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Racism, health and pandemic: a narrative review of the relationship between black population and COVID-19 events in 2020

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Abstract *This study aimed to analyze how scientific publications described and interpreted findings about the relationship between the Black population and events linked to COVID-19 in 2020. Narrative review with systematic search, in which a survey was conducted on articles published in 2020 in the Scopus, Medline/PubMed, and Web of Science databases. Initially, 665 articles were found, and after reading and applying the eligible criteria, the final number of 45 articles was reached. Epidemiological, observational studies, secondary data and developed in the United States predominated. Four groupings and respective findings emerged from the synthesis of information extracted: Main events in the Black population – high number of deaths and mortality rate; Direct relationships – poor health, housing, and work conditions; Intermediate relationships – low income and anti-Black prejudice; Comprehensive relationships – structural racism and social determinants of health. The identification of racial health disparities is an important finding about the dynamics of the pandemic among the Black population. However, multicausal explanations were limited. It is necessary to mobilize critical theoretical resources from ethnic and health studies to qualify research in order to support global actions to combat the SARS-CoV-2 epidemic in this group.*

Keywords *Racism, Public health, Social determinants of health, COVID-19*

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Introduction

At the end of 2019, cases of pneumonia of unknown cause in patients in Wuhan, China, led to the discovery of the virus called Coronavirus[1]. Modern transport routes between mass populations[2] favored rapid viral intercontinental dissemination, triggering a devastating international impact. In March 2020, The World Health Organization (WHO) declared the new Coronavirus a pandemic. Faced with this new global health situation, responses relating to risk groups, containment, mitigation, suppression, and recovery measures were the subject of actions and research in Public Health, produced at an unprecedented speed[3].

Regarding risk groups, older adults were initially identified as the more vulnerable population[4]. As soon as restrictive circulation measures began to be implemented, accompanied by socioeconomic government actions[5], the topic of social inequalities and illness from SARS-CoV-2 in different groups, such as the Black population, also gained interest among researchers.

The systematic review conducted by De Souza et al.[6] (2020) in September 2020 to analyze the association of race with a higher risk of illness and death due to COVID-19 concluded that differences observed in hospitalization rates and mortality from SARS-CoV-2 "reflect the general trends" in racial/ethnic health disparities, which arise from interactions such as poverty, access to healthcare, individual factors, and chronic diseases.

While studies have already documented the identification of ethnic-racial inequalities in health in the Black population before the pandemic, explanations of the mechanisms for articulating and sustaining the health situation of this population group are still incipient. Therefore, when considering the magnitude of the COVID-19 pandemic in the Black population and the first studies on this topic, it is important to revisit this issue since, besides the historical record value, understanding the meanings of these synthesized findings also represents a new starting point, which can influence the direction of knowledge production on this topic.

Thus, this article aimed to analyze how scientific publications described and interpreted findings about the relationship between the Black population and events linked to COVID-19 in the first year of the pandemic.

Methods

This is a narrative review of scientific articles with a systematic search based on the Scale for the Assessment of Narrative Review Articles (SANRA)[7]. We surveyed scientific articles indexed in Medline/PubMed, Scopus (Elsevier), and Web Of Science databases from December 2020 to March 2021.

After exploratory reading of thematic articles and consulting the Medical Subject Headings Terms (MeSH) of the United States National Library of Medicine (NLM), the search descriptors were defined as "*COVID-19*", "*Coronavirus*", "*Race*", "*Racism*", "*Black People*", combining the descriptors associated with Boolean operators as shown in Chart 1. We included complete empirical articles published in scientific journals during 2020 that investigated the issue of COVID-19 among the Black population. We excluded duplicates, opinion articles, literature reviews, and theoretical essays, even if they addressed the topic.

We initially found 665 articles. Next, we proceeded with an exploratory reading of the titles and abstracts, following the eligibility criteria. After reading the articles in full, 45 final articles remained, as shown in Figure 1. Finally, we created data organization and analysis table containing the categories emerging from reading the content extracted from the "results and discussion" sections of the articles, namely, "main events in the Black population", "direct relationships", "intermediate relationships", and "comprehensive relationships".

Results

The results showed us that most studies are concentrated in the United States, as described in Table 1. The term "US counties", to refer to American counties, was used in most articles to conduct a general analysis of the country's population without specifying the State. We identified the predominance of observational epidemiological studies developed from secondary data from government databases and hospital services.

Concerning the findings that relate COVID-19 to the Black population, Figure 2 presents an overview of the synthesis, followed by a detailed description.

Chart 1. Protocol with search strategies used.

Databases	Descriptors employed	Search type	Articles found
MedLine/ PubMed	((“COVID-19” OR “Coronavirus”) AND (“Race” OR “Racism”)) AND (“black people”)	Title, abstract, author, and keywords	126
Web Of Science	TÓPICO: ((((“COVID-19” OR “Coronavirus”))) AND TÓPICO: ((((“Race” OR “Racism”))) AND IDIOMA: (English OR Portuguese OR Spanish) Time established: 2019-2020.	Title, abstract, author, and keywords	165
Scopus	TITLE-ABS-KEY ("COVID-19" OR "Coronavirus" AND "Race" OR "Racism") AND DOCTYPE (ar) AND ACCESSTYPE (OA) AND PUBYEAR > 2018 AND PUBYEAR < 2021	Title, abstract, author, and keywords	374

Source: Authors.

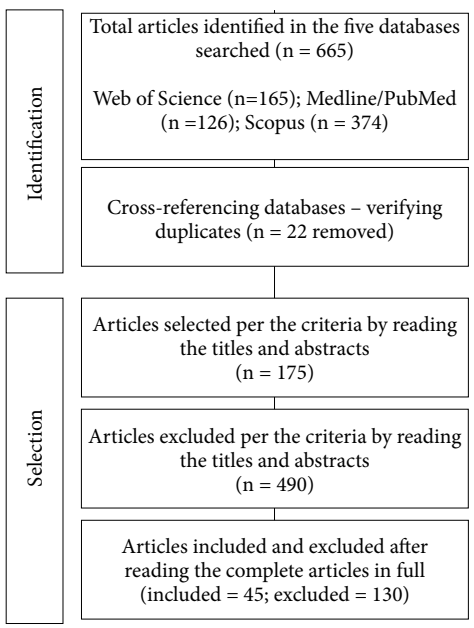

Figure 1. Flowchart of the systematic search and article selection process, adapted from the PRISMA Protocol[13].

Source: Authors.

Table 1. Research development location by country/ state

Countries/States	Articles	
	n	%
NORTH AMERICA (USA)		
US counties	16	25%
New York	11	17%
California	6	9%
Michigan	3	5%
Louisiana	3	5%
Massachusetts	3	5%
New Jersey	2	3%
Washington, D.C	3	5%
Chicago	2	3%
Maryland	2	3%
Wisconsin	2	3%
Texas	2	3%
Alaska	1	2%
Connecticut	1	2%
Oregon	1	2%
Pennsylvania	1	2%
Atlanta, Georgia	1	2%
New Orleans	1	2%
Europe (England)		
London	1	2%
England	1	2%
South America (Brazil)		
Paraná, Santa Catarina, and Rio Grande do Sul	1	2%
Total	64	100%

Source: Authors.

Main events in the black population – cases, hospitalizations, and deaths

The findings show that infection and illness, hospitalization, and deaths in the general population revealed inequalities between racial groups during the COVID-19 pandemic. Such events appear at different frequencies, ranging, in descending order, from the high number of deaths and mortality rates to risks, exposure, and vulnerability.

Thus, the Black population, especially when compared to the whites and Hispanics, is related not only to a high mortality rate but also to a higher risk of death, regardless of factors such as comorbidities, poverty, access to care health, and risk factors[8-13]. This situation can also be seen territorially, where, in the United States, in general, counties with higher proportions of Black residents had more deaths from COVID-19, regardless of size[14,15].

According to Bassett et al.[16], the disproportional number of deaths indicates that potential years of life lost before 65 were experienced by Black and Hispanic populations compared to whites. However, the latter is the majority in the USA. Also, Black people accounted for 18.7% of overall deaths despite representing only 12.5% of the population in that country[17]. Thus, a question raised by Wrigley-Field[18] indicates that the entire white population of the United States would need to "experience a level of excess mortality comparable to 90% of the official COVID-19 mortality rate (for all racial groups) in New York City" to achieve the highest Black mortality rates.

Regarding hospitalization, the Black population was identified as the racial group most hospitalized due to the new Coronavirus infection against patients from all racial groups testing positive, mainly when associating poverty, older age, male sex, and obesity, and this inequality persists even adjusting for age, sex, comorbidity and income[19-22]. Corroborating this, Wiemers et al.[23] show that non-Hispanic Blacks are more vulnerable than non-Hispanic whites and Hispanics, both at comparable ages and regarding increasing age.

However, in ICU admission for the same cause, no association was identified between race/ethnicity and increased admission[19-21]. Even so, the study by Arasteh[24] developed in New York identifies that predominantly Black and Hispanic neighborhoods, with a higher level of pover-

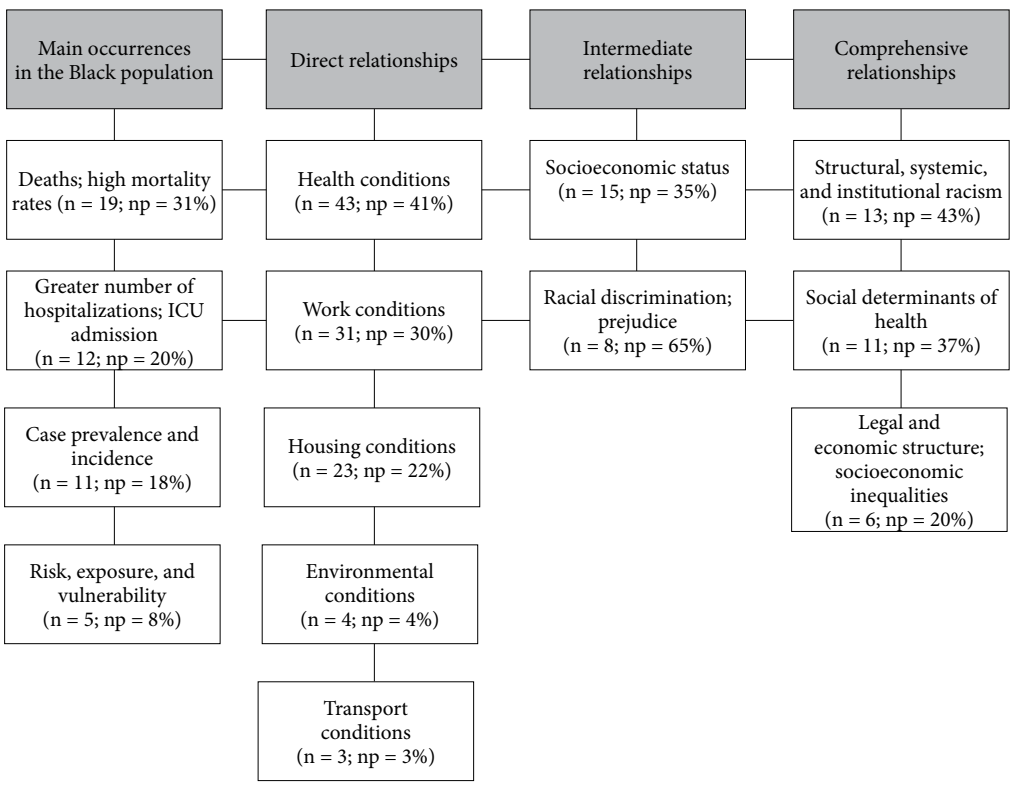

Figure 2. Relationship between black population and COVID-19 in studies per approach frequency.

n = number of articles whose results and discussion highlight the issue. np = percentage number against the universe of 45 articles.

Source: Authors.

ty, had 1 ICU bed for 900 adults aged 60 or over, compared to 1 ICU bed for 452 in predominantly white neighborhoods, with less poverty.

Regarding cases, the highest number of positive tests for SARS-CoV-2 was associated with the Black population[8,20,25,26]. We should underscore the study by Lieberman-Cribbin et al.[27] conducted in New York/USA, which points out that the number of total tests increased significantly with the increasing proportion of white residents. However, the ratio of positive tests to total tests has decreased significantly with the higher proportion of white residents in the area.

Also, regarding incidence and prevalence rates, the findings show the disproportionally high rates in the Black population, whether in territories with a Black majority or not, with rates higher than their territorial representations[28-30]. The Brazilian study by Polidoro et al.[31] reveals that quilombola communities composed mainly of people of African descent and Indigenous people located in metropolitan areas of the Southern states, the region with the largest Caucasian population in the country, are among the total population of the three metropolitan regions most impacted by the accumulation of COVID-19 cases.

Direct relationships – health, work, and housing conditions

The articles establish a direct relationship between the findings described above and the Black population. These events are, to a greater or lesser extent, associated mainly with health, work, and housing conditions. The greater frequency of these findings among the other groupings that address "relationships" suggests a multifactorial perspective.

Thus, "chronic conditions", "multiple comorbidities", "underlying health conditions", "disease burden", and "pre-existing diseases" are the terms appearing most frequently related to more significant hospitalization and deaths due to COVID-19 in this group, with consequent increase in the mortality rate. Health problems such as obesity, chronic kidney disease, heart disease, hypertension, chronic respiratory disease, dementia, chronic lung disease, asthma, HIV, morbid obesity, liver disease, and diabetes are the most cited in studies[8-10,26,32-35].

Besides these conditions, limited access and reduced routine to health services, primarily due to the difficulty in covering the costs are a widespread situation among "racial minorities" in the USA, especially in the Black population[10,28]. This country's population experiences difficulty accessing health insurance due to a lack of financial conditions, which was observed even before the pandemic[10,14,29,36]. As a result, chronic diseases that require prolonged and regular use of health services deteriorate, making these subjects even more vulnerable, causing poor progress of the disease and adverse outcome[12,13,16,17]. We should underscore other aspects related to access, such as the long wait for care and even the patients' delay in seeking a hospital for fear of exposure to discriminatory situations[8,19,22].

Still, in this sense, the Black population is described as the majority in essential service stations, which implies that they cannot perform their activities remotely and are in constant contact with the public, triggering elevated cases in this group. Cashiers and market clerks, bus drivers, subway drivers, nurses, doctors, other health workers, meat packers, farmers, police officers, and firefighters are the most cited jobs[9,14,20,24,27,29,37-40]. Keeping social distancing in the workplace among peers[8,12,41] was challenging in most of these functions.

Furthermore, Black people are those with more than one job, forced to show up for work for fear of dismissal, even in contravention of the most restrictive mobility measures or during lockdowns[42,43]. While being a less frequently raised issue, unemployment also appears as a situation that affects the so-called "ethnic minorities", in particular, a significant part of the Black population, often generating the need for more significant movement in search of employment and, therefore, greater exposure[14,39,43].

Regarding the domestic environment, multigenerational and multi-family homes characterize most of the homes of American ethnic minorities, predominantly Black and Hispanic people. Multigenerational households are marked by coexistence between older adults, the leading risk group, and, therefore, the target of the ostensible recommendation of social distancing, with young Black adults of working age, most of the essential workforce[20,29,37]. Multi-family homes and high-density environments hinder social distancing among residents[14,35].

Furthermore, the conditions of Black and Hispanic neighborhoods, where homes with these characteristics are located, make up territories marked by diverse issues that lead to exposure to infection, such as high population density[21,41,44], hindering social distancing when accessing public roads, high air pollution levels, favoring respiratory problems[12,17] and, while not

significant in the publications[12], significant cases of arrests of residents, who are confined in jails and left without adequate conditions to comply with preventive measures.

Intermediate relationships – income and racial discrimination

Two issues stand out as an "additional layer" to compose the analysis of associations: income and racial discrimination. These elements aim to mediate relationships between the COVID-19 events and issues directly linked to the Black population, as set out in the previous section. The lower frequency of these findings also reinforces the multicausal perspective, as few studies develop mediations during the health-illness process.

Thus, the terms "low income" and "low socioeconomic status" in the Black population[10,24,28,37,38,42] appear mainly related to the lack of access to health insurance[24] and deteriorated mental health, generating a negative perception about self-care[39] and greater dependence on public transport, which can lead the exposure of this population to the virus on the way to work, or even avoid using it to seek medical care in the face of COVID-19 symptoms[16]. Renelus et al.[34] highlight that, even when working in essential services, the Black population receives the lowest wages.

Anti-black racial discrimination, more than discrimination against other ethnic-racial groups in the USA, is related to greater inequality in COVID-19[33]. Long-term experience and exposure to discrimination, besides short-term effects, such as the activated stress process[43], is associated with increased distrust in the health system, resulting in delays or even distancing from health services[17]. This situation contributes to factors that increase the risk of underlying conditions[28]. Furthermore, racial discrimination is a barrier to access to real estate credit, leading to purchasing housing in poorer neighborhoods, often with high air pollution levels and multi-family homes[43].

Comprehensive relationships – structural racism and social determinants of health

Although they are among the findings with the second lowest frequency of approach, we should underscore that some articles "rehearse" expanding, albeit succinctly and not very explicitly, the explanation for the poor living conditions of the Black population and their situation in the face of the COVID-19 pandemic.

Thus, structural racism is the term that appears in most articles when seeking an explanatory perspective for racial health disparities. Sometimes the term appears as something that "*operates*", "*determines*", "*produces*", "*leads to*", or "*causes*"[11,14,32] and sometimes appears as something that "*influences*", "*reinforces*", "*maintains*", "*contributes*", "*reflects*", "*impacts*", and "*affects*"[3,28,44]. Also, in this sense, the same term appears most of the time along with other socioeconomic elements: "*structural racism and systemic roots*"[14]; "*structural racism and income inequality*"[32]; "*social determinants of health and structural racism*"[28]; "*structural racism and violence*"[31]; "*systemic economic hardship, interpersonal racial discrimination, and structural racism*"[45] and "*environmental pollutants, social inequality, structural racism, food insecurity, poor housing and living conditions, illiteracy, low socioeconomic status and lack of healthcare resources*"[44]. Other variant terms that appear less frequently are "*systemic racism*", "*conditioning structural racism*", "*institutional racism*", also follow the same logic mentioned above[13,29,46].

The term *social determinant of health*, which appears less frequently than the previous one, is positioned alongside ideas such as "*boost*"[2,41]; "*affect*"[28] or even as "*cause*"[10,19]; "*lead to*"[21]; "*explain*"[44]; "*play a role*"[22]. Also, like structural racism, it is mainly related to the idea of ethnic and racial disparities[25,41,42]. Often, the term appears "translated" as the negative conditions of work, housing, environment, education, socioeconomic status, income, food security, insurance, and transportation[10,25,42], even being stated as "different determinants" for each ethnic group[42].

Also, "*Legal and economic structure*" and *"socioeconomic inequalities"* appear, albeit less than the other terms, in a generalized way, with adverse effects on the total population, without considering racism as a structuring factor[24,38].

Discussion

The 2020 global health situation was often characterized as "exacerbating" a pre-existing reality in several social life dimensions. Even so, the health conditions of the Black population, which had already been described with negative metrics, ended up drastically taking a worse course, considering the impact of a pandemic, as shown in the summarized results.

Despite data showing high incidence, hospitalization, mortality from SARS-CoV-2, and less

testing in this group, the search for the scientific meaning of these associations promotes the debate on the relationships between "the social" and "the pathological" elements. The magnitude of a pandemic demands global surveillance of the disease and its consequences from the scientific community to understand its several aspects, especially how historical, political, economic, and cultural features shape the distribution of health problems among different social groups in different countries.

Given that most of the articles in this scope result from research produced in the American reality, we should consider these results in their particular dimension: the underlying racial relationships and socio-health characteristics in this country. However, it is also essential to understand the historical processes of race relationships internationally since the health reality of this population during the COVID-19 pandemic has negative similarities in health conditions when compared to Black people in other countries.

Thus, the characteristics of the American health system, with a robust private weight, not universal, and structured in different types of health insurance, establish significant restrictions and control mechanisms in access to health care, unlike access in public and universal systems[47]. This is one of the elements to understand the data that show the prevalence of "chronic conditions", "underlying health conditions", and "pre-existing diseases" in vulnerable populations, since these issues are identified as risk factors for the worst outcome of cases due to SARS-CoV-2.

Furthermore, to understand how the nature of this commercial health system connects with the Black community, arguments associating this population with low income and unemployment are often shown in these articles, which implies obstacles to complete or even partial access to health insurance.

Therefore, it is necessary to identify that these conditions were shaped by racial segregationism that structured the country with discriminatory, so-called Jim Crow laws in the Southern States. Even after the struggles of the American black movements, in the context of the Civil Rights mobilization in the 1960s that put an end to formal segregation, marks of the impact of this historical process on American Blacks are still visible[48,49].

Despite the particularities mentioned above, seeking to understand these processes in their complexity, a path that elucidates the poor health, work, and housing conditions and COVID-19 among the Black population of the wealthiest country in the world and in other economically more fragile nations, also includes the categories of *African diaspora* and *Black genocide*[50]. The first allows us to perceive current experiences historically connected between the territories in which men and women, Black men and women, were trafficked during the slavery period, analyzing "the problem of racism in its historical format in modern times"; that is, racism was established as essential technology to build contemporary societies, structuring the former colonies, through large estates and enslaved labor, and the modern States that emerged from them, preserving super-exploitation of the work of Black men and women.

The second, arising from the previous category, gives an intentional character to the elimination of these groups, not only in the subjugations in the daily processes of life and death but also in the State's discourse that denies and treats these situations as isolated cases to marginalize racially, upholding the overexploitation of their bodies[50]. These categories allow demobilizing arguments of inertia/continuity of the disadvantaged situation of the Black population, leading to the naturalized health situation of this group during the pandemic.

Thus, while not comparable, one can notice a common event among the findings, such as in quilombola in the southern region of Brazil and Black people in the USA; negative health indicators are more significant than their territorial representations. In other words, numerical majority or minorities are not absolute parameters for interpreting the adverse effects on the health of Black populations, and attention must be paid to racism that starts from a social structure and sustains health inequalities when reproduced institutionally.

However, we should underscore that although most articles associate "structural racism" with the COVID-19 problems in the Black population, the term is presented without a clear distinction from other types of racism – cultural, institutional, and interpersonal. The "structural" qualifier in these cases only suggests an event found in all social environments, requiring other additional elements to determine the poor living conditions of the Black population, such as low income, lack of access to healthcare, and unemployment.

However, as a theoretical-analytical category, structural racism offers the analysis of social

events, the understanding of racism as a historical and political process, which manifests itself structurally through ideology, politics, law, and economics, supporting conditions so that "racially identified groups" are systematically subjected to unequal social advantages and disadvantages[51]. This "structural" conception delineates income inequalities, violence, systemic economic hardships, interpersonal racial discrimination, territories with a higher concentration of environmental pollutants, substandard housing, illiteracy, and lack of health resources in the Black population.

In this sense, the term *disparity*, often used to "reveal negative differences" between different ethnic-racial groups, requires more grounding to develop the analysis of the data presented. By restricting themselves to low indicators in the living standards of the Black population as the main reason for this group's exposure to SARS-CoV-2 and its course and adverse outcomes end up dismissing more robust contributions from Human and Social Sciences that denaturalize this "evidence". Although epidemiology takes health inequalities as a topic of investigative interest due to their global nature, revealing differences in life expectancy or burden of suffering[52], these explanations find diverse theoretical references within the health field.

In most of the articles analyzed, *disparities* are suggested as "social factors", or even the "translation" of what *social determinants of health* are, understood as harmful elements that affect exposure, illness, and deaths among the Black population due to SARS-CoV-2. This perspective is insufficient because it is necessary to overcome the "linear conception of causality" in the cause-effect relationship between characteristics or social indicators and health problems[53] to understand the dynamics of the complex relationship between these health and illness-producing elements.

Thus, from the perspective of *social determination*, understanding the health-disease process involves intertwining "the general logic of society with the more or less healthy or unhealthy ways of living of social classes", crossed by ethnocultural and gender relationships[54]. Breilh[54] believes rethinking the power relationships that determine life and distribute inequality is challenging for scientific research, including epidemiology. Thus, advancing in understanding the race concept as an ideology that reveals power relationships also means overcoming biological and social determinism in producing knowledge in health. In other words, attributing the impact of COVID-19 on the Black population to macroeconomic, political, and social elements without seeking a dialectical relationship risks repeating ecological conceptions of health in new guises.

In this sense, the complexity surrounding how most of the Black population is in menial, low-paying jobs, with a significant level of exposure to infection, with pre-existing chronic diseases, and difficult access to health services due to lack of financial conditions to bear health insurance costs does not admit Cartesianism when seeking qualified scientific support to subsidize effective health policies to reverse the health catastrophe naturalized in this population.

Final considerations

The observation of the persistent racial inequalities in health in the first year of the COVID-19 pandemic, expressed mainly in data on high deaths and mortalities in the Black population, exposes the need to uncover events mostly revealed through numbers.

The notions of social determinants and structural Racism mobilized in these studies suggest the idea of overlapping layers of "social factors" that affect Black people and end up simplifying reality, resulting in multicausal explanations. In the opposite sense, understanding the critical racial theory and the dialectical theory of the health-disease process[51,54] offers more robustness to understanding the socio-historical complexity of the health situation.

This perspective offers quality scientific subsidies that allow formulating and operationalizing effective global actions in Public Health, such as equitable, intersectoral, and anti-racist policies in the face of the challenging SARS-CoV-2 pandemic and new pandemics that may arise anytime in the future.

Collaborations

MVR Araujo worked on the article's conception, writing, methodology, research, and final review. RC Pereira-Borges worked on the methodology, research, and writing.

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