sadness, loneliness, anguish, inability and isolation sensations<sup>41</sup>.

As already reported, the pandemic and restriction measures such as social distancing and isolation interrupted social and health interactions, resulting in loss of contact with health services, lack of support from health specialists and social participation losses, aggravating mental health problems in first-time mothers<sup>44</sup>. Taking into account how women feel and their specific needs at this moment signals the importance for health professionals to do their best to establish a respectful alliance and empower women with self-confidence.

Our findings reveal high emotional responses, with negative feelings centered on the uncertainties about the effects exerted by COVID-19 on perinatal health, on the changes in celebrating the gestational moment and in the way in which the family was inserted in this pandemic context, in addition to the challenges inherent to assistance measures. The feelings of joy normally experienced during pregnancy and parturition were substituted for fear, concern, sadness and even depression due to the impact exerted by the COVID-19 pandemic. These changes in the meanings of pregnancy and parturition can be justified by the first premise of Symbolic Interactionism<sup>17,19</sup>, which sets forth that human beings act in the world based on the meanings it offers them, not limiting themselves merely to what is happening among people but also taking into account what happens inside each human being, considering the culture where they live.

### Study limitations

The sample was exclusively comprised by multiparous puerperal women treated in a single habitual-risk maternity hospital, which can limit generalization of the results to other realities such as high-risk maternity hospitals or different contexts found in Brazil. In addition to that, the interviews were conducted during the immediate puerperium, which restricted understanding the feelings experienced in subsequent phases of the puerperal cycle that might also contribute relevant perceptions.

### FINAL CONSIDERATIONS

This study presents diverse evidence of worrisome and intense negative feelings experienced by the participating women during pregnancy and parturition in the COVID-19 pandemic. Specifically, the feeling of fear was present in everyday routines, while seeking prenatal and parturition care and even in social interactions, somatized through social distancing and isolation, which contributed to adhering to the support network at the pregnancy and parturition moments. It was possible to notice that fear of contracting COVID-19 and passing it on to the fetus and the uncertainties about the true impacts of the pandemic on perinatal health made other negative feelings emerge, namely: concern, frustration,

sadness, panic, loneliness, anxiety, depression and disappointment, which can exert long-term impacts on women's and children's health.

Understanding the feelings experienced by pregnant and puerperal women during the COVID-19 pandemic holds major scientific and social relevance, even after the critical period of the health crisis. Recording these experiences contributes to preserving recall of the emotional repercussions in an especially vulnerable group, enabling reflections that guide more humanized care practices in emergency situations. In addition to that, such findings offer aids to strengthen public policies targeted at maternal mental health, as well as to train health professionals working in the assistance provided during the pregnancy-puerperal cycle.

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#### Use of artificial intelligence tools

Authors declare that no artificial intelligence tools were used in the composition of the manuscript “*Feelings experienced during pregnancy and parturition in COVID-19 times*”.