

ANALYSIS OF THE PHYSICAL AND MENTAL IMPACT ON PREGNANT WOMEN IN THE PERIOD OF ISOLATION OF COVID

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Abstract: Introduction: The period of greatest alarm of the pandemic by COVID-19 implied widespread impacts for society. In specific populations, such as pregnant women, this scenario was even more aggravating, since it is a risk group with particular physical and psychological demands, in addition to the need for routine prenatal care, with or without complaints, to which in the period of isolation, presented itself as a risky circumstance. For this reason, the World Health Organization (2019) included pregnant and postpartum women in the risk groups for COVID-19, especially in the second trimester of pregnancy, when symptoms can be more intense, such as severe acute respiratory syndrome. (SARS). This work, therefore, was initiated based on the thesis that the physical and psychological impairment of the pandemic, already recognized in the general population, could present itself in a high way in pregnant women during this pandemic period. Thus, the current study aims to review the literature on pregnancy in times of a COVID-19 pandemic in order to discuss the main points of impact and encourage new approaches to the topic. **Methodology:** This is a narrative review study of the literature on the physical and mental impact of the COVID-19 pandemic on pregnant women. To carry this out, the choice of the research question, definition of the information that would be extracted from the studies, evaluation of the studies included in the review, interpretation of results and synthesis were made. The selection of articles was carried out through several databases, namely: Scielo, Google Scholar, PubMed and Lilacs. The presentation of the results and discussion of the data obtained were made in a playful and descriptive way. **Results:** Among the physical impacts, the impairment of eating habits, physical activity, alcohol consumption, irregular prenatal care and the

virulence of COVID-19 in pregnant women were elucidated. In the psychological sphere, the incidence of fears, anxiety and depression stood out. **Conclusions:** The direct and indirect effects of the COVID-19 pandemic can be expected in most of the general population. However, risk groups have a higher rate of repercussions. Recognizing this type of scenario in pregnant women allows new studies to identify the consequences of the pandemic both in this group and in children born between 2020 and 2022.

Keywords: COVID-19, pandemic, physical impact, psychological impact and pregnant women.

INTRODUCTION

Covid-19 is an acute respiratory disease, which has a mortality rate of about 2% (FIOCRUZ, 2020). It can result in death due to major damage to the pulmonary alveoli and severe and progressive respiratory failure (HUANG et al. 2020; XU et al., 2020). The period of greatest alarm of the pandemic by COVID-19 implied widespread impacts for society. On the one hand, the population and health services faced health challenges capable of compromising both quality of life and mortality rates. In specific populations, such as pregnant women, this scenario was even more aggravating, since it is a risk group with particular physical and psychological demands, in addition to the need for routine prenatal care, with or without complaints, to which in the period of isolation, presented itself as a risky circumstance. For this reason, the World Health Organization (2019) included pregnant and postpartum women in the risk groups for COVID-19, especially in the second trimester of pregnancy, when symptoms can be more intense, such as severe acute respiratory syndrome. (SARS).

The World Health Organization also warns that, worldwide, about 10% of

pregnant women and 13% of women who have just conceived suffer from a mental disorder, mainly depression. Furthermore, it recognizes that, in developing countries, the rates rise to 15.6% during pregnancy and 19.8% after childbirth. In this sense, the WHO draws attention to the seriousness of the issue, as these disorders can lead to suicide, in addition to harming the growth and development of children (WHO, 2020).

Among the implications in the psychological sphere of the general population, Dantas (2021) shows that the fear of contamination, fear of losing family members, mourning routine, social isolation and emotional pressure are factors that increase the number of diagnoses of mental disorders every day, as they lead people to confront their own psychological resources, which may be capable of generating a higher level of stress, anxiety and depression (MIRANDA, 2020). In fact, the fear of being infected by the coronavirus and developing Covid-19 has become the main concern of the Brazilian population in general (SCHMIDT et al., 2020). In the physical sphere of impacts, changes are estimated in the quality of prenatal care, in the physical health of the pregnant woman, in the practice of activities harmful to pregnancy, such as consumption of alcoholic beverages and worsening eating habits, among others.

This work, therefore, was initiated based on the thesis that the physical and psychological impairment of the pandemic, already recognized in the general population, could present itself in a high way in pregnant women during this pandemic period. Thus, the current study aims to review the literature on pregnancy in times of a COVID-19 pandemic in order to discuss the main points of impact and encourage new approaches to the topic.

METHODOLOGY

This is a narrative review study of the literature on the physical and mental impact of the COVID-19 pandemic on pregnant women. To carry this out, the choice of the research question, definition of the information that would be extracted from the studies, evaluation of the studies included in the review, interpretation of results and synthesis were made.

The selection of articles was carried out through several databases, namely: Scielo, Google Scholar, PubMed and Lilacs. Articles published in Portuguese, English and Spanish were included, without limitation of period, whose approach supported the discussion on the topic. The articles with a direct approach to the thesis have recently been published, between 2020 and 2022, a period characterized by the oscillations of the pandemic. The keywords used were COVID-19, pandemic, physical impact, psychological impact and pregnant women.

The presentation of the results and discussion of the data obtained were made in a playful and descriptive way, allowing the reader to evaluate the applicability of the narrative review elaborated, in order to elucidate the objective of this method.

RESULTS

PHYSICAL IMPACTS

Eating habits

Pregnancy is a stage of life in which the adoption of eating practices and a healthier lifestyle is expected due to the increase in nutritional needs and the impact of these behaviors on maternal-fetal outcomes. The literature has pointed out associations between dietary aspects and pregnancy outcomes.

Campos et al., in a cohort of pregnant adolescents, found higher consumption of protein, lipids, cholesterol, calcium,

potassium, phosphorus, saturated and monounsaturated fatty acids among mothers of children born with more than 2500 g, being the main predictor of birth weight and maternal dietary lipid profile.

In another cohort, comprising 46,262 Danish pregnant women, a strong association was observed between added sugar and higher values of gestational weight gain. Pregnant women with energy intake above the Institute of Medicine recommendations showed an average increase of more than 1.7 kg per gestational trimester, when compared to those with adequate intake. In the same sense, Ruchat et al. showed that a diet controlling for total caloric value, percentage of carbohydrates and fat led to a reduction in excessive gestational weight gain among Canadians.

A review study found an association between Mediterranean diet (rich in fruits, vegetables, legumes, nuts, olive oil, whole grains) and reduced chance of prematurity and gestational diabetes. Thus, pregnant women must be especially concerned about their food choices compared to non-pregnant women (GOMES et al., 2015).

In the face of the pandemic, studies indicate that psychological and emotional changes can increase the risk of developing a dysfunctional diet (LI et al., 2020; MONTEMURRO 2020; WANG et al., 2020). A cross-sectional survey carried out in Brazil, analyzing adult individuals, concluded that the current scenario favored a worsening in lifestyle and an increase in risky health behaviors, such as a 5.8% increase in the consumption of chocolates, cookies, pies and 3.7% in the consumption of snacks, in addition to reducing the consumption of vegetables by around 4.3% (MALTA et al., 2020).

In addition, the literature points to an increase in the consumption of comfort food, an expression designated for foods chosen

to obtain positive emotions. Research shows that this habit is generally negative for health, since these are high-carb options. Thus, the high consumption of comfort food during social isolation, in the sample by Renzo et al. (2020), can be related to the high level of stress experienced during this period (WAGNER et al., 2014; JONES & LONG 2017) and represents an important physical impact on pregnancy.

Intake of alcoholic beverages

Among the substances known as teratogens, alcohol is probably the most studied. The teratogenous effects related to alcohol use were initially described in 1968, but it was not until 1973 that a specific pattern of malformations was defined in children born to women who drink alcohol, called fetal alcohol syndrome (FAS) - an irreversible condition characterized by typical craniofacial anomalies, growth failure, central nervous system dysfunctions and various associated malformations.

Between 2020 and 2022, studies indicate an increase in alcohol consumption, alone, and in the associated consumption of alcohol and tobacco, during quarantine (MALTA et al., 2020). Malta also linked this increase to possible stressors such as sadness and anxiety, fears about the future, job insecurity and risk of death.

Physical activity

It is well established that physical inactivity represents an important risk factor in the development of non-communicable chronic degenerative diseases, such as diabetes mellitus, cardiovascular diseases and some types of cancer.

During pregnancy, the changes that occur in the female body are linked to the excessive amount of hormones responsible for the body's adaptations to its new condition. Such alterations mainly affect the cardiorespiratory

and musculoskeletal systems and general metabolism; not restricted only to organs, but also to body mechanics, influencing the center of gravity, posture and balance, which increases the risk for excessive weight gain, gestational diabetes, preeclampsia, difficulties in labor, between others. In this scenario, establishing a physically active routine is even more crucial in controlling these factors.

In the pandemic, however, sedentary lifestyle was accentuated. Based on the premise that the pandemic brought a greater need to stay at home, reducing the practice of sports, outdoor exercises or in gyms, poor adherence to physical activity reduced even more, both in time and in type of activity performed (COSTA et al., 2020).

A survey commissioned by the Brazilian Drinks Association (Abrabe), in 2019, revealed that 61% of alcohol consumption took place in bars, restaurants, nightclubs and various events. With the closure of these establishments and the ban on gathering people, consumption began to be carried out predominantly in the domestic environment, also encouraged by online events, such as happy hours and parties, which incited the increase in sales of beverages in supermarkets (GARCIA & SANCHEZ, 2020).

Interrupted prenatal

Prenatal care aims to ensure maternal-fetal well-being and safety, through periodic consultations, physical assessment and complementary exams, based on qualified listening, in order to diagnose or mitigate early risks to the health of the child. pregnant woman and the baby (FONTANA et al., 2017).

Prenatal care is of paramount importance to women's health during pregnancy and the postpartum period and is associated with better perinatal outcomes. However, despite requiring more care, pregnant women have faced difficulties in carrying out prenatal

care due to cancellation of appointments, appointments via teleservice or postponement for even in cases of suspicion or confirmation of COVID-19 infection (DING W, et al., 2021).

According to the Associação Paulista de Medicina, 64% of professionals in the field of gynecology and obstetrics say that the routine of prenatal care was changed during the pandemic. According to them, 8% of the women did not perform the subsidiary exams and 46% of them had difficulties to perform them. In this context, in addition to pregnancy being naturally a period of great stress and emotional conflicts due to the hormonal changes undergone, these feelings are aggravated by the uncertainties and fear that surround the infection by COVID-19, which is the biggest concern expressed by pregnant women in consultations (FEBRASGO, 2020).

An important issue observed was the abandonment of medical treatments and follow-ups once instituted, with a drop of almost 46% in the number of clinical procedures, 44% in the rate of prenatal procedures and a drop of 36% in the number of medical consultations, when compared to the period before the pandemic (CHISINILA, et al., 2021). Thus, all health care for women was affected by the pandemic, both by prioritizing care for the treatment of COVID-19, and by the fear of seeking the health service due to uncertainties and fear of leaving home, increasing the frequency of visits. signs and symptoms of anxiety and depression (SOUZA AR, et al., 2020).

Virulence of COVID-19 in pregnancy

According to Cardoso et al. (2021, p. 222), the clinical evolution of COVID-19 infection among pregnant women is unclear. However, it is believed that contracting the disease during this period can lead to

unfavorable clinical evolution and obstetric outcomes, such as fetal distress, spontaneous abortion, respiratory distress, prematurity and a greater need for surgical delivery. Research has shown that pregnant women, when infected with the new coronavirus, are about twelve times more likely to be hospitalized and twice as likely to need moderate ventilation (QEADAN F, et al., 2021; SANTOS DS, et al., 2020). Recent data from the Covid-19 Brazilian Obstetrics Observatory (OOBr Covid-19) showed that the number of deaths of pregnant and postpartum women by COVID-19 was much higher than that recorded in the general population, reinforcing the need to intensify care for these women (FIOCRUZ, 2021).

During pregnancy one of the diseases that have a high incidence are thromboembolic, in this period the risk of Venous Thromboembolism (VTE) increases from five to ten times. Tang et al. analyzed patients diagnosed with severe COVID-19 and showed that 71.4% of those who did not survive and 0.6% of those who survived showed evidence of disseminated intravascular coagulation (DIC), indicating the frequency of DIC in severe COVID-19 cases. Therefore, attention and care for this risk group must be intensified (ALMEIDA et al., 2020).

Furthermore, studies have shown that SARS infection during pregnancy can increase rates of miscarriage, preterm birth and intrauterine growth restriction and these complications may have been caused by the direct effect of the virus (WONG SF, et al., 2004).

PSYCHOLOGICAL IMPACTS

Ears and worries

According to a 2021 study published in the Revista da Sociedade de Psicologia do Rio Grande do Sul conducted virtually with women living in the five regions of Brazil,

the results showed that the main concerns and fears of pregnant women pointed to: having Covid-19 and being hospitalized in an ICU; the baby needs neonatal ICU; having Covid-19 and losing the baby, with response rates of 88%, 86% and 77%, respectively. Other concerns and fears also appeared with high frequency in the responses of pregnant women: transmitting the coronavirus to the baby while still inside the uterus; the baby acquires a malformation if the mother has been contaminated by the coronavirus, with an incidence of 73% and 66% each.

Another concern is related to the fact that both mothers and professionals or companions present in the delivery room who are contaminated with the coronavirus, even asymptomatic or with Covid-19, may have contaminated the babies during or shortly after their birth (FROTAL et al., 2020). Pregnant women still worry about: not being respected during labor and delivery, not being able to do skin to skin, lack of space in the maternity ward and/or not being able to follow the birth plan.

The fear of dying in the postpartum period is a frequent fear in pregnant women and is related to the abandonment of the baby and negative social beliefs that mothers are the ones who know how to take better care of their babies and are the only ones who will be able to nurture a love, unconditional by the child (SCHETTER, 2011; SAVIANI-ZEOTI & PETEAN, 2015). The pandemic may have intensified this fear, giving more contours to this ghost (ARRAIS et al., 2021).

There is also the fear that the infection could be transmitted to the baby that the pregnant woman carries in her womb (KNIGHT et al., 2020; LÓPEZ-MORALES et al., 2021).

Anxiety and depression

The massive dissemination of negative news about the pandemic and the so-called “fake news” contributed to the increase in this emotional and psychic overload in pregnant and postpartum women, significantly harming their mental health (ARRAIS et al., 2021; LÉLIS et al., 2020; LIMA et al., 2020; SANTANA et al., 2021).

In this sense, some studies (ARRAIS et al., 2021; GOMES et al., 2021; LÉLIS et al., 2020; MACIEL et al., 2021) indicate an increase in depression, anxiety, negative affect and a decrease in positive affect, in this population compared to non-pregnant women; in addition to the use of alcohol, drugs and excessive consumption of food.

In addition, the aforementioned concerns can lead to pathological somatization. Pregnant women who present this condition usually complain of headaches, gastrointestinal symptoms and psychological outbreaks that directly influence the postpartum depression, either by a predisposition or an intensification of the symptoms presented (LÉLIS et al., 2020; MACIEL et al., 2021).

In a study by Moyer, 2020, an increase in anxiety levels was found, with the score being 20.6 pre-COVID and 23.9 during the pandemic. The related factors found were: interrupting face-to-face prenatal consultations and changing the hospital delivery plan, increased conflict at home and the fear of being infected. The same warning occurred in the study by Shayganfa, 2020, which showed high levels of anxiety related to proximity to infected people and the fear of becoming infected.

For Dong, in 2021, when assessing depression in pregnant women in China and its influencing factors during the COVID-19 pandemic, the level of this disorder was significantly higher.

CONCLUSIONS

The direct and indirect effects of the COVID-19 pandemic can be expected in most of the general population. However, risk groups have a higher rate of repercussions. In pregnant women, for example, changes in eating habits, greater consumption of alcoholic beverages, sedentary lifestyle, risks inherent to COVID-19 infection and irregular prenatal care, in addition to living with fear, anxiety and depression represent physical and mental impacts of important relevance.

Recognizing this type of scenario allows new studies to identify the consequences of the pandemic both in this group and in children born between 2020 and 2022.

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