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A scoping review about LGBTQIAP+ people in oral health research

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Abstract: Oral health personnel must acknowledge the health needs of sexual and gender minorities. They should consult scientific literature to deepen their knowledge about sexuality, gender identity, general and oral health status, and treatment disparities among LGBTQIA+ people. The aim of this scoping review was to portray the development and current stage of internationally indexed literature approaching the oral health of this population. In this study, the search strategy used consisted of combinations of subject descriptors (MeSH terms), in two concept blocks: LGBTQIAP+ people and oral health. Global literature was searched through Medline (PUBMED), Web of Science, Embase, Lilacs, and Scopus electronic databases, with no language or date restrictions. Records were selected and evaluated by two independent reviewers, under the supervision of three senior reviewers and the inclusion criteria resulted in 189 eligible papers. Since the first study was published in 1974, numbers increased over the decades, reaching 67 (35.4%) in 2010-2019. The most frequently studied populations were North American (42.9%) and European (19.0%) and the most frequent language of publication was English (99.0%). There were 38 open access papers (20.1%). Medical (57.7%) and dental journals (20.1%) predominated. Cross-sectional studies were found more frequently (65.1%), followed by the cohort type (11.1%). Oral manifestation of STI (58.7%) was the topic most frequently addressed. The search for literature approaching the oral health of LGBTQIAP+ people showed evidence of the need to encourage research reported in papers made easily available, with more robust scientific evidence, and on a broader scope of topics, including oral health needs and treatment, and planning of oral health services.

Keywords: Sexual and Gender Minorities; Oral Health; Dental Research; Vulnerable Populations.

Introduction

LGBTQIA+ people search for human rights, including the right to oral health. The acronym LGBT initially referred to lesbian, gay, bisexual, and transgender people. Over time, the letters Q, I, A, and P were added to represent queer, intersex, asexual, and pansexual people. LGBTQIAP+ people can also be referred to as sexual and gender minorities.[1,2]

Sexual and gender minorities are more vulnerable to drug use and eating disorders, less likely to seek health care, and have a high demand for mental health care.[3-5] They may be at greater risk of developing oral problems triggered by depression, medication side effects, and unhealthy eating. Oropharyngeal cancers associated with Human Papillomavirus and Human Immunodeficiency Virus infections, among other sexually transmitted infections (STI) that affect oral health, are prevalent in this population group. Furthermore, there has been evidence of an association between hormone replacement therapy and periodontal disease in transgender people.[6]

National governments have established strategies and programs directed toward the needs of sexual and gender minorities. Countries such as the United Kingdom, the Philippines, and South Africa have invested in strategies to combat discrimination and violence against their LGBTQIA+ population. There have been notable advances such as those occurring in Mozambique and Samoa, in which discriminatory laws have been removed from their criminal codes. In Brazil, the creation of the National Comprehensive Health Policy for Lesbians, Gays, Bisexuals, Transvestites, and Transsexuals (PNSILBTT) in 2011 was a milestone in this population's struggle for the right to health. However, there are still barriers to its effectiveness.[7-9] There are gaps in professional training that can lead to professionals who are not fully informed on this particular topic. Moreover, permanent education programs dedicated to the topic lack continuity.[10] Financial barriers and the lack of a social support network may result in health inequities that prevent sexual and gender minorities gaining to access health care,[11,12]

Oral health professionals require training to identify the needs of sexual and gender minorities. More in-depth knowledge about sexuality, gender identity, and the health disparities they face is needed. This would create reliable bonds with these vulnerable people and help to solve their health problems[12]. Recent studies have shown the difficulties health professionals encounter in taking care of sexual and gender minorities, and in healthcare settings, these challenges could make it difficult to provide comprehensive, quality care and may result in discrimination.[13-15]

There is a need to survey the dental literature and to identify ways in which it could provide dentists with adequate training that will enable them to take care of sexual and gender minorities.[13,14,16] The aim of this scoping review was to portray the development and current stage of internationally indexed literature, in which the oral health of LGBTQIAP+ people has been studied.

Methodology

This scoping review followed PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews) guidelines.[17]

Eligibility criteria

The recommended "PCC" mnemonic (population, concept, and context) guided the construction of the inclusion criteria.[18] The population was defined as the LGBTQIAP+ people, the concept was research conducted in the international area of biomedicine, published in specialized journals, and oral health care was the context. The research question was defined as: "What is available in biomedical literature about oral health needs and care for the LGBTQIAP+ population?".

Human studies that addressed any aspect of the oral health of the LGBTQIAP+ population were selected. The LGBTQIAP+ population was defined as the population group that involves lesbian, gay, bisexual, transgender, queer, intersex, asexual, and pansexual people, or more broadly, the group of sexual and gender minorities[2]. Publications in the form of letters to the editor and editorials, studies that did not address participants of the LGBTQIAP+ group, and those that did not present information on oral health were excluded.

Information sources

The mapping of the international literature was carried out in five search platforms, without language or date restrictions: Medline (via PUBMED), Web of

Science, Embase, Lilacs, and Scopus. Gray literature was not evaluated, as the aim of the review was to identify studies published in indexed literature.

Literature search

The literature search took place in February 2022. Combinations of subject descriptors and synonyms were grouped into two concept blocks: LGBTQIAP+ people and oral health. The full electronic search strategy developed was: ((“Sexual and Gender Minorities”[Mesh] OR LGBT*OR GLBT*OR Lesbigay OR “Non Heterosexual” OR “Sexual Minorit*” OR Non-Heterosexual OR “Sexual Dissiden*” OR Gay OR “Men Who Have Sex With Men” OR Lesbian OR “Women Who Have Sex With Women” OR Bisexual OR Homosexual* OR Pansexual* OR Asexual* OR Demisexual*OR Queer OR “Gender Minorit*” OR Gender-expansive OR “Gender diverse” OR Intersex* OR “Non-binary gender” OR Travesti OR Travesty OR Transvest* OR Transgender* OR Transperson OR Transpeople OR Transsexual* OR Two-Spirit OR “Fluid gender” OR Transmen OR Transman OR Transwom*) AND (“Oral health” OR dentistry OR dentist* OR “dental care” OR “mouth diseases” OR “jaw diseases” OR “tooth diseases”). The strategy was adapted to the engineering of each database.

Selection of sources of evidence and data charting process

Studies retrieved during the electronic searches were exported to EndNote software Version 20 (Clarivate), and duplicates were excluded. The datasheet was then exported to DistillerSR Literature Review Software (DistillerSR Inc.) and the subsequent electronic classification of studies and data collection were performed with the use of this program.

Studies were selected by two independent, trained, and calibrated reviewers (EMMS and TRF), under the supervision of three senior researchers (AMAD, LGZ, and FFM). They screened 10% of all references retrieved, discussed the results, and amended paper screening, as necessary.

Initially, titles and abstracts were read and classified. Papers were excluded when there was no access to full texts. Then, full texts were read, and a final selection of studies was included in the review. An electronic data extraction form was created in DistillerSR. Each reviewer completed the form independently, and the software identified disagreements between them. Group discussions were held with the participation of senior reviewers to reach consensus, when necessary.

Data items

Data were extracted on the year of publication (any), language (all), the continent of data collection (North/South/Central America, Europe, Asia, Oceania, Africa, Central America or Intercontinental, when more than one continent was cited in the paper), journal area (for instance Medicine and Dentistry), first and last author’s affiliation (dental or non-dental academic affiliation), journal access (open or not), study design (cross-sectional, cohort, non-systematic review, case report, case series, systematic review, case-control, and clinical trial), study topic (oral manifestations of diseases, oral health care, professional training and education, services access and use, forensic dentistry, occupational health, and others), sampling approach (LGBTQIAP+ people only or mixed samples, which include LGBTQIAP+ people and other population groups), and primary objective of the study, (when LGBTQIAP+ people were the main study population or the primary objective was directed to them).

Synthesis of results

Studies were grouped according to publication characteristics and a descriptive synthesis was performed. There was no critical appraisal of individual sources of evidence since the aim of this scoping review was to map the literature on a specific subject, and therefore methodology quality assessment was not applicable.[17]

Results

Initially, the search strategy resulted in 1994 items. In the selection process, 1302 publications were excluded after reading their titles and abstracts, resulting in 210 items for full-text reading. After

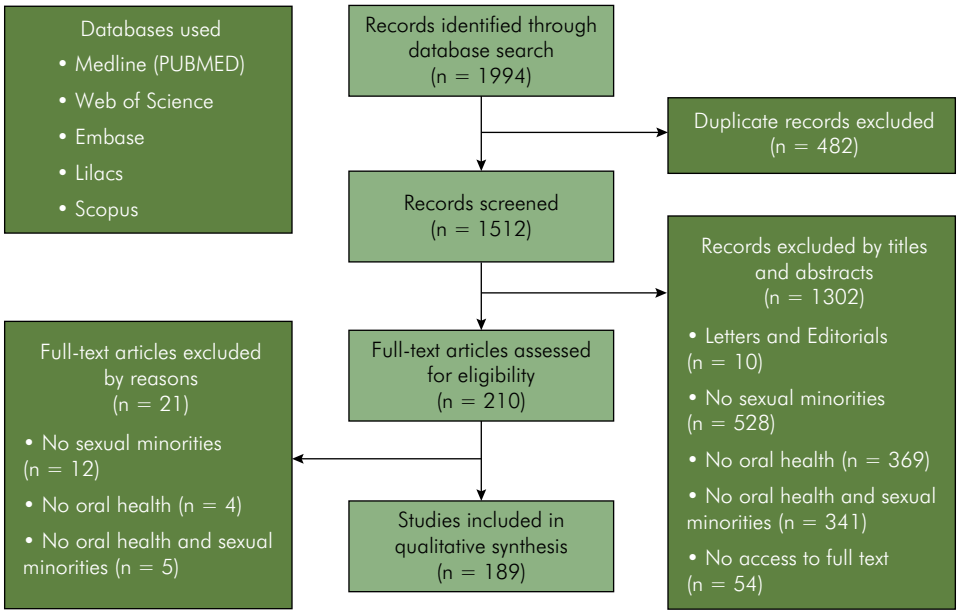

Figure 1. Flowchart of studies selection and inclusion process.

that, 189 published papers were eligible for the study (Figure 1).

The first paper included in this study was published in 1974 and the last in 2021. Figure 2 shows the increase in the number of studies between 1974-1979 (1, 1. 1%) and 1990-1999 (50, 26.5%), followed by smaller numbers between 2000 and 2009 (23, 12.2%), and further growth between 2010-2019 (67, 35.4%). There were 28 (14.7%) papers published in the 2020-21 period. The most frequently studied continental populations were North American (81, 42.9%), followed by Europeans (36, 19.0%), and Asians (23, 12.2%), and one paper sampled populations from more than one continent. In 30 papers, the continent of the population sampled could not be identified, either because there was no primary data collection or due to lack of information. The majority of studies were published in journals with titles related to medicine (109, 57.7%) and dentistry (38, 20.1%), while few were published in multidisciplinary journals (6, 3.2%). More frequently, papers were written by authors affiliated to dental institutions or departments (107, 56.7%) either in the position of first or last author, while in 41 (21.7%) studies it was not possible to identify the authors' professional affiliation (Table).

Of the 189 studies, 38 (20.1%) were available in open access. The Cross-sectional type was the most common study design (123, 65.1%). There were also cohort studies (21, 11.1%), non-systematic reviews (14, 7.4%), case reports (13, 6.9%), case series (12, 6.3%), systematic reviews (3, 1.7%), a case-control study (1, 0.5%), a randomized clinical trial (1, 0.5%) and one study had a mixed design (Table).

The majority of papers included only LGBTQIAP+ samples (112, 59.3%), and 77 (40.7%) also addressed other population groups. Studies with mixed samples predominated before the year 2000 (38, 20.1%), while studies with only LGBTQIAP+ samples were more frequent from 2010 (69, 37.2%) (Table), and especially after 2015 (54, 28.6%). The English language was used in 187 (99.0%) papers, and there was one in Spanish and one in French.

Over the years, the most frequently addressed topic was the oral manifestation of sexually transmitted infections (STI) (111, 58.7%), followed by oral health care (28, 14.8%), professional training (25, 13.2%), and LGBTQIA+ people's access to and use of health services (21, 11.2%). The last three topics were addressed more frequently from 2010 onwards. One study addressed forensic dentistry, and another addressed occupational health (Figure 2).

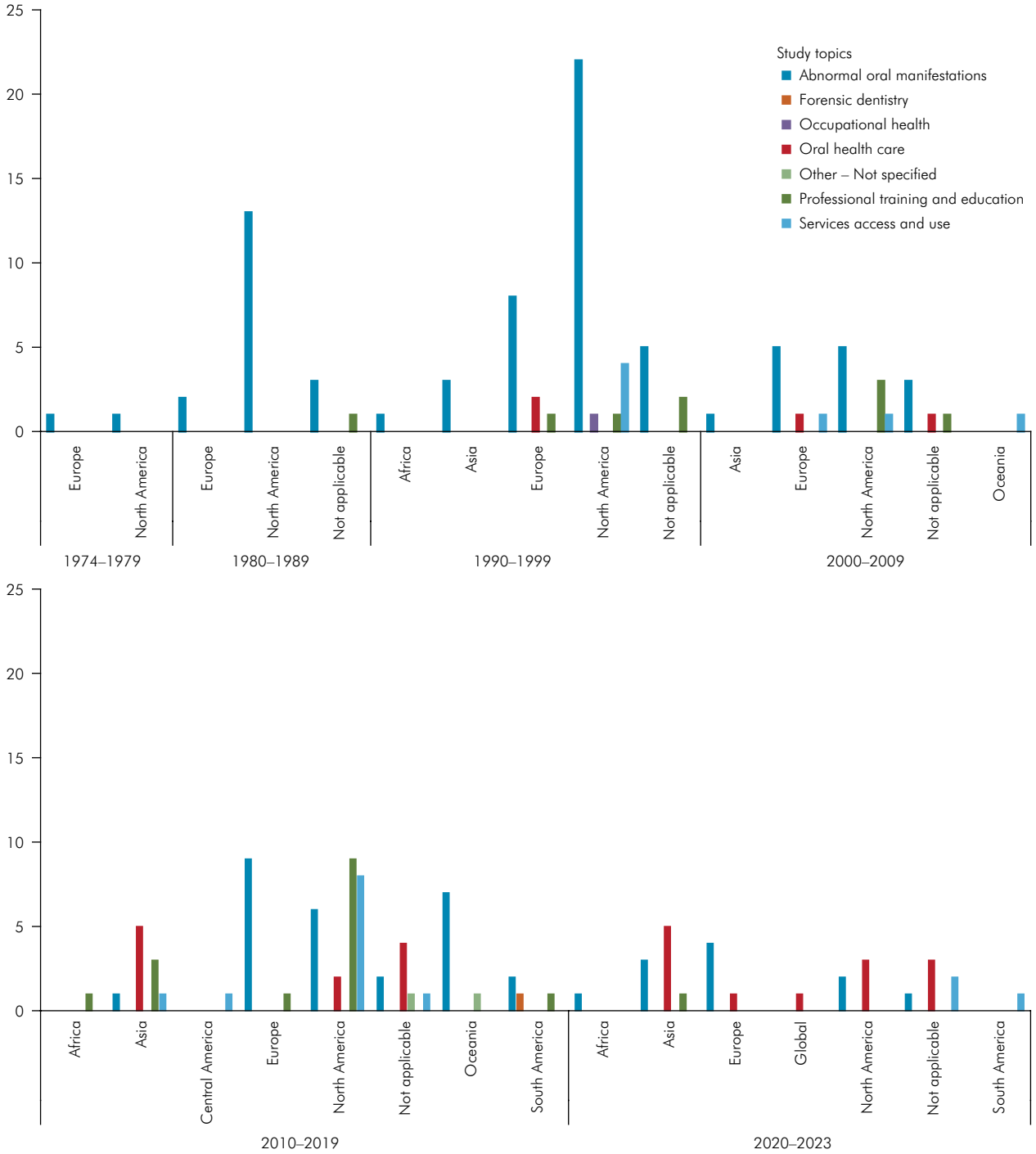

Figure 2. Year, continent of data collection, and studied topics among the included papers.

Discussion

Scoping reviews are ideal tools for analyzing existing literature on a given topic. They allow scientific production to be measured and evaluated according to variables such as time and location. Furthermore, they present the synthesis of the studied content in an objective and utilitarian way.[19] They are particularly indicated for studies of emerging themes or those little discussed in the literature, which seek

Table. Characteristics of the 189 papers approaching the oral health of LGBTQIAP+ people (1974-2021).

Characteristics	n (%)
Year of publication	
1974–1979	2 (1.1)
1980–1989	19 (10.1)
1990–1999	50 (26.5)
2000–2009	23 (12.2)
2010–2019	67 (35.4)
2020–2021	28 (14.7)
Continent of the sampled population	
North America	81 (42.9)
Europe	36 (19.0)
Asia	23 (12.2)
Oceania	9 (4.8)
South America	5 (2.6)
Africa	3 (1.6)
Central America	1 (0.5)
Intercontinental	1 (0.5)
Unidentified	30 (15.9)
Journal area	
Medicine	109 (57.7)
Dentistry	38 (20.1)
Multidisciplinary	6 (3.2)
Other	36 (19.0)
Lead or senior authoraffiliated with dental institutions/departments	
Yes	107 (56.7)
No	41 (21.7)
Unidentified	41 (21.7)
Paper access	
Not open	151 (79.9)
Open	38 (20.1)
Study design	
Cross-sectional	123 (65.1)
Cohort study	21 (11.1)
Non-systematic review	14 (7.4)
Case report	13 (6.9)
Case series	12 (6.3)
Systematic review	3 (1.7)
Case control	1 (0.5)
Clinical trial randomized or not	1 (0.5)
Mixed	1 (0.5)

Continue

Continuação	
Study topic	
Oral manifestations of STI	111 (58.7)
Oral health care	28 (14.8)
Professional training	25 (13.2)
Health services access and use	21 (11.2)
Other – Not specified	2 (1.1)
Forensic dentistry	1 (0.5)
Occupational health	1 (0.5)
Sampling	
LGBTQIAP+ sample	112 (59.3)
Mixed sample	77 (40.7)
Language	
English	187 (99.0)
French	1 (0.5)
Spanish	1 (0.5)

to highlight academic gaps or disagreements.[20] Since health inequities among LGBTQIAP+ people are an emerging theme and given the small number of specific dental studies about them, this scoping review mapped the available knowledge and interpreted its strengths and limitations.[12]

The first study was published late, in 1974, and described the oral health manifestation of primary syphilis in "male homosexuals". There was an increase in the number of papers in the next decade, with a peak between 2010 and 2019. This level of distribution may be related to identification of the human immunodeficiency virus (HIV) and the associated acquired immune deficiency syndrome (AIDS) in 1981, and their initial association with LGBTQIAP+ people. This prejudiced association lasted for years and highlighted the need to include sexual and gender minorities as a study population in health research.[21] The recent increase in the number of papers approaching the health of LGBTQIAP+ people, particularly in 2020-21, illustrates the growth of interest in the topic, as a result of their struggle for access to human rights, including health[1]. Data in this study agreed with the results of a scoping review conducted to evaluate the existing literature on the general health of the LGBTAQIAP+ population in Brazil. In this review, the first paper was published in 1985 and there was a significant increase in the number of publications in 2016.[22]

The majority of papers included in this review studied populations from North America and Europe. This feature has also been reported in bibliometric studies conducted with focus on different areas of dentistry.[23-25] The literature shows that the world's leading research centers are in the United States of America, where more funding is invested in research.[26] Other explanations for this North American predominance might include language barriers, gaps in professional networking, global relevance, and limited access to information.[27,28] The finding of a single paper, in which LGBTQIAP+ people in more than one continent were studied, demonstrated that there is a knowledge gap to be filled by international multicenter studies. It is noteworthy that few of the papers included were published in dental journals, although the majority of them had first or last authors affiliated to dental departments or institutions, at the time of publication. When searching the literature related to the oral health of sexual minorities, academics and practitioners should also search databases of dental and non-dental journals.

The high cost of accessing the full texts of scientific papers was an important limiting factor in gaining access to information.[29] There has been a significant

increase in authors' interest to publish in open-access journals that result in more extensive availability of knowledge and significantly higher citation rates when compared with not-open access journals.[30,31] The increased demand for open-access journals could favor researchers from developing countries to publish in high-impact international journals, access the scientific community, and reduce social barriers to disseminating scientific information. However, it might also result in increased publication fees, leaving the authors themselves to face the responsibility for paying these fees.[32] The fact that only 20.1% of the papers included in this review were available in open access suggested an impairment to equitable access and dissemination of knowledge about the oral health of sexual and gender minorities.

This study identified that cross-sectional papers were the most frequent type when the oral health of LGBTQIAP+ people was approached in dental literature. These types of studies are more restricted in scope and use smaller samples and less restrictive methods. The main challenge in using data from these studies is their great heterogeneity. The highest levels of evidence were found in meta-analyses, systematic reviews, and randomized clinical trials, which were found in small numbers in this review.[33]

Over the years, in the papers included in this review, the most frequent study topic was the oral manifestations STI. In the scientific literature, there is a chronological approach to the theme in research with sexual and gender minorities. Until 1972, the theme was approached from a perspective of treating homosexuality as a disease. From 1990 onwards, there were studies related to homophobia in schools and health and military institutions. Meanwhile, in health-related literature, sexually transmitted infections and HIV/AIDS were researched in association with gender or sexuality.[34] It is noteworthy that this type of trend may have been a result of the stigma attributed to homosexuals in the transmission of various sexually transmitted diseases.[35]

It has been said that since 2010, the health literature has followed a new trend of common topics in studies with sexual and gender minorities. It has focused on social and organizational topics and health policy, rather than on illnesses.[22] Data in this study identified that for a long time, oral health studies with LGBTQIAP+ people were dedicated to answering the challenge of the HIV/AIDS pandemic, and not to understanding the health needs and care of these people.[34]

It is important to design academic policies that induce the further expansion of new scientific topics that seek to identify the broader health demands of LGBTQIAP+ people. Both faculty and dental school staff should be involved in the teaching of LGBT issues[36] to ensure that dental students and oral health care personnel are aware of the needs of sexual minorities. The European Association of Science Editors took a significant step. by developing guidelines for Sex and Gender Equity in Research, designed to improve scientific reporting and serve as a guide for authors and peer-reviewers. However, the guidelines lack explicit recommendations regarding gender-diverse populations.[37]

A recent global increase in governmental awareness to reduce discrimination against LGBTQIA+ people has been identified. Countries have adopted new laws, policies, and social and educational programs. However, these initiatives have not reached all countries and may not be effective. Nations must establish comprehensive action plans to guarantee human rights and equal protection for the LGBTQIAP+ population.[7]

Conclusion

The scientific literature that approached the oral health of LGBTQIAP+ people and indexed in databases was surveyed and analyzed. Despite an increase in the number of papers over the course of time, this scoping review highlighted the need for policies to stimulate further diverse and inclusive studies with an approach to the oral health of LGBTQIAP+ people. Academia and governments should encourage the production of easily available research, with more robust levels of scientific evidence, and on subjects that are broader in scope, including the characteristics, oral health and treatment needs, and planning of health services specifically for sexual and gender minorities.

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