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Inclusion of Sexual Orientation and Gender Identity (SOGI) Cultural Competence in Higher Education Healthcare Programs: A Scoping Review

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Abstract

Purpose: Lack of sexual orientation and gender identity (SOGI) cultural competence in healthcare providers contributes to poor health outcomes in individuals who are lesbian, gay, bisexual, transgender, queer or questioning, intersex, asexual, and more (LGBTQIA+). However, SOGI is often overlooked in healthcare education. Existing research shows educational programs in the nursing, medical, and pharmacy professions are incorporating cultural competence training into the curricula. Few studies have explored how SOGI cultural competence is incorporated into occupational therapy (OT), physical therapy (PT), and speech-language pathology (SLP) curricula. Clear guidelines for training on SOGI cultural competence are lacking in these professions. It is important to identify how OT, PT, and SLP educational programs are preparing students to provide culturally competent care to LGBTQIA+ individuals. This scoping review summarizes existing research on this topic and identifies gaps in the literature. **Method:** A scoping review methodological framework (Arksey & O'Malley, 2005; Levac et al., 2010) was used to search six databases. Descriptive numerical summary and qualitative analysis were used to summarize and interpret the results. **Results:** A total of 1,091 articles were included in the original search. After the initial title and abstract screening, 55 articles remained. In total, nine articles met the inclusion criteria for this scoping review. Quantitative results describe variation in study participants, SOGI populations, the type and purpose of training, and outcome measures used. Qualitative themes related to SOGI cultural competence include assessment of student and faculty knowledge, and the perceptions and evaluation of course content. Gaps in the literature include long-term changes in knowledge, skills, and dispositions of students; the need for clinical workshops, the quality of self-report in education, outcomes of training programs, and effectiveness of voice training for transgender clients. **Conclusions:** The benefits of including SOGI cultural competence in the healthcare curricula include increased student knowledge, confidence, sensitivity, cultural competence, and improved attitudes toward LGBTQIA+ individuals. Additional research is needed to develop and standardize training on SOGI cultural competence in the OT, PT, and SLP curricula.

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ABSTRACT

Purpose: Lack of sexual orientation and gender identity (SOGI) cultural competence in healthcare providers contributes to poor health outcomes in individuals who are lesbian, gay, bisexual, transgender, queer or questioning, intersex, asexual, and more (LGBTQIA+). However, SOGI is often overlooked in healthcare education. Existing research shows educational programs in the nursing, medical, and pharmacy professions are incorporating cultural competence training into the curricula. Few studies have explored how SOGI cultural competence is incorporated into occupational therapy (OT), physical therapy (PT), and speech-language pathology (SLP) curricula. Clear guidelines for training on SOGI cultural competence are lacking in these professions. It is important to identify how OT, PT, and SLP educational programs are preparing students to provide culturally competent care to LGBTQIA+ individuals. This scoping review summarizes existing research on this topic and identifies gaps in the literature.

Method: A scoping review methodological framework was used to search six databases. Descriptive numerical summary and qualitative analysis were used to summarize and interpret the results. **Results:** A total of 1,091 articles were included in the original search. After the initial title and abstract screening, 55 articles remained. In total, nine articles met the inclusion criteria for this scoping review. Quantitative results describe variation in study participants, SOGI populations, the type and purpose of training, and outcome measures used. Qualitative themes related to SOGI cultural competence include assessment of student and faculty knowledge, and the perceptions and evaluation of course content. Gaps in the literature include long-term changes in knowledge, skills, and dispositions of students, the need for clinical workshops, the quality of self-report in education, outcomes of training programs, and effectiveness of voice training for transgender clients. **Conclusions:** The benefits of including SOGI cultural competence in the healthcare curricula include increased student knowledge, confidence, sensitivity, cultural competence, and improved attitudes toward LGBTQIA+ individuals. Additional research is needed to develop and standardize training on SOGI cultural competence in the OT, PT, and SLP curricula.

Keywords: cultural competence, LGBTQ, sexual orientation, gender identity, SOGI, healthcare, education, curriculum

INTRODUCTION

The term cultural competence has become prominent in healthcare literature. Mayfield describes cultural competence as the ability to understand and respect the values, rules, and customs of different cultures.¹ Cultural competence encompasses race, gender, ethnicity, religion, and sexual orientation and gender identity (SOGI). Factors such as SOGI are often overlooked in healthcare education and training programs. Sexual orientation is defined as a person's inherent romantic, emotional, or sexual attraction to other people.² Gender identity is described as a person's self-concept surrounding being male, female, a blend of both, or neither, how they perceive themselves, and what they call themselves.² The term SOGI applies to everyone including lesbian, gay, bisexual, transgender, queer or questioning, intersex, asexual, and more (LGBTQIA+), gender expansive, heterosexual, and cisgender. Regardless of a healthcare provider's good intention, limited SOGI cultural competence contributes to poor health outcomes in LGBTQIA+ individuals.³

According to the 2021 Gallup Daily Tracking Survey, 5.6% of the population identify as LGBT in the United States (U.S.).⁴ Historically, members of the LGBTQIA+ community have been undercounted. Until recently, the U.S. Census did not collect information about sexual orientation. In 2020, the option to identify a relationship as same-sex was added to the survey.⁵ The inclusion of this question was a sign of progress; however, the LGBTQIA+ community includes more than cohabitating same sex partners. A significant portion of LGBTQIA+ individuals are still being left out. Standardized data collection is necessary to identify and reduce health disparities among LGBTQIA+ individuals. The Institute of Medicine (IOM), Centers for Disease Control and Prevention (CDC), and the Joint Commission recommend healthcare providers collect SOGI information from patients.⁶⁻⁸ This initiative includes providing ongoing training to improve the healthcare experience for LGBTQIA+ patients.

Anti-LGBTQIA+ stigma can negatively impact access to healthcare services. Previous experiences with discrimination in healthcare settings, as well as fear of experiencing discrimination, often prevents LGBTQIA+ individuals from seeking healthcare services.⁹ Results from the 2015 Transgender Survey found 23% of respondents avoided seeking needed healthcare due to fear of discrimination.¹⁰ Furthermore, over one-third (33%) of respondents who saw a healthcare provider reported having at least one negative experience associated with gender identity. Specific examples of discrimination include refusal of treatment, verbal harassment, physical or sexual assault, and having to teach the provider about transgender people in order to get appropriate care. Even higher rates were reported for people of color and those with disabilities.

Healthcare providers are well positioned to reduce discrimination and mistreatment through the provision of culturally competent care.¹¹ The Healthy People 2030 initiative set a goal to improve the health, safety, and well-being of LGBTQIA+ individuals.¹² To reduce the potential for bias in future healthcare providers, several accrediting bodies require cultural competence training be included in the curricula.¹¹ Existing research shows nursing, medical, and pharmacy programs are incorporating cultural competence training into their curricula.¹³ Clear guidelines for training on SOGI cultural competence are lacking in rehabilitation fields such as occupational therapy (OT), physical therapy (PT), and speech-language pathology (SLP) curricula. It is important to identify how these professions are preparing students to provide culturally competent care.^{3,13-15} Therefore, a comprehensive review of the existing literature on SOGI cultural competence in the OT, PT, and SLP curricula is warranted.

LITERATURE REVIEW

Research shows that LGBTQIA+ individuals are at a greater risk for certain health conditions including sexually transmitted diseases, obesity, substance use, anxiety, depression, and suicide.¹⁶ Furthermore, it is common for LGBTQIA+ individuals to experience negative stigma and discrimination such as bullying, isolation, and rejection.¹⁶ Research shows barriers to healthcare services result from chronic stress attributed to minority status, health insurance denials, providers with limited training in culturally competent care, and discrimination from within the healthcare system.^{17,18} Healthcare providers who are informed of their patients' SOGI could be better prepared to provide culturally competent and compassionate care.⁶

Research on health outcomes of LGBT individuals has been published in several healthcare disciplines. A study by Wahlen et al, explored the knowledge and attitudes of medical students towards LGBT people and their healthcare needs.¹⁹ A pre-training questionnaire found most participants had favorable attitudes towards LGBT people and a certain degree of knowledge of their health needs. After a one-hour lecture, participants demonstrated a significant increase in knowledge of LGBT health issues. The authors suggest training has the potential to improve health outcomes among this vulnerable population. A study by McEwing evaluated the impact of a nursing student training program on the delivery of culturally competent care to LGBT people.²⁰ Participants completed online modules and a simulation exercise. Findings from this study show educating nurses on cultural competency may lead to improved health outcomes among the LGBT community. Research from the field of psychology shows understanding of the impact of cultural competence on therapeutic outcomes is important to support best practice for LGBT clients.²¹ In addition, the authors state therapists who demonstrate inclusive practices experience sustained therapeutic alliances and more positive outcomes.

A systematic review by Sekoni et al assessed the effect of training for healthcare students and professionals on LGBT healthcare issues.¹³ The disciplines included medicine, dentistry, midwifery, nursing and pharmacy. The topics of interest included terminology, stigma, discrimination, and LGBT specific health disparities. The duration of training ranged from one to 42 hours. Involvement of LGBT individuals was minimal. All studies reported a statistically significant improvement in the knowledge, attitude, and practice of healthcare professionals post-training. McCann and Brown reviewed literature on the education and training needs of undergraduate healthcare professional students related to LGBT+ health.²² A recurring theme was the limited inclusion of LGBT+ health in undergraduate curricula for student doctors, nurses, and allied health professionals. The findings of these studies support inclusion of curricula to reduce conscious bias in healthcare students. According to Sue and Sue, the goal of training should be cultural competence.²³ In addition, achieving competence will require trainees to become aware of their own assumptions, lack of knowledge, biases, and prejudices.

There is a growing body of research surrounding the impact of anti-LGBTQIA+ stigma and discrimination of healthcare providers. Sabin et al examined healthcare professionals' implicit and explicit attitudes toward heterosexual, gay, and lesbian people using an Implicit Association Test.¹⁸ The results of this study found heterosexual, lesbian, and gay people in almost all provider groups reported moderate to strong explicit preferences for people who share their sexual identity. Among heterosexual providers, there was a strong preference for heterosexual people over lesbian and gay people. Findings from this study show implicit preferences may contribute to health disparities among sexual minority populations. The authors stress the importance of education and training on sexual minority healthcare across disciplines. According to Sue, the beliefs and attitudes healthcare professionals hold may lead to stereotypes and negativity toward minority populations.²⁴ Boysen and Vogel found traditional cultural competency training increased awareness, knowledge, and skills of trainees who work with people of color; however, implicit attitudes and biases were left unchanged.²⁵ The authors provide an example of a social work intern who believes in his unbiased nature, yet holds underlying prejudices that appear during the therapeutic encounter.

The impact of anti-LGBTQIA+ stigma on SOGI data collection has also been explored in the literature. A study by Quinn et al examined perceived barriers and facilitators to SOGI data collection among oncology professionals.²⁶ Individual and organizational barriers included culture (lack of support, value, and awareness from institution); electronic health records (no place to document SOGI); provider discomfort (lack of knowledge, bias); patient discomfort (privacy concerns, mistrust, refusal); and lack of training and time. Facilitators to data collection included protocols (intake process, patient disclosure); training (data collection); culture change (provider and institution); and improving patient-provider trust. Almazan et al examined the relationship between SOGI related stigma and the completeness of patient data collection at U.S. health centers.²⁷ The results of this study indicated that health centers located in cities with more protective sexual orientation nondiscrimination policies reported more complete SOGI data collection. These studies support the need for implicit bias and cultural competence training in the health professions. Without accurate data on LGBTQ patients, specific needs cannot be identified, health disparities will not be addressed, and healthcare services may not be delivered.⁶

Study Purpose

The purpose of this scoping review is to: 1) summarize existing research on SOGI cultural competence in OT, PT, and SLP curricula; 2) identify existing knowledge gaps in the literature, and 3) explore accreditation requirements for the inclusion of SOGI culturally competent care when educating OT, PT, and SLP students. The findings of this study may assist in advancing knowledge on SOGI cultural competence in the health professions and informing future research. To the authors knowledge, this is the first scoping review on SOGI cultural competence in the OT, PT, and SLP professions.

METHODS

Procedures

A scoping review examines the extent, range, and nature of concepts in a field of study, and identifies gaps in current literature.²⁸ This study was guided by the scoping review methodological frameworks developed by Arksey and O'Malley and expanded by Levac et al.^{28,29} The scoping review was carried out in five stages: 1) identifying the primary research question; 2) identifying relevant studies; 3) study selection; 4) charting the data; and 5) collating, summarizing, and reporting results. Descriptive statistics and qualitative thematic analysis were used to analyze the data and identify themes within it. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist was used to increase rigor, enhance reporting, and develop a visual representation of the results.³⁰

Stage 1: Identifying the Research Question

This study aims to answer the following research question: What is the existing literature on sexual orientation and gender identity (SOGI) cultural competence in OT, PT, and SLP curricula? This research question is broad to summarize the breadth of the existing

literature.^{28, 29} Findings from this study will be used to identify the extent and scope of existing literature and identify knowledge gaps.

Stage 2: Identifying Relevant Studies

The researchers worked in collaboration with a research librarian to develop a comprehensive search strategy. The search terms used included education, cultural competence, sexual and gender minorities. The full search strategy is included in Appendix A. In June of 2021, the researchers conducted a systematic search of six databases: PubMed, Cumulative Index to Nursing and Allied Health Literature (CINAHL) Complete, Web of Science Core Collection, PsycInfo, Educational Resource Information Center (ERIC), and Education Source (EBSCO). These databases were selected to obtain articles relevant to SOGI cultural competence, LGBTQIA+, and education in healthcare.

Stage 3: Study Selection

This study used the PRISMA framework to select studies that align with the research question.³¹ After the initial search was completed, one researcher manually removed all duplicate articles from the results. The researchers worked together to identify inclusion and exclusion criteria for article selection. The inclusion criteria for this study included: peer-reviewed research, published in English, focused on SOGI cultural competence, within the context of higher education in healthcare, and related to OT, PT, and SLP disciplines. Articles were not excluded based on publication year or study design. Exclusion criteria consisted of reports, editorials, opinion pieces, dissertations, theses, and conference abstracts. Articles that did not indicate direct application to OT, PT, and SLP students were excluded. To reduce selection bias, all articles were reviewed independently by two reviewers. The reference lists of the included articles were also scanned manually to identify articles that may have been missed in the initial search. Any discrepancies were resolved by majority opinion.

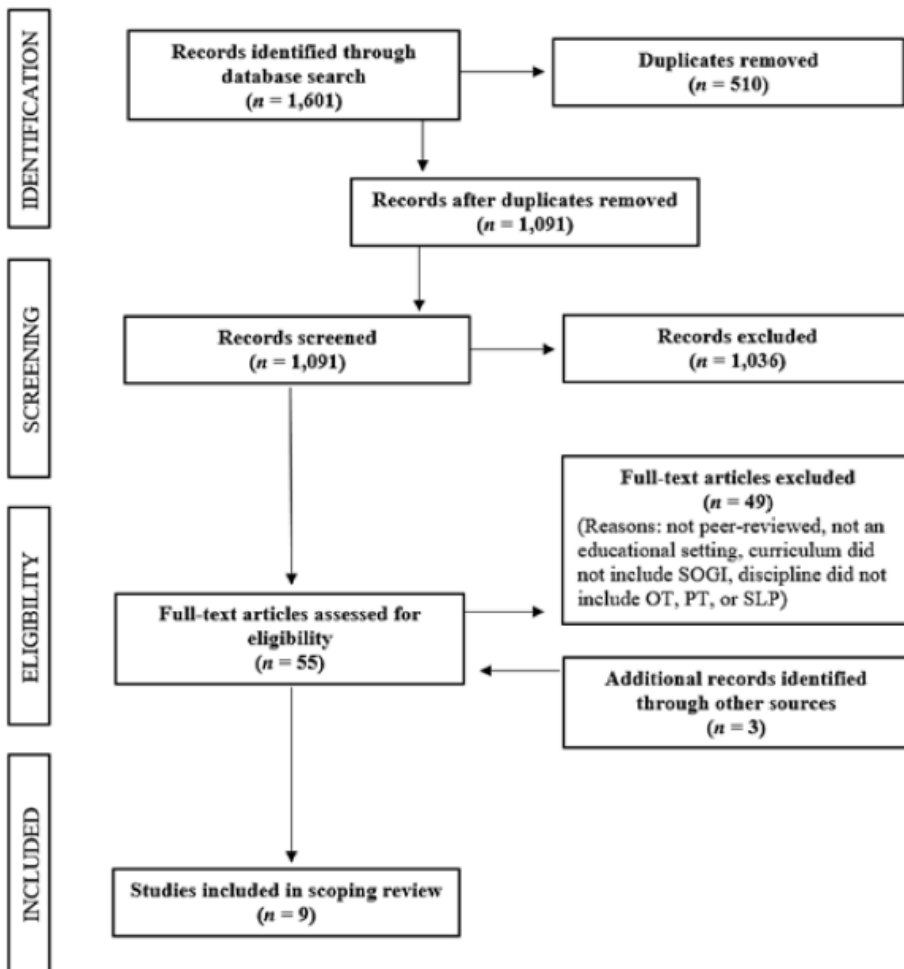
The initial search produced a total of 1,601 articles. After 510 duplicates were removed, the researchers screened the titles and abstracts of 1,091 articles. A total of 1,036 articles were excluded during this step. The remaining 55 articles were read in full. Of these articles, 49 were excluded. This process yielded six articles that met the inclusion criteria for this scoping review. After reviewing the reference lists of the final articles, the researchers found three more articles that met the inclusion criteria bringing the total of articles to nine. Figure 1 provides a flow diagram of the article selection process.

Stage 4: Data Charting

A data charting table was used to extract and summarize relevant information for data analysis. This table is displayed in Appendix B. The information summarized in the table included article citations, country of publication, purpose, SOGI population in curriculum, participants and sample, type of course, outcome measures, results or course outcomes, study limitations, gaps in the literature, and recommendations for future research.

Stage 5: Collating, Summarizing and Reporting the Results

The fifth stage of the scoping review process involves three steps: 1) analyzing the data; 2) reporting the results; and 3) applying meaning.^{28, 29} The authors used descriptive statistics and qualitative thematic analysis to identify and interpret major themes in the literature. Descriptive statistics were used to summarize and report key characteristics in the dataset. Qualitative analysis took place in three phases: 1) data reduction, 2) data display, and 3) conclusion drawing and verification.³² During data reduction, the researchers completed basic coding to link data chunks to emerging categories. For data display, a concept map was created to identify patterns and relationships between categories. During conclusion drawing and verification, the categories were condensed into overarching themes. The results were described in relation to the research questions and context of the study purpose.

Figure 1. PRISMA flow diagram of article selection process³¹

RESULTS

A total of nine articles met the inclusion criteria for this scoping review. The year of publication ranged from 2011 to 2020.³³⁻³⁶ Seven (78%) articles were published in the last five years. The countries of publication include the United States $n = 8$ (89%) and Australia $n = 1$ (11%). The research designs of the studies include survey $n = 8$ (89%) and descriptive $n = 1$ (11%). Data were quantitative $n = 3$ (33%) and mixed $n = 6$ (67%).

Participants and Sample Sizes

Participants consisted of healthcare students $n = 7$ (78%) and faculty $n = 2$ (22%). The healthcare disciplines of study participants include interprofessional groups $n = 4$ (44%), speech-language pathology $n = 3$ (33%), and physical therapy $n = 2$ (22%). None of the studies were specific to occupational therapy students or faculty. Occupational therapy students participated in three of the interprofessional groups. The sample size of the included studies ranges from 18 to 1,701 participants.^{34, 36} The mean number of participants across all studies was 307.

SOGI Population

All nine articles in this scoping review identified a population under SOGI. These populations included Transgender $n = 3$ (33%), LGBTQ $n = 2$ (22%), LGBT $n = 2$ (22%), and LGBTQI $n = 1$ (11%). One article $n = 1$ (11%) referred to patient populations that differ in sexual orientation.

Type and Purpose of Training

Six studies included in this scoping review identified the specific type of course used to deliver SOGI cultural competence training and education in the curricula. The courses were required $n = 3$ (50%), elective $n = 2$ (33%), and interprofessional events (IPE) n

= 1 (17%). Both elective courses consisted of a mix of students from different healthcare disciplines. The purpose of providing SOGI cultural competence training and education was to educate students $n = 3$ (33%), evaluate programs $n = 2$ (22%), assess teaching methods $n = 2$ (22%), and to evaluate the knowledge of faculty $n = 1$ (11%), and students $n = 1$ (11%).

Outcome Measures

The studies included in this scoping review reported use of 12 outcome measures in the form of surveys $n = 6$ (67%), standardized assessments $n = 3$ (33%), course evaluations $n = 2$ (22%), and interviews $n = 1$ (11%). The standardized assessments included the Inventory for Assessing the Process of Cultural Competence - Student Version (IAPCC-SV), the LGBT-Development of Clinical Skills Scale (LGBT-DOCSS), and the Competency Based Assessment in Speech Pathology (COMPASS) tool.³⁷⁻³⁹

Thematic Analysis

Qualitative data were organized into major themes to summarize the extent and scope of existing research on SOGI cultural competence in healthcare curricula. The primary theme identified was assessment of student and faculty knowledge and perceptions of SOGI cultural competence $n = 6$ (67%). For example, assessment of student beliefs and confidence in ability to provide healthcare services to LGBTQI individuals, and the measurement of knowledge and skills in clinical instructors related to transgender voice and communication training.^{35,40} The secondary theme was evaluation of course content related to SOGI cultural competence $n = 3$ (33%). This theme included student evaluations of course content and teaching methods, and assessment of curricular content across multiple programs.^{33,34} A summary of the major themes found in the literature is provided in Table 1.

Table 1. Major Themes in the Literature

Theme	Citation
Assess student and faculty knowledge and perceptions of SOGI cultural competence	Braun et al (2017) ⁴⁰ Hawala-Druy and Hill (2012) ⁴³ Jakomin et al (2020) ³⁵ McCave et al (2019) ⁴⁴ Nowaskie et al (2020) ³⁶
Evaluation of course content related to SOGI cultural competence	Calvo Glick et al (2020) ³³ Jackson (2011) ³⁴ Mahendra (2019) ⁴¹ Oates and Dacakis (2017) ⁴²

Four articles (44%) identified existing gaps in the literature and made recommendations for future research. These knowledge gaps included lack of measuring clinical outcomes of training programs $n = 2$ (50%), assessing student competence $n = 2$ (50%), and determining the effectiveness of training for LGTBQ+ clients $n = 1$ (20%). Three studies recommended future research to collect longitudinal data to identify changes in student knowledge. One study suggested exploring the effectiveness of voice and communication training for transgender patients.

The limitations found in the studies included in this scoping review include the potential for bias in participant response $n = 2$ (22%) and sampling methods $n = 2$ (22%). Two studies (22%) reported limitations related to not measuring long-term implications of SOGI cultural competence training. Four studies (44%) reported limitations related to the impact of low response rates and small sample sizes on generalizability. A summary of reported gaps in the literature and study limitations is provided in Table 2.

Table 2. Gaps in the Literature and Limitations

Category	Subcategory
Gaps in the Literature	<ul style="list-style-type: none"> • long-term changes in knowledge, skills, and dispositions of students • the need to conduct a clinical workshop • quality of self-reported education • outcomes of clinical training programs on student confidence and competence • effectiveness of voice training for transgender clients
Limitations	<ul style="list-style-type: none"> • sampling methods • participant bias • lack of longitudinal data • small sample size • low response rate

DISCUSSION

This scoping review summarized the extent and scope of existing research on SOGI cultural competence in OT, PT, and SLP curricula and identified gaps in the literature. Most of the existing literature focus on the SOGI cultural competence of other healthcare professions curricula such as nursing, pharmacy and medical students. Research shows that healthcare professionals who lack knowledge and understanding of SOGI cultural competence can contribute to poor health outcomes in LGBTQIA+ individuals.³

Education on SOGI cultural competence was provided in a variety of formats including required courses, electives, and IPE events. The required courses were incorporated into the curricula for SLP and PT programs.^{34, 41, 42} Both of the elective courses consisted of interprofessional audiences from a variety of health professions.^{40, 43} The IPE event was focused on providing team-based care.⁴⁴ Content was delivered through didactic lectures, learning modules, and patient simulation. The overarching purpose of providing education was to expose students to LGBTQIA+ culture and promote culturally competent healthcare in future practice.

Another common theme found in the literature was the positive outcomes for students after education on SOGI cultural competence was implemented. The reported benefits include increased confidence in abilities to provide healthcare to LGBTQIA+ individuals, improved sensitivity, and cultural competence.^{40, 43} In addition, students reported an increase in knowledge and confidence, and improved attitudes toward LGBTQIA+ individuals.⁴¹ According to McCann and Brown, higher education programs should include evidence-based curricula to prevent unconscious bias from negatively impacting the healthcare services provided to LGBTQIA+ individuals.²² The increased risk for certain health issues in this population, combined with implicit attitudes of healthcare providers, creates demand for this type of training in the healthcare curricula.¹⁸

During the initial literature search, limited research on SOGI cultural competence in OT, PT, and SLP curricula was found as compared to other disciplines. One surprising finding was there were no studies specific to occupational therapy curricula. Occupational therapy students were participants in three studies that consisted of interprofessional groups.^{36, 43, 44} One limitation reported by Nowaskie et al., was how lack of participation by occupational therapy students made the generalizability of student groups less reliable.³⁶

Although there were no studies specific to occupational therapy curricula identified in this scoping review, one recent study by Simon et al., describes the role of occupational therapy in supporting the needs of older adults who identify as LGBT.⁴⁵ This study emphasized that LGBT topics are not adequately represented in occupational therapy programs. To meet the occupational therapy profession's commitment to diversity, inclusion and equity, the authors suggest LGBT related topics be included in the curricula across age-groups and practice areas. According to Simon et al., expansion of accreditation and licensure requirements is needed to ensure culturally competent care is provided to LGBT patients.⁴⁵

The Accreditation Council for Occupational Therapy Education (ACOTE) standard B.1.2 states course content must apply, analyze and evaluate the role of sociocultural, socioeconomic and diversity factors, and lifestyle choices.⁴⁶ ACOTE standards lack detail on how to meet the specific needs of LGBTQIA+ individuals. In addition, ACOTE standards stop short of listing which factors and lifestyle choices must be included. Academic departments can choose not to teach SOGI cultural competence, yet still be compliant. For comparison, the Commission on Accreditation in Physical Therapy Education (CAPTE) does not include standards related to cultural competence, or diversity for physical therapy education programs.⁴⁷ The Council on Academic Accreditation of Audiology and Speech-Language Pathology (CAA) standard 3.1.1B requires course content to include cultural and linguistic variables related to the delivery of effective care such as gender and sexual orientation.⁴⁸ The OT, PT, and SLP professions would benefit from establishing explicit accreditation requirements on the provision of culturally competent care to LGBTQIA+ individuals.

Limitations

This scoping review has limitations. First, this study excluded research from healthcare professions outside of the OT, PT, and SLP professions. The researchers acknowledge professions such as nursing have ample literature on SOGI cultural competence to guide training in higher education. This scoping review is focused on healthcare professions who lack research (e.g., OT, PT, and SLP), and how these professions are incorporating SOGI cultural competence into their curricula. Second, the databases used for this scoping review may have been limited by the researcher's educational institution. There may be more research in other databases that were not identified in this study. Third, not all studies included in this scoping review were current. For example, several articles were published more than five years ago. The authors found this necessary due to the limited amount of research published within the allied health professions. Lastly, there was potential for publication bias due to excluding non-peer reviewed articles and research that was not published in English.

Future Research

Additional research is needed to explore instructional design related to SOGI cultural competence in the health professions. In addition, longitudinal studies are needed to measure the impact of training on SOGI educational content. These studies are necessary to build an evidence base that will support the inclusion of SOGI cultural competence in healthcare curricula. Future studies should also explore whether increased confidence after training leads to better health outcomes in LGBTQIA+ individuals. Future studies should employ a participatory action research design to involve LGBTQIA+ individuals in the research process and decision-making process.

Implications for Practice

Findings from this study may be used to identify how the OT, PT, and SLP professions are addressing SOGI cultural competence in their curricula. The results of this study also identify how these professions need to do more to prepare students to provide SOGI culturally competent care. Specifically, sexual orientation is recognized as a personal factor within the Occupational Therapy Practice Framework: Domain and Process.⁴⁹ Occupational therapy students who lack appropriate training may not fully appreciate how sexual orientation impacts occupational engagement. Training on SOGI cultural competence is necessary to reduce health disparities and improve health outcomes amongst LGBTQIA+ individuals. Additionally, incorporating SOGI cultural competence into OT, PT, and SLP educational training is necessary to yield positive outcomes and support therapeutic relationships between therapists and their patients.

CONCLUSION

This scoping review summarized the extent and scope of existing research on SOGI cultural competence in OT, PT, and SLP curricula, and identified knowledge gaps in the literature. Quantitative results found variation in the purpose, populations, outcome measures, and type of courses used to deliver content. Qualitative themes included assessment of knowledge and perceptions of students and faculty, and evaluation of course content related to SOGI cultural competence. Gaps in the literature include measuring clinical outcomes of training programs, assessing student competence, and determining the effectiveness of training for LGBTQIA+ clients. Based on the available literature, the benefits of including SOGI cultural competence in the curricula include increased knowledge, confidence, sensitivity, cultural competence, and improved attitudes toward LGBTQIA+ individuals. The results of this study highlight the need to educate healthcare students on SOGI cultural competence. Additional research is needed to develop and standardize training on SOGI cultural competence in the OT, PT, and SLP curricula.

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Appendix A

Search Strategy: Existing Literature on SOGI Cultural Competence in Higher Education Healthcare Curricula

Database	Search Terms
PubMed	<p>("Universities"[Mesh] OR "Schools, Health Occupations"[Mesh] OR "Curriculum"[Mesh] OR (education[tw] OR college[tw] OR colleges[tw] OR university[tw] OR universities[tw] OR curricula[tw] OR curriculum[tw] OR course[tw] OR courses[tw] OR school[tw] OR schools[tw])) AND ("Students, Health Occupations"[Mesh] OR "student"[tw] OR "students"[tw])) AND ("cultural competency"[MeSH] OR "Cultural Characteristics"[Mesh] OR "Cultural Diversity"[Mesh] OR "Culturally Competent Care"[Mesh] OR "Healthcare Disparities"[Mesh] OR "Social Determinants of Health"[Mesh] OR (Cultural*[tw] OR multicultural*[tw] OR cross-cultural*[tw] OR inequality[tw] OR inequalities[tw] OR disparity[tw] OR disparities[tw] OR "social determinant"[tw] OR "social determinants"[tw] OR ("Professional Competence"[Mesh] AND (cultural*[tw])) OR ("Professional-Patient Relations"[Mesh] AND (cultural*[tw])))) AND ("Sexual and Gender Minorities"[Mesh] OR LGBT*[tw] OR Intersexual*[tw] OR Transgender*[tw] OR Transsexual*[tw] OR "Questioning"[tw] OR "MSM"[tw] OR "men who have sex with men"[tw] OR "WSW"[tw] OR "women who have sex with women"[tw] OR Non-Heterosexual*[tw] OR Sexual-Dissident*[tw] OR GLBT*[tw] OR Lesbian*[tw] OR Sexual-Minorit*[tw] OR Gender-minorit*[tw] OR LBG-Person*[tw] OR "Gay"[tw] OR "Gays"[tw] OR Lesbian*[tw] OR Bisexual*[tw] OR Homosexual*[tw] OR Queer*[tw] OR "SOGI"[tw] OR "Sexual orientation and gender identity"[tw]))</p>
CINAHL Complete	<p>((MH "Colleges and Universities+") OR (MH "Schools, Health Occupations+") OR (MH "Curriculum+") OR (education OR college OR colleges OR university OR universities OR curricula OR curriculum OR course OR courses OR school OR schools)) AND ((MH "Students, College") OR (MH "Students, Health Occupations+") OR (student OR students)) AND ((MH "Cultural Competence") OR (MH "Cultural Diversity") OR (MH "Healthcare Disparities") OR (MH "Social Determinants of Health") OR (MH "Attitude to Sexuality+") OR (MH "Cultural Bias") OR (MH "Cultural Sensitivity") OR (MH "Gender Bias") OR (Cultural* OR multicultural* OR cross-cultural* OR inequality OR inequalities OR disparity OR disparities OR "social determinant" OR "social determinants") OR ((MH "Professional Competence+") AND cultural*)) OR ((MH "Professional-Patient Relations+") AND cultural*)) AND ((MH "Sexual and Gender Minorities+") OR (LGBT* OR Intersexual* OR Transgender* OR Transsexual* OR "Questioning" OR "MSM" OR "men who have sex with men" OR "WSW" OR "women who have sex with women" OR Non-Heterosexual* OR Sexual-Dissident* OR GLBT* OR Lesbian* OR Sexual-Minorit* OR Gender-minorit* OR LBG-Person* OR Gay OR Gays OR Lesbian* OR Bisexual* OR Homosexual* OR Queer* OR "SOGI" OR "Sexual orientation and gender identity"))</p>
PsycInfo	<p>education OR college OR colleges OR university OR universities OR curricula OR curriculum OR course OR courses OR school OR schools AND student* NEAR/3 ("health occupations" OR "health care occupations" OR "healthcare occupations" OR "occupational therap*" OR "physical therap*" OR "speech language pathology" OR audiolog* OR nurs* OR medical OR "physician assistant*" OR doctor* OR dental OR dentist* OR pharmac*) AND Cultural* OR multicultural* OR cross-cultural* OR inequality OR inequalities OR disparity OR disparities OR "social determinant" OR "social determinants" AND LGBT* OR Intersexual* OR Transgender* OR Transsexual* OR "Questioning" OR "MSM" OR "men who have sex with men" OR "WSW" OR "women who have sex with women" OR Non-</p>

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	<p>Heterosexual* OR Sexual-Dissident* OR GLBT* OR Lesbigay* OR Sexual-Minorit* OR Gender-minorit* OR LBG-Person* OR Gay OR Gays OR Lesbian* OR Bisexual* OR Homosexual* OR Queer* OR "SOGI" OR "Sexual orientation and gender identity"</p>
Web of Science Core Collection	<p>education OR college OR colleges OR university OR universities OR curricula OR curriculum OR course OR courses OR school OR schools</p> <p>AND</p> <p>student* NEAR/3 ("health occupations" OR "health care occupations" OR "healthcare occupations" OR "occupational therap*" OR "physical therap*" OR "speech language pathology" OR audiolog* OR nurs* OR medical OR "physician assistant*" OR doctor* OR dental OR dentist* OR pharmac*)</p> <p>AND</p> <p>Cultural* OR multicultural* OR cross-cultural* OR inequality OR inequalities OR disparity OR disparities OR "social determinant" OR "social determinants"</p> <p>AND</p> <p>LGBT* OR Intersexual* OR Transgender* OR Transsexual* OR "Questioning" OR "MSM" OR "men who have sex with men" OR "WSW" OR "women who have sex with women" OR Non-Heterosexual* OR Sexual-Dissident* OR GLBT* OR Lesbigay* OR Sexual-Minorit* OR Gender-minorit* OR LBG-Person* OR Gay OR Gays OR Lesbian* OR Bisexual* OR Homosexual* OR Queer* OR "SOGI" OR "Sexual orientation and gender identity"</p>
ERIC	<p>((student*) AND ("health occupations" OR "health care occupations" OR "healthcare occupations" OR "occupational therap*" OR "physical therap*" OR "speech language pathology" OR audiolog* OR nurs* OR medical OR "physician assistant*" OR doctor* OR dental OR dentist* OR pharmac*))</p> <p>AND</p> <p>Cultural* OR multicultural* OR cross-cultural* OR inequality OR inequalities OR disparity OR disparities OR "social determinant" OR "social determinants"</p> <p>AND</p> <p>LGBT* OR Intersexual* OR Transgender* OR Transsexual* OR "Questioning" OR "MSM" OR "men who have sex with men" OR "WSW" OR "women who have sex with women" OR Non-Heterosexual* OR Sexual-Dissident* OR GLBT* OR Lesbigay* OR Sexual-Minorit* OR Gender-minorit* OR LBG-Person* OR Gay OR Gays OR Lesbian* OR Bisexual* OR Homosexual* OR Queer* OR "SOGI" OR "Sexual orientation and gender identity"</p>
Education Source	<p>((student*) AND ("health occupations" OR "health care occupations" OR "healthcare occupations" OR "occupational therap*" OR "physical therap*" OR "speech language pathology" OR audiolog* OR nurs* OR medical OR "physician assistant*" OR doctor* OR dental OR dentist* OR pharmac*))</p> <p>AND</p> <p>Cultural* OR multicultural* OR cross-cultural* OR inequality OR inequalities OR disparity OR disparities OR "social determinant" OR "social determinants"</p> <p>AND</p> <p>LGBT* OR Intersexual* OR Transgender* OR Transsexual* OR "Questioning" OR "MSM" OR "men who have sex with men" OR "WSW" OR "women who have sex with women" OR Non-Heterosexual* OR Sexual-Dissident* OR GLBT* OR Lesbigay* OR Sexual-Minorit* OR Gender-minorit* OR LBG-Person* OR Gay OR Gays OR Lesbian* OR Bisexual* OR Homosexual* OR Queer* OR "SOGI" OR "Sexual orientation and gender identity"</p>

Appendix B, Page 1

Citation: Author, Year, & Country	Study Design	Purpose	SOGI	Participants and Sample	Type of Course	Outcome Measures	Results or Course Outcomes	Study Limitations	Gaps in the Literature & Future Research
Braun et al, 2017 United States	Survey (quantitative)	To educate students through IPE learning and assess student knowledge	LGBTQI	Healthcare professional students in the following programs: Medicine Dentistry Pharmacy Nursing Physical therapy (PT). (n = 179)	Elective course	Pre/post survey to measure beliefs and confidence related to LGBTQI healthcare.	Students demonstrated improved confidence in ability to provide healthcare to LGBTQI patients.		
Calvo Glick, et al, 2020 United States	Survey (Mix of qualitative and quantitative responses)	To assess LGBTQ curricular content in physical therapy programs.	LGBTQ	Accredited PT programs (n = 72)		Online survey sent to program directors to gain information regarding LGBTQ training and content within curriculum.	Half of the respondents reported inclusion of LGBTQ-related topics in curriculum. Participants reported 2.8 hours per year was the average amount of time that should be spent on LGBTQ content.		

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Citation: Author, Year, & Country	Study Design	Purpose	SOGI	Participants and Sample	Type of Course	Outcome Measures	Results or Course Outcomes	Study Limitations	Gaps in the Literature & Future Research
Hawala-Druy & Hill, 2012 United States	Survey (quantitative)	To promote culturally competent students and reduce health disparities through interdisciplinary educational activities.	LGBT	Healthcare professional students in the following programs: Nursing Pharmacy PT Occupational therapy (OT). (n = 106)	Elective Course	Pre/posttest using the Inventory for Assessing the Process of Cultural Competence – Student Version (IAPCC-SV) and course evaluations.	Improvement in IAPCC-SV scores indicate improved cultural competency. Students reported satisfaction with the course and increased sensitivity and competency.	Small sample size. Studies excluded when pre/posttest IDs did not match.	
Jackson, 2011 United States	Questionnaire and Interview (Mix of qualitative and quantitative)	Assess student perceptions of teaching methods and evaluate course content.	Patient populations that differ in age, race, gender, religion, ethnicity, sexual orientation, socio-economic status, geographic orientation, and diagnosis.	PT students (n = 18)	Required course	Cultural competency questionnaire and phone interview	Students reported the methods used were useful and effective for developing cultural competence. Hands-on experience with diverse populations was the most beneficial.		

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Citation: Author, Year, & Country	Study Design	Purpose	SOGI	Participants and Sample	Type of Course	Outcome Measures	Results or Course Outcomes	Study Limitations	Gaps in the Literature & Future Research
Jakomin et al, 2020 United States	Survey (Mix of qualitative and quantitative)	To determine training, experience and knowledge of faculty.	Transgender	Voice instructors and clinical directors in Speech- language pathology (SLP) programs (n = 37)		Survey to measure knowledge and skills of instructors and the clinical opportunities and instruction for students.	Improvement in instruction time spent on transgender voice and communication.	Small sample size. Potential for sampling and response bias.	
Mahendra, 2019 United States	Survey (Mix of qualitative and quantitative)	To provide education on LGBTQ material and assess perspectives of course content and student knowledge.	LGBTQ	Healthcare professional students in the SLP and audiology programs. (n = 70)	Required Course	Learner outcomes were assessed with a course evaluation.	Improved knowledge, skills, and attitudes after completing the module.	Small sample size. Long- term changes in students were not measured.	Future research should include a longitudinal study to identify changes in knowledge, skills, and dispositions among students.
McCave et al, 2019 United States	Survey (quantitative)	To educate students through IPE learning and assess knowledge.	Transgender	Students in the following programs: OT PT Medicine Nursing Social Work Business Administration (n = 278)	IPE event	Survey to measure IPE competencies.	Majority of students found the simulation useful. Students felt better prepared to engage in collaboration as evidenced by IPE competencies	Low response rate. Potential for response bias. Long- term effects were not measured	Future research should collect longitudinal data or conduct a workshop at a clinical site.

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Citation: Author, Year, & Country	Study Design	Purpose	SOGI	Participants and Sample	Type of Course	Outcome Measures	Results or Course Outcomes	Study Limitations	Gaps in the Literature & Future Research
Nowaskie et al, 2020 United States	Survey (quantitative)	A multicenter, multi-disciplinary assessment of multiple healthcare professional students' levels of LGBT cultural competency	LGBT cultural competency	Healthcare professional students in the following programs: Dental Medical Social Work OT PT Pharmacy Physician Assistant (n = 1701)		Survey of experiential variables including annual LGBT patients and curricular hours to compare across disciplines. The LGBT Development of Clinical Skills Scale (LGBT-DOCSS) was used to assess clinical preparedness, attitudinal awareness, and basic knowledge.	OT and PT students reported less than one LGBT curricular hour annually and interacting with less than five LGBT patients annually. Their experiences were substantially more limited than other disciplines. Students across all disciplines reported higher attitudinal awareness as compared to basic knowledge and clinical preparedness.	Small sample size. Potential for sampling and response bias. The LGBT-DOCSS has only been validated with graduate students from psychotherapy, counseling, and medical programs.	Future research should clarify the amount of LGBT patient exposure and education required to obtain adequate cultural competence and examine the long-term effects of increased LGBT patient exposure and education.

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Citation: Author, Year, & Country	Study Design	Purpose	SOGI	Participants and Sample	Type of Course	Outcome Measures	Results or Course Outcomes	Study Limitations	Gaps in the Literature & Future Research
Oates & Dacakis (2017) Australia	Descriptive (Mix of qualitative and quantitative)	This paper describes a week-long problem-based learning (PBL) case and transgender voice and communication (VAC) training, observation, and a 10-week clinical placement.	Transgender	Speech-language pathology students	Required course	Students are rated on their clinical performance with the Competency Based Assessment in Speech Pathology tool (COMPASS) at the middle and end of their clinical placement. Clients provide anonymous written feedback.	Both students and clients attest to the positive experience of transgender voice and communication training in the university clinic.		Future research should include formal evaluation of the clinic's VAC training outcomes is required in terms of both student competence and confidence in delivering VAC training. Future research should also explore the effectiveness of VAC training for trans-identified clients.