Review Article

JHSMR Journal of Health Science and Medical Research

Healthcare Provision for the LGBT Community: A Scoping Review of Service Providers and User Perspectives

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Received 21 September 2023 ● Revised 28 December 2023 ● Accepted 1 April 2024 ● Published online 19 September 2024

Abstract

Objective: This scoping review aimed to explore available literature on the knowledge, attitudes, and practices of healthcare professionals on providing care to the lesbian, gay, bisexual, or transgender (LGBT) community as well as the experiences and perspectives of the LGBT community on their healthcare.

Material and Methods: The following electronic databases were searched in December 2020: MEDLINE/PubMed, CINAHL, Web of Science, ProQuest, SCOPUS, and Embase for English-language publications; from 2010 to 2020.

Results: This review included 59 studies that were selected from 5,318 studies. This review revealed that there was an increase in publications regarding this topic across the world. This review identified four themes: (I) the current healthcare landscape for the LGBT community, (II) facilitators of and (III) barriers to healthcare access and utilization among the LGBT community, and (IV) varied facets of healthcare of relevance for LGBT healthcare users – communication, space, education and training, research, and policies.

Conclusion: This review serves as a valuable compass for future researchers seeking areas for deeper exploration and understanding. Nevertheless, the limitations of the study underscore the significance of exercising caution when interpreting its findings concerning challenges within LGBT healthcare.

Keywords: health services, LGBT, scoping review

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J Health Sci Med Res 2025;43(2):e20241088
doi: 10.31584/jhsmr.20241088
www.jhsmr.org

Introduction

Individuals that self-identify as lesbian, gay, bisexual, or transgender (LGBT) are characterized by sexual orientations, gender identities, or expressions that deviate from societal norms[1]. As they represent a diverse demographic that includes all ages, races, ethnicities, religions, and socioeconomic statuses, they face many of the same health problems as the general population. However, because of their sexuality, the LGBT community is more likely to face social and structural inequities, resulting in specific health-related issues[2-4]. Psychosocial stressors (e.g., discrimination, stigma, harassment, and bullying) are often associated with increased engagement in health-risk behaviors, such as smoking, heavy drinking and substance abuse as well as higher morbidity and all-cause mortality[4-7]. Moreover, their mental health is also compromised, as evidenced by higher rates of depression and suicide among LGBT-identifying individuals compared with their heterosexual peers[8-10]. Thus, healthcare services and public health policies cognizant of the LGBT community's unique healthcare needs and vulnerabilities are essential to improve overall health outcomes and quality of life[11].

Unfortunately, LGBT individuals commonly encounter challenges in accessing healthcare[12]. This places them as a marginalized and vulnerable group. Although the World Health Organization[13] has enshrined in its constitution and continues to endorse the fundamental right of every human being to the highest attainable standard of health, incidents of discrimination against LGBT-identifying individuals in healthcare settings, ranging from harassment and humiliation by healthcare providers to instances of being refused service by hospitals, pharmacists or physicians, persist[14]. The high rates of discrimination experienced by the population, as well as the fear of potential discrimination, has led many to withhold their LGBT identity from their healthcare providers[11,15] and/or avoid seeking medical care completely[16,17]. This unequal healthcare access, partly fueled by negative experiences in healthcare settings, helps maintain the persistent health disparities between LGBT individuals and their heterosexual counterparts[18-20].

Significant strides are being made globally to protect and promote the rights of LGBT individuals; however, challenges persist in numerous countries[21]. Additionally, discriminatory practices within healthcare settings continue to endanger LGBT health outcomes, by impeding or denying access to essential health and social care. There is a wealth of research demonstrating that experiencing discrimination is associated with a range of negative health outcomes[15]. In fact, a 2018 systematic review conducted by the Center for the Study of Inequality[22] provided empirical evidence underscoring a robust association between anti-LGBT discrimination and adverse health outcomes for LGBT individuals. The imperative of tackling these barriers and enhancing healthcare access for LGBT communities cannot be overstated. It is pivotal for mitigating health disparities and guaranteeing equitable care. In this endeavor, healthcare professionals assume an important role by championing inclusivity, cultivating cultural competence, and actively advocating for the rights and well-being of LGBT individuals. This ethical duty is underscored by Townsend and Marval[23], who asserted that healthcare professionals have a moral obligation to safeguard the interests of their clients.

A lack of awareness and insensitivity among healthcare providers to the unique needs of the LGBT community is a significant problem that undermines this duty[24]. One of the proposed solutions involves gathering more data to help identify specific healthcare issues of the LGBT population, along with educating health professionals to better understand these needs[16]. On the one hand, understanding healthcare professionals' knowledge, attitudes, and practices can help identify knowledge gaps

and biases. On the other hand, exploring LGBT individuals' experiences and perspectives on their providers not only identifies prevalent healthcare needs but also clarifies practices that promote healthcare accessibility. Furthermore, studying both healthcare providers and recipients (i.e., LGBT individual's) perspectives can illuminate inconsistencies and mismatching needs and expectations. Hence, this unique scoping review seeks to explore the existing literature on healthcare professionals' knowledge, attitudes, and practices, alongside the perspectives and experiences of the LGBT community concerning healthcare access and utilization, representing a novel contribution to the field.

Material and Methods

Study design

This review adopted Arksey & O'Malley's[25] scoping review framework, involving five steps: (1) identifying the research question, (2) identifying relevant studies, (3) selecting studies, (4) charting the data, and (5) collating, summarizing, and reporting the results. Like other scoping reviews, the focus of the current review was not to judge the rigor of the evidence[26] but rather to provide an overview of a broad topic[27,28]. Reporting of this scoping review was guided by PRISMA extension for scoping reviews[29].

Review procedures

Step 1 Identifying the research question

This scoping review aimed to answer the following questions:

1. What is the nature and range of research on equitable, just healthcare services and opportunities for the LGBT community?

2. What are the knowledge, attitudes, and practices of health professionals on the provision of equitable, just healthcare services and opportunities for the LGBT community?

3. What are the experiences and perceptions of the LGBT community on receiving equitable, just healthcare services and opportunities?

Step 2 Identifying relevant studies

The following electronic databases were searched in December 2020: MEDLINE (PubMed), CINAHL (EBSCO), Web of Science Core Collection, ProQuest, SCOPUS, and Embase. The search was limited to literature published from 2010 to 2020, with English as the language used. The key terms were: (1) knowledge, attitude, and practice, (2) healthcare professional, (3) client, (4) occupational justice,

Table 1 Search terms

Concepts	Search terms*
1. Knowledge, attitudes, and practice	knowledge, attitudes, and practice, attitude to health, attitude of health personnel, professional–patient relations, perception, perspective
2. Healthcare professional	healthcare professional, health personnel, healthcare provider, healthcare worker, medical staff
3. Client	client, patient
4. Justice	Justice, occupational justice, human right, patient rights, social justice, social discrimination, stereotype, prejudice, social stigma, social marginalization
5. Lesbian, gay, bisexual, and transgender	lesbian, gay, bisexual, transgender homosexuality, sexual and gender minority, gender identity, gender orientation, gender expression, sexuality, LGBT, queer, intersex, pansex, omnisex, non–binary, genderfluid, trans, ego–dystonic, men who have sex with men, women who have sex with women

*These terms were utilized appropriately in the required format of each electronic databases to retrieved most results. The complete search strings can be requested from the corresponding author.

and (5) lesbian, gay, bisexual, and transgender. To develop the search string from these key terms, search terms were compiled from a combination of free text and controlled vocabularies (e.g., MeSH, Emtree). See Table 1 for the search strategy used. Citation search using the reference list of the included articles was also performed to identify additional references that may have been missed from the database search.

Step 3 Selecting studies

Bibliographic data from the database search was imported to EndNote X9 (Clarivate, Philadelphia, United States) to eliminate identical publications. The primary author and a research assistant trained for the task independently performed the screening in Rayyan[30], a web-based application. An external reviewer disputed any conflict during screening. The final list of literature included was agreed upon by all the authors. Each publication was screened against the review's inclusion criteria; namely: (1) participants are healthcare professionals or members of the LGBT community and (2) primary outcome is knowledge, attitudes and practices of health professional on LGBT healthcare, or experiences and perspective of LGBT individuals on receiving healthcare. In acknowledgement of the diversity of the LGBT community, this review focused only on those who identified themselves as lesbian, gay, bisexual or transgender, while those studies that included other identities in the spectrum were mentioned they were not given much emphasis. This was done to contain the scope of the review. Publications that did not present the primary data; including conference proceedings, policy briefs and editorials, were excluded. The authors met throughout multiple stages of the review process, as recommended by Levac and associates[31], to discuss the current strategy; enabling flexibility with the protocol. Figure 1 presents the PRISMA flow diagram of the screening process.

Step 4 Charting the data

This step is essential to review and explore the data published by the literature selected against the parameters that are related to the research questions[32].The following information was extracted from each included article: year of publication, place of study, focus population, summary of findings, and recommendations. Data was organized by encoding them in two separate spreadsheets, where one focused on the knowledge, attitudes and practices of healthcare professionals (Supplement Table 1) and another focused on the experiences and perspectives of members of the LGBT community (Table 2). The first and second authors extracted the data independently and discussions were done to achieve accuracy and reduce bias[26,31].

Step 5 Collating, summarizing, and reporting the results

Findings of the scoping review were summarized by descriptive statistics (using frequency count) to describe the nature and range of studies on the topic, and inductive thematic analysis to synthesize textual data from the tabulated information in the spreadsheets. The thematic analysis by Caulfield[33] was used, wherein the following steps were performed: familiarization, coding, generating themes, reviewing themes, defining and naming themes, and writing. Initially, the qualitative analysis was performed by the primary author manually. To ensure rigor and trustworthiness, the first four authors did member checking by discussing each step and proceeding only when the majority of the authors agreed with the codes, themes, and descriptions, respectively.

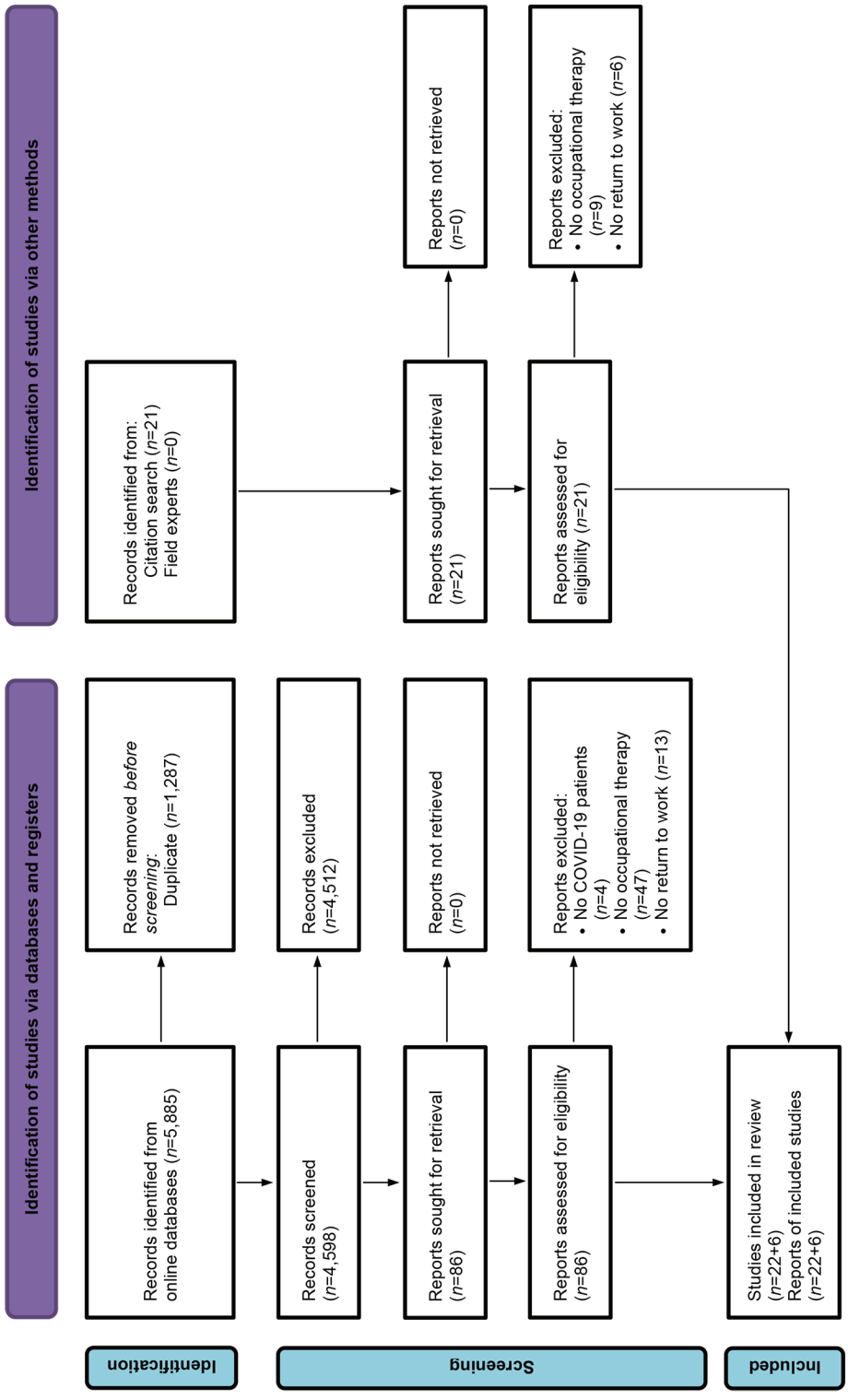

Figure 1 PRISMA flowchart of screening and selection of sudies included in the review

Table 2 Perspective of the LGBT community

Citation	Country	Research design	Study participant	Experiences of the LGBT community	Recommendations
Acree, et al., 2020[87]	USA	Qualitative	Gay and bisexual	At least 77% of the participants felt respected by their current healthcare provider. However, eight individuals reported to be reluctant to engage in healthcare due to cultural memory of medical experimentation, and there is a belief that white individuals receive better healthcare. External forces of discrimination were often internalized, which leads to interpersonal conflict. Also, providers tried to address race or sexual identity, but not simultaneously.	Participants reported being willing to open discussions on sexual with sensitive, culturally competent healthcare professionals in face-to-face interaction. There should be a move to create safe, non-discriminatory spaces so that clients can communicate well. Also, there was a need for more research that focuses on the development of best practices and models in inclusive care.
Agardh, et al., 2017[74]	Tanzania	Qualitative	Gay, bisexual, and transgender	The participants described their experiences and perceptions as complex and contradictory. Due to the accessibility of the pharmacies and drugstores, they established relationships with the pharmacists and preferred to go there before accessing formal healthcare. However, some participants have said that there are instances that, due to a lack of trained pharmacists, ineffectual medications or incorrect dosages were given to them. Some also have lacked proper knowledge of sexually transmitted infections. The participants also tried to seek help from healthcare professionals through social networks.	Interventions to address the concerns of the participants were noted to be multifaceted. Education and training were necessary for pharmacists.
Agenor, et al., 2015[88]	USA	Qualitative	Lesbian and bisexual	Participants in the study reported some form of fear of discrimination when availing healthcare and would prefer healthcare professionals who were knowledgeable on same-sex relationships or even shared some common life experiences.	The study suggested various ways to improve healthcare among the participants. First, the education of professionals should include same-sex sexual health. Another suggestion would be the provision of opportunities for healthcare professionals to learn about the various effects of discrimination on the LGB community. Also, it was encouraged to increase the number of LGB women of color in the healthcare system.

Table 2 Continued

Citation	Country	Research design	Study participant	Experiences of the LGBT community	Recommendations
Alencar Albuquerque, et al., 2015[19]	Brazil	Qualitative	Gay and bisexual	Heteronormative culture was evident as professionals continue to connect homosexuality/ bisexuality and HIV infection. Sexist and macho culture also guided professionals to have prejudice and discriminatory practices. The presence of constraints and exclusionary acts, which are socially reinforced and able to interfere in the environmental context of professionals and users, promoted distance from the homosexual and bisexual community.	There was a need to invest in training that was focused on developing communication skills so that healthcare professionals can offer humanized care. Awareness of non-discriminatory care should also be encouraged. Academic debates were suggested to make knowledge and culturally grounded professional practices planned and operationalized.
Alpert, et al., 2017[89]	USA	Qualitative	Lesbian, gay, bisexual, and transgender	Participants in the study showed concerns that healthcare professionals do not feel comfortable caring for them. They recognized several areas to improve. There was the impact of paternalism or the presence of the other needs of marginalized subpopulations that are not addressed. However, one participant defended the potential of some healthcare professionals to display high-quality care.	It was recommended to have some healthcare competencies to enable quality and inclusive care. Some of these suggestions include being comfortable with LGBT community patients, sharing decision-making with patients, avoiding assumptions, applying knowledge of LGBT practices, and acknowledging the social context of healthcare.
Apalı, et al., 2020[90]	Turkey	Qualitative	Lesbian, gay, bisexual, and transgender	An alarming rate of reported identity-based discrimination was shown in the study. Health care personnel, including non-medical, usually assume LGB individuals to be HIV positive or to be seeking mental health care. With these, high numbers of non-disclosure of gender and sexuality in the study were reported.	There was a need for LGBTQ-friendly health settings in Turkey by creating a safe environment for the LGBTQ youth through policies and training.
Arbeit, et al., 2016[91]	USA	Mixed method	Bisexual	Only 18% disclosed their bisexuality to their healthcare provider. Several participants described negative provider attitudes towards sexuality topics. Many participants were willing to talk about sexual orientation,, but did not want to initiate coming out. There was also a lack of sexual literacy among women.	There was a need for emphasizing privacy during interaction with healthcare professionals. Also, school-based education may benefit young members of the non-binary group, since heterosexual safer sex instructions could be alienating. It was also suggested that delivering sexual healthcare in a non-judgmental manner and incorporating questions and information about bisexuality into standard contraceptive care, etc. can inform the rights of bisexual women.

Table 2 Continued

Citation	Country	Research design	Study participant	Experiences of the LGBT community	Recommendations
Baldwin, et al., 2018[61]	USA	Mixed method	Lesbian, gay, bisexual, and transgender	The use or misuse of pronouns, preferred names, and language determined the positive or negative experience of the participants. In the study, the participants needed to educate their providers on transgender identity concerns.	There was a need for cultural safety that should be implemented at the institutional and system levels. There was a need for training for healthcare professionals. There was also the crucial role of the medical staff and the clinical environment in facilitating positive interactions.
Barefoot, et al., 2017[59]	USA	Quantitative	Lesbian	Rural lesbians disclose their sexuality with less hesitation, experience limited opportunities to facilitate disclosure, report less communication on their orientation, and have previous negative reactions to healthcare access.	Healthcare providers should be aware of the decision-making and communication process of the LGBT community. They should also facilitate a safe environment for clients to promote a positive disclosure experience.
Bartholomaeus, et al., 2020[92]	Australia	Qualitative	Transgender	Different levels of knowledge and affirmation existed towards the LGBT community in pediatric gender clinics. However, despite being affirming, there was still a lack of knowledge connected services and pathways of healthcare. However, it was noteworthy that professionals usually have good intent and dedication to help out in the experiences of the participants.	The study suggested the need for training for professionals to better equip them in trans-affirming healthcare.
Bauer, et al., 2015[44]	Canada	Quantitative	Transgender	More than half of the participants reported being uncomfortable discussing their trans status and trans health concerns with their regular family physicians. The discomfort was related to anxiety about the potential for the physician to restrict or deny access to care; especially in transition-related care.	The study proposed trans cultural humility and clinical care needs in the education of family physicians. An example of this movement was to include trans sensitivity education in cultural competency modules.
Bradford, et al., 2012[40]	USA	Quantitative	Transgender	A great number of transgender persons experienced widespread discrimination, especially in healthcare. Factors associated with this were geographic context, gender, socioeconomic status, racial differences, not having insurance, gender transition concerns, and so on. There were also reports of problems encountered at the policy level and training of healthcare professionals.	A life course approach to transgender health was needed. It should also be multilevel. Family support also needed to be addressed.

Table 2 Continued

Citation	Country	Research design	Study participant	Experiences of the LGBT community	Recommendations
Buchman, 2010[93]	USA	Qualitative	Transgender	Transgender participants felt that the healthcare professionals' attitude and behavior displayed a lack of personal respect making their healthcare compromised. Also, transition care for them was hindered because of healthcare professionals and insurance policies that do not recognize transition care. Also, anti-trans discrimination was still present and was more heightened in rural areas.	Advocacy and social support may facilitate access to quality healthcare. Well-educated healthcare providers would also serve as facilitators of this. This topic was very important in public health.
Burton, et al., 2019[94]	USA	Qualitative	Lesbian, gay, bisexual, and transgender	Only a few reported overt experiences of discrimination; however, a lot fear its possibility. They did not always feel the necessity to disclose their gender and sexuality, but they were willing and prepared. Moreover, it was mentioned that there were intergenerational impacts of stigma.	There was a need for trauma-informed practice since there was the presence of social and political impact of stigma across generations. Future interventions to enhance specialized nursing and healthcare for this population were needed.
Butler, 2017[45]	USA	Qualitative	Lesbian	The majority of the participants did not disclose their sexuality. Of those who did, a minority had experienced homophobia. However, the participants mostly found care providers with whom they are comfortable with and who provided good care.	There should be the presence of public financing and housing options for the participants. Moreover, the study highlighted practice and policy implications that includes careful recruitment and training, and supervision for lesbian-sensitive care.
Cele, et al., 2015[41]	South Africa	Qualitative	Lesbian, gay, bisexual, and transgender	The majority of the participants experienced prejudice coming from health care providers and other patients when availing healthcare. Their difficulty in demonstrating professionalism came from a lack of tolerance towards this population. Some health care providers preached and argued that homosexuality was something unacceptable based on political, societal, and religious biases. Patriarchal heteronormative attitudes were still present, as most are assumed to be in the binary system of gender.	The study recommended that educational institutions and private businesses should introduce homosexuality and anti-homophobia education focusing on guidelines in history taking, and showing respect to non-binary individuals. There should also be public campaigns regarding these matters creating a conducive environment for homosexual patients, so that they would be more confident in accessing healthcare.

Table 2 Continued

Citation	Country	Research design	Study participant	Experiences of the LGBT community	Recommendations
Chung, et al., 2020[17]	USA	Qualitative	Lesbian, gay, bisexual, and transgender	Participants said that prior negative healthcare experiences made them delay or avoid healthcare; such as feeling discriminated against, having mistrust, and decreased confidence with healthcare providers, and prior other traumatic experiences. There were also other barriers such as misgendering and the need to educate professionals on trans care.	The clients expressed that they need knowledgeable, culturally competent, and compassionate healthcare providers. They also reported that they would like a professional that would balance treatments and priorities with them. The study fostered awareness among providers, hopefully influencing educational institutions, and informs practice to care for trans and gender diverse populations.
Dietert, et al., 2017[64]	USA	Qualitative	Transgender	Participants expressed that there were still some concerns with the administration of care, training of staff and healthcare providers, and availability of comprehensive services for the needs of transgender individuals. Generally, according to the participants, professionals who were familiar with or willing to learn could create positive experiences in healthcare for them.	The participants indicated that there was a need for a full spectrum of treatment available to them.
Eady, et al., 2011[58]	Canada	Qualitative	Bisexual	Participants had both positive and negative experiences when accessing mental health services. Practices that contributed to the negative experiences were expressing judgment, dismissing bisexuality, pathologizing bisexuality, and asking intrusive questions. These might be due to the providers' lack of knowledge on bisexuality. On the other hand, positive experiences were reported also when professionals would seek education, ask open-ended questions and maintain neutral reactions during interactions. Some of the helpful factors that made the interaction positive were the openness of the professionals, lack of judgment, and willingness to learn.	It was suggested that professionals should know the LGBT community, not make an issue about sexual orientation, not be afraid about discussing issues around sexual orientation, and help clients feel good about themselves. Aside from education, assumptions should be avoided and proper use of language is suggested to be an important factor. Also, organizations should consider creating inclusive spaces, such as making changes in intake forms, client interviews, office space, and materials. There was also a need for additional research on how to improve mental health facilities and services for the LGBT community.

Table 2 Continued

Citation	Country	Research design	Study participant	Experiences of the LGBT community	Recommendations
Eisenber, et al., 2019[62]	USA	Qualitative	Transgender	The participants in the study expressed that healthcare professionals should ask for gender and pronouns during interaction to indicate care, and should demonstrate respect and a desire to help out. There was still a need for training healthcare professionals.	Participants of the study recommended that content and approaches for providing quality care, sensitive care, knowledge of external resources, and methods of training should be emphasized. Materials, infrastructure, and protocols should be improved.
Fish & Williamson, 2016[95]	UK	Qualitative	Lesbian, gay, bisexual, and transgender	The participants narrated some events where they experienced prejudice; such as physical withdrawal and offhand responses. There was also the feeling of rejection that influenced the behavior of the participants and made some of them conceal their sexual orientation. There was also the presence of internalized homophobia among some healthcare professionals. Participants also used different forms of stigma evasion strategies to cope with prejudice and rejection.	There was a need for not just personal changes to enable quality care for the LGB community but structural changes also to address alienation from usual psychosocial cancer care.
Gahagan & Subriana-Malare, 2018[46]	Canada	Quantitative	Lesbian, gay, bisexual, and transgender	The majority of the respondents had at least one poor experience in the healthcare system. However, the majority also expressed that they believe that they have healthcare professionals to whom they can turn to.	The study suggested that to address the concerns of the community, micro level, and macro level healthcare system processes and procedures should be improved. Additional research was also warranted to survey the evolving interplay of various factors that can collectively and synergistically improve health outcomes in the community.
Guss, et al., 2019[35]	USA	Qualitative	Transgender	Generally, positive experiences were noted by the participants in primary care. However, they experienced distress when healthcare professionals use incorrect names or pronouns. Moreover, some professionals would need to be educated by the patient about transgender health.	There was a call for healthcare professionals to create a welcoming environment by using correct names and pronouns and discussing gender confidentially with transgender individuals. There were specific recommendations for the healthcare setting, healthcare staff, and process and approach regarding physical examination for transgender individuals.

Table 2 Continued

Citation	Country	Research design	Study participant	Experiences of the LGBT community	Recommendations
Howard, et al., 2019[57]	USA	Qualitative	Transgender	All participants of the study reported inferior healthcare experiences. A majority of participants have thought that if they are cisgender people or white, they would be treated better. The majority assumed that the quality of care was poor because of transphobia if gender is a factor. Also, providers have stereotypes and assumptions. However, it was good to note that they feel seen when some professionals call them by their name and pronoun.	The need for diversity and inclusion programming and quality improvement mechanisms to address the needs of clients who hold multiple minority identities should be recognized. These were needed to improve healthcare.
Hulbert-Williams, et al., 2017[71]	UK	Quantitative	Lesbian, gay, and bisexual	Less positive cancer experiences were reported by the participants. This may be because of poor patient–professional communication and the presence of heteronormativity. Social isolation was experienced by the participants. There was a need for the professional training for healthcare professionals and revision of information resources to negate negative attitudes.	There should be an effort to standardize the monitoring of sexual orientation within healthcare and research to enable opportunities for quality care for the LGBT community. Communication between the patients and the healthcare provider should be emphasized. Education and training may negate heteronormativity.
Hunt, 2014[34]	UK	Mixed Method	Transgender	Approximately half of the participants felt that their healthcare provider was affirmative of their gender identity, but only a few observed that the professional had good knowledge when it comes to gender issues. One of the barriers to seeking counseling was fear of being judged or discriminated against, and fearing the possible losses that might follow from exploring gender issues for the very first time. It was noted that three out of five participants have sought gender counseling before seeking other counseling services.	There was a need for counselors to be well-equipped to work with transgender individuals. An example would be avoiding gender issues that were not of usual concern for transgender clients in getting therapy.

Table 2 Continued

Citation	Country	Research design	Study participant	Experiences of the LGBT community	Recommendations
Johnson, et al., 2019[72]	USA	Qualitative	Lesbian, gay, bisexual, and transgender	The participants in the study experienced structural, cultural, and interpersonal issues that impeded their access to quality care. They have trust issues in contacting healthcare professionals. They also feel inconsistent access to healthcare as the participants said they feel excluded in the sense that they are having difficulties in finding health professionals willing to treat them. Moreover, they felt disrespected as some experience mistreatment and harassment when they find a professional that catered to their needs.	There was a call for providers, practices, and systems to be mindful of trans and gender-diverse clients. Providers should recognize the existence of transgender individuals in the community. Future research is needed for this also.
Kamen, et al., 2019[96]	USA	Quantitative	Lesbian, gay, bisexual, and transgender	The participants of the study reported challenges in accessing competent cancer treatment. Interaction with healthcare professionals was affected by their knowledge of LGBT health, safety on disclosure, and the presence and acknowledgment of supportive networks. Moreover, experiences were also affected by other intersecting identities. Self-advocacy could also facilitate good experiences in healthcare, since it makes access to healthcare transformative.	Healthcare professionals should provide their clients a safe clinical encounter, ask and respond professionally to the identities and identifiers of the clients, provide gender-sensitive care, and address treatments' effects on sexuality.
Kattari &, Hasche, 2015[79]	USA	Quantitative	Lesbian, gay, bisexual, and transgender	Discrimination and harassment were reported due to gender identity by more than one in five participants of any age. However, older groups experienced less of these. This may be due to generational influences. Approximately two percent also reported physical victimization. Private insurance was reported to decrease the likelihood of individuals experiencing discrimination, but it can increase the reports of harassment just like with those with public insurance. Some members of the LGBT community don't present their authentic selves to minimize the risk of discrimination, harassment, and victimization.	Healthcare providers should strive to eliminate discrimination, harassment, and victimization of the LGBT community. There was also a need for regulations supporting LGBT inclusive healthcare, not just for professionals but for insurance companies as well.

Table 2 Continued

Citation	Country	Research design	Study participant	Experiences of the LGBT community	Recommendations
Koh, et al., 2014[80]	Australia	Qualitative	Lesbian, gay, bisexual, and transgender	Sexual identity varies in meaning among the participants that influences their experiences in healthcare. However, there are reports of perceived and real discrimination in access. Participants disclosed their identities also. Visual symbols and respect promote positive experiences in healthcare. However, barriers were still evident. Moreover, there is a notable observation in the research where there is reverse stereotyping where the LGBT community assumes things about the healthcare providers based on their attributes that are greatly affecting their disclosure.	There is an ongoing reform in healthcare for the LGBT community. At the policy and planning level, the LGBT community should be encouraged to participate. There was a need for teaching and training of healthcare professionals during school and in postgraduate courses.
Laiti, et al., 2020[76]	Finland	Qualitative	Lesbian, gay, bisexual, and transgender	The experiences of the participants were often unsatisfactory. Initially, nurses would appear open-minded, but when the participants disclosed their identity the nurses appeared confused; so the participants worried of being judged or discriminated against. There was inconsistent preparedness in supporting LGBT clients. The participants echoed the need that LGBT+ health and support needs should be recognized and diversity-affirming information across professionals should be warranted.	Based on the study, there was a need for diversity-affirming information dissemination and adequate support for various settings. There was a need for research on the perspectives of the nurses.
Logie, et al., 2019[68]	Canada	Qualitative	Lesbian, gay, bisexual, and transgender	Participants in the study experienced interconnected dimensions of marginalization; such as having concerns about confidentiality and limited available services for the LGBT+ community, the presence of stigma that was highly shaped by social relations and structures, and a sense of being invisible due to heterosexism and cisnormativity.	There were three recommendations; such as creating a non-judgmental and comfortable place for the LGBT community, having healthcare professionals obtain LGBT specific knowledge, and gender-inclusive services. These also provided the need for multi-level strategies that can enable transformation in healthcare education and affirm diversity in practice. There was also a call for strength-based and solution-focused research with the LGBT+ community.

Table 2 Continued

Citation	Country	Research design	Study participant	Experiences of the LGBT community	Recommendations
Müller, 2017[42]	South Africa	Qualitative	Lesbian, gay, bisexual, and transgender	All the participants shared at least some sort of discrimination when accessing or utilizing healthcare. There have been some challenges for the LGBT community in terms of healthcare availability, accessibility, acceptability, and quality in South Africa. There were also concerns with the accountability mechanisms of healthcare systems in enabling access to healthcare for the LGBT community.	Gender and sexuality should be taken into account when operationalizing the right to health. Sensitization training and LGBT-specific professional development courses should be offered to people. Accountability mechanisms can be improved by making all members of the healthcare system understand more about sexual orientation and identity and strengthen this knowledge and awareness across all levels.
Ross & Setchell, 2019[97]	Australia	Quantitative	Lesbian, gay, bisexual, and transgender	Physiotherapists usually made assumptions about LGBT+ clients; wherein, one major factor that contributes to this is their heteronormative perspective. Also, clients tend to have discomfort specifically in physical interaction with healthcare providers. Some experienced and feared being discriminated, which greatly affected their access to and utilization in general of healthcare. The participants voiced the need for diversity training of physiotherapists.	Evidenced-based curricula covering various topics; ranging from terminologies, stigma, and so on, were highly encouraged. There was a call for healthcare professionals specially physiotherapists to become more aware of health issues specific to the LGBT+ community.
De Santis, et al, 2020[36]	USA	Mixed methods	Transgender	A great number of participants claimed that they are satisfied with healthcare services. However, during the qualitative part, some concerns were raised that act as barriers to healthcare satisfaction; specifically on structures of the healthcare system. There were also facilitators of satisfaction.	The study suggested self-study modules or attendance in conferences that provide information on care for transgender women. Being an advocate of professionals was emphasized. Also, there should be an intentional use of evidence-based healthcare for the population.
Snyder, et al., 2017[65]	USA	Mixed method	Lesbian, gay, bisexual, and transgender	More than two-thirds of the participants claimed that they were able to talk about their health issues with their provider; however, when asked during the focus group this was not usually reported. The majority of the participants experienced poor patient-provider communication, disrespect, and a lack of discussion about sexual health during visits. Participants were concerned with confidentiality and the inappropriateness of responses from healthcare providers.	There were mixed opinions on having a specific clinic for LGTBQ youth, because for some it might label them more. General questions about sexual health were proposed to be routinely asked instead of only allotting approximately 36 seconds for this.

Results

Through the various steps performed, this scoping review was able to provide an overview of the number of studies that answered the questions of the review, which was further described based on the year of publication, study design, country of origin of the study, the participants explored, and the recurring themes of the included articles.

Literature on LGBT within healthcare

The bulk of the included articles spanned from 2015 to 2020. Notably, publications on healthcare professionals' knowledge, attitudes and practices, experiences and perspectives of the LGBT community on seeking healthcare services had grown over this timeframe (Figure 2).

In terms of study design, 59% utilized qualitative methods, 31% quantitative, and 10% mixed-methods approaches. While articles about healthcare professionals had a balanced mix of qualitative and quantitative methods (Figure 3), articles about the experiences of the LGBT community leaned heavily towards qualitative designs (62%).

The studies represented all inhabited continents; including Asia (Israel, Malaysia, Taiwan, Turkey, Vietnam), Europe (Finland, Italy, United Kingdom), Australia, Africa (Malawi, South Africa, Tanzania), and South America (Brazil). However, as Figure 4 shows, the majority hailed from North America, particularly the United States and Canada. These two countries were the countries of implementation for 48% and 67% of all included articles on healthcare professionals and LGBT-identifying individuals, respectively.

In terms of study participants, most studies explicitly defined their target populations within the LGBT spectrum; although some provided general backgrounds. Notably, there was almost equal emphasis on the bisexual, gay, and lesbian communities, but a larger number of studies highlighted the transgender community (Figure 5A); possibly indicating a growing trend of interest. The included studies that explored various health professionals, with physicians and nurses being the primary focus (Figure 5B) of most studies. Other health professionals that have been studied also included movement therapists, psychologists, midwives and paramedics, but to a lesser extent than physicians and nurses.

Figure 2 Progression in annual publications on healthcare provision to the LGBT community from the perspective of LGBT individuals themselves or of healthcare professionals (HP)

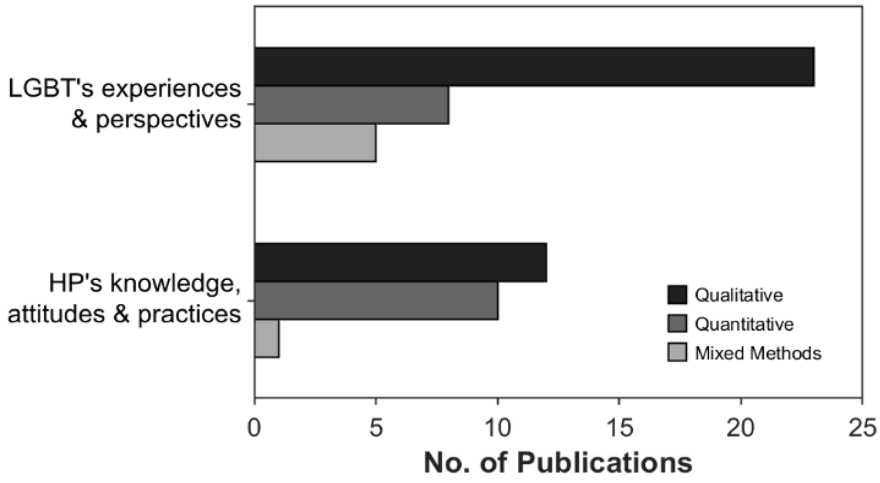

Figure 3 Research design of studies that focused on LGBT's experiences and perspectives, and health professionals' (HP's) knowledge, attitudes and practices

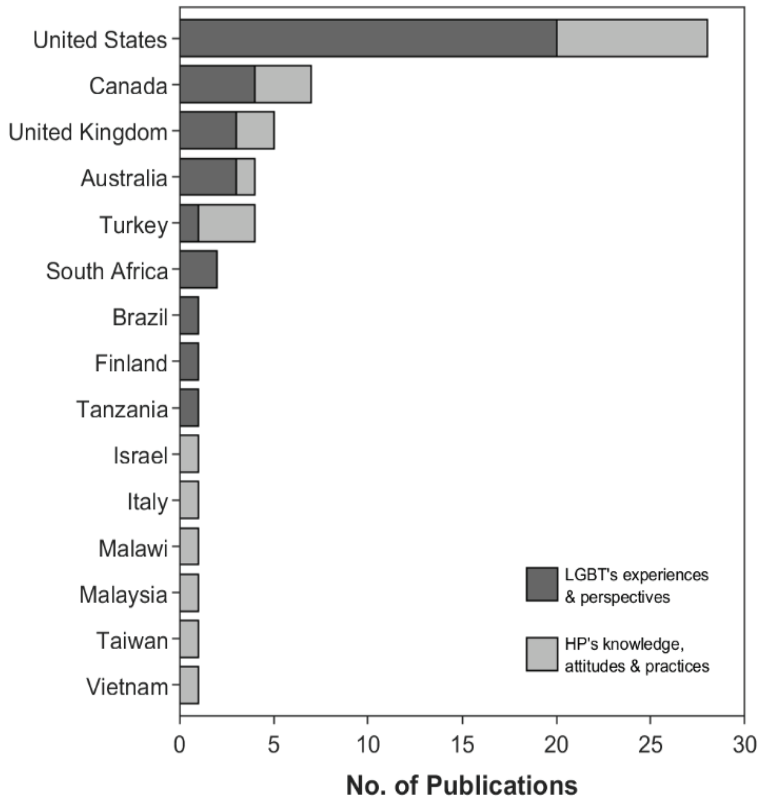

Figure 4 Country of implementation of studies that focused on LGBT's experiences and perspectives, and health professionals' (HP's) knowledge, attitudes and practices

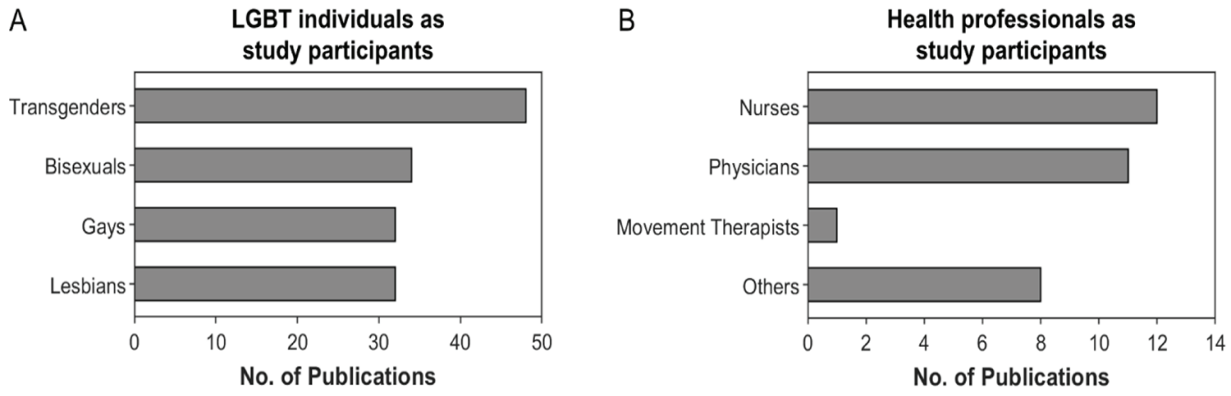

Figure 5 Specific subgroup of the LGBT community (A) or healthcare professional (B), which served as participants of included studies

Themes

The scoping review shed insights on the knowledge, attitude and practices of healthcare professionals and perspectives of the LGBT community within healthcare through the following themes: (I) the healthcare landscape for the LGBT community where they are identified (II) facilitators of and (III) barriers to healthcare access and utilization, which could be supported and addressed by looking into the (IV) varied facets of healthcare – communication, space, education, training, research, and policies.

Current Healthcare Landscape

There are various realities that were uncovered within the scoping review. Discussions about the LGBT community, healthcare access, and service delivery have been evolving steadily and becoming more open. There are several reports of positive experiences of the LGBT community in healthcare[34–36]. as well as active exploration of some professionals in trying to create gender-affirmative healthcare[37–39]. However, there is still the presence of discrimination, prejudice, and injustice against members of the LGBT community[40–43]. Also, there is still the common idea of fear and anxiety being felt by the LGBT community brought upon by self-stigma and stigmatization experienced in healthcare[17,44,45]. One study concretizes the call for the need to continue the developments in this area: "*[...findings] highlight the need to continue working towards the development of a truly welcoming, health equity-focused, inclusive and culturally competent primary health system…*"[46] Furthermore, there is a huge push for healthcare professionals to become strong enablers of these developments: "*…engaging healthcare providers is a crucial step towards reducing barriers to healthcare access for people who identify as LGBT*"[42].

Facilitators of Healthcare

Numerous studies[47–49] have shown that most healthcare professionals are becoming more aware of the significance of offering the LGBT community inclusive and high-quality healthcare services. This good intention shows a sincere commitment to address the LGBT community's specific healthcare needs and concerns. Additionally, healthcare professionals are actively involved in numerous

advocacy campaigns designed to promote diversity and equality in the healthcare industry. Numerous professional associations and governing bodies have made proactive measures to create standards and procedures that guarantee LGBT patients receive care that is respectful of their culture. These advocacy programs act as a potent change agent and help build a more welcoming and encouraging healthcare environment.

The LGBT community's own advocacy initiatives are equally significant. The community is crucial in bringing about positive change in the healthcare system by spreading awareness, sharing personal experiences, and calling for equal treatment. LGBT people fight for their rights and work to end prejudice via their tenacity and fortitude, which supports a more inclusive healthcare environment.

All concerned stakeholders benefit from expanded access to healthcare services and the development of a safer and more welcoming atmosphere as a result of the alignment of the good intentions of healthcare professionals and LGBT advocacy movements. These intentions and advocacy movements promote better communication, trust, and respect between healthcare practitioners and LGBT patients, by addressing the knowledge, understanding, and sensitivity gaps. The LGBT community ultimately benefits from better healthcare outcomes and greater general well-being as a result of this improved contact.

Barriers to Healthcare

It is acknowledged that patriarchy remains prominent in some places that results in homophobia. In fact, in some countries, there is still great gender inequality; such as in the Arab nations[50], India[51], and South Korea[52]. This is further observed in some healthcare professionals that were raised in cultures that actively discriminate or are complacent with the order of society. One study emphasized the presence of this culture and its impact by saying: "*While some of these challenges can be attributed to the general lack of resources…persisting homo- and transphobia among healthcare…lead to systematic discrimination….*"[42] This also contributes to the challenge that is identified by Eskici and associates:[53] "*Discriminatory and homophobic attitudes towards the LGBTQ+ are considered to be universal problems among...professionals*"[50]. These negative attitudes are felt by the LGBT community as they feel disrespected as healthcare recipients[54,55]. Additionally, this thinking is intergenerational where prevalent societal attitudes in the present time can be traced from long-held beliefs and practices of the past. Such attitudes are a tenacious barrier to LGBT healthcare, as any viable solution should be structural and comprehensive and its effect may not be impactful until after some time.

Another barrier that is being discussed by the majority of the studies is the problem of the intersectionality of the gender spectrum with other factors; such as but not limited to race, religion, and/or political beliefs, which makes people more vulnerable than others. Some studies identified factors increasing tolerance for non-heterosexuality. For example, in "*Buddhism [which] practices tolerance towards non-heterosexual orientations*"[56], anti-LGBT attitudes are attenuated because of religious beliefs that promote understanding of others. In most cases, however, these intersectionalities present bigger and deeper issues that require further studies and exploration. "*Sometimes race or gender identity is the dominant factor impacting the healthcare experience, but the healthcare experiences of transgender people of color reflect the intersectional effects of multiple concurrent identities*"[57].

Facets of Healthcare

Each study incorporated into the scoping review presents a unique viewpoint and set of conclusions that emphasize various facets of the interaction between

healthcare institutions and the LGBT community. These studies, despite their individual variances, show a variety of opportunities for collaborative contact that can promote good change when taken as a whole.

Communication

This is an essential facet that relies heavily on appropriate terminology, good social skills, non-judgmental interaction, fitting forms and documentation procedures, and openness on topics of gender and sexuality. The most common suggestion to improve healthcare practice towards the LGBT community was having additional knowledge to understand the scenarios and stories of the LGBT community. Healthcare providers' understanding of LGBT issues should be communicated to LGBT service users with verbal and non-verbal language[58,59]. Hence, a big chunk of communication as a facet is using appropriate pronouns and sensitive terminologies for activities of non-binary individuals[19,61,62]. In fact, the study by Tho Do[63] shared the sentiment, *"[Provider's misconceptions and inappropriate communication] might be also part of a larger structural context shaped by societal negative attitudes towards the transgender population."*

Space

Rainbows have been used as the symbol of the LGBT community in various contexts, which makes spaces more approachable for the LGBT community. Based on the included studies, public campaigns can enable the healthcare facility to have a conducive space that can facilitate good interaction between the LGBT client and healthcare professionals[41,64]. It was highly recommended to create a space that could welcome and indicate the movement of the facility into gender-affirmative healthcare[35,58,62]. However, there have been some debates about whether the establishment of solo-standing gender-sensitive clinics should be pushed or whether mainstreaming all facilities into gender-affirmative facilities should be the main goal[65]. Those who advocate for the former suggest having a specialized treatment facility for the LGBT community, especially transgender individuals, where they know they are together with their peers. However, some argue that this might lead to further discrimination, differentiation, and stigma. "*Overall, study participants desired not to be treated as 'special' clients, but as 'regular' clients"*[66].

Education and Training

"Awareness and pro-social educational approaches might attenuate professional attitudes..."[66] Across all the included studies, education is a vital facet to enable just and equitable access and utilization of healthcare by the LGBT community. All professionals strongly suggested having additional and specialized training in LGBT healthcare, including, but not limited to: their needs[60,67-69], perceptions[49,70-72], communication skills[41], handling techniques[73,74] and professional ethics[44,75]. There is a huge gap in the training curriculums of healthcare professionals for LGBT healthcare. For some, it was just being run through quickly, and for the majority, it is not really provided with sufficient time. While some existing training opportunities were mentioned, not all professionals are obligated to attend. It is still not typical for healthcare professionals to have basic knowledge and skills in interacting with and providing healthcare for LGBT clients. This was echoed by the stories of LGBT students, which: "*showed how discussing diversity in relation to sexuality and gender was not always familiar to…nurses*"[76]. Those with strong interest and intent are the ones who actively seek training for such specialized practice. Suggestions for training vary from the undergraduate level[41] to post-graduate[77] or via continuing education[36,78]. However, there is agreement that additional training is warranted. The exact content of modules and lessons for LGBT care are not yet fully described, as sometimes members of the group vary

approaches; especially with transgender individuals that undergo a transition process.

Research

Research is an important facet that needs to be fostered to enable understanding and exploration of LGBT in healthcare. Despite the presence of several studies, there still exists the need to produce data that is qualitatively and quantitatively rich[48,67,73]. There is also a need to explore the facilitators and barriers associated with access and utilization[46,58,68,72,76]. Moreover, this area of research needs to stay updated with changing societal attitudes and practices. Furthermore, there are still many aspects of LGBT identity and its members' experiences that can be explored. It is vital to understand the uniqueness of these experiences because, as remarked by Logie and colleagues:[68] "*At the end of the day, people are people, and what might be safe for one person is not safe for another. What might be safe for a femme, lesbian cis woman, going to see a doctor and being totally cool and that doctor being fine might be completely different for someone like me who is noticeably not femme, not cisgender*".

Policies

A multi-level approach is one of the primary approaches suggested that could be a changemaker in dealing with LGBT healthcare issues. In this approach, policies and regulations should explicitly promote gender-affirmative healthcare[63,68,78]. There have been some actions in trying to address the concerns of the LGBT community in each study. However, to facilitate sustainable and permanent change for the sake of the LGBT community, changing policies and regulations should be far-reaching[79]. The proposals that aim to improve LGBT healthcare could only be implemented with ease if there is a basis for advancing such activities[59]. If policies clearly indicate a movement toward gender-friendly spaces and/or sensitive and relevant training for staff, the majority, if not all, could be persuaded to comply and participate in gender-affirmative activities[55,80,81]. However, changing and improving policies and regulations may take a tedious process. Hence, the former facet, research, needs to be enabled. These policies can have a top-down influence to existing healthcare systems. This is important because there is: "*the need to continue working towards the development of a truly welcoming, health equity-focused, inclusive and culturally competent primary health system…*"[46]

Discussion

This scoping review explored the evolution of LGBT healthcare research from 2010, denoting a notable increase in publications, particularly focusing on the perspectives of the LGBT community. This trend coincides with increasing societal acceptance of the LGBT population[82], suggesting greater openness among researchers and the public toward these topics. However, a study by Coulter and associates revealed disparities in funding for LGBT health research[83], perpetuating inequalities despite the surge in overall research within this field.

Qualitative approaches were predominantly used in understanding LGBT healthcare issues, possibly due to their humanistic approach in deciphering experiences and interactions[84]. Studies were primarily conducted in North America, consistent with Flores's findings indicating higher acceptance and rights for the LGBT community in the United States and Canada[85], mirrored by their greater representation in research. Additionally, countries with more developed economies tend to show more acceptance[56], potentially explaining the prevalence of studies from these regions.

The review encompassed diverse studies involving all segments of the LGBT community, with a noticeable emphasis on transgender populations, likely due to emerging trends and distinctive healthcare needs. While nurses and

physicians received considerable attention, there's a need for more studies exploring other healthcare professionals to ensure comprehensive understanding within the healthcare system. Overall, this review offers insights into the growing body of research concerning LGBT healthcare, from both provider and user perspectives.

This scoping review was able to unravel four themes. The first theme is essential to emphasize the progress yet the presence of challenges of the LGBT community in relation to healthcare across the globe. This is a reality that still needs to be echoed since, across the reviewed studies, this message exists, reminding all advocates, researchers, educators, and readers that constant updating on the field is necessary. Contrarily, the second and third themes explored the enablers and impediments identified by the LGBT community and reported by healthcare experts. One facilitator is the good intentions of healthcare professionals to help people. However, it is acknowledged that intentions do not equate to actions that are usually impeded by the lack of full understanding and knowledge of how to approach friendly healthcare to the community[46,73,77].Also, the mere existence of advocacy that could facilitate just and equitable healthcare basically means that there is still resistance toward the provision of good healthcare for LGBT clients. Nonetheless, these facilitators are important for change-making. Conversely, intersections of many other factors create barriers for the LGBT community. This scenario creates a nuanced grasp of understanding inequities and injustices. Hence, more research is needed to uncover how these intersections contribute to the access and utilization of healthcare by the LGBT community. Lastly, this scoping review was able to highlight opportunities or facets of healthcare in which stakeholder actions are required. Within these facets, further development in just and equitable access and utilization of healthcare by the LGBT community can be facilitated. For example, when communication, good social skills, and non-judgmental interaction is demonstrated as the display of genuine care through the non-assumption of gender[68,78]. This is basically gearing away from non-heteronormative thinking, by asking questions that do not assume gender or make the client pretend that they are the gender that is expected of them. Fitting forms and documentation procedures[58,71] are also part of the communication facet, wherein, the forms utilized depict the culture of the facility or the healthcare professional. Hence, including other gender options, aside from binary genders, would be a great improvement based on many of the selected studies. Normalizing calling individuals based on their preferred name rather than a birth name can create a more open and safe interaction. This is connected with the concept of space or the facility itself where healthcare is provided. Safety is initially observed at a first glance of the environment;[86] therefore, the environment should have explicit indicators of how any facility is welcoming to the LGBT community. Nonetheless, there is still a debate on how any facility should really accommodate the needs of the LGBT community. Consequently, this has just given the spotlight that space is a facet that needs to be further looked into. Education, training and research are crucial facets that also were mentioned within the results, which are different but intertwined with each other. These interactions across these facets can further be demonstrated through changes in policies that are highly encouraged to go beyond all levels of healthcare. Moreover, as this scoping review reveals the gaps that future research could explore, it then concretizes that research is crucial since this informs the majority of the other facets that aid in connecting and relating to each other, which could enable the creation of a truly inclusive community.

Limitations

The study contains a number of significant drawbacks. First off, due to the study's limited publishing date range of 2010 to 2020, significant advancements

in LGBT healthcare may have been missed, giving a potentially inadequate picture of the knowledge, attitudes, and practices of healthcare workers today. Second, doing the study in English alone could preclude pertinent non-English research. Thirdly, by concentrating on particular keywords, the search technique may have missed studies that used other languages or approaches, so reducing the representation of the literature. Furthermore, the majority of the studies included were from North America that may not accurately represent opinions and experiences from around the world, particularly in areas where LGBT people are less accepted and have fewer legal protections. Whether the findings can be applied to other healthcare environments and demographics is still up for debate. In summary, the scoping study provides important insights into LGBT healthcare challenges, but these limitations must be taken into account when interpreting the results; highlighting the need for more research in this area.

Conclusion

This scoping review underscores the imperative for comprehensive research in LGBT healthcare, examining perspectives of healthcare providers and the LGBT community to identify persistent issues and opportunities for gender-affirmative care. Despite increasing studies, significant global research gaps persist, necessitating diverse methodologies; especially in developing countries, given the North America-centric focus of existing research.

Findings highlighted healthcare system perspectives from both LGBT individuals and professionals, revealing barriers, facilitators, and areas needing improvement in healthcare practices. While acknowledging positive changes in healthcare professionals' attitudes, substantial gaps persist, forming a critical foundation for future research endeavors. A broader scope of studies is urged to encompass all facets of the LGBT community and encourage interdisciplinary approaches in health and social care. Recommendations include using identified gaps and facets as educational frameworks to enhance healthcare professionals' training on LGBT interactions, and fostering more inclusive and gender-affirmative healthcare.

Active engagement in continuous education among healthcare professionals to bridge knowledge gaps is pivotal for improving care provision to LGBT clients. Addressing these gaps could significantly enhance the experiences of the LGBT community within healthcare settings, necessitating ongoing advocacy, systemic changes, and consistent evaluations across healthcare levels.

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Supplement Table 1 Knowledge, attitudes, and practices of healthcare professionals

Citation	Country	Research design	LGBT population	Study participant	Knowledge, attitudes, and practices of healthcare professionals	Recommendations
Abdessamad, et al., 2013[77]	Canada	Quantitative	Lesbian	Obstetrician gynecologists	The majority of respondents had favorable opinions of lesbians. Additionally, according to the study, the participants had a good understanding of lesbians' worries. There were, however, some particular knowledge gaps that need attention. Additionally, they received no professional obstetrician–gynecological training during their formative years.	The study underscored the need for formal teaching on lesbian health issues in medical schools and residency training. Additionally, more research was required to identify the critical elements that lead to the common exclusion of women whom identify as sexual minorities.
Ali, et al., 2015[66]	Canada	Quantitative	Transgender	Psychiatry residents and psychiatrists	Transgender people have reported stigmatizing healthcare. Compared to the non–physician sample population, psychiatric professionals and residents showed less hostility toward transgender people because they were more understanding. Greater acceptance of transgender people and less unfavorable sentiments were influenced by greater professional experience and exposure. It is crucial to remember that interpersonal engagement and professional interaction are two very different things. Medical professionals exhibited increased pessimism and political conservatism with higher degrees of religiosity.	Based on the findings, stigma may decrease with the spread of knowledge. Additionally, it was claimed that learning from educators whom identify as transgender may help to foster a favorable viewpoint of the transgender.
Angelino, et al., 2019[37]	USA	Qualitative	Transgender	Healthcare providers	There were gaps even though almost all participants had received culturally specific training. Only a small percentage of healthcare professionals received formal training in providing care specifically for the LGBT+ population. However, the majority had experience working with community members in daily practice. Additionally, colonialism, historical trauma, and structural problems all had an effect on how the LGBT+ community accessed healthcare and perceived it. According to the participants, the following social determinants of health were seen as community barriers: family and community acceptability, accessibility to services and healthcare providers, and other social determinants of health.	At the provider level, developments should be recommended. Additionally, education must be offered. Understanding one's own historical history can help one better comprehend the dynamics of relationships between clients and health professionals.

Supplement Table 1 Continued

Citation	Country	Research design	LGBT population	Study participant	Knowledge, attitudes, and practices of healthcare professionals	Recommendations
Aslan, et al., 2019[49]	Turkey	Quantitative	Lesbian, gay, bisexual, and transgender	Nurse educators	The necessity for and importance of knowing about LGBT healthcare were highlighted by more than half of the participants; however, only 23% of those polled read any articles on the subject, and nearly 74% had it covered in their curricula. Only worries about sexuality, homophobia, and HIV/AIDS were frequently discussed. High levels of homophobia were found in the study as well, despite the intention to include related subjects in nursing education.	Topics like social justice, security concerns, or cultural competency with regard to the LGBT community should be required to be covered in order to improve awareness of LGBT healthcare in the nursing curriculum. There should be more support and tools available, as well as less societal pressure when talking about such subjects.
Banerjee, et al., 2018[60]	USA	Quantitative	Lesbian, gay, bisexual, and transgender	Physicians, advanced practice professionals, and nurses	Oncology practitioners had a general, serious knowledge gap and a pressing need for education on LGBT healthcare. Furthermore, people with more information are more likely to hold positive views about the LGBT community.	For the purpose of creating a curriculum or training materials for those working in the field of cancer, a needs assessment of the particular difficulties that LGBT clients' communication and engagement with healthcare professionals presents was necessary.
Beagan, et al., 2015[70]	Canada	Qualitative	Lesbian, gay, bisexual, and transgender	Family physicians	Physicians expressed one of the following ideas on LGBT women healthcare: It really makes no difference, where physicians try to gear away from labels to ensure equity, sexuality, and gender identity do matter, where to enable holistic care and avoid marginalization, it should be explored, and it matters, yet it doesn't matter, where physicians use recognition of group membership as a way to draw awareness to possible health issues and appropriate approach for each individual.	To facilitate learning about LGBT care, a comprehensive understanding of student attitudes and their origin was an excellent place to start. In order to avoid internalizing social messages, students should consider how they do so.

Supplement Table 1 Continued

Citation	Country	Research design	LGBT population	Study participant	Knowledge, attitudes, and practices of healthcare professionals	Recommendations
Carabez, et al., 2016[78]	USA	Qualitative	Transgender	Nurses	More than over half of the respondents reported experiencing some level of discomfort. Some people admitted that this might be due to people's ignorance of transgender people and their lack of exposure. Others started gossiping, using demeaning language, and misunderstood how to use pronouns. They also mentioned that the transitional period is the only variation in the health of transgender patients. However, before starting care, individuals would have to disclose their stage of the process. The respondents were also aware of the issues of transgender people in terms of stigma and mental health.	The study advocated challenging the notion of gender binary in clinical settings and nursing education. Topics on these issues were also recommended for modules for continuing education. The authors generally advocated a strategy of self-reflection, cultural humility, and training in gender diversity. Changes at the individual and system levels should be considered.
Clark, et al., 2017[81]	USA	Qualitative	Transgender	Physicians, social workers, psychologists, and mental health counselors	There were barriers for healthcare professionals in correctional facilities to enable gender-affirmative healthcare on at least three levels: structural, interpersonal, and individual. They did not receive adequate training, a proper budget, and support in the environment. Also, the staff had biases that affect the relationship with clients. Lastly, they lacked cultural and clinical competence in transgender-specific healthcare.	It was necessary to make policy modifications that were particular to transgender people and to offer transgender competence training to all healthcare professionals working in correctional facilities. To lessen prejudice and false information that may affect healthcare or provision, should be done.
Della Pelle, et al., 2018[75]	Italy	Qualitative	Lesbian, gay, bisexual, and transgender	Nurses	The study's participants; especially the female ones, were aware of homosexuality and had generally good sentiments toward it. They demonstrated a lack of understanding of homosexuality as well, but they insisted that training regarding homosexual customers should be given top priority. When it came to providing care, the participants have shown a high level of competence.	It was necessary to increase the cultural competence of nurses and other healthcare professionals with regard to the LGBT community.

Supplement Table 1 Continued

Citation	Country	Research design	LGBT population	Study participant	Knowledge, attitudes, and practices of healthcare professionals	Recommendations
Dorsen & Van Devanter, 2016[73]	USA	Qualitative	Lesbian, gay, and bisexual	Nurses	In the survey, nurses described having difficulty balancing their desire and capacity to provide care for sexual minorities. However, individuals' sentiments of the LGB community were usually positive. Negative perceptions are a result of practitioners' ambivalence toward them as a unique demographic and conflicts over personal beliefs. However, they believed they could deliver high-quality care by putting these beliefs aside. Additionally, the majority of participants acknowledged uneasiness when discussing sexual issues with customers.	There was a need for more clinical preparation for healthcare professionals towards care for the LGB community. Also, the role of stigma and discrimination should also be learned by all. A need for more research on understanding the origins and meanings of conflicts between professional and personal values were suggested.
Kapanda, et al., 2019[98]	Malawi	Qualitative	Gay	Nurses, clinical officers, nursing students, and clinical officer students	The participants looked after the gay people. They concur that since they have health requirements, they ought to get the same access to healthcare. However, stigma and discrimination were acknowledged, which they believed to be access-barriers.	There was a call for patient-centered healthcare and creating friendly services that are non-discriminatory. There was also a need for investments dedicated to the population's health.
Kawano, et al., 2018[47]	USA	Quantitative	Lesbian, gay, bisexual, and transgender	Dance/ movement therapists	The participants of the study generally had good intentions and a willingness to care for the LGBT community. However, lack of training and preparedness to work with this population, a lack of awareness of gender-binary heteronormative social expectations and public spaces, a lack of knowledge of LGBT specific issues; such as the use of language, documentation, and legal rights, lack of skills regarding the consideration of the environment, music, movement, and other specific interventions were noted.	There was a need to be culturally responsive and use many lenses to advocate for the client.
Keles, et al., 2020[38]	Turkey	Qualitative	Lesbian, gay, bisexual, and transgender	Psychiatry residents and specialists	The study's participants were aware of the prejudice against the LGBT population. It was even mentioned that participants' confidence in giving care increased once they understood the clients' values. When dealing with LGBT clientele, they placed a high importance on beneficence and non-maleficence. They took meticulous care of their privacy as well. They typically showed the LGBT community positive prejudice.	The participants suggested improvement in undergraduate medical curricula and residency programs to provide sufficient education on gender.

Supplement Table 1 Continued

Citation	Country	Research design	LGBT population	Study participant	Knowledge, attitudes, and practices of healthcare professionals	Recommendations
Kirlew, et al., 2020[54]	UK	Qualitative	Transgender	Healthcare providers	The healthcare professionals acknowledged that there was prejudice, issues with professionalism, difficulty over terminology, cultural perceptions and attitudes toward trans persons, and a lack of understanding of the trans body and gender identity. Additionally, it was noted that trans staff personnel required societal acceptance and training in trans awareness.	Despite the passage of the Gender Recognition Act 2004, organizations still failed to address concerns of the transgender community. Hence, it was encouraged to have trans awareness training for all healthcare professionals to enable them to assess needs and improve health outcomes.
Landau, et al., 2020[69]	Israel	Quantitative	Transgender	Senior and resident pediatricians	Almost everyone in the study recognized the universal value of transgender individuals, and two–thirds said that they would feel comfortable interacting with transgender individuals. Also, there were significant negative beliefs in regards to transgenders. This means that there were still stigmatization and prejudice. There were some demographic factors that might affect these things.	There was a need to improve the beliefs of pediatricians, since they affect the provision of proper care for transgender children.
Lefkowitz & Mannell, 2017[67]	UK	Qualitative	Transgender	Nurses, client support workers, sexual health counselors, and sexual health advisors	The healthcare professionals perceived transgender individuals differently. They understood transgender within the binary approach and see transgender as being gay. Also, they experienced and shared ideas on the confusion of organs of transgender individuals alongside the assumption that they are just mentally unstable or lost. The participants said that the youth is still incapable to decide whether they are transgender or not.	There was a need for further training for healthcare professionals. Also, clinics should distribute resources to various organizations and institutions supporting transgender care. There should be more research investigating topics as such to enable quality healthcare.
Paradiso & Lally, 2018[48]	USA	Qualitative	Transgender	Nurses	Nurses generally had good intentions and desire to enable inclusive care. However, these were not bridged into practice due to feelings of uncertainty and fear. secondary to gaps in knowledge, lack of necessary tools and the absence of accessible experts in transgender care. The majority were not aware of the World Professional Association for Transgender Health's efforts making them experience personal and professional gaps in both experience and knowledge. Also, despite the perception of not being biased, not knowing the specifics of transgender health care was a form of bias already.	Education and research were required in the area. Literature on nursing practice in transgender care was scarce. Despite diversity initiatives, specialized client care training with a transgender focus was recommended.

Supplement Table 1 Continued

Citation	Country	Research design	LGBT population	Study participant	Knowledge, attitudes, and practices of healthcare professionals	Recommendations
Riggs & Bartholomaeus, 2016[99]	Australia	Quantitative	Transgender	Mental health care providers	There are variations in the clinical knowledge, confidence, and level of comfort among mental health professionals. However, increased training and previous encounter provided better clinical knowledge and confidence. Psychiatrists had the lowest level of knowledge, while female healthcare providers, in general, have higher levels of knowledge. Counselors were the most confident.	There was a need for mental health professionals to improve their knowledge and confidence in providing care for transgender individuals. Also, the research provided some guidelines and listed skillsets needed for the ongoing training of professionals.
Stein, et al., 2020[55]	USA	Mixed Method	Lesbian, gay, bisexual, and transgender	Physician, nurses, social workers, chaplains, and other professionals	The najority of the participants believed that the LGBT community were more likely to experience discrimination and would delay access to healthcare and withhold information because of this. Almost one-quarter of the respondents had observed inadequate, disrespectful, or abusive treatment of LGBT patients. The LGBT community and their families had perceived and observed to have experienced discrimination, even in the most vulnerable part of their life; such as having their treatment decisions disregarded or minimized.	The study emphasized its implication in policies to ensure civil rights protection against the LGBT community. Staff training was an important way to enable improvement in LGBT healthcare but enforcing non-discriminatory policies should also be done.
Taskiran Eskici, et al., 2020[53]	Turkey	Quantitative	Lesbian, gay, bisexual, and transgender	Physicians, nurses, and other professionals	Most healthcare professionals were familiar with the LGBT+ community, but most professionals had not interacted with LGBT patients in care settings. Most were willing to take care of them, but for those who were not willing, understood the LGBT+ community in relation to infectious diseases. The homophobia levels of the healthcare professionals were above average and discrimination scores were below average. A positive relationship was identified between homophobia and discrimination scores, while a negative relationship was seen between education and discriminatory behaviors.	Special training programs were suggested. It was also emphasized that it is the ethical responsibility to learn about LGBT individuals' health concerns and issues.

Supplement Table 1 Continued

Citation	Country	Research design	LGBT population	Study participant	Knowledge, attitudes, and practices of healthcare professionals	Recommendations
Thu Do & Van Ngyuen, 2020[63]	Vietnam, 2020	Qualitative	Transgender	General practitioner, medical specialists, and nurses	The study has suggested that the medical environment was under-prepared for the complexity of transgender healthcare in their country that was due to concerns with the legal framework, lack of specific services and guidelines for transgender healthcare and lack of knowledge of professionals that serve as a threat to quality transgender healthcare. Despite the majority being open and acknowledging topics related to transgender healthcare, professional and social skills were noted to be barriers. The concerns were noted on various levels from the individual, organizational, and systems.	There should be an emphasis on cross-level analysis of health issues, and the need for intervention approaches beyond individual-level support, from micro to macro perspectives. It was therefore necessary that laws and regulations operationalize transgender rights, localize international clinical standards and disseminate them accordingly, and emphasize diversity in the education of medical professionals.
Vijay, et al., 2018[100]	Malaysia	Quantitative	Transgender	Physicians	Enabling access to quality healthcare was essential for transgender individuals. However, this access was influenced negatively by discrimination by medical professionals. In the study, the majority had expressed relatively low intent to discriminate against transgender people. Stigma-related attitudes towards transgender people were the source of discrimination intent driven by internalized shame, fear, and belief in good care based on the study.	To address quality and access, early medical education and continuing medical education for healthcare professionals were suggested by the study. It would include cultural and clinical competency training that would be implemented early in career training.
Wang, et al., 2020[39]	Taiwan	Quantitative	Lesbian, gay, bisexual, and transgender	Nurses	A great number of nurses were found to have a high level of positive attitudes towards the LGBT community. This may be because increased social tolerance was enabled by improvement in education and liberal values, high visibility of the LGBT community, and legalization of same-sex marriage in Taiwan. Interestingly, attitudes, knowledge, and behavior were not influenced by religion. However, based on the study, knowledge was still lacking for many, which poses a barrier to access to quality healthcare.	One-third of the participants expressed a need for information on culturally competent care for the LGBT community.