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Academic student perception of the influence of medical training on topics about the LGBTQIA+ population

Percepção acadêmica discente sobre a influência da formação médica acerca de temas referentes à população LGBTQIA+

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ABSTRACT

Introduction: Medical education should prepare professionals to provide comprehensive and humanized care regardless of gender identity or sexual orientation. Despite existing policies, prejudice and lack of preparedness persist, distancing LGBTQIA+ individuals from healthcare services and increasing their vulnerabilities.

Objective: This study aimed to evaluate medical students' perceptions of their training regarding LGBTQIA+ health.

Methods: This was a cross-sectional study using a 5-point Likert scale questionnaire (1 = strongly disagree to 5 = strongly agree), analyzed through mean comparisons between groups. A total of 135 medical students (9th to 12th semesters) from a private university in southern São Paulo were surveyed. The questionnaire was divided into three sections: prior knowledge about the LGBTQIA+ population, the impact of medical education on interns, and the care provided to LGBTQIA+ patients. Data were analyzed by comparing responses from cisgender heterosexual students and LGBTQIA+ students using the Student's t-test.

Results: Among participants, 68.1% were female, 31.2% male, and 0.7% identified as other; regarding sexual orientation, 80.7% were cisgender heterosexual and 19.3% LGBTQIA+. Concerning prior knowledge, LGBTQIA+ students showed higher scores for knowledge of the acronym (4.96 vs. 4.82; p=0.325) and concepts such as gender identity (4.96 vs. 4.66; p=0.044), while cisgender heterosexual students reported greater learning during medical school (3.8 vs. 2.88; p=0.008). Regarding the impact of medical education, discussions about LGBTQIA+ topics were perceived as superficial, with a significant difference in having "heard about the acronym" between cisgender heterosexual and LGBTQIA+ students (4.19 vs. 4.62; p=0.023). In terms of care and sensitivity, LGBTQIA+ students demonstrated greater concern for the use of correct pronouns in a humanized manner (4.92 vs. 4.42; p=0.020) and for patient welcoming (4.92 vs. 4.65; p=0.099). Regarding insecurity in care, cisgender heterosexual students had a mean score close to the neutral point of the scale (2.7), whereas LGBTQIA+ students had a lower mean (2.08), indicating a greater tendency toward disagreement (p=0.048).

Conclusion: The students' perceptions indicate that medical education remains superficial regarding LGBTQIA+ health, highlighting the need for deeper, more inclusive approaches focused on reducing prejudice and aligning training with the realities of this population to promote comprehensive and humanized care.

Keywords: Sexual and gender minorities; Universal health care; Teaching.

RESUMO

Introdução: *A formação médica deve preparar profissionais para atendimento integral e humanizado, independentemente da identidade de gênero ou orientação sexual. Apesar de políticas, o preconceito e despreparo persistem, o que afasta a população LGBTQIA+ dos serviços e aumenta as vulnerabilidades.*

Objetivo: *Este estudo teve como objetivo avaliar a percepção acadêmica discente sobre a formação médica acerca da população LGBTQIA+.*

Método: *Trata-se de um estudo transversal em que se utilizou um questionário em escala Likert de 5 pontos (de 1 = discordo totalmente a 5 = concordo totalmente), cujas respostas foram analisadas por meio de médias e comparação entre grupos. Entrevistaram-se 135 estudantes de Medicina (do nono ao 12º semestre) de uma universidade privada localizada na zona sul de São Paulo, que responderam a um questionário dividido em três partes: conhecimentos prévios sobre a população LGBTQIA+, impacto da formação médica sobre os internos e acolhimento de pacientes LGBTQIA+. Na análise dos dados, compararam-se as respostas dos estudantes cis-heterossexuais com as dos discentes LGBTQIA+ por meio do teste t de Student.*

Resultado: *Entre os estudantes, 68,1% se declararam do sexo feminino, 31,2% mencionaram ser do sexo masculino, e 0,7% relatou outras designações; em relação à sexualidade, 80,7% eram cis-heterossexuais, e 19,3%, LGBTQIA+. Observou-se que os estudantes LGBTQIA+ possuem maior conhecimento sobre a sigla (4,96 versus 4,82; p = 0,325) e conceitos como identidade de gênero (4,96 versus 4,66; p = 0,044), e os cis-heterossexuais relataram maior aprendizado na faculdade (2,88 versus 3,8; p = 0,008). Já no impacto da formação médica, as discussões sobre LGBTQIA+ na formação são percebidas como superficiais, e há diferença significativa sobre "ouvir falar da sigla" entre cis-heterossexuais e LGBTQIA+ (4,19 versus 4,62; p = 0,023). Quanto ao acolhimento e à sensibilidade, os LGBTQIA+ demonstraram maior preocupação com o uso humanizado de pronomes corretos (4,92 versus 4,42; p = 0,020) e com o acolhimento (4,92 versus 4,65; p = 0,099). Em relação à insegurança no atendimento, os estudantes cis-heterossexuais apresentaram média próxima ao ponto neutro da escala (2,7), enquanto os discentes LGBTQIA+ apresentaram média inferior (2,08), indicando maior tendência à discordância (p = 0,048).*

Conclusão: *A percepção discente estudada revela que a formação médica ainda é superficial quanto à saúde de pessoas LGBTQIA+, o que indica a necessidade de abordagens mais profundas, inclusivas, com enfoque na redução de preconceitos e alinhadas à realidade dessa população, visando a um atendimento integral e humanizado.*

Palavras-chave: *Minorias Sexuais e de Gênero; Assistência de Saúde Universal; Ensino.*

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INTRODUCTION

There is a growing need for professionals who are qualified to provide comprehensive, respectful, and humanized care to all people, regardless of gender identity and/or sexual orientation. Although policies and programs aimed at LGBTQIA+ populations (lesbians, gay men, bisexual people, transgender and transvestite (cross-dresser), queer, intersex, asexual and aromantic people, and other gender identities and sexual orientations not covered by the previous letters, such as pansexual, demisexual, non-binary people, and many others) demonstrate positive expectations, their implementation faces difficulties. Physicians need to have knowledge of the diversity of sexual and gender identities, as well as the health implications and inequalities experienced by these communities[1,2].

The embracement and care of this population should be based on the construction of a relationship of trust, bond, and commitment, respecting equity and seeking to understand health needs. Thus, it is essential that primary care actions directed toward this population are not one-off and transient but rather encompass the reality in which these individuals are inserted[3] .

It is known that many LGBTQIA+ users avoid medical follow-up and care from other health professionals, even in emergency situations, and cite barriers to care such as lack of professional education, refusal of treatment, poor care, and verbal abuse by professionals[4-6] . Thus, although specialized policies and programs exist in favor of the LGBTQIA+ population, there are difficulties in implementing them and resistance on the part of professionals, who are culturally embedded in a cis-heteronormative society that does not understand their particularities and often does not create space for LGBTQIA+ individuals to bring their concerns to consultations[7].

The main reasons why the LGBTQIA+ population seeks health services are prevention of sexually transmitted infections (STIs), contraception, and hormone therapy[4]. However, it is important to clarify that technical knowledge of these issues alone is not enough to ensure comprehensive and welcoming care in health services. In addition, these access-related difficulties make this population more susceptible to diseases that are more prevalent in this group, such as psychological problems, acquired immunodeficiency syndrome (AIDS), cervical cancer, breast cancer, and prostate cancer[8].

A study conducted with 14 physicians working in Primary Health Care Units in a capital city in northeastern Brazil found that none had sufficient knowledge to approach an LGBTQIA+ patient, as they had not had contact with the topic during undergraduate training nor participated in qualification courses afterward. The same study showed that none of the physicians recognized weaknesses in their own care, instead blaming the marginalized population itself for not having its issues resolved in health services[9].

Change must go beyond knowledge of the rights and specific needs of the LGBTQIA+ population, beginning with humanized training that ensures empathy among health professionals. In order to help and provide welcoming care, professionals must first understand the particularities and context in which the patient is inserted and know how to recognize intersecting vulnerabilities. Establishing a bond and a relationship of trust, respecting equity, and recognizing and treating each individual as a unique and singular person are essential[3].

Within the context of the Brazilian Unified Health System (Sistema Único de Saúde - SUS), the National Policy for Comprehensive Health Care for Lesbians, Gays, Bisexual, Cross-dresser, and Transgender people establishes guidelines and strategies aimed at recognizing the impacts generated by discrimination and exclusion of the LGBTQIA+ population both in society and, more critically, in access to the public health network. Among its objectives, it emphasizes the incorporation, into educational processes, of the topics "confronting discrimination based on gender, sexual orientation, race, color, and territory" and "sexual orientation and gender identity of lesbians, gay men, bisexual, cross-dresser, and transgender people"[10].

In parallel with the SUS, regarding the training of new physicians, the National Curriculum Guidelines (Diretrizes Curriculares Nacionais - DCN)[11] for undergraduate medical education were established in 2025 with the purpose of ensuring a humanized, critical medical education capable of serving the population in a dignified and comprehensive manner. Article 8 addresses the essential competencies for ethical medical practice, with emphasis on item XI, which states that, upon completion of the medical course, the student must "recognize, embrace, and value the multiple dimensions of human diversity, including biological, subjective, ethnic-racial, gender, sexual-orientation, political-ideological, environmental, socioeconomic, cultural, and religious aspects," representing progress toward a teaching-learning process with a transversal character when addressing specific populations.

Despite regulatory advances and official recommendations, national and international studies show that, to the best of our knowledge, the presence of content related to the health of the LGBTQIA+ population in medical curricula remains insufficient, fragmented, and often restricted to elective courses or extracurricular activities. This training gap contributes to the reproduction of stigma and prejudice within the academic environment, reinforcing the so-called "hidden curriculum," in which institutional silence regarding sexual and gender diversity ultimately legitimizes exclusionary practices.

International studies have demonstrated the implementation and expansion of educational content and interventions focused on the health of the LGBTQIA+ population in medical curricula, including structured initiatives in several countries, indicating possible paths for Brazil. Thus, expanding the curricular space dedicated to these topics is essential to train professionals capable of promoting comprehensive, humanized care that is consistent with the principles of health equity [12-18].

However, the shift from teaching centered on disease to an understanding of the human being as social, historical, and multiple remains a challenge in medical education. Professionals who had no contact with the topic during their training, or had limited contact with it, do not know how to approach the subject and often have not even had the opportunity to discuss it[19].

Although the DCN for Undergraduate Medical Education[11] include a humanized and transversal approach to specific populations in medical training, and although policies and programs aimed at LGBTQIA+ populations demonstrate positive expectations, their implementation faces difficulties. Undergraduate education focused on technical aspects of the health-disease process, combined with the culture of heteronormativity and/or cissexism rooted in most of the medical population, distances the health system from SUS doctrines, since these characteristics are based on a binary ideology that associates biological sex with fixed gender roles, generating stigma and harm and preventing plurality in the globalized world.

Individuals who are part of the LGBTQIA+ population, supported by the principles of universalization, equity, and comprehensiveness, have the right to access health services regardless of their personal characteristics, receiving greater attention to their vulnerabilities and having care for all their needs guaranteed. In this context, the objective of this study was to evaluate students' academic perception of medical training regarding the LGBTQIA+ population.

METHODS

Ethical aspects

As this was a study involving human participants, the project was approved under Opinion number 6.824.957 by the University Research Ethics Committee. Students were approached by the research team, which explained the voluntary nature of the study and that participants were not required to answer all questions if they felt uncomfortable.

Study design

This was a cross-sectional and analytical study conducted through the analysis of an online questionnaire presented on a five-point Likert scale, with two positive responses (5 and 4 points), two negative responses (2 and 1 points), and one neutral response (3 points). After agreeing to participate in the study, students answered questions about date of birth, gender, sexual orientation, and whether they intended to pursue medical residency. Based on the responses regarding gender and sexual orientation, students were divided into two groups: cis-heterosexual and LGBTQIA+. They answered questions divided into three categories: perception of knowledge about the LGBTQIA+ population, impact of medical training on interns, and embracement and care of LGBTQIA+ patients.

In the item on prior knowledge about the LGBTQIA+ population, the following statements were formulated: I know what LGBT means; I know what LGBTQIAPN+ means; I know the difference between sexual orientation and gender identity; and I learned at medical school the difference between sexual orientation and gender identity. In the item on the impact of medical training on interns, the statements were: In my medical training, I heard about the acronym LGBTQIA+; My medical training contributed to my knowledge about the LGBTQIA+ population; My medical training contributed to the embracement and care of the LGBTQIA+ population; Classroom discussions involving the topic "LGBTQIA+ population" were associated with modes of transmission of sexually transmitted infections. In the category embracement and care of LGBTQIA+ patients, the statements were: I am concerned about the embracement and care of the LGBTQIA+ population in medical consultations; I am concerned about using the correct pronouns for transgender patients; I believe that classroom discussion about the embracement and care of the LGBTQIA+ population is necessary; I believe there should be a need for distinction in the embracement and care of the LGBTQIA+ population compared with the cis-heterosexual population; and I feel insecure about the embracement or care for an LGBTQIA+ patient.

Sampling

A convenience sample of 135 students enrolled exclusively in the medical internship period (9th to 12th semesters of the medical course) at a university located in the southern area of São Paulo was approached. This is a private university that adopts the inclusion of varied active learning strategies in classes, and topics related to the LGBTQIA+ population are inserted transversally, with emphasis on the family and community medicine module.

Data analysis

After the questionnaires were received, analyses were performed considering the cis-heterosexual and LGBTQIA+ groups. For general characteristics, means, standard deviations, and relative values were presented. For the Likert-scale

questions, data are presented as means, and comparisons between groups were performed using Student's t-test in GraphPad Prism 8.0 (GraphPad Software Inc., San Diego, USA).

RESULTS

Characteristics of the study population

A total of 109 (80.7%) cis-heterosexual students and 26 (19.3%) students belonging to the LGBTQIA+ community were interviewed. The data are depicted in Table 1 below.

Prior knowledge about the LGBTQIA+ population

Regarding knowledge of concepts associated with LGBTQIA+ people, it was observed that students belonging to the acronym had greater self-perception of their knowledge than cis-heterosexual students (4.96 vs. 4.82), with a statistically significant difference when considering the more inclusive acronym LGBTQIAPN+ (4.77 vs. 3.55; p<0.001). It is also important to highlight that there was a statistically significant difference in the perception of the difference between sexual orientation and gender identity between LGBTQIA+ and cis-heterosexual students (4.96 vs. 4.66; p=0.044); however, both groups showed high mean scores. The study participants' medical training did not affect the self-assessment of knowledge regarding sexual orientation or gender identity among LGBTQIA+ students; however, there was a statistically significant positive contribution among cis-heterosexual students compared with LGBTQIA+ students (3.80 vs. 2.88; p=0.008) (Table 2).

Impact of medical training on interns

Medical training did not contribute to knowledge about the LGBTQIA+ population among the interns who participated in this study, since cis-heterosexual students responded neutrally (3.43), whereas students from the LGBTQIA+ community stated that there had been no contribution (2.81). The only response with a statistically significant difference concerned hearing about the LGBTQIA+ population during medical training, with the cis-heterosexual population tending to strongly agree and the LGBTQIA+ population partially agreeing (4.62 vs. 4.19; p=0.023).

Regarding embracement and care of the LGBTQIA+ population, responses were neutral and showed similar mean scores in both groups, with higher values among cis-heterosexual students (3.69 vs. 3.46). When the association of the LGBTQIA+ population was made with topics related to the transmission of sexually transmitted infections, there was a tendency toward neutrality; however, the LGBTQIA+ population appears to perceive this topic more strongly (3.48 vs. 3.62) (Table 3).

Table 1. Characteristics of the students who participated in the study.

	Cis-heterosexual students (n=109)	LGBTQIA+ students (n=26)
Mean age	24.8 (2.55)	24.9 (2.88)
Sex		
Female	72.5%	50%
Male	27.5%	42.3%
Other	-	7.7%
Sexual orientation		
Heterosexual	100%	-
Lesbians	-	11.5%
Gay men	-	34.6%
Bisexuals	-	53.8%

Legend: LGBTQIA+: acronym representing lesbians, gay men, bisexuals, transvestites (cross-dressers) or transgender people, queer, intersex, asexual people, and many others.
Source: Prepared by the authors.

Table 2. Mean perception scores of medical interns at a private university located in the southern area of the city of São Paulo regarding concepts associated with LGBTQIA+ people, 2024.

	Cis-heterosexual students	LGBTQIA+ students	p
I know what LGBT means	4.82	4.96	0.325
I know what LGBTQIAPN+ means	3.55	4.77	<0.001*
I know the difference between sexual orientation and gender identity	4.66	4.96	0.044*
I learned at medical school the difference between sexual orientation and gender identity.	3.80	2.88	0.008*

Legend: LGBTQIA+: acronym representing lesbians, gay men, bisexuals, transvestites (cross-dressers) or transgender, queer, intersex, asexual people, and many others; p: observed statistical probability, with p<0.05 considered significant.
Source: Prepared by the authors.

Table 3. Mean perception scores regarding the impact of medical training on medical interns at a private university located in the southern area of the city of São Paulo, 2024.

	Cis-heterosexual students	LGBTQIA+ students	p
My medical training contributed to my knowledge about the LGBTQIA+ population	3.43	2.81	0.055
In my medical training, I heard about the acronym LGBTQIA+	4.62	4.19	0.023*
My medical training contributed to the embracement and care of the LGBTQIA+ population	3.69	3.46	0.429
Classroom discussions involving the topic "LGBTQIA+ population" were associated with modes of transmission of sexually-transmitted infections	3.48	3.62	0.621

Legend: LGBTQIA+: acronym representing lesbians, gay men, bisexuals, transvestites (cross-dressers) or transgender, queer, intersex, asexual people, and many others; p: observed statistical probability, with p<0.05 considered significant.
Source: Prepared by the authors.

Table 4. Mean perception scores regarding embracement and care of the LGBTQIA+ population among future physicians graduating from a private university located in the southern area of the city of São Paulo, 2024.

	Cis-heterosexual students	LGBTQIA+ students	p
I am concerned about the embracement and care of the LGBTQIA+ population in medical consultations	4.65	4.92	0.099
I am concerned about using the correct pronouns for transgender patients	4.42	4.92	0.020*
I believe that classroom discussion about the embracement and care of the LGBTQIA+ population is necessary	4.48	4.92	0.042*
I believe there should be a need for distinction in the embracement and care of the LGBTQIA+ population compared with the cis-heterosexual population	3.23	3.62	0.218
I feel insecure about embracing or caring for an LGBTQIA+ patient	2.70	2.08	0.048*

Legend: LGBTQIA+: acronym representing lesbians, gay men, bisexuals, transvestites (cross-dressers) or transgender, queer, intersex, asexual people, and many others; p: observed statistical probability, with p<0.05 considered significant.
Source: Prepared by the authors.

Embracement and care of LGBTQIA+ patients

LGBTQIA+ and cis-heterosexual students demonstrated concern about the embracement and care of LGBTQIA+ patients in medical consultations (4.92 vs. 4.65), about the use of the correct pronouns for transgender patients (4.92 vs. 4.42; p=0.020), and believed that classroom discussion about the embracement and care of the LGBTQIA+ population is necessary (4.48 vs. 4.92; p=0.042). However, there was a statistically significant difference in the responses provided by the groups of LGBTQIA+ students, who agreed almost completely with their responses.

Both groups were relatively similar in their view of whether there is a need to distinguish the embracement and care of the LGBTQIA+ population from that of the cis-heterosexual population, and there was no statistically significant difference between responses (3.38 vs. 3.62; p=0.218). Regarding insecurity in caring for LGBTQIA+ patients, the group belonging to the community partially disagreed that they felt insecure in this regard, compared with near neutrality in the cis-heterosexual group, although with a statistically significant difference (2.08 vs. 2.70; p=0.048) (Table 4).

DISCUSSION

Studies addressing medical training for the embracement and care of the LGBTQIA+ population have been increasing in recent years. This demonstrates that the need to embrace people belonging to this community who seek health care and assistance is also increasing; after all, there seems to be greater understanding of their rights as citizens. The percentage of medical students who participated in this study and identified as LGBTQIA+ was more than ten times higher than data published by the Brazilian Institute of Geography and Statistics (IBGE – Instituto Brasileiro de Geografia e Estatística), in which only 1.8% of the population declared themselves homosexual or bisexual[20].

The fact that cis-heterosexual medical students perceived that medical training contributed more to their knowledge about the LGBTQIA+ population may be associated with several factors, such as differences in personal perspective. In other words, cis-heterosexual students may often have been less exposed to issues related to the LGBTQIA+ population before medical training; therefore, any approach to the topic during the course may be perceived by them as a significant contribution to their knowledge, even if addressed superficially. On the other hand, LGBTQIA+ students often have dealt with this knowledge for a longer period because of personal experiences or prior contact with the community, which may lead them to perceive medical training as less innovative or useful for expanding knowledge about the topic[21]. Thus, each individual's experience contributes to moral and ethical structuring and to perceptions within learning, similarly to the passage described by Bondía[22], which states that "experience is what happens to us, what occurs to us, what touches us. Not what happens, not what occurs, or what touches" (p.21).

There are also issues associated with limitations in medical training, lack of a specific approach, and different expectations. It is very common for classes in which the topic of the LGBTQIA+ population appears to be stereotyped, especially through its association with issues related to sexual health, such as sexually-transmitted infections, and in a generalized and superficial manner[9]. This point may seem disconnected from the real needs and expectations of comprehensive and humanized care for the community. For cis-heterosexual students, these topics, even when addressed superficially, may already seem relevant, since life realities are different.

In a qualitative study conducted with homosexual men in a city in Northeastern Brazil, the eight participants reported that health care for the LGBTQIA+ population is constantly related to sexual health, evidencing insufficient and fragmented health practices based on judgments made by the professionals themselves. In addition, they identified the Testing and Counseling Center as the health service most commonly sought for health assistance by this population, because they are always referred there, thus failing to practice the transversality of comprehensive LGBT health care within the SUS[23]. In another study, conducted in a municipality in Northeastern Goiás, it was identified that those who feel the need to conceal their sexual orientation or gender identity during a consultation feel that they will not receive adequate care because of this characteristic. These data demonstrate that stigmatization and discrimination, as well as the lack of preparedness among health professionals to meet the specific needs of the LGBTQIA+ population, affect this population's access to health care[24].

Although a considerable proportion of the students who answered the questionnaire reported the presence and contribution of discussions and approaches to LGBTQIA+ health during medical training, this contact seems to be insufficient and does not provide effective confidence for these elements to be put into action during clinical practice. In a similar scenario, when applying the "LGBTQIA+ Clinical Skills Development Scale," Nowaskie and Patel[25] highlighted that medical students exposed to 35 hours or more of LGBTQIA+ education and who had cared for at least 35 patients belonging to this population obtained high competence scores. However, educational programs must explicitly expose these students to these contributing factors, since most obtained such experiences in extracurricular activities outside the formal curriculum[25].

A mandatory one-hour lecture on sexual orientation and gender identity development during adolescence was offered to all fourth-year medical students at the School of Biology and Medicine of the University of Lausanne in the fall semester of 2016. The lecture focused on facts about LGBTQIA+ adolescent health and was delivered by a pediatrician with experience in adolescent health. This study demonstrated that even a one-hour class can help improve students' knowledge of LGBTQIA+ health needs. However, knowledge is only one part of the equation for removing barriers and providing better care to a stigmatized group, and further work is needed to identify effective interventions that improve providers' attitudes toward this population[26].

Australian universities have shown that they ensure considerable contact with LGBTQIA+ health during medical training: of the 15 schools evaluated, 60% provide up to 5 hours of education on the topic, and 60% also promote access to services where care for this population is common; 9 present the topic camouflaged among various disciplines, and 5 include a specific discipline[27]. However, all have in common a greater emphasis on these patients' sexuality, leaving a gap in students' learning and confidence in dealing with them, as previously observed in our analysis.

With regard to embracement and care, there seems to be greater personal sensitivity among LGBTQIA+ students toward the topic, given that many may have direct experiences of discrimination or lack of welcoming care in the health system. There is greater awareness of the importance of using correct pronouns, and students wish to see broader discussion of the topic in the classroom. The same relationship was observed in the study by Medeiros et al.[28] in which cis-heterosexual respondents showed greater concern with technical knowledge, whereas LGBTQIA+ respondents demonstrated the need for discussion beyond scientific aspects, since they experience discrimination and discomfort

also in the academic environment, highlighting the need to address the topic in the classroom[28].

In an online questionnaire administered to medical students at three institutions in the United States, most students reported feeling comfortable caring for lesbian, gay, and bisexual patients, but the percentage decreased for transgender and non-binary patients. In addition, when specifically asked about their comfort discussing preventive, sexual, reproductive, and gender-affirming health needs, fewer students agreed with the statements[29]. Furthermore, among medical students at the University of Ottawa, the general opinion followed the same pattern, as they cited lack of knowledge and training regarding specific transgender health issues as reasons for this. However, there was consensus that education and training regarding LGBTQIA+ issues are necessary and desired by them[30].

In this study, cis-heterosexual and LGBTQIA+ students partially disagreed that there is insecurity in caring for LGBTQIA+ patients, although there was a significant difference between the responses of the two groups. Cis-heterosexual students demonstrated greater insecurity in caring for LGBTQIA+ patients than LGBTQIA+ students themselves in this study, different from the qualitative study proposed by Medeiros et al.[28] however, the samples and methods used in the studies are quite different.

It is of great importance for students to have contact with LGBTQIA+ people and with life stories told in the first person, which is associated with a stronger bond and is fundamental for increasing their confidence and comfort in the clinical approach, creating a safe and inclusive learning environment that encourages open and respectful dialogue[16]. Understanding LGBTQIA+ terminology, for example, is the first step in providing a more welcoming and inclusive environment for patients belonging to the acronym[30].

Medical students in Australia were evaluated in a study according to self-perception of each competence within LGBTQIA+ health, with high scores that were higher than the coverage of content addressed during medical school. Students belonging to the LGBTQIA+ group stood out because they felt more prepared and had a greater desire for in-depth learning on the topic, but were less confident when compared with the responses of cis-heterosexual students[31] . This differs from what we observed in the present study, in which the highest level of insecurity was recorded among cis-heterosexual students.

In view of the present study and related research, it was possible to document a deficiency not only in the concrete and in-depth implementation of the topic in medical school curricula, but also in interest in and perception of its importance among students and health professionals, particularly those who are not part of the LGBTQIA+ community.

This study has some limitations that should be considered when interpreting the results, since it is based on a convenience sample consisting of students from a single private institution. This selection bias may limit the generalization of the findings to other academic contexts. In addition, the data were obtained through a self-report questionnaire using a Likert scale, reflecting participants' perceptions, which may not correspond to objective knowledge or practices and may increase information bias. Another point to be considered is the cross-sectional design, which does not allow causal relationships to be established between medical training and students' perceptions. The possibility of social desirability bias should be considered, since topics related to the LGBTQIA+ population may influence socially more accepted responses. Despite these limitations, the study contributes by highlighting gaps in medical training and by comparing perceptions between different groups of students, providing support for curricular improvement. Reflection on the stigma and institutional discrimination against this population remains highly relevant to the promotion of human rights, citizenship, and health.

CONCLUSION

The analyzed student perception reveals that medical training remains superficial with regard to the health of the LGBTQIA+ population, evidencing gaps in knowledge, sensitivity, and the ability to deal with the specificities of this group. The results point to the need for deeper, more inclusive, and integrated approaches in curricular matrices, promoting the understanding of the diversity of gender identities and sexual orientations, reducing prejudice, and encouraging humanized care practices.

Among the challenges identified are the predominance of a biologicist, medicalized, and disease-centered view; lack of faculty training; and cultural resistance to the inclusion of LGBTQIA+ topics in the curriculum. To address these barriers, it is suggested that topics related to sexual and gender diversity be implemented, that LGBTQIA+ content be transversally included in practical and theoretical activities across various modules, and that continuing education programs be offered to faculty and health professionals. In addition, the promotion of supervised internships and experiences in primary care services that assist the LGBTQIA+ population may favor the development of clinical and communication competencies necessary for comprehensive, equitable care that is sensitive to the needs of this population.

AUTHORS' CONTRIBUTIONS

Beatriz Yamaguchi Hourneaux Pompeu and Sarah Tanios Daneluzzi collected the data, discussed the results, and edited

the manuscript. Cintia Leci Rodrigues, Paula Yuri Sugishita Kanikadan, Lucas Melo Neves, and Marcelo Andreetta Corral analyzed the data and reviewed the manuscript.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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DATA AVAILABILITY STATEMENT

Research data are available in the body of the document.

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