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Mental health and access to healthcare among vulnerable populations in Brazil

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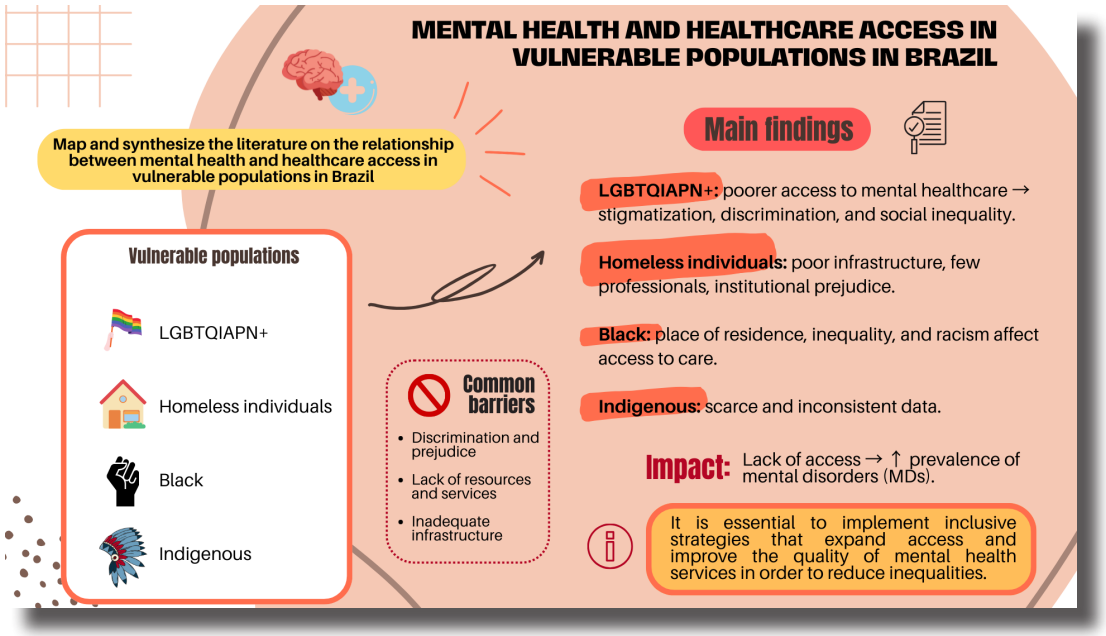
Graphical Abstract



Highlights

- *The LGBTQIAPN+ population faces exclusion due to stigma, financial barriers, and inadequate services.*
- *Black individuals have less access to depression diagnosis and treatment.*
- *Homelessnes worsens social exclusion and limits access to mental healthcare.*

Abstract

Vulnerable populations, including people experiencing homelessness, LGBTQIAPN+ individuals (lesbian, gay, bisexual, transgender and transvestite, queer, intersex, asexual, pansexual, non-binary, and other gender and sexuality groups and variations), Black people, and Indigenous peoples, are more susceptible to mental disorders and face multiple barriers in accessing healthcare. However, the scientific literature still lacks a study that synthesizes findings on this topic. This work synthesized the relationship between mental health and access to healthcare among vulnerable groups in Brazil. A search was conducted in PubMed, LILACS, and Google Scholar based on the question: "What is the relationship between mental health and access to healthcare in vulnerable populations in Brazil?" A total of 578 records were identified, of which 7 met the inclusion criteria. The LGBTQIAPN+ population showed poorer access to healthcare due to financial issues and prejudice. Stigmatization, social discrimination, and lack of resources affected access to mental health services and the quality of care for the homeless population. Race/ethnicity and low educational attainment were the main factors associated with reduced access to depression diagnosis and treatment among Black individuals. Data collected on the topic in the Indigenous population were inconsistent, preventing a conclusive analysis for this group. The implementation of public policies aimed at improving the availability and quality of healthcare services for vulnerable populations is essential to reduce access inequalities in the Brazilian population and mitigate their social and economic impacts.

Keywords: Vulnerability. Health. Access. Discrimination. Equity. Minorities.

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INTRODUCTION

Among the conditions that significantly impact the global population, mental disorders (MDs) stand out as psychological manifestations that affect individuals in their mental and behavioral functioning. These disorders are associated with suffering or impairment in personal, familial, and social functioning, among other areas[1]. Due to their high prevalence, affecting individuals from childhood through old age, they impose a considerable burden on healthcare systems, the economy, and society at large. As a consequence, individuals' well-being is compromised[2]. According to the World Health Organization (WHO), approximately 1 billion people were affected by MDs in 2019[3]. Moreover, around 86% of the Brazilian population presents some form of mental disorder, particularly anxiety, making Brazil the country with the highest prevalence of this condition[4].

Although the concept of MDs is widely disseminated, it is important to emphasize that mental health should not be understood solely as the absence of disorders. According to the WHO, mental health is a state of well-being in which the individual recognizes their own abilities, can cope with the normal stresses of life, work productively, and contribute to their community[3]. This perspective broadens the understanding of mental health determinants and reinforces the need for intersectoral approaches beyond the biomedical model centered on diagnosis and the medicalization of psychological suffering. Social vulnerability, in turn, is defined as the degree to which an individual's social situation makes them susceptible to further insults, that is, adverse health or social events[5].

It is widely known that vulnerability to mental disorders (MDs) is higher among certain communities that face challenges related to their socioeconomic conditions and well-being[6]. However, this vulnerability decreases when robust social support is available[7,8]. Thus, groups with lower socioeconomic status, such as individuals experiencing homelessness, present a higher prevalence of MDs, and this prevalence tends to decrease as support systems strengthen[7]. Additionally, the LGBTQIAPN+ population, which includes lesbian, gay, bisexual, transgender and transvestite, queer, intersex, asexual, pansexual, non-binary individuals, and other gender and sexuality groups and variations[9], is particularly affected by discrimination and violence in society, which also increases the prevalence of such disorders[10]. Furthermore, certain ethnic/racial communities, especially Black and Brown populations, show greater susceptibility to MDs due to the prejudice they face, along with other prevalent factors such as socioeconomic status[11].

Vulnerability to MDs is exacerbated by the barriers these populations face, such as violence, intolerance, and discrimination. These factors directly affect access to education, the labor market, and healthcare systems, resulting in lower socioeconomic and educational development and increasing the risk of mental illness. This can manifest in symptoms such as decreased motivation, low self-confidence, and reduced self-esteem[8]. The exclusion of these groups contributes to the deterioration of individual well-being, fostering the development of MDs[8,10].

Health equity highlights the need to reduce disparities in healthcare services within communities and ensure access for all. To achieve this, the implementation of public policies is crucial in making healthcare resources available to vulnerable populations[12]. In Brazil, the National Policy for the Homeless Population (PNPR) aims to address the needs of this group through intersectoral strategies directly linked to social protection policies[13]; the National Policy for Comprehensive Health of LGBT People (PNSILGBT) seeks to promote equity within the Unified Health System (SUS), ensure appropriate care, access to specific services, and intersectoral policies[9]; the National Policy for the Comprehensive Health of the Black Population (PNSIPN) aims to reduce racial discrimination through health care measures and improve universal policy within the public health system[14]; and the National Policy for the Health Care of Indigenous Peoples (PNASPI) seeks to provide healthcare access and services while respecting sociocultural diversity and incorporating traditional Indigenous medicine[15]. Additionally, it is important to mention the Social Determinants of Health (SDH), which encompass the social, economic, cultural, ethno-racial, psychological, and behavioral aspects that expose populations to health risks, and the Psychosocial Care Network (RAPS), created in Brazil to structure mental health services and enable integrated care through the articulation of community-based services within SUS care networks[16,17].

In this context, investigating the relationship between mental health and access to healthcare in vulnerable populations is essential to understand the specific barriers faced by these communities. A thorough analysis allows for the identification of challenges and disparities in healthcare access among individuals at the intersection of vulnerability and mental disorders, thereby contributing to

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the development of more effective and inclusive policies and interventions. However, to date, the Brazilian literature lacks a study that synthesizes the findings on this topic. Therefore, this scoping review aims to map and synthesize the existing literature on the relationship between mental health and access to healthcare among vulnerable populations in Brazil.

MATERIAL AND METHODS

A scoping review was conducted, defined as a way of organizing and synthesizing knowledge through a systematic method. The main objective is to map the available evidence on a given topic[18]. This review followed the recommendations of the Joanna Briggs Institute (JBI) Manual for Evidence Synthesis[19] and was reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR)[18].

A comprehensive literature search was carried out to identify studies published up to October 2023 in the databases PubMed, Latin American and Caribbean Literature on Health Sciences (LILACS), and Google Scholar (gray literature), aiming to answer the following question: "What is the relationship between mental health and access to healthcare in vulnerable populations in Brazil?" The keywords used to identify the studies were based on the acronym PCC (Population, Concept, and Context)[19], where: P – vulnerable populations, Black population, Indigenous population, LGBTQIAPN+; C – access to healthcare; and C – Brazil. Health Sciences Descriptors (DeCS) and/or Medical Subject Headings (MeSH), along with their synonyms, were used to develop the search strategy. Preliminary tests that included a specific block of descriptors on mental health in the search strategy resulted in a significant reduction in the number of retrieved studies. Therefore, a broader approach was adopted, focusing on vulnerable populations and access to healthcare, to ensure greater sensitivity in identifying relevant studies. The selection of articles addressing mental health was carried out later during the screening stage, based on the inclusion criteria. The complete search strategy for each database/search engine is presented in Annex 1.

The inclusion criteria for this scoping review were: (1) original studies using qualitative, quantitative, or mixed methodological designs; (2) published in Portuguese, English, or Spanish; (3) conducted in Brazil; (4) involving individuals experiencing homelessness, LGBTQIAPN+, Black, or Indigenous populations; and (5) addressing the relationship between mental health and access to healthcare. Studies published in other languages, conducted in other countries, involving different target populations, or using other study designs were excluded (reviews were not included, although their reference lists were manually screened to identify additional articles). With the aid of Rayyan software (https://www.rayyan.ai/) and after removing duplicates, two researchers (P.T.S. and T.A.R.M.) independently screened the titles and abstracts of all records to identify potentially relevant studies. Full-text articles were obtained and reviewed to determine whether they met the predefined inclusion criteria. Any disagreement was resolved by consensus or, if necessary, through discussion with a third reviewer (P.M.A.).

Data extraction from the studies was carried out by two independent reviewers (P.T.S. and T.A.R.M.). The following information was collected: first author, year of publication, objective, study type, state and city, setting, vulnerable population and sample size, main results, and hypotheses proposed by the authors to explain their findings. Any discrepancies in data extraction were resolved by consensus. The data were systematically organized into structured tables.

RESULTS

The literature search identified 578 records of potential interest. After the removal of 74 duplicates, the titles and abstracts of 504 records were screened, of which 33 were selected for full-text reading. Following detailed analysis, 7 articles, including one retrieved through complementary search, met the predefined inclusion criteria and were included in this scoping review. The flowchart detailing the study selection process is shown in Figure 1. The studies excluded during the full-text review phase, along with the reasons for their exclusion, are listed in Annex 2.

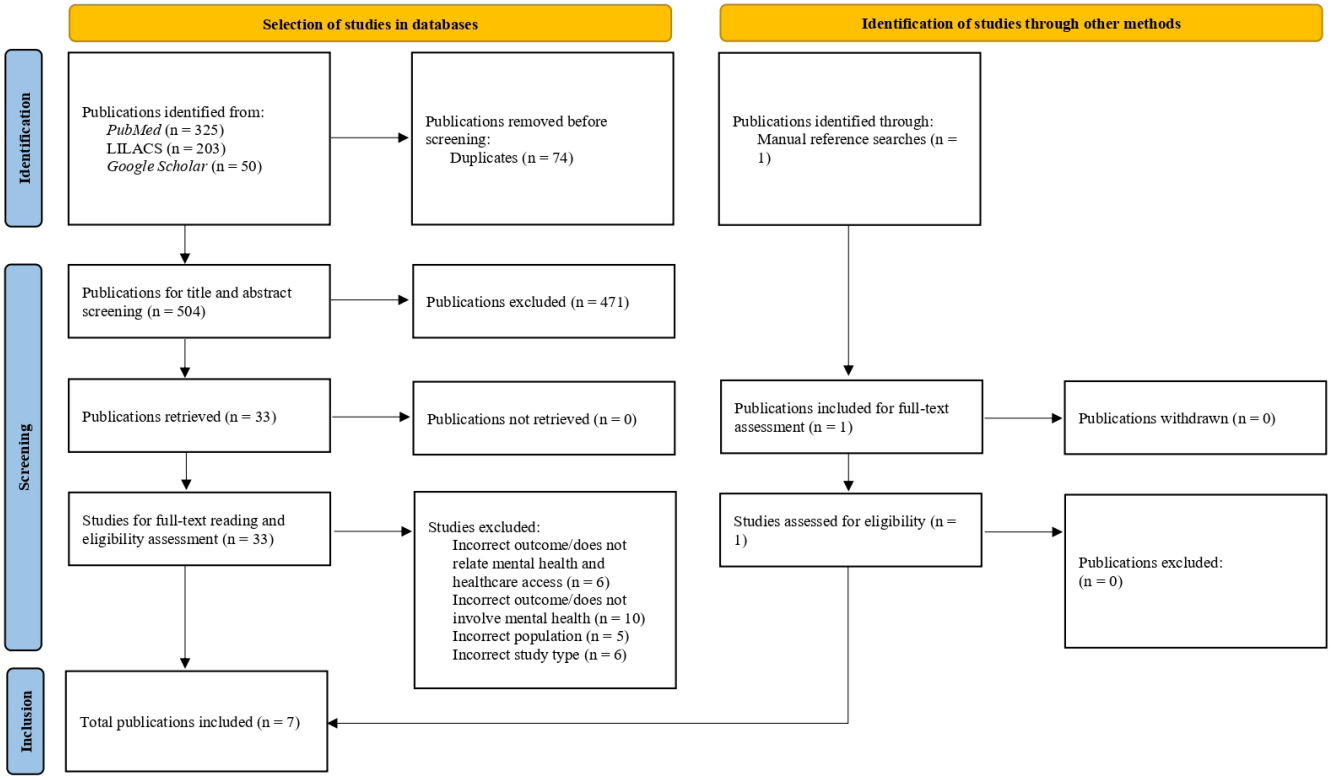

Figure 1 - Flowchart of study selection.

Table 1 - Characteristics of the studies included in the scoping review. São Paulo, 2024.

Main author	Objective	Study type	State and city	Setting	Vulnerable population and sample size	Main findings	Hypotheses
Borysow *et al.*[20]	To understand and assess intersectoral support services regarding the integration and flow of homeless individuals (HI) with severe mental disorders (SMD) in public mental health services.	Case study	Interior city, São Paulo	Social Assistance Reference Centers (CREAS), specialized centers for HI, shelters, and CAPS	Homeless population; not informed	Homeless individuals face discrimination in healthcare; CAPS-AD provided inconsistent care in shelters due to staff shortages; limited user understanding of services	Insufficient mental health professionals (overburdened social services); inadequate infrastructure of CAPS-AD and CAPS-III (in terms of location and staffing)

to be continued...

...continuation - Table 1.

Main author	Objective	Study type	State and city	Setting	Vulnerable population and sample size	Main findings	Hypotheses
Constante *et al.*[21]	To assess the performance of Brazil's universal health system in providing equitable access to depression treatment among the most marginalized groups of society.	Cross-sectional	Nationwide	Households with residents aged 15 and over	Black population; 87,187 individuals	Diagnosis of Major Depressive Disorder (MDD) by a health professional was lower among Black individuals than among whites; Black women with low education had less access to regular or specialized care	Racial segregation, persistent inequalities from education to labor market, high incarceration rates among the Black population
Crenitte *et al.*[22]	To compare healthcare access variables between LGBT+ individuals aged 50+ and non-LGBT+ individuals.	Cross-sectional	Nationwide	Medical associations, patient organizations, neighborhood groups, daycare centers, NGOs	LGBT+ population; 6,693 individuals	LGBT+ individuals with depression were associated with worse healthcare access quintiles compared to non-LGBT+ individuals	Cisgender heteronormativ practices in services (e.g., lack of recognition of social names, exclusionary educational materials, exposure to humiliation); poverty; violence; stigma
Guadagnin *et al.*[23]	To analyze the psychological and social impacts of the COVID-19 pandemic on individuals diagnosed with Gender Dysphoria (GD).	Cross-sectional	Porto Alegre, Rio Grande do Sul	Hospital de Clínicas de Porto Alegre (HCPA)	LGBT+ population; 48 individuals	LGBT+ individuals with depressive symptoms sought emergency care more often; 33% reported difficulties seeking care due to prejudice and discrimination	Economic crisis during COVID-19, minority stress, social vulnerability among LGBT+ people (worsened mental health led to greater emergency service use), discrimination in healthcare
Mrejen *et al.*[24]	To identify factors explaining income and racial/ethnic inequalities in depression prevalence and treatment gaps.	Cross-sectional	Nationwide	Not reported	Black and Indigenous populations; 148,688 individuals	Black and Brown individual showed a significant reduction in the treatment gap for depression from 2013 to 2019; estimates for Indigenous populations were imprecise due to small sample sizes	Large regional and racial variations (e.g., fewer mental health professionals in the Northeast vs. South/Southeast); racial discrimination; socioeconomic inequalities
Oliveira *et al.*[25]	To describe the healthcare-seeking pathways of transgender individuals in a city in the interior of Bahia.	Qualitative study	Vitória da Conquista, Bahia	Local health services in Vitória da Conquista	LGBT+ population; not informed	Transgender individuals reported financial difficulties and limited access to psychological care for mental health conditions	Insufficient number of psychologists to meet the mental health care demand among transgender patients
Paiva *et al.*[26]	To analyze how care for the homeless population (HI) is delivered through the Psychosocial Care Network (RAPS) in Natal, Rio Grande do Norte (RN).	Qualitative study	Natal, Rio Grande do Norte	RAPS across the five municipal districts of Natal	Homeless population; 23 individuals	Social discrimination, stigmatization, lack of documentation, territorial issues, and disjointed psychosocial care network affect access to healthcare for HI	RAPS itself views HI with inferiority (based on moralistic and discriminatory discourse); excessive guardianship and infantilization; repression; discrimination

Based on the data collected (Table 1), most studies were published in 2022[21,23,24,25,26], with the languages varying between English[21,22,23,24] and Portuguese[20,25,26]. The predominant study type was cross-sectional, present in four articles[21,22,23,24], followed by qualitative studies[25,26], and one case study[20]. There was considerable variability in the states and cities where the studies were conducted, with many covering the national territory[21,22,24]. The study settings and data collection sites included a variety of environments, such as healthcare services[20,23,25,26], shelters[20], non-governmental organizations[22], and participants' homes[21].

Among the vulnerable populations, the studies involved people experiencing homelessness[20,26], LGBTQIAPN+ individuals[22,23,25], Black individuals[21,24], and Indigenous peoples[24], covering sample sizes ranging from 23[26] to 148,688[24] participants. It is worth noting that some publications did not report all the data collected for this review, such as study setting[24] and sample size of the studied population[20,25].

The relationship between mental health and access to healthcare among vulnerable populations was reported in various ways across the studies. LGBTQIAPN+ individuals with depressive symptoms showed poorer access to healthcare[22,23], including mental health services[25], compared to non-LGBTQIAPN+ individuals, likely a condition worsened by financial issues and prejudice. For the homeless population, studies reported that stigmatization[26], social discrimination[20,26], and lack of resources in healthcare services[20] affected both access to mental healthcare and the quality of care received. In the case of the Black population, race/ethnicity was identified as the main factor associated with reduced access to depression diagnosis[21] and treatment[24]. Moreover, it was observed that Black women with low educational attainment may represent a particularly vulnerable group in terms of access to mental health services[21]. Regarding the Indigenous population, the data collected in the only study addressing this group were inconsistent, as the values obtained on access to depression treatment were low, making it impossible to conduct a conclusive analysis of the relationship between mental health and healthcare access for this population[24].

The authors of the studies proposed several hypotheses that could explain the intersection between mental health and access to healthcare in vulnerable populations. For individuals experiencing homelessness, contributing factors included limited support from healthcare services, such as a low number of professionals[20], poor accessibility to institutions[20], precarious infrastructure[20], and prejudice and discrimination[26]. In the case of the Black population, factors such as place of residence[24], socioeconomic inequality[21,24], and racial discrimination and segregation[21,24] were cited as possible explanations for the difficulties this group faces in accessing healthcare.

Finally, the main factors associated with poorer service availability in healthcare settings for LGBTQIAPN+ individuals included the delivery of healthcare in a cisgender heteronormative framework, for example, failure to recognize the social names of trans people, difficulties accessing spaces such as restrooms, lack of inclusive educational materials for LGBTQIAPN+ individuals in waiting rooms, and exposure to embarrassing situations[22]. Additional barriers included discrimination[23], stigmatization[22], social vulnerability[23], insufficient psychological support[25], and socioeconomic inequality[23].

DISCUSSION

At the time this study was conducted, no scoping reviews had been identified that map and synthesize the literature on the relationship between mental health and access to healthcare among vulnerable populations in Brazil. This study made it possible to observe the most recurrent barriers faced by these communities in accessing healthcare, such as racial and social discrimination and limited support from healthcare services. Based on the data obtained, it is evident that the analysis of the various difficulties faced by individuals in vulnerable situations when accessing healthcare is relatively recent, as demonstrated by the predominance of studies published in 2022. Moreover, the limited number of studies on this topic highlights the need for greater focus on research of this nature in Brazil, especially considering the high prevalence of mental disorders in the population, which affects a significant portion of society[27].

In this context, understanding social vulnerability allows for the recognition that barriers to healthcare access are shaped by social markers such as race, gender, and sexual orientation. Structural racism deepens the inequities that affect the Black population; institutional LGBTphobia hinders access for LGBTQIAPN+ individuals; and people

experiencing homelessness face intersectional vulnerabilities marked by lack of housing, food insecurity, violence, and extreme precariousness in living conditions.

Among the main factors that compromise healthcare access for these populations, discrimination, prejudice, and stigmatization stand out. These were frequently identified in the analyzed studies as determinants in the intersection between mental health and access to services, particularly for homeless, Black, and LGBTQIAPN+ populations[23,24,26]. Intolerance manifests across various spheres, from educational to racial, directly impacting the quality of care, reception in healthcare units[28,29], and even employment opportunities, thereby reinforcing the cycle of physical and mental illness[30]. In this regard, although Brazil has the National Humanization Policy (PNH)[31], which promotes care practices based on welcoming, active listening, and respect for individual needs, the findings of this review indicate that its principles are not yet fully realized in the care of populations in situations of vulnerability.

Moreover, another barrier reported in the publications was the limited accessibility to healthcare institutions[20,24], mainly due to the individuals' region of residence, which suggests a lack of support and prevents the adequate provision of care and treatment for these communities. Socioeconomic inequality also affected healthcare access for Black and LGBTQIAPN+ populations[21,23,24], including factors such as low educational attainment and challenges in the labor market[21]. Therefore, it is necessary to implement actions, such as public policies, that promote access to healthcare services while considering the specific needs of each group and assessing the cultural, social, economic, and political aspects of the regions in which these populations are located[28,32].

Beyond the social determinants, it is essential to consider that the organization of mental health services in Brazil poses significant challenges for populations in vulnerable situations. The Psychosocial Care Network (RAPS) structures these services through an integrated approach across primary, secondary, and tertiary care, offering support at different levels. In addition to services provided by Basic Health Units (UBS) and general hospitals, specialized care is offered through Psychosocial Care Centers (CAPS), which may be geared toward adults, children and adolescents, or individuals with substance use disorders. However, RAPS faces structural weaknesses that directly impact access and continuity of care, such as the insufficient availability of services in many regions, particularly in the North and Northeast, and poor coordination among the network's service points[33].

According to Guadagnin[23] and Oliveira[25], the LGBTQIAPN+ population experiences social vulnerabilities that may arise both in family environments and in broader society, in addition to facing low psychological support to address the healthcare needs of this group. The social discrimination experienced by LGBTQIAPN+ individuals can lead to worsening physical and mental health and increase their overall vulnerability. Therefore, it is crucial to implement strategies that expand access to healthcare for this community and provide appropriate and inclusive care[32].

The prevalence of mental disorders suggests that it is essential to promote mental health through actions targeting the social determinants of health, such as poverty, unemployment, lack of access to healthcare services, education, among others. Social, economic, and physical factors directly influence an individual's mental health, and the greater the social inequality, the higher the risk of developing mental disorders in the population. Studies have shown that low income, lack of education, and/or unemployment are associated with a higher prevalence of mental disorders such as depression and anxiety[34]. A study by Patel[35] found that limited access to healthcare services among individuals with mental disorders is influenced by economic factors, stigma, and discrimination from society. The quality of healthcare is also affected, particularly by the shortage of specialized healthcare professionals. Therefore, interventions must be carried out to ensure the quality of life of communities, from childhood to old age, promoting well-being and mitigating mental disorders associated with social inequalities[34].

Public policies targeting LGBTQIAPN+, Black, and homeless populations aim to promote health equity, reduce social inequalities, and meet the specific needs of each group[13,14,36]. However, improvements are still needed in certain areas, such as the alignment between health policies and the National Policy for Comprehensive LGBT Health (PNSILGBT), given the limited access to mental health programs for gay individuals, for example[36]. Regarding the National Policy for the Comprehensive Health of the Black Population (PNSIPN), the inadequate training of healthcare professionals in addressing the consequences of racism and meeting the community's needs, along with the lack of ethnic and/or racial sensitivity in the Psychosocial Care Network (RAPS), reveals weaknesses in policy implementation in society due to the impact

of racism and social discrimination on the mental health of the Black population[37]. Considering the vulnerability of the homeless population to worsening physical and mental health, limited access to healthcare, risk conditions, and violence, the National Policy for the Homeless Population (PNPSR) is linked to RAPS to provide care for this group. However, actions must be implemented to provide appropriate mental healthcare according to their needs and to expand the integration among sectors of healthcare services, strengthening psychosocial care[38].

This review presents several limitations. No methodological quality assessment of the publications was conducted, as the scoping review model does not require such an evaluation of the included primary studies, focusing instead on identifying all available evidence in databases and highlighting their main aspects, regardless of quality[18]. Furthermore, some studies may not have been identified in the selected databases and search engines due to indexing limitations. Additionally, databases such as SciELO (despite its overlap with LILACS) and Scopus (focused on social and human sciences) could have broadened the scope of the search. It is acknowledged as a limitation that technical reports, government documents, and publications by civil society organizations were not included. These materials could have contributed to a more comprehensive understanding of the relationship between mental health and access to healthcare services among vulnerable populations, especially considering the scarcity of academic studies on the topic in the Brazilian context. The exclusion of studies focused solely on *quilombola* communities may also be seen as a limitation, as this population is part of the Black racial group but possesses specific socio-territorial characteristics that require distinct analysis. Lastly, the geographic concentration of studies, with disproportionate focus on certain regions of Brazil, may not fully reflect the diversity of barriers experienced across the country.

CONCLUSION

This scoping review enabled a deeper understanding of the complex relationship between mental health and access to healthcare among vulnerable populations in Brazil. Discrimination, social vulnerability, socioeconomic inequality, and poor healthcare infrastructure were identified as the main barriers limiting access to services for these groups. It is important to note the inconsistency of data collected on Indigenous populations, which prevented drawing definitive conclusions for this community. Although public policies such as the National Policy for Comprehensive LGBT Health (PNSILGBT), the National Policy for the Comprehensive Health of the Black Population (PNSIPN), and the National Policy for the Homeless Population (PNPSR) represent progress in promoting health equity and addressing socioeconomic inequalities, their practical implementation still faces challenges, such as improving integration across healthcare services, training healthcare professionals, and developing strategies that address the specific needs of each population.

Given these findings, it is clear that these communities are more likely to develop mental disorders and face numerous obstacles in obtaining proper diagnosis and treatment within the Brazilian healthcare system. The topic remains underexplored in the Brazilian literature, highlighting the urgent need to implement strategies aimed at improving the availability and quality of healthcare services, with the goal of reducing the prevalence of mental disorders in the Brazilian population and mitigating their social and economic impacts.

CRediT author statement

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All authors have read and agreed to the published version of the manuscript.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix 1 - Complete Search Strategy for the Databases.

PubMed n = 325	#1 Health Disparate, Minority and Vulnerable Populations[Mesh Terms] OR (“Health Disparate Populations”) OR (“Health Disparate Population”) OR (“Health Disparity Populations”) OR (“Health Disparity Population”) OR (“Minority Populations”) OR (“Minority Population”) OR Vulnerable Populations[Mesh Terms] OR (“Vulnerable Population”) OR (“Underserved Population”) OR (“Underserved Populations”) OR (“Underserved Patient”) OR (“Underserved Patients”) OR (“Disadvantaged Populations”) OR (“Disadvantaged Population”) OR (“Sensitive Populations”) OR (“Sensitive Population”) OR (“Sensitive Population Groups”) OR (“Sensitive Population Group”) OR Sexual and Gender Minorities [MeSH terms] OR Transgender Persons[MeSH terms] OR (“Non-Heterosexuals”) OR (“Non-Heterosexual”) OR (“Non Heterosexuals”) OR (“Sexual Dissidents”) OR (“Sexual Dissident”) OR (“GLBT Persons”) OR (“GLBT Person”) OR (“GLBTQ Persons”) OR (“GLBTQ Person”) OR (“LGBT Persons”) OR (“LGBT Person”) OR (“LGBTQ Persons”) OR (“LGBTQ Person”) OR (“Lesbigay Persons”) OR (“Lesbigay Person”) OR (“Non-Heterosexual Persons”) OR (“Non-Heterosexual Person”) OR (“Non Heterosexual Persons”) OR (“Sexual Minorities”) OR (“Sexual Minority”) OR (“LBG Persons”) OR (“LBG Person”) OR (LGBTQI) OR (LGBTQIA) OR (LGBTQIA+) OR (Gays) OR (Gay) OR (“Men Who Have Sex With Men”) OR (“Gender Minorities”) OR (“Gender Minority”) OR (Lesbians) OR (Lesbian) OR (“Women Who Have Sex With Women”) OR (Bisexuals) OR (Bisexual) OR (Homosexuals) OR (Homosexual) OR (Queers) OR (Queer) OR (“Transgender Person”) OR (Transgenders) OR (Transgender) OR (“Transgendered Persons”) OR (“Transgendered Person”) OR (“Two-Spirit Persons”) OR (“Transsexual Person”) OR (Transexuals) OR (Transexual) OR (Intersex) OR (Asexual) OR Black People[Mesh Terms] OR (Blacks) OR (Negroes) OR (Negro) OR (“Black Peoples”) OR (“Black Person”) OR (“Black Persons”) OR (“Negroid Race”) OR (“Negroid Races”) OR (“African Continental Ancestry Group”) OR Indigenous Peoples[Mesh Terms] OR (“Indigenous People”) OR (“First Nation Peoples”) OR (“First Nation People”) OR (“Native Peoples”) OR (“Native People”) OR (Natives) OR (Native-Born) OR (“Native Born”) OR (“Indigenous Population”) OR (“Indigenous Populations”) OR (Indigenous) OR (Tribes) #2 Health Services Accessibility[Mesh Terms] OR (“Access to Health Services”) OR (“Access to Care”) OR (“Access to Cares”) OR (“Accessibility of Health Services”) OR (“Availability of Health Services”) OR (“Health Services Availability”) OR (“Access to Health Care”) OR (“Health Services Geographic Accessibility”) OR (“Access to Therapy”) OR (“Access to Therapies”) OR (“Access to Treatment”) OR (“Access to Treatments”) OR (“Access to Medicines”) OR (“Access to Medicine”) OR (“Access to Medications”) OR (“Access to Medication”) OR (“Medication Access”) OR (“Medication Accesses”) #3 Brazil [Mesh Terms] OR Brazil OR Brazilian #4 #1 AND #2 AND #3
LILACS n = 203	((MH:Health Disparate, Minority and Vulnerable Populations) OR (“Health Disparate Populations”) OR (“Health Disparate Population”) OR (“Health Disparity Populations”) OR (“Health Disparity Population”) OR (“Minority Populations”) OR (“Minority Population”) OR (MH:Vulnerable Populations) OR (“Vulnerable Population”) OR (“Underserved Population”) OR (“Underserved Populations”) OR (“Underserved Patient”) OR (“Underserved Patients”) OR (“Disadvantaged Populations”) OR (“Disadvantaged Population”) OR (“Sensitive Populations”) OR (“Sensitive Population”) OR (“Sensitive Population Groups”) OR (“Sensitive Population Group”) OR (MH:Sexual and Gender Minorities) OR (MH:Transgender Persons) OR (“Non-Heterosexuals”) OR (“Non-Heterosexual”) OR (“Non Heterosexuals”) OR (“Sexual Dissidents”) OR (“Sexual Dissident”) OR (“GLBT Persons”) OR (“GLBT Person”) OR (“GLBTQ Persons”) OR (“GLBTQ Person”) OR (“LGBT Persons”) OR (“LGBT Person”) OR (“LGBTQ Persons”) OR (“LGBTQ Person”) OR (“Lesbigay Persons”) OR (“Lesbigay Person”) OR (“Non-Heterosexual Persons”) OR (“Non-Heterosexual Person”) OR (“Non Heterosexual Persons”) OR (“Sexual Minorities”) OR (“Sexual Minority”) OR (“LBG Persons”) OR (“LBG Person”) OR (LGBTQI) OR (LGBTQIA) OR (LGBTQIA+) OR (Gays) OR (Gay) OR (“Men Who Have Sex With Men”) OR (“Gender Minorities”) OR (“Gender Minority”) OR (Lesbians) OR (Lesbian) OR (“Women Who Have Sex With Women”) OR (Bisexuals) OR (Bisexual) OR (Homosexuals) OR (Homosexual) OR (Queers) OR (Queer) OR (“Transgender Person”) OR (Transgenders) OR (Transgender) OR (“Transgendered Persons”) OR (“Transgendered Person”) OR (“Two-Spirit Persons”) OR (“Transsexual Person”) OR (Transexuals) OR (Transexual) OR (Intersex) OR (Asexual) OR (MH:Black People) OR (Blacks) OR (Negroes) OR (Negro) OR (“Black Peoples”) OR (“Black Person”) OR (“Black Persons”) OR (“Negroid Race”) OR (“Negroid Races”) OR (“African Continental Ancestry Group”) OR (MH:Indigenous Peoples) OR (“Indigenous People”) OR (“First Nation Peoples”) OR (“First Nation People”) OR (“Native Peoples”) OR (“Native People”) OR (Natives) OR (Native-Born) OR (“Native Born”) OR (“Indigenous Population”) OR (“Indigenous Populations”) OR (Indigenous) OR (Tribes)) AND ((MH:Health Services Accessibility) OR (“Access to Health Services”) OR (“Access to Care”) OR (“Access to Cares”) OR (“Accessibility of Health Services”) OR (“Availability of Health Services”) OR (“Health Services Availability”) OR (“Access to Health Care”) OR (“Health Services Geographic Accessibility”) OR (“Access to Therapy”) OR (“Access to Therapies”) OR (“Access to Treatment”) OR (“Access to Treatments”) OR (“Access to Medicines”) OR (“Access to Medicine”) OR (“Access to Medications”) OR (“Access to Medication”) OR (“Medication Access”) OR (“Medication Accesses”)) AND (Brazil OR Brazilian)
Google Scholar n = 50	((“Minority Populations”) OR (“Minority Population”) OR (“Vulnerable Population”) OR (LGBTQI) OR (LGBTQIA) OR (LGBTQIA+) OR (Gays) OR (Gay) OR (Lesbians) OR (Lesbian) OR (Bisexual) OR (Homosexuals) OR (Homosexual) OR (Queers) OR (Queer) OR (Transgenders) OR (Transgender) OR (Transexuals) OR (Transexual) OR (Intersex) OR (Asexual) OR (Blacks) OR (Negroes) OR (Negro) OR (“Black Peoples”) OR (“Black Person”) OR (“Black Persons”) OR (Indigenous) OR (Tribes)) AND ((“Access to Health Services”) OR (“Access to Care”) OR (“Access to Cares”) OR (“Access to Health Care”) OR (“Access to Therapy”) OR (“Access to Therapies”) OR (“Access to Treatment”) OR (“Access to Treatments”) OR (“Access to Medicines”) OR (“Access to Medicine”) OR (“Access to Medications”) OR (“Access to Medication”) OR (“Medication Access”)) AND (Brazil OR Brazilian)

Appendix 2 - Excluded studies and their exclusion criteria.

Author and Year	Title	Publication (Journal, Volume, Issue, Pages)	Exclusion Criterion
Albuquerque *et al.*, 2016	Access to health services by lesbian, gay, bisexual, and transgender persons: systematic literature review	BMC International Health and Human Rights, vol. 16, no. 1	Incorrect study type (review)
Arruda *et al.*, 2018	*Desigualdade no acesso à saúde entre as áreas urbanas e rurais do Brasil: uma decomposição de fatores entre 1998 a 2008*	Cadernos de Saúde Pública, vol. 34, no. 6, e00213816	Incorrect outcome (does not relate mental health and access to healthcare)
Barata *et al.*, 2007	Health inequalities based on ethnicity in individuals aged 15 to 64, Brazil, 1998	Cadernos de Saúde Pública, vol. 23, no. 2, pp. 305–313	Incorrect outcome (does not involve mental health)
Barroso *et al.*, 2015	*Fatores associados à depressão: diferenças por sexo em moradores de comunidades quilombolas*	Revista Brasileira de Epidemiologia, vol. 18, no. 2, pp. 503–514	Incorrect population
Cobo *et al.*, 2021	*Desigualdades de gênero e raciais no acesso e uso dos serviços de atenção primária à saúde no Brasil*	Ciência & Saúde Coletiva, vol. 26, no. 9, pp. 4021–4032	Incorrect outcome (does not relate mental health and access to healthcare)
Coelho e DPhil, 2011	Making the Right to Health a Reality for Brazil's Indigenous Peoples: Innovation, Decentralization and Equity	MEDICC Review, vol. 13, no. 3, pp. 50-53	Incorrect outcome (does not involve mental health)
Constante *et al.*, 2021	The door is open, but not everyone may enter: racial inequities in healthcare access across three Brazilian surveys	Ciência & Saúde Coletiva, vol. 26, no. 9, pp. 3981–3990	Incorrect outcome (does not involve mental health)
Costa *et al.*, 2016	Healthcare Needs of and Access Barriers for Brazilian Transgender and Gender Diverse People	Journal of Immigrant and Minority Health, vol. 20, no. 1, pp. 115–123	Incorrect outcome (does not relate mental health and access to healthcare)
Filho e Laurenti, 2013	*Disparidades étnico-raciais em saúde autoavaliada: análise multinível de 2.697 indivíduos residentes em 145 municípios brasileiros*	Cadernos de Saúde Pública, vol. 29, no. 8, pp. 1572–1582	Incorrect outcome (does not involve mental health)
Gomes e Esperidião, 2017	*Acesso dos usuários indígenas aos serviços de saúde de Cuiabá, Mato Grosso, Brasil*	Cadernos de Saúde Pública, vol. 33, no. 5, e00132215	Incorrect outcome (does not involve mental health)
Guimarães *et al.*, 2020	*Avaliação da implementação da Política Nacional de Saúde Integral à população LGBT em um município da região Sudeste do Brasil*	Revista Eletrônica de Comunicação, Informação E Inovação Em Saúde, vol. 14, no. 2, pp. 372-385	Incorrect outcome (does not involve mental health)
Hamada *et al.*, 2018	*População em situação de rua: a questão da marginalização social e o papel do Estado na garantia dos direitos humanos e do acesso aos serviços de saúde no Brasil*	Revista de APS, vol. 21, no. 3, pp. 461-469	Incorrect outcome (does not relate mental health and access to healthcare)
Hino *et al.*, 2018	*Pessoas que vivenciam situação de rua sob o olhar da saúde*	Revista Brasileira de Enfermagem, vol. 71, no. 1, 2018, pp. 684–92	Incorrect study type (review)
Hökerberg *et al.*, 2001	*Organização e qualidade da assistência à saúde dos índios Kaingáng do Rio Grande do Sul, Brasil*	Cadernos de Saúde Pública, vol. 17, no. 2, pp. 261–272	Incorrect outcome (does not involve mental health)
Jezus *et al.*, 2021	Local action plan to promote access to the health system by indigenous Venezuelans from the Warao ethnic group in Manaus, Brazil: Analysis of the plan´s development, experiences, and impact through a mixed-methods study (2020)	PLOS ONE, vol. 16, no. 11, p. e0259189	Incorrect outcome (does not involve mental health)
Mendes *et al.*, 2023	*Vulnerabilidades para o adoecimento de mulheres em garimpos na fronteira do Escudo das Guianas*	Revista Da Escola de Enfermagem Da USP, vol. 57, p. e20230010	Incorrect population
Mondragón-Sanchez *et al.*, 2022	*Desigualdades em saúde de adolescentes em situação de rua*	Revista Latino-Americana de Enfermagem, vol. 30, no. spe, p. e3757	Incorrect outcome (does not relate mental health and access to healthcare)
Mota *et al.*, 2021	*Um olhar para a vulnerabilidade: análise da ausência de acesso à saúde pelos quilombolas no Brasil*	Journal of Human Growth and Development, vol. 31, no. 2, pp. 302–309	Incorrect population
Nogueira e Aragão, 2019	*Política Nacional de Saúde Integral LGBT: o que ocorre na prática sob o prisma de usuários (as) e profissionais de saúde*	Saúde E Pesquisa, vol. 12, no. 3, 463–470	Incorrect outcome (does not involve mental health)
Pereira e Chazan, 2019	*O Acesso das Pessoas Transexuais e Travestis à Atenção Primária à Saúde: uma revisão integrativa*	Revista Brasileira de Medicina de Família E Comunidade, vol. 14, no. 41, 1795	Incorrect study type (review)
Rocon *et al.*, 2020	*Acesso à saúde pela população trans no brasil: nas entrelinhas da revisão integrativa*	Trabalho, Educação E Saúde, vol. 18, no. 1, e0023469	Incorrect study type (review)
Santos *et al.*, 2016	*Assistência prestada pelo Sistema Único de Saúde de Teresina à população indígena do Maranhão, 2011: um estudo descritivo*	Epidemiologia E Serviços de Saúde, vol. 25, no. 1, pp. 1–10	Incorrect outcome (does not involve mental health)
Silva *et al.*, 2020	*Acesso da população negra a serviços de saúde: revisão integrativa*	Revista Brasileira de Enfermagem, vol. 73, p. e20180834	Incorrect study type (review)
Silva *et al.*, 2023	*Acesso e utilização dos serviços de saúde e raça/cor/etnia entre mulheres: uma metanálise*	Revista Baiana de Saúde Pública, vol. 47, no. 2, pp. 264–282	Incorrect study type (review)
Sousa *et al.*, 2023	*Condições de saúde e relação com os serviços de saúde na perspectiva de pessoas de quilombo*	Escola Anna Nery, vol. 27, p. e20220164	Incorrect population
Souza *et al.*, 2021	The role of rurality on factors associated with major depressive episode screening among Brazilian adults in a national household survey	International Journal of Social Psychiatry, vol. 68, no. 4, pp. 762–772	Incorrect population
Torres *et al.*, 2021	*O Inquérito Nacional de Saúde LGBT+: metodologia e resultados descritivos*	Cadernos de Saúde Pública, vol. 37, no. 9, p. e00069521	Incorrect outcome (does not relate mental health and access to healthcare)