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How Do the Inclusion of Specific Gender-Affirming Content in Medical and Nursing School Curricula Affect Health Outcomes in Transgender and Gender Non-Conforming Communities?

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How Do the Inclusion of Specific Gender-Affirming Content in Medical and Nursing School
Curricula Affect Health Outcomes in Transgender and Gender Non-Conforming Communities?

by

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Under the Direction of Carlos A. O. Pavão, DrPH, MPA

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ABSTRACT

Introduction: Transgender and Gender Non-Conforming (TGNC) people regularly experience health care provider discrimination, contributing to adverse health outcomes. This systematic literature review aims to evaluate how including TGNC-specific content in U.S. nursing and medical school curricula affects health outcomes in TGNC communities. The effectiveness of previously implemented gender-affirming interventions will be reviewed, as well as cultural competency inclusion and TGNC racial health disparities.

Methods: A systematic literature review was conducted to identify articles that assessed specific theoretical frameworks to describe why striking health disparities exist in TGNC communities, common health care barriers, and how disparities can be addressed through the inclusion of TGNC-specific and cultural competency criteria in U.S. medical and nursing school curricula.

Results: The results revealed that health care discrimination is one of the top barriers associated with adverse health outcomes in TGNC communities, with over 70% of gender minorities reporting harassment and discrimination. In addition to including TGNC-specific content in school curricula, results also showed that the inclusion of cultural competence training is also essential to advance health equity and to address TGNC-specific health needs and disparities.

Discussion: Results show that it is essential for U.S. medical and nursing schools to include TGNC-inclusive content in curricula to effectively educate and prepare health care providers to competently treat TGNC patients and help improve their experienced health disparities and barriers to care. By translating suggestions for future research into practice, common barriers to successful implementation can be overcome, and care quality for TGNC communities can improve.

APPROVAL PAGE

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AUTHOR'S STATEMENT PAGE

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Annelise G. Gilmer

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CHAPTER I: INTRODUCTION

1.1 Background

In the U.S., 1 in 3 transgender and gender non-conforming (TGNC) people have experienced discrimination in health care settings (Rodriguez et al., 2017), and 1 in 5 was denied health care services (National Center for Transgender Equality, 2016). Those who identify as either transgender or gender non-conforming express a different gender identity than the sex they were assigned at birth. Gender identity is defined as an individual's self-perception as being a man, woman, or non-binary. This is also known as being considered a "gender minority." The amount of U.S. adult residents that identify as TGNC has increased in the U.S. over the last ten years, resulting in about 1 per every 250 adults identifying as transgender (Meerwijk & Sevelius, 2017). TGNC people have historically been rejected by communities and health care providers in the U.S., contributing to higher rates of depression/anxiety, suicide, cardiovascular disease, HIV/AIDS, substance use, and other mental health conditions (White-Hughto et al., 2015). TGNC individuals are less likely to access health care, and those with access commonly state that they experience discrimination when their TGNC status is discovered by health care staff (Rodriguez et al., 2017). It is essential for medical and nursing schools in the U.S. to include and enforce TGNC-inclusive content in their curricula to effectively educate and prepare future health care providers to competently treat TGNC patients to help improve their experienced health disparities and barriers to care.

1.2 Health Disparities and Discrimination

1.2.1 *Transgender and Gender Non-Conforming Youth Health Disparities*

The main factors correlated with adverse health outcomes and suicide within TGNC youth include depression, victimization based on gender identity, bullying, health care access

challenges, and a lack of family or social support (Bochicchio et al., 2021; Singh et al., 2014). Those who identify as TGNC often face a higher risk of environmental stressors, including school-based peer victimization, mistreatment by caregivers, and decreased access to health care. These stressors are directly associated with adverse health outcomes in TGNC youth, including higher rates of depression, HIV, STIs (sexually transmitted infections), anxiety, and suicidal attempts/ideation. They are also associated with increased substance misuse, school absenteeism, and increased rates of homelessness. Decreased access to health care results from discriminatory policies and misinformed provider practices, leading to less preventive care and less health care utilization. Some resilience factors to help improve associated health, educational, occupational, and economic disparities in TGNC youth include access to supportive educational systems, supportive health care providers and environments, connecting with other members of TGNC communities, and social support from family and friends (Delozier et al., 2020; Singh et al., 2014).

Transgender youth experience increased rates of direct discrimination, primarily through anti-transgender legislation and the removal of protections for transgender students (Turban et al., 2022). These outcomes are also consistent with high rates of discrimination and low levels of support from families (Golden & Oransky, 2019). Substantial empirical evidence supports the importance of gender affirmation for TGNC people, including gender-affirmation surgery and other social and legal transitions when needed. Access to gender-affirming health care correlates with improved quality of life and body image (Austin, 2016). Even with this evidence supporting gender affirmation, anti-transgender legislation continues to be passed that attempts to ban access to multiple forms of gender-affirming health care services for TGNC communities. This will result in countless negative consequences for these individuals (Austin, 2016). According to

an observational cohort study of 104 TGNC teens in Washington, those with access to puberty blockers and other gender-affirming care were reportedly 60% less likely to experience depression and 73% less likely to self-harm and attempt suicide (Tordoff et al., 2022). Despite this evidence, U.S. states have introduced and passed anti-transgender legislation (Kameg, 2021). Arkansas was the first state to ban health care providers from giving gender-affirming care for TGNC youth in Arkansas House Bill 1570 (HB 1570). This legislation also banned referring TGNC youth under the age of 18 to any other health care provider. This bill was passed in April 2021 and is just one example of the recent anti-transgender legislation in the United States. This bill helps to pave the way for additional discriminatory TGNC health care legislation that will continue to negatively affect TGNC health outcomes at all ages (Kameg, 2021).

1.2.2 Transgender and Gender Non-Conforming Adult's Health Disparities

Transgender and gender non-conforming people experience multidimensional discrimination, including at the individual, interpersonal, and structural levels. This is positively associated with high substance misuse, HIV, anxiety/depression, suicide, and other chronic conditions (White-Hughto et al., 2015). Transgender individuals are more likely to be targeted in hate crimes because of transphobia and stigma, and this is associated with adverse health outcomes and higher rates of homelessness, lack of stable jobs, substance abuse, and incarceration (Rodriguez et al., 2017).

Transgender and gender non-conforming (TGNC) adults face higher cardiovascular health risks partially due to discrimination and violence (Streed et al., 2021). Certain social and structural-level stressors specific to TGNC communities lead to increased stress levels. This excess stress evolves into broader mental and physical health complications, including cardiovascular health issues. Findings show that TGNC communities not only face disparities in

common CVD risk but also in less common TGNC-specific cardiovascular disease risk factors (Streed et al., 2021).

Cisgender men and women reported Heavy Episodic Drinking on fewer days and had lower odds of past-year alcohol-related sexual assault than TGNC people (Coulter et al., 2015). Older transgender adults (above 65) reported higher rates of hearing loss, disability, vision issues, dental problems, and overall poorer health when compared to other members of the LGBQ+ community and cisgender heterosexuals (Coulter et al., 2015).

In addition to high rates of health disparities faced by the transgender community compared to other LGBTQ+ counterparts, genderqueer and gender non-conforming (GNC) people face unique health disparities. GNC people tend to face higher rates of discrimination and sexual abuse compared to cisgender and transgender communities. GNC individuals report increased rates of discrimination in having limited access to non-binary-inclusive public restrooms, receiving gender-neutral legal documents because of the lack of gender-neutral markers on legal applications, being misgendered more frequently, and in health care access and gender-neutral-appropriate care due to a lack of GNC provider education. (Lefevor et al., 2019).

1.2.3 Race/Ethnicity Health Disparities

Transgender and gender non-conforming people of color experience the highest rates of discrimination and violence due to being part of two separate minority groups. There is discrimination based on their skin color and ethnicity coupled with discrimination based on their gender identity. Due to this increase in experienced discrimination and associated stress levels, TGNC people of color report higher rates of adverse health outcomes compared to their white TGNC counterparts, who only identify as having one minority identity (Howard et al., 2019). Findings from the 2015 U.S. Transgender Survey found that Black transgender women face the

highest level of health inequities (National Center for Transgender Equality, 2016). Black transgender women report higher HIV prevalence rates, higher rates of suicide, and lower insurance coverage rates (Howard et al., 2019). Limited health care resource utilization in TGNC communities, especially by Black transgender women, is commonly due to experienced health care provider discrimination. Barriers faced in employment due to discrimination have led to more sex work and an increased risk of HIV/STIs for these communities (Mann-Jackson et al., 2020). By involving and educating the medical community, the unique needs of this population can be better informed and practiced (Mann-Jackson et al., 2020).

1.3 Purpose of Study

This systematic literature review aims to evaluate how the inclusion of specific transgender and gender non-conforming (TGNC) content in nursing and medical school curricula affects health outcomes and unique health disparities in TGNC communities. To accomplish this, the literature review will include specific theoretical frameworks to help explain why these disparities exist, the common barriers to health care faced by TGNC communities, and how these disparities can be addressed through the inclusions of TGNC-specific and cultural competency criteria in U.S. medical and nursing school curricula. The main research question is, “How do the incorporation of TGNC health-specific content into nursing and medical school curricula impact the overall health outcomes in these communities?” It is essential to include more TGNC-specific content into medical/nursing school curricula to decrease misinformation, discrimination, and stigma toward these communities and to more effectively prepare medical and nursing students to treat TGNC patients with high-quality and equitable care (de Vries et al., 2020). The effectiveness of previously implemented interventions that aim to promote affirmative transgender health care will be included in this review, as well as U.S. transgender

policy analysis, cultural competency training inclusion, and racial health disparities within TGNC communities.

2 CHAPTER II: LITERATURE REVIEW

2.1 Theoretical Frameworks

2.1.1 *Minority Stress Theory*

Meyer's Minority Stress Theory (MST) initially explained how chronic stress in minority lesbian, gay, and bisexual (LGB) populations results from commonly faced discrimination in a heteronormative society. The original purpose of this model was to identify internal and external stressors that negatively affect LGB communities (Meyer, 2003). Minority stress theory states that adverse social environments result in harmful mental health disparities, especially within sexual and gender minority populations. LGB populations report higher mental health problems associated with substance misuse, suicide, depression, and bipolar disorder. According to the MST, three processes contribute to experiencing minority stressors. These include external/distal stressors, interactive proximal stressors, and internal proximal stressors. Examples of external stressors are violence and discrimination. Examples of interactive proximal stressors include anticipating discrimination or violence and maintaining self-protection tactics. The internal proximal stressors are the internalization of negative prejudice and treatment (Meyer, 2003).

Meyer's initial conceptualization of this model later evolved to include and describe the factors associated with chronic stress disproportionately faced by transgender and gender non-conforming communities and associated health disparities. The health disparities faced by transgender and gender non-conforming (TGNC) communities also include mental health problems that are associated with substance misuse, suicide, depression, and bipolar disorder. Still, higher rates are reported when compared to LGB counterparts. The adaptations of this framework for TGNC communities emphasize the importance of community and social support. The increased amount of anti-transgender legislation being introduced (and passed) signifies that

community and social support for these groups are not as present and accessible. Improving and expanding gender identity data collection in national surveys can help better understand the increased risk faced by these communities and determine more protective factors. (Valentine & Shipherd, 2018).

According to an article by Tucker et al., the minority stress theory shows that rates of suicide and self-harm in transgender communities were around 43% lower in states with protective policies/laws against employment discrimination for transgender people (Tucker et al., 2018). Another article by Tebbe & Moradi (Tebbe & Moradi, 2016) stated that the MST was used to test the relationship between factors of transgender discrimination/prejudice, substance use, and social support with the outcomes of suicidal risk and depression within a sample of TGNC individuals. Drug use was directly correlated with increased suicide risk in this population. Low social support and increased minority stressors were associated with increased depression levels in this community. Health outcomes for this population can improve by preventing these minority stressors with more inclusive health care provider training and anti-discrimination policies (Tebbe & Moradi, 2016).

An article by Lefevor et al. (2019) sought to extend the definition of Minority Stress Theory by including genderqueer individuals who identify outside of the gender binary. Emphasis is also placed on using this theoretical framework to help explain the unique health disparities faced by the transgender community compared to their cisgender counterparts due to the adverse sociopolitical climate that reinforces these forms of discrimination, including biological sex-based sports teams, bathroom use, identity document changes, gender affirmation surgeries, and insurance coverage. Utilizing this theory to support research on these health disparities has led to the inclusion of gender identity in anti-discrimination laws in at least 30

U.S. states. However, systemic discrimination still needs to be addressed to improve TGNC health outcomes (Lefevor et al., 2019).

2.1.2 Transgender Theory

Another leading theory used to describe health disparities associated with the transgender and gender non-conforming communities is Transgender Theory. Transgender Theory describes the lived experience and existence of TGNC people and their interaction within the surrounding environment. This theory emphasizes that individuals are aware of their gender identity over the biological sex assigned at birth and the importance of understanding intersectionality and marginalized gender identities. This theory posits that a deeper understanding of intersectionality and marginalized gender identities will lead to less TGNC oppression and discrimination, resulting in better health outcomes for these communities (Breux & Thyer, 2021). Crenshaw introduced the term intersectionality to explain the issues with how structures in the U.S., along with anti-racist and feminist movements, generally depict mutually exclusive social identities (Crenshaw, 1989). These depictions of having one social identity led to erasing the lived experiences of Black women with multiple social identities, including Black transgender women. Crenshaw highlighted the importance of understanding and considering the unique lived experiences of those with more than one social identity to increase inclusivity in policies and health care access and decrease rates of discrimination. Intersectionality highlights the compounded stressors of transphobia and racism disproportionately faced by transgender people of color (TPOC). Efforts to overlook, ignore, isolate, and attack the intersection of individual identities, including discriminatory policies, negatively impact how people with more than one minoritized social identity are treated, especially Black transgender women (Crenshaw, 1989; Shelton and Lester, 2020).

Nagoshi & Brzuzy (2010) explored how essentialist approaches before the development of transgender theory perceived social identities as being fixed, leaving no possibility for fluidity. Perceiving set social identities is problematic because it posits that disparities experienced by those of different sexes, races, ethnicities, gender identities, sexual orientations, and classes are due to “nature.” This perspective overlooks the unique experience and needs of gender, sexual, and racial minority groups and the disparities and discrimination they face. The transgender theory helped to disprove this idea of fixed social identities by stating that social identities are fluid, socially constructed, and self-constructed. This theory also identifies the regular interaction and application of these social identity aspects with the unique lived experiences, especially those of the transgender community. This theoretical basis is helpful in the application to TGNC oppression, discrimination, and overall identity. This theory has helped inform a more exact cause of gender and sexual identity, which is essential for anti-discrimination legislation (Nagoshi & Brzuzy, 2010).

Transgender theory informs the ability to look beyond the general binary gender framework. It achieves this by considering and emphasizing the unique experiences and marginalization of those with more than one social identity and different lived experiences (Barron & Capous-Desyllas, 2017). This theory further explains how complex TGNC individual identities are, especially for those that are gender fluid, due to the close relationship between the self-constructed gender identity and the physical body. It is essential to understand that transgressing, which is not physically transitioning from one gender to another, is associated with continuity between the mind and the body. The authors conclude that by looking beyond this general binary framework and verifying the identities of TGNC individuals, the struggles faced by TGNC individuals and families could improve. This further demonstrates that health

care training, policies, and practices need to be more gender-affirming and protective of TGNC communities (Barron & Capous-Desyllas, 2017).

2.2 Barriers to Health Care

2.2.1 Health Care Discrimination

Transgender and gender non-conforming patients commonly state that they experience discrimination when their TGNC identity is discovered by health care staff. This makes these communities even more hesitant to receive regular preventive health care, further contributing to harmful health disparities. This discrimination includes providers' lack of cultural competency regarding transgender people, systems and policy-level discrimination, and negative assumptions/stigma regarding TGNC communities (Rodriguez et al., 2017). Over 70% of gender minority patients and over 50% of sexual minority patients report health care harassment and discrimination (Zelin et al., 2018). This generally results in negative patient-provider relationships and avoidance of any kind of health care overall due to fear of discrimination and low-quality services (Zelin et al., 2018).

TGNC communities continue to be disproportionately impacted by HIV, but the utilization of pre-exposure prophylaxis (PrEP) is still low (Watson et al., 2020). PrEP-related barriers to care for transgender and gender non-conforming communities include health care provider discrimination, exclusive health care policies and services that limit access, financial limitations, mental health issues that make health care access complex, concerns about hormone therapy drug interactions and side effects, and lack of access to additional STI protection resources (Watson et al., 2020). This lack of access and the associated stigma with getting HIV-related prevention and care for TGNC communities is essential to address from the individual and structural levels. Experiences of discrimination based on TGNC gender identities could be alleviated by increased

access to gender-affirming health care and inclusive PrEP interventions (Mann-Jackson et al., 2020; Watson et al., 2020).

Little research has been done on determining systemic racism against transgender people of color (TPOC) on their access to gender-affirming care, especially mental health care. According to a cross-sectional study by Lett et al. (2022), all TPOCs had decreased access to gender-affirming mental health care, with the most affected subgroups being African-Americans, Latinos/Hispanics, and Native Americans assigned male at birth. White respondents had the least prevalent psychological stress and adverse mental health outcomes (Lett et al., 2022). Gender-affirming mental health care (GAMHC) is crucial for mental well-being in the transition process for all transgender people. It is also required before gender-affirming surgery. Researchers noted the importance of having a mental health care provider appropriately trained in TGNC-specific health care needs, including being trained on cultural competence, the increased risk of co-occurring mental health problems within TGNC communities, and gender identity dysphoria. Increased access to GAMHC is positively associated with lower rates of psychological distress, and findings showed that TPOC overwhelmingly reported less access to GAMHC compared to their white trans counterparts. Accordingly, TPOC reported higher psychological distress levels than their white counterparts. Ethnoracial inequities in income and affordable insurance coverage also specifically lead to less access to GAMHC. This lack of access to GAMHC is associated with less access to gender affirmation surgeries since GAMHC recommendations are required. This leads to further mental distress since surgical affirmation surgeries are associated with lower rates of suicidal attempts and ideation (Lett et al., 2022).

2.3 TGNC Content Inclusion in Medical/Nursing School Curricula

2.3.1 Importance

An article by de Vries et al. (2020) outlines the importance of transgender and gender diverse-specific medical school interventions and gaps in research and medical school curricula. The authors discussed ethics in using various health care models and compared them. The models used were the informed consent model (patient has the autonomy to make their own health care decisions) and the gatekeeper model (health care providers decide who can receive care). The research in this article emphasizes the ethical need for improving the content and quantity of training and educational curricula in health science/medical school programs to help reduce the disparities faced by the transgender and gender diverse communities. Much health care provider discrimination comes from larger overarching societal transphobia and the lack of specific education and information on LGBTQ health, resulting in fewer health care facilities with LGBTQ-friendly environments. By including teaching on sexuality and constructions of gender identity through social dynamics in medical curricula and ongoing health care training, transgender-specific discrimination rates can decrease (de Vries et al., 2020).

According to Constantinou et al. (2020), cultural competence aims to give high-quality care to all people of all cultural and racial backgrounds. Cultural competence is the knowledge of cultural and social elements influencing health and health behaviors. Cultural competence is implemented in numerous training, but it is reportedly more difficult to incorporate into medical school curricula. Prior studies aiming to integrate cultural competence in medical school curricula have reported student pushback with incorporating this training into medical practice. The goal of this study was to present a new example of an international medical program that successfully included and implemented cultural competency in medical school curricula.

Program participants found this content very helpful in real-time practice, mainly due to the tutorials and having the chance to work with realistic patients throughout the program. It is essential to include regular cultural competency training in health care settings and medical school curricula (Constantinou et al., 2020).

2.3.2 Examples in the United States

According to a 2018 pilot study that surveyed numerous U.S. medical school deans, over 70% reported that the SGM-specific health care information in their curriculum ranges from fair to very poor (Zelin et al., 2018). In 2014, the Association of American Medical Colleges released medical school competencies regarding SGM-specific health needs and disparities. This is not a requirement for medical schools to use. Still, adopting this competency resource in medical school curricula could help to efficiently and more thoroughly train health care providers to provide evidence-based care that is culturally competent to this population. Medical students in New England were chosen to participate in this pilot study on comfort and competence levels when providing care for SGM individuals. The results showed that around 92.7% of medical students felt comfortable treating sexual minorities, and a little over 68% felt comfortable treating gender minorities. About 77% of students thought they were not competent in treating gender minority patients, and around 81% reported feeling they were not skilled in treating SGM patients of different sex (Zelin et al., 2018). More than half of the students surveyed said their medical school curriculum does not accurately cover SGM-specific health information and does not adequately prepare them to treat and interact with SGM patients in real-world settings (Zelin et al., 2018).

Najor et al. (2020) created an intervention of a new curriculum on transgender and gender non-conforming care to be added to required medical school training. This intervention aimed to

address students' knowledge gaps by increasing confidence, education, and comfort in giving transgender patients high-quality care tailored to their unique needs. The methodology of this intervention included distributing a pre-lecture survey, a one-hour lecture on LGBTQ+ health disparities showing how discrimination/microaggressions result in adverse health outcomes, a post-lecture survey, and a one-year follow-up survey. The critical numerical results for the post-lecture study with a response rate of 70% indicated a 15% improvement from the pre-survey on comfort caring for transgender patients and a 20% improvement in comfort with providing treatment for specific transgender patients' needs. For the one-year follow-up survey with a response rate of 44%, there was a 95% increase from the post-lecture study of comfort with a transgender patient scenario and a 64% increase in awareness that insurance companies are increasing prices for transgender patients. Conclusions from this study were that this educational lecture improved participants' knowledge and comfort of caring for transgender patients for up to one year (Najor et al., 2020).

Minturn et al. (2021) implemented an intervention of a ten-hour LGBTQ-specific curriculum for the first two years of a medical school program. This curriculum was intended explicitly for preclinical level students to improve their knowledge, confidence, and comfort around LGBTQ-specific health requirements to provide the best affirming care. The methodology of this intervention included a pre-and-post survey to evaluate learned knowledge and self-confidence changes in providing LGBTQ-informed care and implementing a five-section education overview. These sections had an LGBTQ terminology review, inclusive sexual health intake methods, best practices/detailed transition education for transgender patient care, a panel discussion with LGBTQ patients reviewing scenarios and improvement recommendations, and students discussing challenges and suggestions with standardized patients. The vital

numerical results for the post-survey included a 17% improvement in culturally competent terminology and a 24% increase in gender-affirming hormone replacement therapy knowledge for transgender patients. The students also showed a 15% improvement in preparation to be more inclusive in sexual health intake methods, a 19% improvement in obtaining gender identity information, and an 18% improvement in knowledge of health needs and care recommendations for the LGB and transgender communities. The study concluded that this curriculum helped improve participants' understanding and comfort in providing affirmative care for both the LGB and transgender populations, with a more considerable increase in knowledge for those with no experience working with LGBT populations (Minturn et al., 2021).

McCave et al. (2019) created an intervention of a simulation activity to teach medical professionals how to adequately address the complex needs of transgender patients by collaborating with professionals in various medical fields. The goal was to destigmatize transgender patient experiences and provider treatment by promoting higher education levels in competencies throughout interpersonal medical areas. The multimodal methodology of the simulation involved participants watching a video, discussing standards of care, evaluating a standardized transgender patient, creating team care plans, receiving feedback from transgender patients, debriefing, and completing surveys on the success of experiences. The vital numerical results included provider survey responses on a 100% scale with how the simulation prepared the medical professionals to practice patient-centered core competencies in transgender care, including the following: 91.4% of "Values and Ethics," 90% of "Roles and Responsibilities," 88.7% of "Interpersonal Communication," and 88.7% of "Teamwork" (McCave et al., 2019). This study concluded that having direct contact and communication with transgender patients

was the most useful in learning about their unique needs. It helped providers feel more prepared to improve their practice within this community (McCave et al., 2019).

Health care professionals in the U.S. are better equipped to provide TGNC care when TGNC-specific content is included in medical curricula, but gaps in TGNC disparities remain. A pilot program of a transgender medicine elective was implemented at the Boston University School of Medicine that required medical students to provide face-to-face care to transgender patients in clinical rotations (Park & Safer, 2018). Surveys were administered to participants before and after completing this TGNC educational elective. Participants reported a change from 45% to 80% when asked about feeling “highly comfortable” providing competent clinical care to TGNC patients and a shift from 0% to 85% when asked about feeling “high knowledge” with managing TGNC patients. These results show an increased success rate when including real-world medical practice and interaction with TGNC patients in medical school curricula as opposed to solely including lectures and training that do not have clinical exposure. Including clinical exposure with TGNC patients shows the potential to increasingly address the health disparities and adverse health outcomes these groups face (Park & Safer, 2018).

Nurse educators in the U.S. use curricula guidelines created by the National League for Nursing or the American Association of Colleges of Nursing. Curricular guidelines from these groups include demonstrating competencies to deliver culturally competent and sensitive care to diverse populations, but there are no specific requirements for the inclusion of LGBTQ+ people. In addition to the lack of proper direction from the accredited U.S. nursing bodies, other barriers to including these competencies include time constraints and instructors not feeling prepared to teach this specific content properly. An LGBT health education module intervention was created to be included in nurse practitioner curricula (Yingling et al., 2017). The goal is to address

challenges faced by the LGBTQ+ community and prepare students to provide culturally competent and sensitive care. The methodology of this study included prioritizing main issues from literature reviews, consulting providers that care for this population, reviewing recommended care suggestions and LGBT recorded commentaries, and consolidating findings into the learning module. There were no numerical results in this study, but this module was added to five campuses of one university and showed positive results. The key points included: “minority stress theory, cultural competency, gender, and sexual minority vocabulary,” and medical care for each specific LGBT category. The study concluded that the inclusion of real-life clinical cases best prepared them to approach and address LGBT-specific health conditions adequately instead of reading about hypothetical cases (Yingling et al., 2017).

An intervention called the Transgender Curriculum Integration Project (TCIP) was created and implemented by Sherman et al. (2021) in a U.S. nursing school program. The goal was to test out the baseline knowledge and comfort of this subject matter and what is needed to generalize the process of improving the understanding of transgender health disparities. The methodology of this intervention included gaining curriculum approval from the Baccalaureate Curriculum Committee, determining key topics to include, meeting with professors of the five courses using the curriculum, and distributing a virtual survey before, during, and following the program to determine knowledge improvements. Some key topics included best practices/interventions that are gender-affirming, a formal language for TGNC communities, and needed resources and health inequities faced by these communities. The critical numerical results for the post-curriculum surveys included statistically significant increases in the importance of the following: knowing the gender identity of patients ($p=0.05$), competence in giving polite and successful TGNC care ($p=0.06$), and more knowledge of resources that specifically cater to

TGNC populations ($p=0.05$). These results showed that this curriculum aided in some areas with a change in knowledge and feelings regarding TGNC-specific health issues and unique care needs. Participants reportedly improved their comfort and understanding of factors involved in TGNC care. Based on the final survey, specific content on feeling comfortable connecting TGNC communities to resources for their unique needs is a recommendation to improve future inclusive curricula (Sherman et al., 2021). According to Saunders & McWeeney, in the U.S., the median time spent overviewing sexual and gender minority-specific (SGM) health needs in medical school is around 5 hours. Approximately 4.5% of the U.S. population identifies as an SGM; the amount of time spent instructing physician assistant (PA) students about this population is meager and very likely to not be very successful in preparing these students to deal with SGM patients in real-life scenarios. A majority of physician assistant medical programs do not have SGM-inclusive curricula content, supporting the lack of knowledge and experience needed to care properly for this population. Not many examples of inclusive programs were found, but a few are great examples of what to emulate and follow to improve care (Saunders & McWeeney, 2022).

3 CHAPTER III: METHODS

The goal of the methodology for this systematic literature review was to identify diverse research articles that address my main research question, resulting in a balanced literature overview. A mixed methods systematic literature review was conducted to identify articles that assessed specific theoretical frameworks to help describe why striking health disparities exist in transgender and gender non-conforming (TGNC) communities, common barriers to health care faced by TGNC communities, and how these disparities can be addressed through the inclusion of TGNC-specific and cultural competency criteria in U.S. medical and nursing school curricula. Since my research question requires findings on the effectiveness of U.S. medical and nursing curricula with inclusive transgender and gender non-conforming educational content, I reviewed primary and secondary articles from peer-reviewed journals and reputable sources of publicly available data that are known to publish research on transgender and gender non-conforming communities overall.

3.1 Inclusion and Exclusion Criteria

The inclusion criteria included articles published from 2010-2022, articles published in the mainland United States, articles in English, pieces that were fully available online, and peer-reviewed articles that were specifically relevant to the main research question. This included articles that assessed specific theoretical frameworks to help explain why striking health disparities exist in transgender and gender non-conforming (TGNC) communities, common barriers to health care faced by TGNC communities, and how these disparities can be addressed through the inclusion of TGNC-specific and cultural competency criteria in U.S. medical and nursing school curricula. The exclusion criteria included articles published before 2010, articles published in any country besides the mainland United States, articles in languages other than

English, pieces that were not fully available online, and articles that were not specifically relevant to the main research question. Articles that did not reference my initial research question were excluded.

3.2 Data Sources

The data sources of PubMed, Google Scholar, and Science Direct were used to conduct the keyword search. Boolean logic was used in keyword selection to narrow the search results with the most relevant content. Using Boolean logic helped to select keywords that were not too broad or too specific, ensuring more relevant search results. Boolean operators were used to capture necessary information in the search process. Each data source was reviewed individually. Filters were adjusted in each database to align with inclusion and exclusion criteria. The keywords used in my search strategy for each database are included in Table 1.

Table 1: Keyword Search Strategy by Data Source

PubMed	health outcomes, barriers health care access, disparities AND gender non-conforming OR transgender OR LGBTQ+ OR transgender people of color (TPOC), cultural competence, intersectional, Minority Stress Theory, Transgender Theory, gender identity
	AND
	medical school curricula OR curriculum OR education, nursing school curricula OR curriculum OR education, transgender, gender-nonconforming
Google Scholar	health outcomes, barriers health care access, disparities AND gender non-conforming OR transgender OR LGBTQ+ OR transgender people of color (TPOC), cultural competence, intersectional, Minority Stress Theory, Transgender Theory, gender identity
	AND
	medical school curricula OR curriculum OR education, nursing school curricula OR

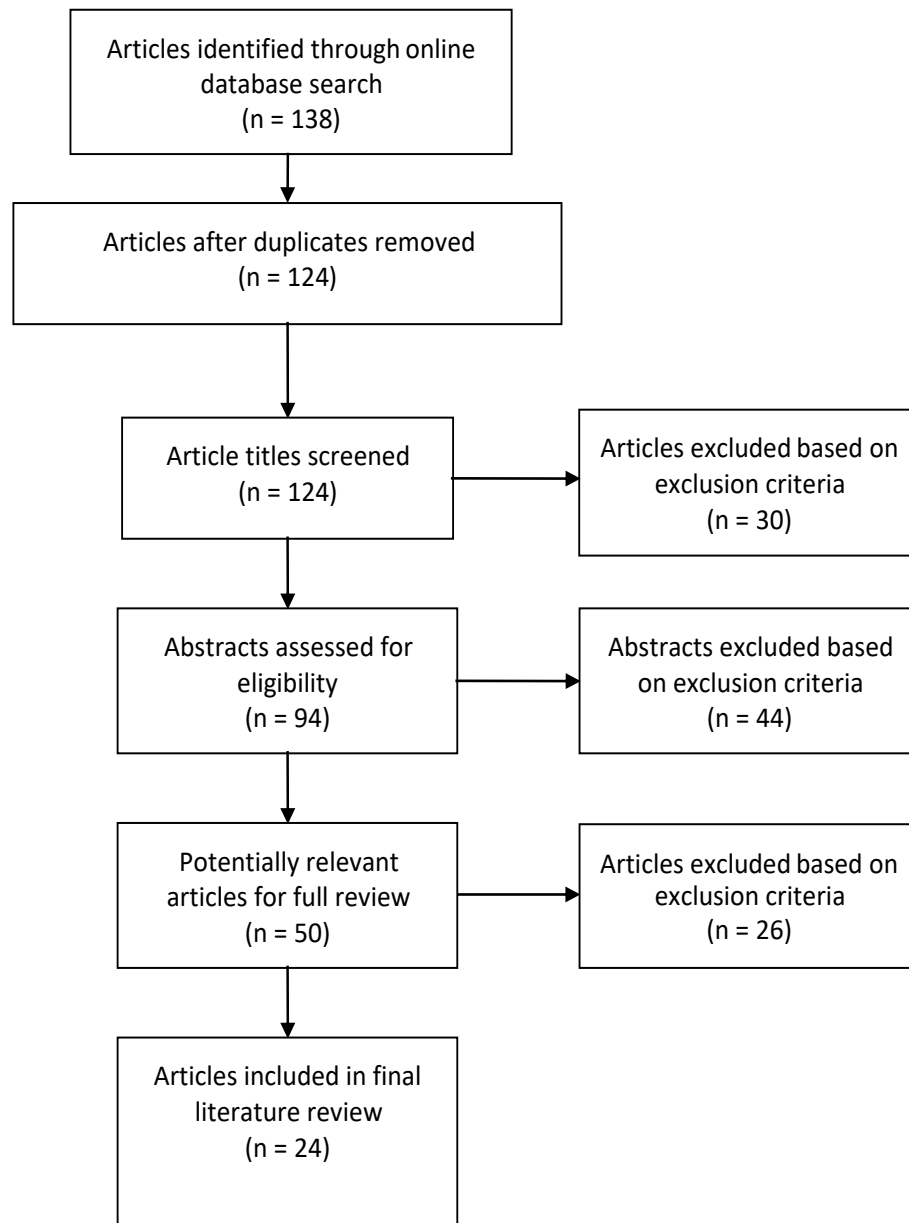
	curriculum OR education, transgender, gender-nonconforming
Science Direct	health outcomes, barriers health care access, disparities AND gender non-conforming OR transgender OR LGBTQ+ OR transgender people of color (TPOC), cultural competence, intersectional, Minority Stress Theory, Transgender Theory, gender identity
	AND
	medical school curricula OR curriculum OR education, nursing school curricula OR curriculum OR education, transgender, gender-nonconforming

3.3 Study Selection

Duplicate studies were removed after the initial review of articles that matched the inclusion criteria. After duplicate studies were released, I assessed the quality of the literature by reviewing abstracts of the papers that resulted from the specific keyword search. Afterward, I determined if each article had results and findings in the abstract that were relevant to my keyword searches. I determined this by reviewing the article goals and findings listed in each abstract and assessing the relevance to the main research question of this review. I then conducted a full review of the report to determine to what degree the specific objectives, methods, results, and discussions best aligned with my research question based on the inclusion and exclusion criteria.

From the initial database search, 138 articles were identified. After removing 14 duplicate articles, 30 articles were excluded after screening article titles. Next, 44 articles were excluded after abstract reviews based on the identified exclusion and inclusion criteria. From there, 50 articles remained to be fully reviewed, and 26 were excluded due to not meeting inclusion criteria. Following the final full reviews, 24 articles are included in this systematic literature review. A summary of the article identification methods is displayed in Figure 1.

Figure 1: Article Identification Methods



4 CHAPTER IV: RESULTS

The results listed in this section summarize the importance of transgender and gender non-conforming content inclusion in medical and nursing school curricula. Findings from the articles were first put into two categories, including examples and outcomes of TGNC and cultural competence content inclusion in U.S. medical and nursing school curricula and the associated theoretical frameworks. After further review, an additional theme of barriers to health care emerged from the results of the articles included in this review. These themes were included to help support and explain why it is essential to incorporate TGNC-specific content into medical and nursing school curricula to improve health outcomes within these communities. The results revealed that one of the most frequently experienced barriers associated with adverse health outcomes in TGNC communities is health care discrimination, with over 70% of gender minorities reporting harassment and discrimination (Rodriguez et al., 2017). This is further supported by the theoretical frameworks of minority stress theory (MST) and transgender theory, which help to explain how stressors such as discrimination result in adverse mental and physical health outcomes, especially for TGNC communities. In addition to including TGNC-specific content in medical and nursing school curricula, results also showed that the inclusion of cultural competence education and training is also essential in helping to advance health equity and to address TGNC-specific health needs and disparities. Specific study results are described in Table 2.

Table 2: Study Results

Title	Authors	Year Published	Results Summary
Transgressing the gendered norms in childhood: Understanding transgender	Barron, C., & Capous-Desyllas, M.	2017	Study participants reported a large amount of negative discrimination experiences due to their children's gender variance and large variations in gender identity development. Applying this knowledge of the

children and their families.			complexities of gender identity and the health needs within TGNC communities to families and health care providers can help to reduce the adverse discrimination experiences. The authors used Transgender Theory to support their conclusion of how looking beyond the general binary framework and by verifying the identities of TGNC individuals, the struggles faced by TGNC individuals and families could improve.
Transgender Theory for Contemporary Social Work Practice: A Question of Values and Ethics	Breaux, H. P., & Thyer, B. A.	2021	The inclusion of cultural competency in health care provider curricula is necessary in learning the unique needs of TGNC communities, but more is required to efficiently improve their health outcomes. Transgender Theory is used to emphasize the need for incorporating education on intersectionality and gender identity minorities in curricula to reduce discrimination and to improve overall health of TGNC communities.
How to integrate cultural competence in medical curricula: Learning from a new Medical Program	Constantinou, C., Papageorgiou, A., Andreou, P., & McCrorie, P.	2020	Program participants found this content very helpful in real-world practice, especially due to the tutorials and having the chance to work with realistic patients throughout the program. The results following the implementation of cultural competence into the curriculum of one medical school included averages of students scoring 4.5 out of 5 in the medical sociology course, 4.9 out of 5 in the Integrated Clinical Practice (ICP) cultural competence course, and a 1.5 out of 2 on a cultural competency learning questionnaire. Tutorial practicality and having real-world practice application opportunities were reported to be the most helpful facilitators in this curriculum inclusion.
Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine,	Crenshaw, K.	1989	Intersectionality helps to explain how thinking that everyone only has one social identity leads to the erasure of lived experiences of Black women with multiple social identities, including Black transgender women. Crenshaw highlighted the importance of understanding and

Feminist Theory, and Anti-racist Politics			considering the unique lived experiences of those with more than one social identity to increase inclusivity in policies, health care access, and to decrease rates of discrimination. In conclusion, efforts to overlook, ignore, isolate, and attack the intersection of individual identities, including discriminatory policies, negatively impact how people with more than one minority social identity are treated, especially Black transgender women.
Debate: Why should gender-affirming health care be included in health science curricula?	de Vries, E., Kathard, H., & Müller, A.	2020	Results showed that the common use of the gatekeeper model (health care providers decide who can receive care) is unethical and leads to greater health disparities and risk in TGNC communities. The Minority Stress Model helped to inform these findings by describing how discriminatory health care experiences lead to less use of and access to health care services. The research in this article emphasizes the ethical need for improving the content and quantity of TGNC-specific training and educational curricula in health science/medical school programs to help reduce the disparities faced by these communities.
Health disparities between genderqueer, transgender, and cisgender individuals: An extension of minority stress theory	Lefevor, G. T., Boyd-Rogers, C. C., Sprague, B. M., & Janis, R. A.	2019	Authors sought to extend the definition of the Minority Stress Theory by specifically including gender non-conforming individuals. GNC individuals report at least 50% higher rates of sexual abuse, discrimination, and other traumatic events than their cisgender counterparts. Results showed that these experiences result in higher rates of suicide and self-harm. Increasing knowledge of TGNC-specific experiences, access to health care, systematic discrimination, and other disparities is essential in addressing these disparities, especially for health care providers since they play such a large role in health care access and utilization of TGNC communities.
Ethnoracial inequities in	Lett, E., Abrams, M.	2022	All transgender people of color (TPOC) had decreased access to gender-affirming

access to gender-affirming mental health care and psychological distress among transgender adults	P., Gold, A., Fullerton, F.-A., & Everhart, A.		mental health care, with the most affected subgroup being African American (aOR: 0.51), Latino/Hispanic (aOR: 0.52), and Native American (aOR: 0.59) individuals assigned male at birth. Psychological stress and negative mental health outcomes were least prevalent in white respondents (39.9%). Those with the highest rates of reported severe psychological stress included Native American participants (47.4%), Latino/Hispanic participants (47.1%), and multiracial/other participants (46.7%).
Using community-based participatory research to address STI/HIV disparities and social determinants of health among young GBMSM and transgender women of color in North Carolina, USA	Mann-Jackson, L., Alonzo, J., Garcia, M., Trent, S., Bell, J., Horridge, D. N., & Rhodes, S. D.	2020	Key qualitative findings showed that limited health care resource utilization was due to experienced health care provider discrimination. This result contributes to limited knowledge of PrEP prevention for HIV and barriers faced in employment due to discrimination leading to more sex work and increased risk of HIV/STIs. Conclusions from this study were by improving involvement and education of the medical community, the unique needs of this population can be better informed and practiced.
Promoting Affirmative Transgender Health Care Practice Within Hospitals: An IPE Standardized Patient Simulation for Graduate Health Care Learners	McCave, E. L., Aptaker, D., Hartmann, K. D., & Zucconi, R.	2019	The key numerical results included provider survey responses on a 100% scale on how this simulation made them feel better prepared to practice patient-centered core competencies in transgender care, including the following: 91.4% of “Values and Ethics,” 90% of “Roles and Responsibilities,” 88.7% of “Interpersonal Communication,” and 88.7% of “Teamwork.” According to simulation participants, conclusions from this study were that having direct contact and communication with transgender patients was the most useful in learning about their unique needs. It helped them feel more prepared to improve practice within this community.
Prejudice, social stress, and mental	Meyer I. H.	2003	Minority stress theory states that negative social environments result in negative

health in lesbian, gay, and bisexual populations: conceptual issues and research evidence			mental health disparities, especially within sexual and gender minority populations. According to the MST, external/distal stressors, interactive proximal stressors, and internal proximal stressors are the three processes that contribute to experiencing minority stressors. The adaptations of this framework for TGNC communities emphasize the importance of community and social support.
Early Intervention for LGBTQ Health: A 10-Hour Curriculum for Preclinical Health Professions Students	Minturn, M. S., Martinez, E. I., Le, T., Nokoff, N., Fitch, L., Little, C. E., & Lee, R. S.	2021	The key numerical results for the post-survey included a 17% improvement in culturally competent terminology and a 24% increase in gender-affirming hormone replacement therapy knowledge for transgender patients. The students also showed a 15% improvement in preparation to be more inclusive in sexual health intake methods, a 19% improvement in getting gender identity information, and an 18% improvement in knowledge of health needs and care recommendations for the LGB and transgender communities. Conclusions from this study were that this curriculum helped improve the overall knowledge and comfort of participants in providing affirmative care for both the LGB and transgender populations, with a more considerable increase in knowledge for those with no experience working with LGBT populations.
Transgender theory: Embodying research and practice	Nagoshi, J. L. & Brzuzy, S.	2010	The transgender theory helped to disprove this idea of fixed social identities by stating that social identities are fluid, socially constructed, and self-constructed. This theoretical basis is useful in the application to TGNC oppression, discrimination, and overall identity. This theory has helped inform a more accurate basis of gender and sexual identity. The framework of this theory helps to empower TGNC communities with multiple minority identities and to educate others about their unique differences and needs, and this has an especially useful application in the health care field.

<p>Transgender Health Care Curriculum Development: A Dual-Site Medical School Campus Program</p>	<p>Najor, A. J., Kling, J. M., Imhof, R. L., Sussman, J. D., Nippoldt, T. B., & Davidge-Pitts, C. J.</p>	<p>2020</p>	<p>The key numerical results for the post-lecture survey with a response rate of 70% included a 15% improvement from the presurvey on comfort caring for T.G. patients and a 20% improvement in comfort with T.G. patient scenario. For the one-year follow-up survey with a response rate of 44%, there was a 95% increase from the post-lecture survey on comfort with a transgender patient scenario and a 64% increase in awareness that insurance companies are increasing prices for transgender patients. Conclusions from this study were that this educational lecture improved participant knowledge and comfort of caring for transgender patients for up to one year.</p>
<p>Clinical exposure to transgender medicine improves students' preparedness above levels seen with didactic teaching alone: A key addition to the Boston University model for teaching Transgender Healthcare</p>	<p>Park, J. A., & Safer, J. D.</p>	<p>2018</p>	<p>Participants reported a change from 45% to 80% when asked about feeling "highly comfortable" in providing competent clinical care to TGNC patients, and a change from 0% to 85% when asked about feeling "high knowledge" in managing TGNC patients. These results show an increased success rate when including real-world medical practice and interaction with TGNC patients in medical school curricula as opposed to solely including lectures and training that do not include clinical exposure. Including clinical exposure with TGNC patients shows potential to increasingly address the health disparities and negative health outcomes faced by these groups.</p>
<p>Self-Reported Discrimination in Health-Care Settings Based on Recognizability as Transgender: A Cross-Sectional Study Among Transgender U.S. Citizens</p>	<p>Rodriguez, A., Agardh, A., & Asamoah, B. O.</p>	<p>2017</p>	<p>A little over 33% of TGNC patients in this survey reported health care discrimination. The health care sectors with the most reported discrimination against TGNC patients were mental health clinics (14.5%), emergency rooms (16.8%), and general physicians/hospitals (28.7%). American Indian/Alaska Native individuals were found to be twice as likely to face some form of health care discrimination compared to their White counterparts. There were statistically significant</p>

			associations between reported discrimination in health care settings and being recognized as a TGNC patient and TGNC individuals with a gender-related mental health problem
Curricular Inclusion of Sexual and Gender Minority Primary Healthcare Needs for Physician Assistant Trainees: A Literature Review	Saunders, A., & McWeeney, M.	2022	The median amount of time spent discussing sexual and gender minority-specific (SGM) health needs in medical school is approximately 5 hours. Around 4.5% of the U.S. population identifies as an SGM, so this amount of time spent instructing physician assistant (PA) students about this population is very low and very likely to not be very successful in preparing these students to deal with SGM patients in real-life scenarios. A majority of physician assistant medical programs do not have SGM-inclusive curricula content, and this supports the lack of knowledge and experience needed to properly care for this population.
A narrative exploration of the importance of intersectionality in a black trans woman's mental health experiences	Shelton, S. A., & Lester, A. O.	2020	The qualitative findings emphasized that focusing on intersectionality is essential to understand the numerous factors that influence the mental health of TGNC people, especially TGNC people of color. These numerous factors reported include socioeconomic status, race, and geographical location. Although some research exists on these factors with the use of large-scale survey data, these qualitative results show that more in-depth research is needed to understand and address the unique discriminatory experiences faced by TGNC people of color and their associated health outcomes.
Transgender and gender diverse health education for future nurses: Students' knowledge and attitudes	Sherman, A. D. F., McDowell, A., Clark, K. D., Balthazar, M., Klepper, M., & Bower, K.	2021	The key numerical results for the post-curriculum surveys included statistically significant increases for the importance of the following: knowing gender identity of patients (p=0.05), competence in giving polite and successful TGD care (p=0.06), and more knowledge of resources that specifically cater to TGD populations (p=0.05). These results showed that this curriculum aided in some areas with a

			change in knowledge and feelings regarding TGD-specific health issues and unique care needs. Conclusions from this study were that participants reportedly improved their comfort and knowledge on factors involved in TGD care.
Suicide risk in trans populations: An application of minority stress theory	Tebbe, E. A. & Moradi, B.	2016	Drug and alcohol use were found to be directly associated with suicide risk in transgender populations. Low social support and increased minority stressors were found to be associated with increased depression levels in this community. Social support, minority stressors, and substance use are important topics to focus on to further determine TGNC health disparity interventions.
Current and military-specific gender minority stress factors and their relationship with suicide ideation in transgender veterans	Tucker, R. P., Testa, R. J., Reger, M. A., Simpson, T. L., Shipherd, J. C., & Lehavot, K.	2018	Over 34% of transgender military members reported having ideas of suicide in the past year due to internal and external stressors. Around 30% reported experiencing one form of minority stressor during military service, 17% reported two or more experiences, and 6% reported four or more experiences during their service. Most of these respondents reported this discrimination occurring with health care services. Additionally, rates of suicide and/or self-harming in trans communities were around 43% lower in states that had protective policies/laws against employment discrimination for trans people.
A systematic review of social stress and mental health among transgender and gender non-conforming people in the United States	Valentine, S. E., & Shipherd, J. C.	2018	Increasing and expanding gender identity data collection in national surveys can help to better understand the increased risk faced by these communities and to also determine more protective factors.
Barriers and facilitators to prep initiation and adherence among transgender and	Watson, C. W.-M., Pasipanodya, E., Savin, M. J., Ellorin, E.	2020	PrEP-related barriers to care for TGNC communities include health care provider discrimination, exclusive health care policies and services that limit access, financial limitations, mental health issues

gender non-binary individuals in Southern California	E., Corado, K. C., Flynn, R. P., Opalo, C., Lampley, E., Henry, B. L., Blumenthal, J., Bolan, R., Morris, S., & Moore, D. J.		that make health care access difficult, concerns about hormone therapy drug interactions and side effects, and lack of access to additional STI protection resources. Facilitators to care include more PrEP availability/access, motivation to partake in healthy behaviors without fear of getting HIV, and past medication use experience. Gender-affirming health care environments are essential in addressing inequities for TGNC populations from the individual to structural levels.
Building nurses' capacity to address health inequities: incorporating lesbian, gay, bisexual and transgender health content in a family nurse practitioner program	Yingling, C. T., Cotler, K., & Hughes, T. L.	2017	There were no numerical results in this study, but this module was added to five campuses of one nursing school and showed positive results. The key points included: "minority stress theory, cultural competency, gender and sexual minority vocabulary," and medical care of each specific LGBT category. The conclusions from this study were that nursing students found that the inclusion of real-life clinical cases best prepared them to adequately address LGBT-specific health conditions.
Sexual and gender minority health in medical curricula in New England: A pilot study of medical student comfort, competence and perception of curricula	Zelin, N. S., Hastings, C., Beaulieu-Jones, B. R., Scott, C., Rodriguez-Villa, A., Duarte, C., Calahan, C., & Adami, A. J.	2018	Most medical student respondents reported feeling more comfortable in treating sexual minorities (92.7%) than gender minorities (68.4%). The section that students felt most confident in was the ability to conduct interviews on sexual orientation and sexual practices (84.4%). The section that students felt least confident in was treating TGNC patients (19%). Most students felt negatively about their current curricula regarding TGNC-specific materials and that they were not prepared enough to competently care for TGNC patients (60.3%).

5 CHAPTER V: DISCUSSION

5.1 Interpretation of Results

According to the results of this literature review, various medical and nursing schools in the United States attempt to include and incorporate TGNC content into their curricula, whether the focus is on TGNC-specific needs or LGBTQ+ needs in general (Minturn et al., 2021; Sherman et al., 2021; Najor et al., 2020; McCave et al., 2019; Park & Safer, 2018; Zelin et al., 2018; Yingling et al., 2017). There was a similar mix of articles that included content on the striking health disparities and needs of both LGBTQ+ communities overall and the transgender community more specifically. Still, there was less specific focus placed on the needs of the genderqueer community. This shows the need for improved research and curricula inclusion on the overall health disparities and needs of TGNC communities, with particular attention paid to the separate communities and the striking differences and needs of both transgender and gender non-conforming communities. These results also emphasized the need for combining TGNC-specific and cultural competency content into medical and nursing school curricula in the United States to help address these unique disparities and to help advance health equity overall (Constantinou et al., 2020; de Vries et al., 2020).

Intersectionality describes how essential it is to focus on the unique differences of those with multiple marginalized identities and their associated health disparities, particularly among Black transgender women. The striking inequality shown in the results among this population alone reinforces the need for more incorporation of culturally competent TGNC-specific content into medical and nursing school curricula in the United States to address structural racism and to help promote health equity (Lett et al., 2022; Mann-Jackson et al., 2020; Shelton and Lester, 2020; Howard et al., 2019; Nagoshi & Brzuzy, 2010).

The results of this review highlighted that it was difficult for administrators and school leaders to incorporate both TGNC-specific content and cultural competency content into medical and nursing school curricula due to time constraints, a lack of appropriate educational materials, and a lack of overall guidance on how to initiate and implement these curricula inclusions (Minturn et al., 2021; Sherman et al., 2021; Constantinou et al., 2020; de Vries et al., 2020; Najor et al., 2020; McCave et al., 2019; Park & Safer, 2018; Yingling et al., 2017). Another barrier to successfully including TGNC-specific content into medical and nursing school curricula was the faculty's lack of education and expertise. Without adequately trained faculty members to teach this content, the medical and nursing students are less likely to properly learn and digest the correct information, leading to more adverse health outcomes in TGNC communities (Mann-Jackson et al., 2020; McCave et al., 2019). Recruitment and allocation of funds to compensate TGNC guests for simulations, interviews, and clinical trials were also mentioned as a barrier to success for this curricula inclusion. Participants reported finding it difficult to reach out and locate TGNC individuals or groups to participate in simulations or interviews due to the lack of resources and knowledge of where and how to find them appropriately. Without TGNC patient direct involvement, the inclusion of solely educational content was reported to be less valuable in real-world practice settings (Minturn et al., 2021; McCave et al., 2019; Park & Safer, 2018).

Another overarching theme among the reviewed articles was the lack of formality in the requirements of TGNC content in the medical and nursing school curricula. Most study respondents and participants reported having gained more knowledge and higher feelings of comfort when interacting with and treating TGNC patients. However, most of them still felt that they were not adequately prepared to competently treat and care for TGNC patients in real-world

settings outside of medical or nursing school (Saunders & McWeeney, 2022; Minturn et al., 2021; Sherman et al., 2021; McCave et al., 2019; Park & Safer, 2018; Zelin et al., 2018; Yingling et al., 2017). Curricular guidelines from U.S. medical and nursing schools will likely require competencies in delivering culturally competent and sensitive care to diverse populations. Still, there are no universally designated requirements for the inclusion of LGBTQ+ people in these competency guidelines (Yingling et al., 2017). Although not presently required for U.S. medical and nursing school curricula inclusion, some guidelines for LGBTQ+ competency development and inclusion have been released by the Association of American Medical Colleges (AAMC). Still, they consist of recommendations and best practices instead of requirements. Even though they are not required yet, these 30 competencies are one of the first sets of published best practice recommendations that will make it easier for medical and nursing school administrators to integrate the guidelines into existing U.S. curricula (AAMC, 2017).

5.2 Limitations

This literature review is unique because it provides an overview of the inclusion of TGNC-specific content into U.S. medical and nursing school curricula. Unique barriers and suggestions for future research and practice were addressed, which can help inform future interventions, curricular development, and research. To deepen the understanding of what can be done to improve TGNC-specific curricular content in the future, I applied minority stress theory (MST) and transgender theory. The intersectionality framework was also included to highlight the striking health disparities and outcomes faced by marginalized TGNC communities of various racial and ethnic backgrounds.

Despite these strengths, the results of this literature review have numerous limitations. First, only articles that were written and published in English were included. This limits the non-

Western cultural context and representation throughout the United States. Next, only articles that covered medical and nursing school curricula in the U.S. were included. Although only U.S. curricula were included in this review, it is acknowledged that there are further opportunities to learn best practices from other countries that are doing great work on TGNC curricula content inclusion, such as Canada. Third, some of the findings on barriers and facilitators were not TGNC-specific. Some were generally attributed to LGBTQ+ communities, while others were generally attributed to sexual and gender minority communities. In some cases, a specific section was included on TGNC communities within these more general groupings, but this was not the particular focus of the article overall. Finally, this review was initially supposed to compare TGNC-specific curricular learning objectives used by different U.S. medical and nursing schools; however, current literature does not provide enough of these details. Instead, the various methods used by other schools were captured and described. Educational gaps and potential solutions were proposed based on literature review findings.

5.3 Suggestions for Future Research

It is essential to improve the content and quantity of TGNC-specific training and educational curricula in medical and nursing school programs to positively impact TGNC communities (Lefevor et al., 2019). There must be a vast increase in the inclusion of TGNC-specific care into U.S. medical and nursing curricula and the development of training programs for all health care providers, from interns to physicians. This training content needs to include modules on the psychological, surgical, endocrine needs, and other forms of gender-affirming health care for transgender and gender non-conforming patients (Padula & Baker, 2017). Focusing on all aspects of TGNC care simultaneously will help address a greater number of health problems, which can help improve the adverse health outcomes faced by TGNC

communities. By incorporating skill simulations, involving local LGBTQ networks, and having LGBTQ spokespeople for curricula inclusion feedback and recommendations, medical students can have multimodal experiences and lessons to prepare them for future interactions with TGNC patients (Sherman et al., 2021; de Vries et al., 2020; Yingling et al., 2017). It is also important to include TGNC individuals in health care provider positions to increase inclusion and diversity among health care workers and better influence the impact on TGNC patients. TGNC applicants commonly report that disclosure of their gender identity led to experiencing discrimination at some point in the application process, leading to fewer completed applications and lower acceptance rates (Lockman, 2022). The results also emphasized the need for policy-level change that advocates for the destigmatization of TGNC groups (Bochicchio et al., 2021). States with protective policies against transgender identity discrimination, for example, show lower rates of suicide and self-harm in TGNG communities (Tucker et al., 2018).

According to the AAMC, one best practice is to create and implement specified knowledge, attitude, and skills (KAS) learning objectives and curricula assessment protocols (AAMC, 2017). This practice helps foster accurate and culturally sound curricula content. Next, it is recommended to develop innovative curricular programs and activities that include real-world medical practice, clinical exposure, and interaction with TGNC patients in medical school curricula as opposed to solely including lectures and training that do not include clinical exposure (Park & Safer, 2018). Real-world challenges are addressed when TGNC patient perspectives are included in curricular content. Coupling TGNC patient perspectives with the promotion of interprofessional learning and having students eventually teach content on their own will all help to improve TGNC care (AAMC, 2017).

Another best practice is to create formalized curricular assessment tools that evaluate changes in the attitude of students when caring for and treating LGBTQ+ patients, including assessment tools that can be utilized in underserved communities with limited resources. By creating these formalized tools, a more accurate depiction of this curricula extension's impact on students can be captured and improved. Another suggestion for future practice is to create development initiatives for medical and nursing school faculty that are easily accessible. These initiatives will assist with effectively teaching future health care providers about the complexities of TGNC care (AAMC, 2017). A final suggestion is to partake in demonstrations of TGNC content inclusion and share successes and lessons learned with other medical and nursing schools. These demonstrations create opportunities to collaborate with other schools to develop shared datasets on the effectiveness of these interventions and to increase research on curricular assessment tools for LGBTQ+ care objectives. These collaborations will help determine best practices to better inform future research (AAMC, 2017).

The lack of formality in the requirements of TGNC content included in U.S. medical and nursing school curricula shows a significant opportunity for change. An imperative suggestion for future research and practice is to require that the AAMC's 30 competencies about the needs of LGBTQ+ patients be included in all U.S. medical and nursing school curricula. One way to enforce these competencies is to have this information in final exams and other required competencies and content. Another way to implement these competencies is to incorporate questions on LGBTQ+-specific care and disparities into certification and licensing exams. These guidelines were created to help make it easier for medical and nursing school administrators to integrate them into existing U.S. curricula to prepare better students to care for the LGBTQ+ population; therefore, they should be mandatory to follow and implement (AAMC, 2017).

Finally, a suggestion for future research and practice involves competent gender identity data collection. Gender identity data includes sex assigned at birth, legal name, preferred name, and legal sex. Registration is the first step of gender identity data collection, and this is the time to get the most honesty and comfort out of TGNC patients. It is essential to ask specific and anonymous questions to ensure accurate reporting and patient comfort. Some of the proposed suggestions for improved functionality include using three gender fields (gender identity, birth sex, legal sex), including a space for 'preferred name,' instituting a preferred pronoun section, setting up lab/billing/prescription services to use a legal name, and including a checkbox to select if gender identity is not the same as legal sex (Deutsch & Buchholz, 2015). The use of incorrect pronouns and a lack of privacy for the patient's pronouns commonly result in some form of verbal or physical harassment and discrimination, showing the importance of correct pronoun usage and TGNC patient privacy. Expanding gender identity data collection in national surveys can help better understand the increased risk faced by these communities and determine more protective factors for health care providers to learn about (Valentine & Shipherd, 2018). It is essential to correctly count and document TGNC identities for research, policies, and helpful resources (Thompson, 2016). These suggestions help to inform best practices that will result in improved patient satisfaction, care quality, research/funding, and policies.

5.4 Conclusion

The goal of this literature review is to assess the current state of U.S. medical and nursing school curricular inclusion of specific gender-affirming TGNC content, outline common barriers and facilitators to implementation and inclusion, contextualize findings using minority stress theory and transgender theory, and explain how TGNC-specific curricular inclusion affects health outcomes in TGNC communities. Results show the inclusion of gender-affirming TGNC

content in medical and nursing school curricula has the potential to positively affect TGNC health outcomes. Even though I could outline suggestions for future research and practice, there are still systemic and systematic barriers to successfully and effectively incorporating TGNC-specific educational content into medical and nursing school curricula. The quality of care for TGNC communities can improve by incorporating the following suggestions: creating innovative curricular programs and activities that include real-world medical practice, clinical exposure, and interaction with TGNC patients in medical school curricula; including TGNC individuals in health care provider positions to increase inclusion and diversity; creating and implementing specified knowledge, attitude, and skills (KAS) learning objectives and curricula assessment protocols; creating formalized curricular assessment tools that evaluate changes in attitude for students when caring for and treating LGBTQ+ patients; creating development initiatives for medical and nursing school faculty that are easily accessible to improve knowledge of the complexities of TGNC care; partaking in demonstrations of TGNC content inclusion and share successes and lessons learned with other medical and nursing schools; practicing competent gender identity data collection; and requiring the AAMC's 30 competencies pertaining to the needs of LGBTQ+ patients to be included in all U.S. medical and nursing school curricula (Lockman, 2022; Sherman et al., 2021; de Vries et al., 2020; Park & Safer, 2018; AAMC, 2017; Yingling et al., 2017; Deutsch & Buchholz, 2015). Following these outlined suggestions can contribute to better health outcomes in these communities (Lefevor et al., 2019). Additionally, health outcomes are more likely to improve for all LGBTQ+ communities of various racial and ethnic backgrounds since these suggested practices aim to address the striking disparities in care and health outcomes in multiple realms. Although including TGNC-specific content in medical and nursing school curricula is of the utmost importance, further evaluation has shown that

additional steps must be taken to achieve the most effective outcomes. Translating suggestions for future research into practice can help to overcome common implementation barriers.

There is a basic need for creating and implementing TGNC-specific curricula in the United States. Still, the lack of formality and specific requirements in the curricula development must be addressed. In addition to creating formalized guidelines and competencies for TGNC curricular content, it is important to enforce these competencies in final exams, certifications, and licensing exams to ensure that students can adequately demonstrate their skills and knowledge on TGNC-specific health needs, disparities, and care. It is essential to incorporate cultural competency into curricula to help address adverse disparities faced by TPOC and to help improve overall health equity. Finally, increasing the inclusion of TGNC individuals within the health care provider field will help to diversify the workforce and will also help to increase comfort levels in TGNC patients. Increased representation in the health care provider workforce will not only help to improve best health care practices but will also help to improve educational discoveries. More research is needed on the long-term success rates of TGNC content inclusions in U.S. medical and nursing school curricula. Following the suggestions for future research and practice is a great start to improving the health care experiences of TGNC communities.

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