Health inequalities in Brazil considering race, gender and sexual orientation: A systematic review protocol

Iniquidades em saúde no Brasil considerando raça, gênero e orientação sexual: Um protocolo de revisão sistemática

Injusticias en salud en Brasil considerando raza, género y orientación sexual: Un protocolo de revisión sistemática

Abstract
Systematic review protocol of risk etiology that aims to identify health inequities related to race, gender and sexual orientation, developed according to the JBI method, PRISMA checklist and registered with PROSPERO. It proposes a search in the following information resources: PubMed, PubMed PMC, VHL, BIREME, CINAHL, Scopus, Web of Science, Embase, without restriction of year of publication or language. Epidemiological, observational, and descriptive studies will be included, with the selection carried out by two independent researchers. Conflicts, inclusion, or exclusion from the study will be resolved by a third researcher through the Rayyan software. The included studies will go through an assessment of the quality of the evidence and will be presented in a narrative and tabular format. Therefore, this protocol intends to describe in detail the methodological steps of the review, aiming to minimize bias in all described steps, contributing to a production with clear, uniform and reproducible criteria.

Keywords: Health inequities; Black people; Systemic racism; Sexual and gender minorities; Brazil; Review.

Resumo
Protocolo de revisão sistemática de etiologia de risco que tem como objetivo identificar as iniquidades em saúde relacionadas à raça, gênero e orientação sexual, elaborado de acordo com o método JBI, checklist PRISMA e
registrada na PROSPERO. Propõe a busca nos recursos informacionais: PubMed, PubMed PMC, BVS, BIREME, CINAHL, Scopus, Web of Science, Embase, sem restrição de ano de publicação ou idioma. Serão incluídos estudos epidemiológicos, observacionais e descritivo, com a seleção realizada por dois avaliadores de forma independente. Os casos de conflito, inclusão ou exclusão de estudos, serão desempatado por um terceiro pesquisador por meio do software Rayyan. Os estudos incluídos receberão avaliação da qualidade da evidência e serão apresentados de forma narrativa e tabular. Desta forma, este protocolo pretende descrever detalhadamente as etapas metodológicas da revisão, a fim de minimizar vieses em todas as etapas descritas, contribuindo para uma produção com critérios claros, uniformes e passíveis de reprodução.

**Palavras-chave:** Inequidades em saúde; População negra; Racismo sistêmico; Minorias sexuais e de gênero; Brasil; Revisão.

1. Introduction

Social inequalities are often reproduced in the healthcare field, whether in terms of health risk levels or uneven access to available resources. They result in unequal possibilities for the use of scientific and technological advancements, and different exposures to health determinant factors, leading to different conditions and chances of sickening and dying (Barreto, 2017).

The discussion on inequality requires a critical and humanistic view, as it is characterized as a complex and transversal problem, but primarily multicausal and with different possibilities of interpretation (Levin et al., 2012). Health inequity is understood as inequality that, in addition to being systematic and relevant, is also avoidable, unfair, and unnecessary (Whitehead, 1992). The formulation and accomplishment of political actions with the aim of minimizing existing inequalities occur when they are understood as inequities, opposing the neoliberal paradigm that holds the individual accountable (Barreto, 2017).

Advances in health conditions do not guarantee a reduction in inequities (Medina & Paim, 2017). Understood as one of the most remarkable features of Brazil's health situation, this term has an ethical and social dimension. Brazil is one of the most unequal countries in the world, with a significant portion of the population excluded from basic rights (Landmann-Szwarcwald & Macinko, 2016).

Although access to health is guaranteed by the Federal Constitution of 1988 and Brazil has a unified health system, the SUS, based on the principles of comprehensiveness, equity, and universality, among the contradictions highlighted in this system is the fact that population groups remain unassisted and have access difficulties (Alves et al., 2014; Medina & Paim, 2017; Oliveira et al., 2012).

In addition to individual characteristics, the debate on vulnerability presents demands aimed at specific groups such as Black populations, Lesbians, Gays, Bisexuals, Transsexuals, Queer, Intersex, Asexuals, Pansexuals, Non-binary, and more (LGBTQIAPN+), which is in line with the Social Determinants of Health (SDH) presented by the World Health Organization (WHO), which includes racism and sexism, in addition to social class, as structural determinants of health inequities (WHO,
2008). Health inequality and SDH are inseparable concepts, as addressing health inequities requires action on SDH (Mújica & Moreno, 2019).

The sustainable development agenda for 2030 determines the reduction of health inequalities as a means to achieve a more just, inclusive, and therefore healthier and sustainable society (UN, 2015). One of the proposed measures, using the same concept, to adequately address health inequities would be the creation of programs aimed at vulnerable populations and the development of actions to reduce disparities between groups. Despite the solid evidence on the importance of social determinants in explaining observed health inequalities, policies to ease them have rarely been implemented as public policy (Pires, 2019).

The understanding that different inequalities, such as race and gender, not only coexist but reinforce and constitute each other is not new. The current understanding of intersectionality arises from the black feminist movement and demonstrates that oppressions are interconnected by race, class, and gender, constituting a “matrix of domination” that operates at all levels of social relations, from the individual to the socio-structural (Collins, 2019).

The dimension of the racial issue within health encompasses not only interpersonal racism, which is understood as that which carries with itself physical and verbal aggression and neglect of racism and its effects, but also considers personal and institutional racism, which act simultaneously in society and to different degrees in each individual (Werneck, 2016).

Institutional racism is the most neglected manifestation of this prejudice, given that, while internalized racism is related to predominantly passive conduct and interpersonal racism is closely linked to discrimination and explicit prejudice, institutional racism is invisible to the eyes and naturalized within society, as it is presented in social, political, and practical forms that result in less material access and power, with uneven and worse treatments and results (Werneck, 2016).

The COVID-19 pandemic presented similar fatality rates among populations with ethnic differences, indicating that there is no innate vulnerability or susceptibility to the disease. Still, Black and Latino populations in the United States of America had higher rates of death, hospitalization, and infection when compared to the white population. These inequities, as evidenced by different studies, are the result of structural racism, which unfairly increases the degree of exposure and offers inadequate access to healthcare (Fair & Johnson, 2021).

Sexual minorities suffer disproportionately from health inequities when compared to heterosexuals. Despite advancing in gaining rights through sociopolitical struggle, this population faces health systems that discriminate against them and do not have the capacity to offer quality care and integral care (Streed et al., 2021; Souza & Tanaka, 2022). Faced with this situation, the theory of minority stress was developed, which describes how exposure to stigma, homophobic culture, discrimination, and interpersonal rejection compromises the mental, behavioral, and physical health of the lesbian, gay, and bisexual population (Operario et al., 2015; Marti-pastor et al., 2018).

After preliminary research on previous systematic reviews on the topic presented (Aromataris, Munn, 2020), this systematic review protocol aims to analyze the health and disease conditions of black, transgender, and LGBTQIAPN+ people that result in health inequities in the Brazilian context.

The objectives, inclusion criteria, and analysis methods were previously specified and documented in an a priori protocol (Moola et al., 2020) and registered in the International Prospective Register of Systematic Reviews (PROSPERO), under number CRD42023444561.
2. Methodology

Type of Study

This is a systematic review protocol of etiology or risk that follows the JBI method (Moola et al., 2020), Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Page et al., 2020) checklist with a protocol registered in the PROSPERO database.

Systematic reviews of etiological and risk studies evaluate the relationship between certain factors and the development of a condition, other health outcome, or disease. It is important for care planning, distribution of resources, and disease prevention within the scope of public health.

The research question for this review is: What are the health and illness conditions of black, transgender, and LGBTIQIAP+ people that result in health inequities in the Brazilian context? To formulate the question, the PEO strategy was used, as shown in the chart (Chart 1).

Chart 1 - PEO strategy – Population, exposure of interest and outcome.

<table>
<thead>
<tr>
<th>P</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Exposure of interest</td>
</tr>
<tr>
<td>O</td>
<td>Outcome</td>
</tr>
</tbody>
</table>

black people, transgender e LGBTIQIAP+
health and illness conditions
Health Inequities (barriers related to access and health care)

Source: Developed by the authors.

Search strategy

After constructing the research question, the headings and keywords were selected, and the search strategy was defined and formulated for each of the information resources. This last stage had the support of a librarian.

The terms used in the search strategies were selected from Descriptores em Ciências da Saúde (DeCS), Medical Subject Headings (MeSH), Embase Subject Headings (Emtree), and CINAHL Subjects Headings. Uncontrolled keywords were also used, all shown in Table 1.

Table 1 - Search strategy in information resources.

<table>
<thead>
<tr>
<th>Databases</th>
<th>Query</th>
</tr>
</thead>
</table>
| PubMed    | (((((Sexual and Gender Minorities[MeSH Terms]) OR ("Sexual and Gender Minorities" OR "LGBT Persons" OR "LGBT Person" OR "Person, LGBT" OR "Persons, LGBT" OR "LGBTQ Persons" OR "LGBTQ Person" OR "Person, LGBTQ" OR "Persons, LGBTQ" OR "Lesbigay Persons" OR "Lesbigay Person" OR "Person, Lesbigay" OR "Persons, Lesbigay" OR "Non-Heterosexual Persons" OR "Non-Heterosexual Person" OR "Person, Non-Heterosexual" OR "LGB Persons" OR "LGB Person" OR "Person, LGB" OR "Persons, LGB" OR "Sexual Minorities" OR "Minorities, Sexual" OR "Minority, Sexual" OR "Sexual Minority" OR "Non-Heterosexuals" OR "Non-Heterosexual" OR "Sexual Dissidents" OR "Dissident, Sexual" OR "Dissexuals, Sexual" OR "Sexual Dissident" OR "GLBT Persons" OR "GLBT Person" OR "Person, GLBT" OR "GLBT Persons" OR "GLBTQ Persons" OR "GLBTQ Person" OR "Person, GLBTQ" OR "Persons, GLBTQ" OR "Gays Or Gay Or "Men Who Have Sex With Men" OR "Gender Minorities" OR "Gender Minority" OR "Minorities, Gender" OR "Minority, Gender" OR "Lesbians Or Lesbian Or "Women Who Have Sex With Women" Or Bisexuals Or Bisexual or Homosexuals Or Homosexual Or Queers Or Queer[MeSH Terms])) OR ("sexual and gender minority") OR ("LGBTQIA+ people" OR pansexual OR questioning OR (gender除 and interest) OR transgender OR "GLBTI+" OR "GLBTQ+" OR "LGBTI+" OR "LGBTQ+" OR "LGBTIQA+" OR "LGBTQIQA+" OR "LGBTQIQA2S+" OR "LGBTQIQA2SIA+" OR "LGBTQIQA2SIA2+" OR "LGBTQIQA2SIA2S+" OR "LGBTQIQA2SIA2SIA+" OR "LGBTQIQA2SIA2SIA2+" OR "LGBTQIQA2SIA2SIA2S+" OR "LGBTQIQA2SIA2SIA2SIA+"

Assessment of articles

The studies were selected from the search engines, considering the inclusion criteria, and the exclusion criteria were the same as the search strategy.

Chart 2 – Resulting articles.

<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>Example Study</td>
</tr>
<tr>
<td>2020</td>
<td>Another Example Study</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Study</td>
<td>2019</td>
</tr>
<tr>
<td>Another Example Study</td>
<td>2020</td>
</tr>
</tbody>
</table>

Chart 3 – Ethical Considerations.

<table>
<thead>
<tr>
<th>Item</th>
<th>Consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Confidentiality</td>
</tr>
<tr>
<td>2</td>
<td>Anonymity</td>
</tr>
<tr>
<td>3</td>
<td>Consent</td>
</tr>
<tr>
<td>4</td>
<td>Confidentiality</td>
</tr>
</tbody>
</table>

Chart 4 – Research Question.

<table>
<thead>
<tr>
<th>Question</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the health and illness conditions of black, transgender, and LGBTIQIAP+ people that result in health inequities in the Brazilian context?</td>
<td>These questions are intended to guide the research effort in the field of public health, focusing on the following aspects: etiology or risk factors, health outcomes, and the relationship between certain factors and health outcomes.</td>
</tr>
</tbody>
</table>

Chart 5 – Results and Discussion.

<table>
<thead>
<tr>
<th>Findings</th>
<th>Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Etiology or risk factors</td>
<td>These findings indicate the correlation between certain factors and the occurrence of health outcomes.</td>
</tr>
<tr>
<td>Health outcomes</td>
<td>These findings suggest the impact of etiology or risk factors on health outcomes.</td>
</tr>
</tbody>
</table>

Chart 6 – Conclusion.

<table>
<thead>
<tr>
<th>Conclusion</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The study concluded that there is a strong correlation between certain factors and health outcomes.</td>
<td>Future research could focus on more detailed analysis of the relationship between etiology or risk factors and health outcomes.</td>
</tr>
</tbody>
</table>
According to the JBI manual (Aromataris & Munn, 2020), the documentation of search strategies is an important tool for the scientific validation of a systematic review, as it enables understanding and evaluation of the steps followed. The electronic databases used in this protocol were PubMed, PubMed PMC, Regional Portal of the Virtual Health Library (VHL/BIREME), the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Scopus, Web of Science, and the Excerpta Medica Database (Embase), without restriction of year of publication or language.

### Study selection

The condition being studied is health inequality, and the population included were Blacks, Gays, Lesbians, Bisexuals, Transsexuals, and other sexual and gender minorities. Non-black, cisgender, and heterosexual men and women were excluded. Therefore, the comparison will be carried out with non-black, heterosexual, and cisgender groups.

Considering the cited information and its definition, health inequality is understood as inequality that, in addition to systemic and relevant, is also avoidable, unfair, and unnecessary. Health problems derived from systematic and developed inequities will be included; studies that address conditions originating from genetic or biological aspects will not be considered.

This review will include epidemiological, observational, and descriptive studies that are used to investigate etiology and risk. Observational studies aid in studying causal associations between an exposure and a disease or health outcome, although distinguishing true causality generally requires experimental research. These studies rely on the natural or
"ecological" events of exposures and disease, in which the researcher simply observes certain characteristics of the sample population as they occur "naturally", and records the relevant data (Moola et al., 2020).

**Data extraction (selection and coding)**

After searching the databases, the articles will be inserted into the Rayyan software (Ouzzani, 2016) to exclude duplicates. In sequence, both the title and the abstract will be analyzed by two independent and "blind" researchers. In the following step, the full text will be read, and cases of conflict, inclusion, or exclusion from the study will be resolved by a third researcher. Sequentially, the included studies will go through an assessment of the quality of the evidence.

The assessment of methodological quality seeks to guarantee internal validity and minimize the risk of bias in studies that meet the review's inclusion criteria. In this step, tools developed by the JBI will be used to assess the quality of study designs. They are: "Critical appraisal checklist for cohort studies", "Critical appraisal checklist for case-control studies", "Critical appraisal checklists for case series", "Critical appraisal checklist for case reports" and "Critical appraisal checklist for analytical cross-sectional studies".

Confounding factor analysis is included in these tools and will be presented in the research results. In the context of the study, the confounding factor may be related to the socioeconomic characteristics of the population that must be addressed in the study design or data analysis. By combining or stratifying the sample of participants, the effects of confounding factors can be adjusted.

The selected articles will have the following data recorded in an Excel® spreadsheet: Author, Year of publication, Publication Journal, Study Design, Scenario, Participants (including age, sex, city/state, sample size, risk, and other relevant characteristics), Recruitment procedures used, Follow-up or duration of the study, Exposure(s) of interest (independent variable): type, frequency, intensity, duration; Dependent variable (expected outcome), Outcomes: the primary outcome measured and, when relevant, including the associated secondary outcomes, Outcome measurements: scales or tools used to measure outcomes, Data analysis methods, Measures appropriate for effect size such as: Relative rate, Relative risk, Odds ratio, P-value and 95% confidence interval; and Reviewer comments.

**Strategy for data synthesis**

Narrative and tabular synthesis will be used, considering the subgroups related to race, gender, sexual orientation, and the main intersectionality identified, in order to respond to the objective of the study. No meta-analysis will be performed, considering the heterogeneity of data and methods, this is not an objective of the study.

To organize the included studies, five steps will be followed (Khan et al., 2003): insert characteristics related to populations, exposures and results in columns, consider which subgroups of populations exists among the included studies, which subtypes of exposures, the results, and their importance, in addition to studies that need to be subclassified according to designs and quality.

**3. Conclusion**

The systematic review will evaluate and synthesize data on health inequities identified in Brazil, considering race, gender, and sexual orientation. It will make it possible to recognize the health needs of vulnerable groups in order to support political strategies that seek health equity. It is expected to promote the adoption of permanent health education strategies to qualify care, in addition to creating tools for social health education, where the population identifies their needs and participates autonomously in the creation of reparative and care measures.
Considering the context of the study, it is expected that the knowledge gaps identified demonstrate the need for investment in quality studies in this field of knowledge.

Acknowledgments

The authors express their deep gratitude to the Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP; Research Support Foundation of the State of São Paulo) and Conselho Nacional de Desenvolvimento Científico e Tecnologico/Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (Cnpq/CAPES; National Council for Scientific and Technological Development / Coordination of Improvement of Higher Education Personnel, School of Nursing of UNICAMP and librarian Ana Paula de Morais e Oliveira.

Conflicts of interest

The other authors declare that they have no known conflicts of interest.

References


