





Scientific Production in Dentistry for the LGBTQIA+ Population: A Scoping Review

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ABSTRACT

Objective: To map, through a scoping review, the characteristics of scientific dental production directed at LGBTQIA+ people. **Material and Methods:** Text searches were carried out (September 2022) in three databases: PubMed (MEDLINE), Virtual Health Library (BVS/BIREME), and SciELO (Scientific Electronic Library Online). Data extraction was carried out through the content of the abstracts and full texts. **Results:** A total of 1,524 studies were found, of which 186 were considered eligible. The results point to the stigmatizing nature of HIV-AIDS among the LGBTQIA+ population, a highlight of the scientific production that is linked to serophobic outcomes. Studies were also found that addressed the precariousness of oral health and inaccessibility to dental services, anatomical specificities, and the risks of contracting and preventing sexually transmitted infections. However, a substantial gap became evident: questions and directions aimed at providing dental care for the LGBTQIA+ population. **Conclusion:** There is a need to expand the number and scope of research aimed at this population in an attempt to provide evidence for the construction of an effective model of dental care, therefore, integral, collective, and contextualized to the specificities, needs, and demands of the multiple LGBTQIA+ identities.

Keywords: Sexual and Gender Minorities; Dentistry; Oral Health; Review Literature as Topic.

Introduction

Public health studies have been increasingly dedicated to investigating issues related to the health of different population groups in a state of vulnerability, highlighting in this analytical path the relationships between the health-disease process and ethnic-racial aspects, deficiencies, and characteristics of sex, gender, and sexuality [1,2].

In this context, the LGBTQIA+ population stands out since, despite the majority of production in the health area in recent decades focusing on aspects of the HIV/AIDS epidemic [3], current studies already point to some demands beyond sexually transmitted infections "STIs" - such as mental health, aging, drug addiction, cancer prevalence, access to health services, sexual and reproductive health, transsexualization process, problems resulting from violence and discrimination, among others - therefore more contextualized and directed to the improvement of general health indicators of this population [1,4-11].

Furthermore, recent studies indicate that the condition of vulnerability of LGBTQIA+ people can also infer the state of oral health of this population [12,13]. However, the scientific production addressing oral health care for this population group is relatively scarce and diffuse. This circumstance makes it difficult and compromises the knowledge of the demands and oral health care of LGBTQIA+ people, consequently exposing the fragility of the scientific production regarding this theme [12,13].

A gap that, in turn, can impact the training process and continued training of professionals in the dental field and, therefore, the quality of oral health care provided to LGBTQIA+ people, often crossed by obstacles, such as inaccessibility to dental care, discriminatory attitudes, stigmatization, inappropriate conduct, embarrassment, prejudiced connotations and even physical and verbal violence by professionals [12,13].

Thus, considering the above, the present study aims to know and analyze, through a scoping review [14,15] and under the precepts of public health, the characteristics of scientific production in dentistry directed at the LGBTQIA+ population.

Material and Methods

Study Design

This is a scoping review, SR, whose development was guided by the recommendations of the PRISMA-ScR initiative (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews) [14,15]. The protocol for this SR was previously elaborated and is registered and accessible on the Open Science Framework [14-16].

Guiding Question

The formulation of the guiding question [14,15,17], aligned with the acronym PCC (Population: LGBTQIA+ people; Concept: Dentistry; Context: dental scientific literature of journals indexed in databases), was structured as follows: "What are the characteristics of scientific production in the field dental care aimed at the LGBTQIA+ population?"

The eligibility of the studies included in this SR [14,15], in addition to the non-restriction regarding the date of publication, was ordered by previously defined eligibility criteria (inclusion: 1. studies published in indexed scientific journals that expressed the oral health of the LGBTQIA+ population in their objectives and purposes; 2. complete publications with structured texts; exclusion: 1. duplicates; 2. studies published by other means of dissemination other than scientific journals; 3. studies that did not address the topic of interest in a

relevant and explicit way to achieve the objective of this SR; 4. Course completion works, dissertations, theses, and studies published in event annals).

Text searches were carried out (September 2022) in three databases: PubMed (MEDLINE), Virtual Health Library (BVS/BIREME), and SciELO (Scientific Electronic Library Online) [14,15]. These databases were listed to ensure the quality of the data to be collected since, in addition to extensive indexing and high evidence control, these platforms offered the possibility of providing a cross-cultural analysis, covering studies developed in multiple socioeconomic and cultural scenarios [17].

The search strategy [14,15,17] – advanced, trilingual (English, Spanish, and Portuguese) and directed to the starting question of this SR – was built through the intersection, using the Boolean operator "AND," of two descriptors, "sexual and gender minorities" and "dentistry." These descriptors were respectively associated, through the application of the Boolean operator "OR," to their "entry terms," "previous indexing," and "see also." Furthermore, in favor of a more expressive quantitative and qualitative result, three searches were conducted in each database, one for each language (English, Spanish, and Portuguese, respectively, 132, 95, and 117 descriptors) [17].

The selection of studies identified in the databases took place through the application of eligibility, as mentioned in the above criteria [14,15,17]. This process was developed, using the Rayyan program (Rayyan®/QCRI/web app) [18], independently (two of its authors) in two phases [17]: in the first, the reading of the title and abstract of the study and the second, which provided the solution of discrepancies, the entire reading of the texts with divergences and consensus meetings. These phases were sufficient for selecting included studies, eliminating the need for a third evaluator [17]. Given its optional character for scoping reviews [14,15,17], the critical assessment of the quality of the studies included in this SR was not carried out.

Data Extraction

Data extraction [14,15] was carried out through the content of the abstracts and full texts of the included works and structured in an electronic spreadsheet (Excel for Windows®, Microsoft Corp., Redmond WA, USA), in duplicate and in English, containing the following information: "title"; "author"; "general description of the study (year, language, database, methodological design, and location/country and continent)"; "LGBTQIA+ population"; "thematic content (summary: objective/s, result/s and main conclusion/s and descriptors)."

As for the analytical Route [14,15], with the intention of reducing, categorizing, and understanding the content extracted from the studies included in this SR, it was guided by the content Analysis strategy [19-21], CA. CA is a systematized process that gains its effectiveness by simultaneously involving two movements (summative analysis) for decoding and understanding the words (measurement unit of textual content) that make up a text (Textual Corpus), one for counting (inductive) and another of contextualization (deductive) [19,20]. Then, this SR ended with presenting and publishing the information found therein [14,15,17].

Results

At first, as illustrated in Figure 1, the databases identified 1,524 studies between the years 1967 and 2022. Then, 589 duplicates were excluded, leaving 935 studies, of which, in interface with the eligibility criteria, 186 (n) were considered eligible for the sample composition of this SR (Figure 1).

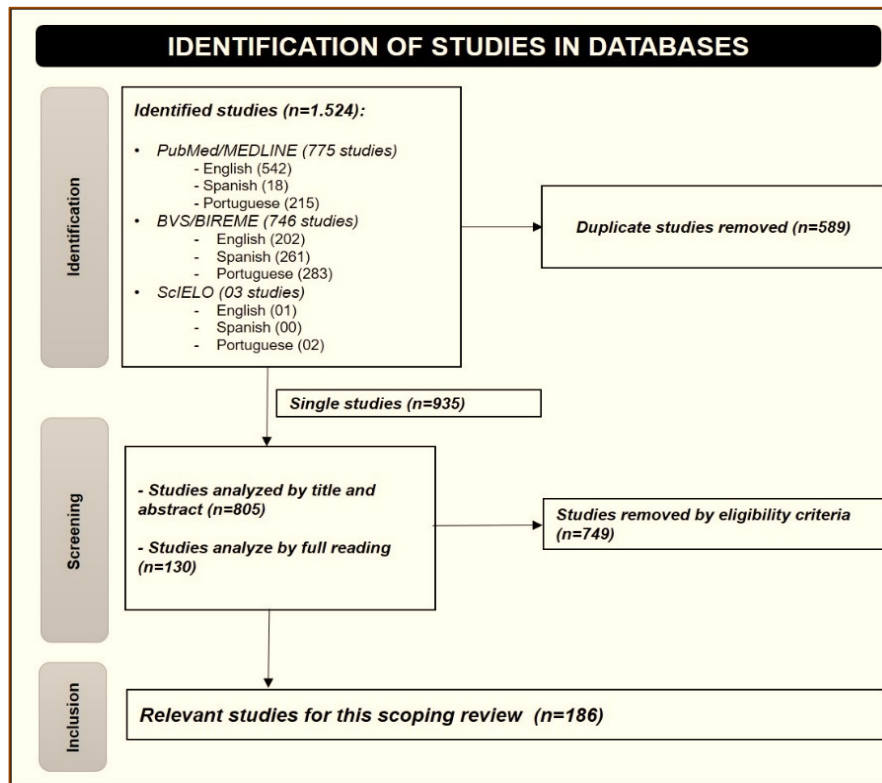


Figure 1. Study search and selection diagram.

The amount of scientific production in dentistry aimed at the LGBTQIA+ population over the years (1974 to 2022, 49 years) was irregular. The data shows two peaks, one in the late 1980s and another in the mid-1990s, followed by a plateau between the end of the first decade and the beginning of the second decade of the 21st century. The maximum number of studies per year was 10 and 11, as shown in Figure 2a.

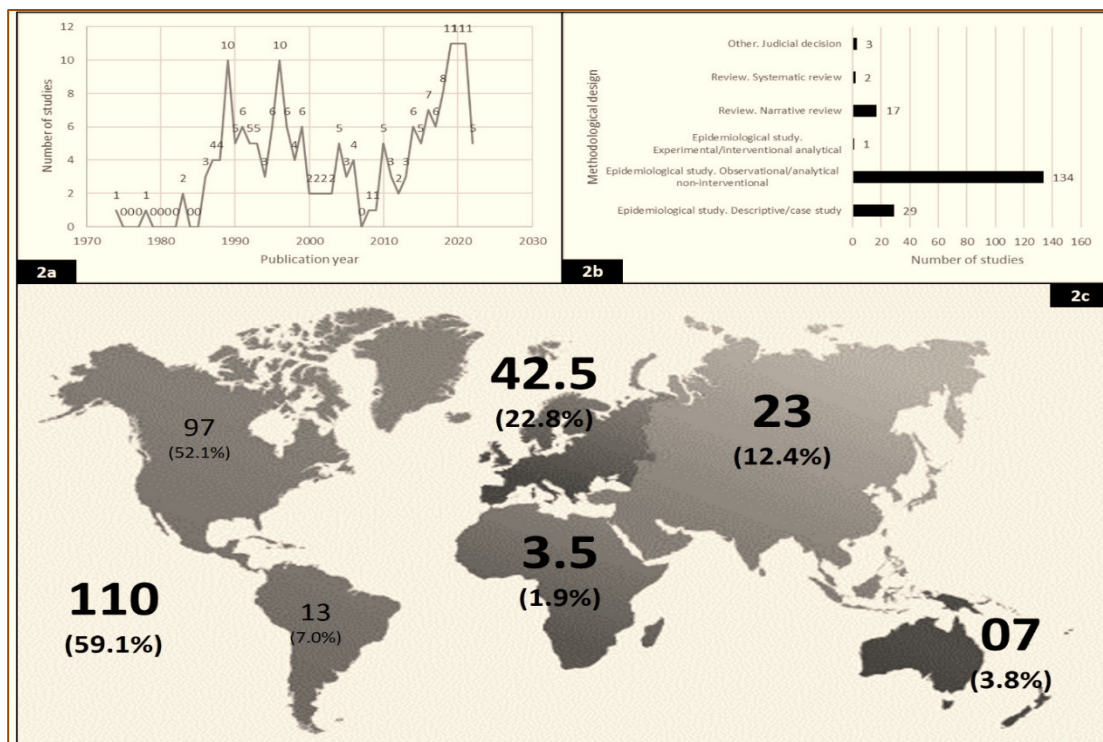


Figure 2. 2a: Year of publication; 2b: Methodological design; 2c: Location/continents.

LGBTQIA+ Population

About the identities that make up the LGBTQIA+ population - "L/Lesbian," "G/Gay," "B/Bisexual," "T/Transgender," "Q/Queer/Questionador," "I/Intersex," "A /Asexual," and "+/Other identities of sex, gender and sexuality" -, were mentioned in that order in 20, 120, 40, 34, seven, one, zero and one studies.

In addition to these identities, LGBTQIA+ participants were also presented as "Men who have sex with other men/MSM," "Women who have sex with other women/MSM," and "Gender and sexual minorities/MGS," respectively mentioned in 38, two and four studies.

Furthermore, considering gender identity ("cisgenders" and "transgenders," in due order, people who "identify" or "not" with the "sex assigned at birth"), the studies were grouped into three groups, being, in decreasing order of frequency, they: 153 (82.3%) studies that contemplated cisgender identities; 17 (9.1%) studies that contemplated transgender identities; 16 (8.6%) studies that contemplated cis and transgender identities.

From this analytical path, the focus given to cisgender identities (169/90.9%) stood out, with the majority of evidence given to "gay" and "MSM" individuals standing out from this quantitative. In contrast, only one study endorsed intersex people (01/0.5%), and none considered asexual people.

Thematic Approaches

The 186 studies included in this SR, after systematic analysis of the extracted data ("title" and "thematic content), provided information that supported the composition of seven thematic categories, being, in descending order, they: 1. Oral manifestations (OM's) of sexually transmitted infections (STIs) (105/56.0%); 2. Education and training (33/17.7%); 3. Perception and attitudes of professionals from the dental team (15/8.1%); 4. Epidemiological survey of oral health (11/5.9%); 5. Occupational risk (09/4.8%); 6. Patients' perceptions and attitudes regarding dental care (08/4.3%); 7. Others (05/2.7%).

Oral Manifestations (OM's) of Sexually Transmitted Infections (STI's)

In the 105 studies in this category, six STIs (HIV-Aids, HPV, Syphilis, Chlamydia, Oropharyngeal Gonorrhea, Herpes) and 11 OM's (Recurrent Candidiasis, Candidiasis, periodontal diseases, herpetic lesions, hairy leukoplakia, lymphoma not Hodgkin's disease, exfoliative cheilitis, Kaposi's sarcoma, warts or papules, xerostomia, and other and multiple oral manifestations) were identified.

And when analyzing the interface of the referred STI's, the studies that associated HIV-AIDS with the following OM's prevailed: Other and multiple oral manifestations (21.0%); Candidiasis (12.7%); Periodontal diseases (9.2%); Hairy leukoplakia (9.2%); Kaposi's sarcoma (8.3%); Warts or papules (6.1%); Herpetic lesions (3.5%); non-Hodgkin's lymphoma (2.5%); Recurrent canker sores (1.7%); exfoliative cheilitis (0.9%); Xerostomia (0.9%) (Figure 3). Other and multiple oral manifestations were also related to LGBTQIA+ individuals diagnosed with HPV (9.6%), syphilis (2.6%), oropharyngeal gonorrhea (1.7%), chlamydia (1.3%) and herpes (0.5%) (Figure 3). The other studies considered the presence of warts and papules with HPV (6.9%) and syphilis (0.9%), in addition to herpetic manifestations in patients infected with Herpes simplex (0.5%) (Figure 3).

Training and Capacity Building

The 33 studies in this category highlighted three debates: the need for training and curricularization of the theme health of LGBTQIA+/sexual and gender minorities patients (18/54.5%), the unpreparedness and discomfort and refusal of professors and students to assist seropositive patients or those at high risk for HIV (12/36.4%); the need to welcome and provide shelter to LGBTQIA+ students (03/9.1%).

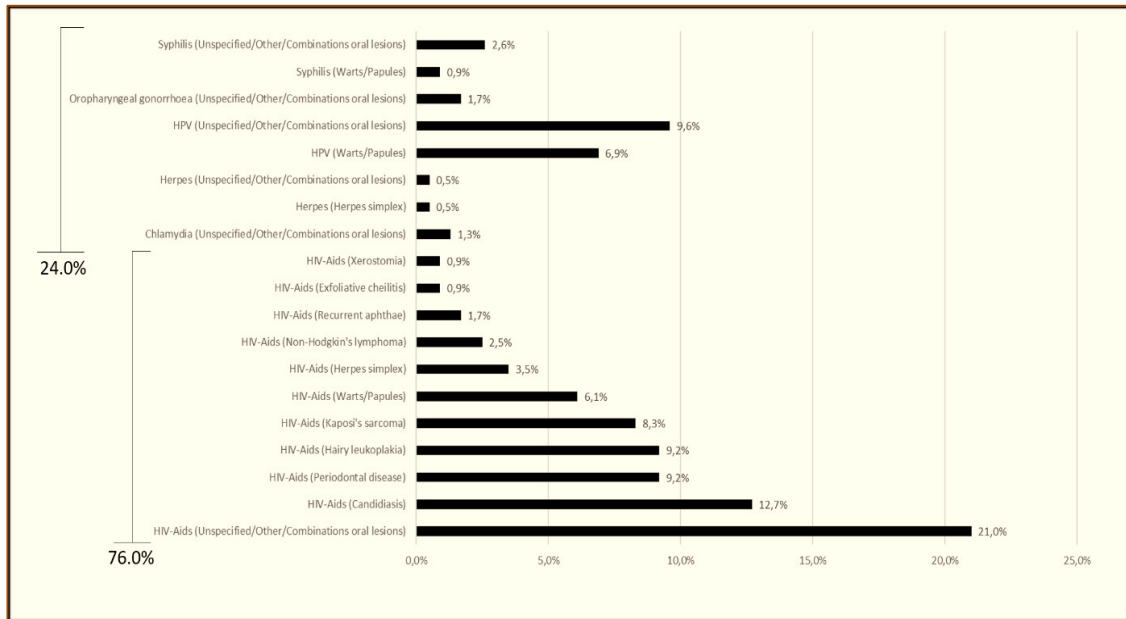


Figure 3. Oral manifestations of sexually transmitted infections.

Perception and Attitudes of Dental Team Professionals

Most studies in this category highlighted the unpreparedness, discomfort, and refusal of dental team professionals to assist seropositive patients or those at high risk for HIV and other blood-borne viruses (11/73.4%). The different studies addressed behaviors and experiences in dental treatment for the LGBTQIA+ population (04/26.6%), where half of them showed seropositive patients or at high risk for HIV and the other part transgender people.

Epidemiological Survey of Oral Health

The studies in this category were dichotomized between those that analyzed the difficulty of accessing health services, including dental, for sexual and gender minorities (08/72.7%) and those that measured the most significant risks regarding the precariousness of the state of health, including oral health (03/27.3%).

Occupational Risk

The nine studies in this category focused on biosafety measures for dental care for high-risk populations, highlighting the mention of the LGBTQIA+ population in all of them of contagion for the transmission of infectious diseases. It should be noted that, except for one study, which highlighted the clinical dental risk for the transmission of Herpes and Hepatitis A viruses, the other eight studies focused on the possible transmission of HIV and the generalization of other diseases transmitted by blood and oral fluids.

Perception and Attitudes of Patients Regarding Dental Care

Studies in this category showed the difficulty of LGBTQIA+ patients in accessing dental treatment. In two different populations, people living with HIV (04) and transgender people (03), the inaccessibility to oral health services materialized in the essentiality of unpreparedness and refusal of the dental team to provide care. It should be noted that in one study, the inaccessibility of dental care came from the negative perception of adolescents, especially males, regarding oral self-care and the search for dental care, characterizing the behaviors above as a gay habit, that is, questioning masculinity.

this SR -that the stigmatizing bias towards HIV-AIDS surpassed the knowledge and recognition of the specificities, needs, and demands in health mouthpiece for the LGBTQIA+ population.

It was found that most of its descriptive data meet the recommendations of the scientific literature, highlighting the prioritization of writing and publication in English language [22] journals (168/90.3%), the emphasis on the PubMed database as a source of bibliographic data [23] (172/92.5%), the choice of epidemiological designs for conducting Research [24] (164/88.2%) and ratification, given the preeminence of studies and North American (97/52.1%) and European (42.5/22.8%) authors, of the socioeconomic strength of developed regions in the quantity and thematic influence of scientific production in health [25].

Furthermore, also through descriptive analysis, despite identifying the plurality of LGBTQIA+ embodiments, it was evident in this SR the protagonism of studies directed at cisgender identities (169/90.9%), when compared to transgender ones, emphasizing the focus bodies identified biosocially as male (gays and men who have sex with men).

This asymmetry of the visibility of one to the detriment of the invisibility of other LGBTQIA+ identities demonstrates the overlapping of cisheteronormativity with scientific production in health, which materializes in the bias of its scientific products, often marked by measurements and interventions that are essentially pathologizing in the face of any conditions of sex, gender, and sexuality [26].

This perspective makes sense in the findings of studies by Almeida et al. [26], which report the synthesis of a recent time frame (2006-2021) of the content of knowledge production in which "[...] the LGBTQIA+ population is essentially designated by the scientific literature as 'men who have sex with other men and seropositive' (p.5)", therefore, "[...] there is a stigmatizing bias in the scientific production in the health area directed at the LGBTQIA+ population (p.7)". This fact, according to the same authors (p.9) [26], may have implications for the health care of the LGBTQIA population, whose precepts of the health-disease process "are predominantly pre-defined through the objects of research and, consequently, in their reproduction – in another way: they precede the critical reflection of the very relationship between cause-consequence and the very encounter between the individual and the health professional."

From then on, permeated by the subsidies offered, it is fundamental to understand that the stigmatization - the process of moralization, racialization, and trans-homosexualization - serological of the LGBTQIA+ population, even in opposition to the continuous discoveries of the HIV timeline, is a cisheteronormative movement [3,26-29]. After all, the discovery of AIDS was born with the validation of the disease as a cancer/gay plague [3,29].

Thus, from what has been explained so far, it can be stated that the relationship mentioned earlier "HIV-Aids" and the LGBTQIA+ population was also present in the dental literature, which demonstrates its possible role, consciously or unconsciously, as an agent of reproduction and reinforcement of the stigmatization of the LGBTQIA+ population [2,26].

A reality that places most of the articles included in this SR, those in the first thematic category, "OM's" of "IST's," in a paradoxical context. After all, with the advent, efficacy, and effectiveness of antiretrovirals, which made undetectable patients emerge, it is extracted that the relationship above between HIV-AIDS and oral manifestations portrays a past perspective [30]. In addition to becoming much less prevalent, oral manifestations have become opportunistic, often linked to the immune status (decreased T-cell count) and access to and treatment adherence (viral load), a possible indicator of the health status of seropositive patients [30].

Furthermore, the protagonism given to HIV-AIDS brings with it the invisibility of other "STIs," highlighting in this context syphilis, one of the most common sexually transmitted infections in the world and

which has shown a growing trend in recent years. It is even highlighted in the report published by the World Health Organization (WHO) in 2021 regarding the direction of public policies for preventive health and care for STIs [31].

In the other thematic categories, HIV-AIDS also stands out, being fundamentally debated through the consequence of the serological stigma, in other words, the practice of serophobia (prejudice, fear, rejection, and discrimination of patients, highlighting the population LGBTQIA+, living with or considered at high risk for HIV) in health settings, including dental [3,32].

This serophobic conduct is revealed through potentially weakening agents of oral health care, highlighting mistaken individual protection practices - excessive and reduced use of personal protective equipment, respectively, for HIV and other transmissible infections by blood, including some of them with more significant risks of transmissibility, as in the case of hepatitis -; delay in providing care and unnecessary referrals of seropositive patients to specialized services; inaccessibility of the population living or considered at high risk for HIV, often justified by discomfort and lack of training on the part of professionals, teachers and students in the dental field [11,16,32].

In addition to HIV-Aids, although quantitatively less expressive, the content of the dental literature directed at the LGBTQIA+ population surveyed in this SR offered other approaches, such as poor oral health and inaccessibility to dental services; the pattern of crinkles in the transgender population; risks of contracting and preventing "STIs," respectively, through oral sex and the use of mouthwashes.

However, even if the aforementioned scientific production points, more precisely in the last decade, to a timid expansion of the content beyond the stigmatizing theme of HIV-AIDS, its limitation is still clear, given the specificities, needs, and current collective demands concerning care. in oral health of the LGBTQIA+ population [11,12,33-37]. A gap that, in addition to worrying about the direction of future research, materializes in questions that are fundamental for the provision of dental care under the precepts of collective health - therefore integral and socially contextualized -directed to the LGBTQIA+ population [11,12,33-37].

Professionals should start with an identification model that does not only contemplate the mistaken dichotomous designation of sex (endosex bodies - male and female - do not biologically express all corporeities since there are other gender conditions between these extremes, designated as intersex) but also considers gender expression (cis or transgender), sexuality (allosexual and asexual, respectively, whether or not one feels affective-sexual attraction to other people) and the recognition and use of the social name (corrected or not through of certificates) of patients [11,12,33-37].

Going through the understanding that the chronic path of existential suffering of the LGBTQIA+ population directly impacts biopsychosocial factors (anxiety, depression, the stress of minorities, smoking, alcoholism, drug addiction, use of antidepressants, eating disorders, and self-image, xerostomia, quality of oral hygiene, access to dental services, oral sex, and violence) linked to the oral health-disease process, therefore increasing these patients' risk for place-dependent diseases (caries and periodontal diseases), tooth loss and wear, oral cancer, temporomandibular dysfunction, manifestations oral treatments for "STIs" and orofacial trauma [11,12,33-37].

Adding some specificities for transgender patients, who often use hormones (prescribed or self-medicated) [11,12,33-37]. It is believed that the use of estrogen and progesterone, the most used by transsexual women and transvestites, and testosterone, the most used by transmasculine people, especially when not properly monitored by a medical professional, may be associated with osteogenic and inflammatory conditions, consequently, causing and aggravating periodontal diseases, complications in orthodontic movements and even

tooth loss [11,12,33-37]. Moreover, for these patients, some dental procedures - dental anatomization, oral and maxillofacial surgeries, and orofacial harmonization - are essential for gender reassurance, directly impacting these people's quality of life [11,12,33-37]. In addition, mainly as a health education strategy for this population, there is the need to discuss the risks of using liquid industrial silicone on the face with the appearance of abscesses and facial deformations [11,12,33-37].





In summary, not to conclude but to challenge the substantial gap that was highlighted in the content of the scientific production raised by this SR: questions and directions, under the precepts of collective health, aimed at providing dental care. This care model, integral and contextualized, begins with the identification and recognition of multiple LGBTQIA+ identities (sex, gender, and sexuality), goes through the understanding of the articulation between being LGBTQIA+ and the oral health-disease process, and ends with the specificities, needs, and demands of trans-bodies (female or male), often the most neglected in the oral health care process.

It ends with the limitations of this SR, of which two stand out. The first one, in interface with the eligibility criteria, is related to the possibility that the bibliographic search process did not cover all available studies. However, information different from that reported here is not believed to be found. Still, it is necessary to consider that the inclusion of the referred studies could improve and amplify, respectively, the results and the discussion presented here. The other fragility, given its optional nature [14,15], refers to the failure to critically assess the quality of the studies included in this SR regarding the content of the dental literature directed to the LGBTQIA+ population.

Conclusion

Through this SR, it was verified that, until the year 2022, the scientific production in dentistry directed to the LGBTQIA+ population, influenced by the cisheteronormative context in which it is inserted, is essentially biased by the stigmatizing character of HIV-AIDS. Gaps were also identified regarding the oral health care of this population, whose specificities, needs, and demands not adequately met serve as a subsidy to awaken, direct, and motivate the development of subsequent studies and the provision of future oral health policies for the LGBTQIA+ population, envisioning in this agenda the access to effective oral health programs and the education and continued qualification of the professionals of the dental team.

Authors' Contributions

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All authors declare that they contributed to critical review of intellectual content and approval of the final version to be published.			

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None.

Conflict of Interest

The authors declare no conflicts of interest.

Data Availability

The data used to support the findings of this study can be made available upon request to the corresponding author.

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