Review

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Maternal Mortality Associated with COVID-19 According to Skin Color: Integrative Literature Review

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Abstract

Background: To describe the comparison between Black and White pregnant and postpartum women with COVID-19 regarding the need for hospitalization in the Intensive Care Unit, mechanical ventilation, and outcome to death. Methods: Integrative Literature Review conducted in Cumulative Index to Nursing and Allied Health Literature, Excerpta Medica Database, Latin American and Caribbean Literature in Health Sciences, Medical Literature Analysis and Retrieval System Online via the National Library of Medicine, Science Direct from Elsevier Scientific Publications, SciVerse Scopus, and Web of Science. Results: Black pregnant and postpartum women presented worse clinical outcomes; the risk of death among these women was up to five times higher compared to White women, in addition to inequalities in timely access to intensive care. Conclusions: Black pregnant and postpartum women were disproportionately affected by COVID-19, with a higher risk of severe complications and death, which reinforces the need for care strategies that consider racial inequalities to reduce maternal mortality.

Keywords: COVID-19; pregnancy complications; pregnancy; postpartum period; maternal death

1. Introduction

On March 11, 2020, the World Health Organization (WHO) declared that COVID-19 was a pandemic [1]. A month later, globally, there were 1,521,252 confirmed cases and 92,798 deaths [2]. Regarding the evolution of the pandemic, it became important to define vulnerable groups with severe disease progression, and the obstetric population was included in these [3].

The first studies originated in China. A Chinese review study described the clinical picture and pointed out that pneumonia caused by the new coronavirus was a highly contagious disease with rapid spread; that the specific mechanism of action of the virus was unknown and that specific drugs for treatment or vaccines had not yet been developed at that time [4]. Five other studies carried out in China, one of them, with nine pregnant women, described a clinical picture similar to that of non-

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pregnant women and of four (44.4%) who had progressed to premature delivery [5]. Two other studies, with seven pregnant women infected at the end of pregnancy [6] and 15 pregnant women infected in the three gestational trimesters [7], found good maternal and neonatal results; with a single reported case, that of a pregnant woman at 30 weeks of gestational age who underwent cesarean section, with the baby being born healthy, without evidence of infection [8]. Finally, a study conducted with 13 pregnant women concluded that pregnant women were susceptible to infection and that when this occurred there could be an increased risk to perinatal health [9].

Outside of China, in a case that occurred in Central America, a pregnant woman progressed to premature vaginal delivery at 32 weeks of gestational age [10]; in the United States of America (USA), of seven cases, two (28.6%) required admission to an Intensive Care Unit (ICU), and the pregnant women were asymptomatic [11]. At the beginning of the pandemic, it was evident that the symptoms presented were mild, such as: fever and dry cough, however, in women in the second half of pregnancy, other symptoms were prevalent: fatigue, dyspnea, diarrhea, nasal congestion and runny nose, associated with possible progression to serious complications [12].

In the Latin American context, Brazilian researchers reported that in developing countries such as Brazil, Iran, and Mexico, there was a possibility of increased risk of maternal death (MD) due to COVID-19. It was observed that in Brazil there were five MDs out of a total of 1,947 deaths from COVID-19, in Iran two out of 3,800, and in Mexico four out of 486, highlighting that limited resources for healthcare provision contribute to the increased risk of MD in vulnerable contexts [13,14]. A review study showed that the presence of comorbidities was associated with greater complications of the disease and negative outcomes, increasing the chances of hospitalization in the ICU and the need for mechanical ventilation, with the postpartum period being the period with the highest frequency of deaths in pregnant women [15]. The increase in MD due to COVID-19 in Brazil and worldwide suggests an emergency in containment measures and the worsening of infection in physiologically vulnerable people [16,17].

Due to this, it is worth mentioning that Black women (both Black and mixed-race) are hospitalized in more severe conditions, with a higher prevalence of dyspnea and lower oxygen saturation, as well as a higher rate of ICU admission and need for mechanical ventilation, and a risk of death almost twice as high in Black women compared to white women [18,19]. In this scenario, there is an identification of greater risk among Black women, who generally experience conditions of social inequality and difficulty accessing health services [20–22]. Considering the gaps in knowledge, this study is justified, aiming to carry out an integrative review to describe the comparison between Black and white pregnant and postpartum women with COVID-19 regarding the need for ICU hospitalization, mechanical ventilation, and outcome to death.

2. Materials and Methods

This report presents an Integrative Literature Review (ILR), filed on Figshare (https://figshare.com/) accessible at: http://dx.doi.org/10.6084/m9.figshare.24321688. The ILR allows for the inclusion of experimental and non-experimental studies for a comprehensive understanding of the investigated phenomenon, being able to determine current knowledge on a specific topic [23–27]. The methodological approach followed six steps: 1- development of the guiding question; 2- definition of the sample, based on the establishment of inclusion and exclusion criteria; 3- data collection, with a description of the characteristics of the selected studies; 4- analysis of the studies based on the definition of the level of evidence; 5- interpretation of the results; and 6- presentation of the review [23–27].

The guiding question of the study was formulated using the PICO strategy [23], an acronym for Patient, Intervention, Comparison and Outcomes, where: "P" – Black pregnant and postpartum women with COVID-19; "I" – hospitalization and mechanical ventilation; "C" – comparison between Black and white pregnant and postpartum women; and "O" – outcomes: maternal death associated with COVID-19 in Black pregnant and postpartum women. Thus, the question was: What is the

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available knowledge in the national and international literature on mortality in hospitalized Black pregnant and postpartum women with COVID-19 when compared to white women?

Interventionary studies involving animals or humans, and other studies that require ethical approval, must list the authority that provided approval and the corresponding ethical approval code.

The inclusion criteria were established as follows: primary studies published from December 2019 onwards that answered the study question; available in electronic format; in English or Portuguese. The time frame was established to ensure an adequate number of primary studies, as including a large volume could make conducting the review unfeasible or introduce biases, in addition to considering the emergence of the coronavirus in China in December 2019. In this study, the concept of race/color used by the Instituto Brasileiro de Geografia e Estatistica (IBGE) was adopted, in which the Black population is composed of people who self-declare as Black and Brown. However, it is recognized that there is an ongoing debate about "brownness," a movement that questions the dilution of brown identity within the classification of Black people. For this reason, whenever the study data allowed, the categories of Black and Brown were presented separately, highlighting when the articles did not make this distinction and opted for grouping them together. This analytical framework was fundamental in providing greater consistency to the discussion and enabling a critical analysis of racial inequalities in the context of COVID-19 and maternal mortality. Exclusion criteria included: duplicate articles, editorials, experience reports, reviews, undergraduate theses, dissertations and theses, articles without open access, and studies that did not fit the target population and objectives.

The literature search in the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Excerpta Medica Database (EMBASE), Latin American and Caribbean Literature in Health Sciences (LILACS), Medical Literature Analysis and Retrieval System Online (MEDLINE) via the National Library of Medicine (PUBMED), Science Direct, SciVerse Scopus and Web of Science (WoS). The search in the selected information sources was performed using the selected descriptors individually, and for refinement, all possible cross-references were performed, i.e., cross-references between all descriptors, combining them two by two. Thus, a new descriptor was always added using the Boolean operator AND. For data collection, terms are indexed in the structured vocabulary of the DeCS of the Virtual Health Library (VHL) and Medical Subject Headings (MeSH terms).

The following databases were consulted: PUBMED, MEDLINE, SCOPUS, Web of Science, EMBASE, CINAHL and Science Direct, using the DeCS/MeSH descriptors COVID-19, Pregnant Women, Postpartum Period, Intensive Care Units, Hospitalization, Death, Race, Ethnicity, and Skin Color, combined using the Boolean operators AND and OR. As an example of a strategy, the following was used: ("COVID-19") AND ("Pregnant Women" OR "Pregnancy" OR "Pregnant Women") AND ("Postpartum Period" OR "Postpartum Period") AND ("Intensive Care Units" OR "ICU") AND ("Death" OR "Death") AND ("Race" OR "Ethnicity" OR "Skin Color"). In addition, free terms were also used in quotation marks to broaden the scope of the search, such as "black women" and "maternal mortality". It was observed that the exclusive use of the MeSH descriptor "Race" proved to be limiting, as some comparative articles did not include this term in the title or abstract. In the LILACS database, the descriptors COVID-19, Pregnant Women, Postpartum Period, ICU, Hospitalization, Death, Race, and Racial Groups were used, also combined with the Boolean operators AND and OR. The search strategy included the following combination: ("COVID-19") AND ("Pregnant Women" OR "Pregnant Woman") AND ("Postpartum Period") AND ("ICU" OR "Hospitalization") AND ("Death" OR "Death") AND ("Race" OR "Racial Groups"), using DeCS descriptors and free terms, also in quotation marks, to increase the sensitivity of the search.

After applying the search strategy, the results obtained were exported to the EndNote X7 reference management software [28], removing duplicates. Screening was performed using the Rayyan web application [29]. During the first selection phase, titles and abstracts were read to assess eligibility criteria, then read in full by two reviewers, working independently and double-blindly, and if there was disagreement, a third reviewer with knowledge in the area was consulted.

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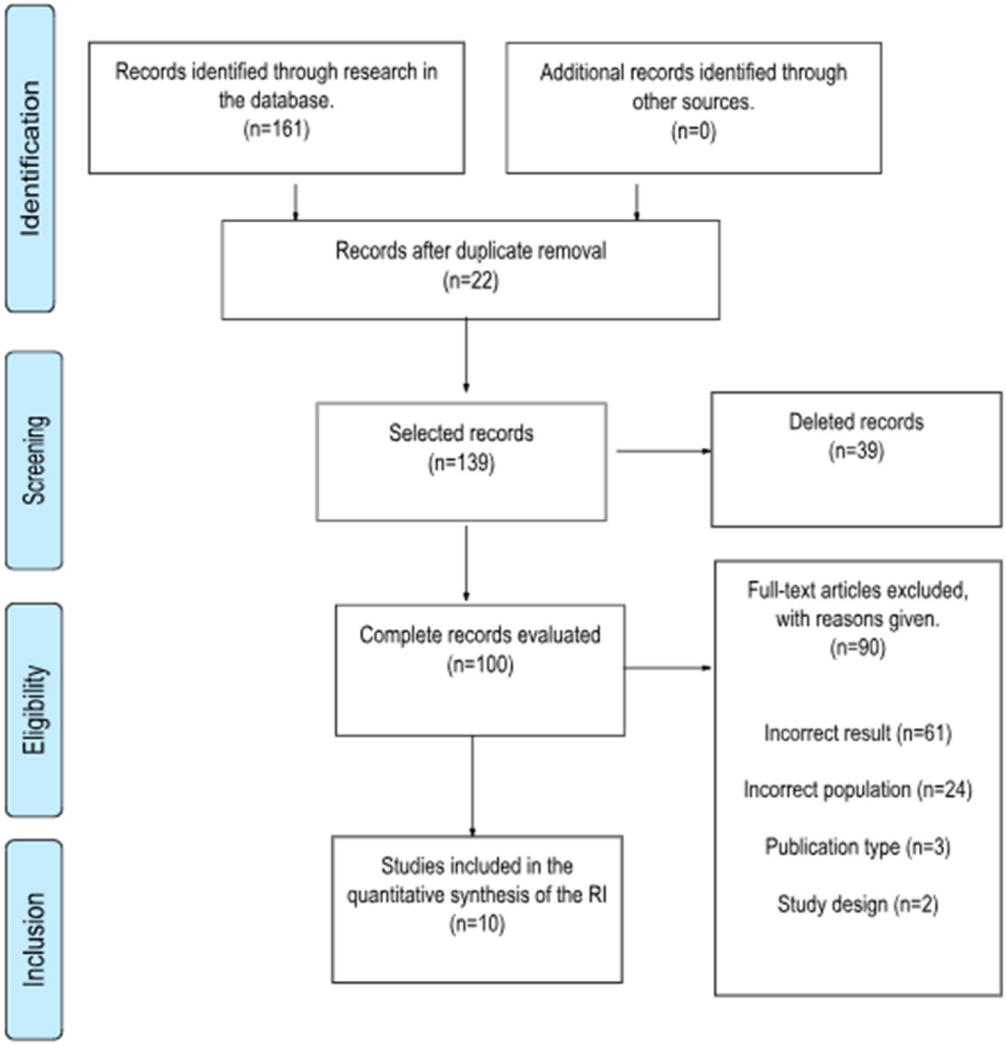
For the evaluation stage, the tool proposed by Johns Hopkins Nursing Evidence-Based Practice was used [30]. For the analysis of the levels of evidence, the Oxford Centre Evidence-Based Medicine was considered: 1A - Systematic reviews and meta-analyses of comparable clinical trials; 1B - Randomized controlled trials; 1C - Case-controlled series studies; 2A - Systematic review of cohort studies; 2B - Cohort study with poor randomization quality, control or without long-term follow-up, or cross-sectional; 2C - Research results (observation of therapeutic results); 3A - Systematic review of case studies with a control group; 3B - Case studies with a control group; 4 - Case reports and series without case-control definition; and 5 - Expert opinion [31].

For data analysis, a summary table was formulated (Tables 2 and 3). The identified knowledge was interpreted and synthesized for later discussion with the literature. Articles were identified by the letter A, representing the word "article," followed by the number that identified it, ranging from 1 to 10 (A1... A10), as shown in Figure 1. Because this research was conducted within a research journal, it was not necessary to submit it for review by the Research Ethics Committee.



Source: Prepared by the author adapted from PRISMA.

Figure 1. Flowchart of searches and the process of including studies in databases/portals adapted from the PRISMA.

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Table 2. Summary table containing year of publication/country/language of publication, type of study/level of evidence and main results.

Article	Year of publication/country/language	Study type/Level of evidence	Results
A1[33]	2023 Brazil Portuguese and English	Cross-sectional study 2B	Black and mixed-race pregnant women were the least likely to access the ICU, and the chance of maternal death for Black women was 62% higher compared to white women.
A2 [34]	2023 Brazil English	Cohort study 2C	729 symptomatic women were included in the study; 285 tested positive for COVID-19, 120 were Black and 165 were White, ICU admission and mortality occurred among Black women.
A3 [35]	2023 Brazil English	Cohort study 2B	Most maternal deaths occurred during pregnancy compared to postpartum, ICU hospitalization, and invasive ventilatory support; among maternal deaths, those of Black women were higher.
A4 [36]	2022 Brazil English	Cross-sectional study 2B	The study identified that pregnant Black women had approximately five times the risk of death compared to white and mixed-race women.
A5 [37]	2021 United States of America English	Cohort study 2B	Four pregnant women presented symptoms, three required oxygen, and the mortality rate among pregnant women was highest in the African American population.
A6 [38]	2020 United Kingdom English	Cohort study 2B	The proportion of Black women was high, there was an association between race, overweight, obesity, and advanced age, and the chance of contracting COVID-19 among Black women was eight times higher.
A7 [39]	2020 Brazil English	Cross-sectional study 2B	There were 2,475 studies that showed that postpartum, age over 35, obesity, diabetes, black ethnicity, and residing in peri-urban areas were associated with the risk of adverse outcomes.
A8 [40]	2020 United States of America English	Cross-sectional study 2B	Of the nine women who required hospitalization, eight were Black, five with severe cases, two were non-Hispanic Black women, and two were Hispanic.
A9 [41]	2020 Brazil English	Cross-sectional study 2B	Black women were admitted in worse condition, presenting with dyspnea and lower O2 saturation, and more frequently required ICU admission and mechanical ventilation.
A10 [42]	2020 Brazil English	Cross-sectional study 2B	Of the 978 positive cases, 207 (21.2%) were admitted to the ICU (134 recovered cases and 73 fatal cases), 22.6% of those who died were not admitted to the ICU, and 64.0% received invasive ventilation. No ventilatory support was offered to 14.6%, while the remaining 21.4% received non-invasive ventilation.

Source: Prepared by the authors. 2026.

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Table 3. Summary table containing objectives, population, limitations and contributions.

Objective	Population	Limitations	Contributions
Assess access to ICU and risk of death according to skin color [33]	Black pregnant women (n=454), mixed-race pregnant women (n=4,085), white pregnant women (n=3,705), total pregnant women (n=8,244) Black postpartum women (n=145), brown women (n=1,305), white women (n=1,051), total (n=2,501)	The analysis cannot be performed using education level as a proxy for socioeconomic status, given its incompleteness (more than 50% of values missing). The number of reported cases among Indigenous and Asian women was relatively small, and it was not possible to include them in the analysis models	Racism and its manifestations (dis)organize the reproductive trajectories of Black and mixed-race women, which, in their interaction with sexism, affect individual behaviors, interpersonal relationships, and care practices, contributing to negative outcomes for sexual and reproductive health
Assess ICU admission and mortality between black and white women [34]	729 symptomatic, 285 positive (120 black, 165 white)	Not being representative of the entire country and some regions being underrepresented	It provides well-documented data on referral maternity hospitals involved in the care of pregnant and postpartum women who tested positive for COVID-19
Compare mortality during pregnancy and puerperium [35]	549 pregnant and postpartum women	Low testing rates in Brazil have prevented a precise understanding of the number of pregnant and postpartum women infected with COVID-19	It shows the gestational vulnerability of Black women, the excess maternal mortality, and the considerable increase in women with near-death experiences caused directly or indirectly by COVID-19, placing the country in a precarious situation
To assess the evolution of COVID-19 related to race/skin color among Brazilian pregnant women registered in the Influenza Surveillance Information System [36]	Pregnant women with white, brown, and black skin color and final outcome (1,884 and 1,286 cases). The final sample (939 and 858 cases)	The use of secondary databases is a limitation of this study, as there is a dependence on the quality of information provided through notification. In this context, underreporting of deaths may occur, varying according to the macro-regions of the country, leading to an underestimation of cases	Quantifying racial inequality in the risk of death, it is important to highlight that the database was used in a country like Brazil, which has continental dimensions, providing important information for managers and health professionals working in the maternal and child health field
Characterize clinical evolution of pregnant women with COVID-19 [37]	997 women tested for COVID-19	The study is limited by the small sample size	Initial report on the vulnerability of the Black population provides important information on the gestational outcomes of COVID-19 infection

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Assessing factors associated with hospitalization for COVID-19 [38]	427 pregnant women hospitalized with confirmed SARS-CoV-2 infection.	Lack of detailed stratification; study produced at a time when active transmission of SARS-CoV-2 was still occurring	It highlights ethnic vulnerabilities using the population-based UKOSS research platform and, therefore, identifies a comprehensive national cohort of infected pregnant women with high case finding across all obstetric units in the United Kingdom
Analyze risk factors for adverse outcomes [39]	2,475 pregnant and postpartum women	Bias introduced by missing variables cannot be ruled out. For example, there are dichotomous variables, such as the presence of comorbidities and the use of intensive care resources, which were treated as "absent" when absent, which may have led to an underestimation of prevalence	The study, which links clinical and social factors to worse outcomes, examined a large sample size compared to previously published series of severe, critical, and fatal COVID-19 cases during pregnancy, as well as a comprehensive set of variables, including barriers to access to adequate care
Characterize hospitalization of pregnant women [40]	88 pregnant and postpartum women with COVID-19, stratified by race/color.	Small number of cases	Preliminary data suggests greater severity among Black women, highlighting the importance of collecting and reporting data based on race/color to better understand the impact of the pandemic in the United States
Compare hospitalization conditions according to skin color [41]	669 pregnant and postpartum women, both black and white.	This implies recognizing both racism and sexism as structural determinants that shape poorer living and health conditions	The study reveals inequality at the time of hospital admission, highlighting serious healthcare failures during the pandemic. Results showed that maternal mortality in Black women due to COVID-19 was almost twice as high as that observed in white women
Assess ventilatory support and ICU admission [42]	978 pregnant and postpartum women	Data without detailed racial stratification	The data appear to reflect that obstetric patients may face barriers to accessing ventilators and intensive care

3. Results

Figure 1 presents, in detail, the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) flowchart that describes all the steps in the process of identifying, screening, eligibility, and inclusion of studies in the integrative review. In the identification phase, 161 records were retrieved through searches in the databases, with no inclusion of studies from other sources. After verification and removal of duplicates, 139 records remained eligible for the initial screening stage.

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In the screening phase, these 139 studies had their titles and abstracts analyzed, resulting in the exclusion of 39 records that did not meet the previously established criteria. Thus, 100 articles proceeded to the eligibility assessment stage, in which the full texts were carefully analyzed. During the full-text reading, 90 studies were excluded for not meeting the inclusion criteria. The main reasons for exclusion were: results considered inadequate to answer the research question (n=61), study population incompatible with the scope of the review (n=24), ineligible publication type (n=3), and inadequate methodological design (n=2). At the end of the process, 10 studies met all the established methodological and thematic criteria and were included in the quantitative synthesis of the integrative review, comprising the final sample analyzed. This workflow demonstrates the application of a rigorous, transparent, and systematic selection process, ensuring greater methodological robustness and reliability of the review findings.

Table 2 summarizes ten studies published between 2020 and 2023, predominantly conducted in Brazil and published in English, with observational designs (mainly cross-sectional and cohort studies) and levels of evidence classified mostly as 2B, indicating moderate evidence from well-conducted observational studies. Overall, the results show significant racial inequalities in maternal outcomes related to COVID-19. The Brazilian studies highlight that Black and mixed-race women had less access to ICU, greater clinical severity at admission, and a greater need for mechanical ventilation, as well as a higher incidence of maternal death. In some findings, the risk of death was 62% higher among Black women, and could be up to five times higher when compared to white women. It was also observed that most deaths occurred during pregnancy (and not in the postpartum period) and were associated with ICU hospitalization, invasive ventilation, and aggravated clinical conditions. In addition to race/color, other factors associated with worse outcomes included age over 35, obesity, diabetes, and residence in peri-urban areas. International studies from the United States and the United Kingdom reinforce the pattern observed in Brazil, showing that Black women had higher rates of hospitalization, need for oxygen therapy, and mortality, as well as a greater likelihood of infection and severe progression of COVID-19.

The set of studies shown in Table 3 below presents convergent objectives focused on analyzing racial inequalities in COVID-19 care and outcomes among pregnant and postpartum women, especially regarding access to ICU, hospitalization, mechanical ventilation, and maternal mortality. The populations investigated were large and heterogeneous, encompassing thousands of women in different national contexts, with a predominance of Brazilian studies, but also including data from the United States and the United Kingdom. In general, the samples ranged from studies with fewer than 100 participants to large national databases with thousands of pregnant and postpartum women. Most studies compared Black, mixed-race, and white women, highlighting greater clinical and social vulnerability among Black women, both in terms of disease severity and access to health services. Methodological limitations were similar across studies and mainly involved the use of secondary databases, underreporting of cases and deaths, absence or incompleteness of socioeconomic variables (such as education level), small sample sizes in some studies, low testing rates at the beginning of the pandemic, and lack of national representativeness in certain research. Furthermore, some studies did not present detailed racial stratification or had a loss of relevant data, which may have led to an underestimation of inequalities. Despite these limitations, the scientific contributions are consistent and complementary. The studies demonstrate that structural racism, articulated with sexism, influences reproductive trajectories, access to health services, and maternal outcomes, resulting in greater clinical severity, barriers to access to ICU and mechanical ventilation, and higher mortality among Black women. They also highlight gestational vulnerability to COVID-19 and the importance of integrating social and clinical factors in the analysis of outcomes.

4. Discussion

After synthesizing the selected articles, a thematic analysis was performed based on the recurrence of similar results among the studies. This process allowed for the formulation of analytical categories that enabled the organization and interpretation of the findings in a clearer way. The

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categories were constructed from the convergences in risk factors, vulnerabilities, and clinical outcomes described in the articles, resulting in two main categories: "Risk factors and vulnerability to COVID-19 in Black pregnant and postpartum women" and "Severe outcomes and maternal death from COVID-19 in the obstetric population".

Risk and Vulnerability Factors for COVID-19 in Pregnant and Postpartum Black Women

The social, environmental, and structural effects of racism in the U.S. include differences in the prevalence of underlying chronic conditions and the disproportionate impact of health determinants, where Black women with COVID-19 presented with chronic lung disease, diabetes, hypertension, or obesity, contributing to vulnerability to COVID-19 [40]. When assessing risk factors, racial differences are noted, with 50.44% of Black women having at least one risk factor, compared to 48.72% of white women and 46.27% of mixed-race women. This variation is also identified in postpartum women, with 48.97% of Black women having a higher prevalence of diabetes, obesity, chronic cardiovascular disease, and asthma. For both pregnant and postpartum women, obesity prevalence was identified across racial groups, with the percentage among black women being high (31.34%), followed by white women (25.11%) and mixed-race women (21.94%) [33].

In a cohort study conducted in Brazil, the risks were higher among Black women due to three comorbidities: cardiovascular disease, diabetes mellitus, and obesity [35]. Another study identifies that brown skin color, age, region of residence, and symptoms: fever, cough, dyspnea, respiratory distress, oxygen saturation less than 95%, were associated with ICU admission, with pregnant women with Black skin color having approximately five times more chances of death [36]. Having diabetes, cardiovascular disease, and obesity are significant conditions associated with mortality in the obstetric population [42]. Among the American studies conducted in Detroit, with a predominantly African-American population, it was concluded that COVID-19 does not appear to increase morbidity and mortality among pregnant women [37]. A study from the United Kingdom showed that the majority of pregnant women hospitalized for COVID-19 were Black and from other ethnic minorities (56%). There was an association between infection and skin color, with the chance of COVID-19 occurrence being eight times higher among Black women compared to white women [38].

Two Brazilian studies found a ratio of white and black/brown pregnant/postpartum women of 3:1, respectively. Although the average age and morbidity profiles were similar between the two groups, there was a worse evolution of COVID-19 among black women: hospitalization in a more severe condition; higher rates of ICU admission, use of mechanical ventilation, and death. The researchers pointed out that the results indicate that processes originating outside the hospital may disproportionately affect black/brown pregnant/postpartum women, impacting the evolution of COVID-19, due to the intersection between gender, race, and social class [18,19,36,41,42]. In multivariate analysis, black pregnant and postpartum women, independently, presented a 50% higher risk of adverse outcomes associated with COVID-19 when compared to white women [39]. Thus, in both Brazilian studies, the outcome was worse among Black pregnant/postpartum women with COVID-19 [18,19,39,41,42].

Severe Outcomes and Maternal Death from COVID-19 in the Obstetric Population

The risk of death is more prevalent in women over 35 years of age compared to women under 20 years of age, with black/brown skin color and residing in the Southeast, Northeast and North regions compared to the South region of Brazil, with pregnant women with black skin color having approximately five times more chances of death[36].

A study [42] with 978 cases highlights that 22.6% of women who died were not admitted to the ICU and that only 64.0% had invasive ventilation. No ventilatory support was offered to 14.6% of all fatal cases, while the remaining 21.4% received only non-invasive ventilation. It is also worth mentioning that postpartum women with COVID-19 had twice the risk of adverse effects, such as ICU admission, need for mechanical ventilation, and death, compared to pregnant women. The

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proportion of deaths among postpartum women was high, and respiratory signs/symptoms, need for mechanical ventilation, and intensive care were associated with death [42]. Maternal deaths had a lower risk of occurrence than deaths of women of childbearing age. Regarding social variables, the risk of maternal death was higher among Black women, those living in rural areas, and those treated outside their cities of origin. Regarding hospitalization, women who died during pregnancy and childbirth were more likely to have been admitted to the ICU and to have received invasive ventilatory support[35].

Another study points out how racism and racial inequalities affect Black and Brown pregnant and postpartum women, exposing them to a higher risk of lethal outcomes associated with COVID-19, especially during the postpartum period, where Black women have higher percentages. Black and Brown women also accumulate more risk factors for negative maternal outcomes both during pregnancy and postpartum, and Black and Brown pregnant women are the least likely to be admitted to the ICU[33]. A cohort study conducted in 2023 in Brazil reports that the frequency of death among Black women was higher when compared to non-Black women. Black women were more likely to be hospitalized, and the association of these conditions increased ICU admission, with the occurrence of maternal death being significantly higher among Black women: nine (7.8%) compared to four white women (2.6%)[34].

This study presents some limitations that need to be considered. The first refers to the search strategy, restricted to publications in Portuguese and English. Another limitation concerns the methodological quality of the included studies, since most were observational designs with restrictions on sample representativeness and limitations in variable analysis, which reduces the strength of the available evidence. In addition, many articles did not make a clear distinction between Black and mixed-race individuals, which compromised a more refined analysis of racial inequalities.

This study fills an important gap in the literature by specifically analyzing Black pregnant and postpartum women affected by COVID-19, a group that has been underrepresented in previous studies. Thus, its main contribution lies in highlighting racial inequalities in maternal mortality, providing input for the formulation of public policies and care strategies that prioritize this population in a situation of greater vulnerability.

5. Conclusions

In summary, after analyzing the ten articles included in this review, it was observed that Black pregnant and postpartum women presented worse health outcomes when compared to white women, with a higher risk of serious complications and death. These findings highlight racial inequalities in maternal mortality associated with COVID-19 and reinforce the need for public policies and care practices that address these inequities.

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Conflicts of Interest: The authors declare no conflicts of interest

Abbreviations

CINAHL	Cumulative Index to Nursing and Allied Health Literature
EMBASE	Excerpta Medica Database
IBGE	Instituto Brasileiro de Geografia e Estatística
ICU	Intensive Care Unit
ILR	Integrative Literature Review
LILACS	Latin American and Caribbean Literature in Health Sciences
MD	Maternal Death
MEDLINE	Medical Literature Analysis and Retrieval System Online
MeSH	Medical Subject Headings
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
PUBMED	National Library of Medicine
USA	United States of America
VHL	Virtual Health Library
WHO	World Health Organization
WoS	Web of Science

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