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Enhancing Transgender Informed Healthcare for Nursing Students: An Educational Intervention

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Enhancing Transgender Informed Healthcare for Nursing Students: An Educational Intervention

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Abstract

Background: Limited teaching of transgender related healthcare competencies is seen in baccalaureate nursing curriculum, resulting in inadequate preparation of healthcare providers to care for this population of patients. This discord can prevent transgender patients from seeking healthcare and affect access to needed services. *Purpose:* The purpose of this DNP project was to educate accelerated Bachelor of Science in Nursing students at an institute of higher education on providing culturally responsive healthcare for transgender patients. *Methods:* An in-person educational intervention focused on improving clinical and cultural knowledge for transgender patients was implemented and evaluated. A pre-intervention survey and post-intervention survey were utilized to assess the level of knowledge, attitudes, and skills of students prior to the intervention and immediately after the intervention using the Sexual Orientation Counselor Competency Scale (SOCCS). *Results:* Overall SOCCS scores (*paired t*(40)= -5.508, $p < .001$), and the scores for the sub-domains of skills (*paired t* (40) = -5.817, $p < .001$) and knowledge (*paired t*(40) = -2.51, $p = 0.016$), significantly increased from the pre-survey to the post-survey while the means for the sub-domain of attitudinal awareness did increase, but this increase was not statistically significant (*paired t*(40) = -.601, $p = .551$). *Conclusion:* The statistically significant improvement of overall SOCCS scores, as well as the sub-domains of skills and knowledge indicate that education is a key component in creating inclusive healthcare environments and preparing future healthcare professionals to provide culturally appropriate care to the transgender patient population.

Keywords: Transgender healthcare, nursing students, education, nursing

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Introduction

There are an estimated 1.4 million transgender individuals in the United States, and many postpone healthcare due to fear of stigma, gender identity discrimination, and lack of healthcare provider knowledge (Player & Jones, 2020). Transgender care is important to address and comprehend to improve the health, safety and well-being of transgender patients, as well as reduce disparities in both mental and physical health (Healthy People 2030). Transgender patient experiences in healthcare are often shaped by stigma (Health People 2030). Financial constraints, provider discrimination, and lack of insurance and access to services can result in poor health outcomes (Healthy People 2030).

Healthy People 2020 found these barriers are heightened by a shortage of healthcare providers who are knowledgeable in providing respectful and sensitive care. Healthy People 2030 added that healthcare, especially primary care, is vital in early detection of disease, preventative care, and chronic disease management. Healthcare providers must possess a strong understanding of transgender healthcare as it is important to acknowledge and recognize patient needs in order to provide equitable quality care.

Problem and Purpose Statements

There are increased health disparities among transgender patients and lower rates of seeking out preventative health services, as well as a lack of access to health services in relation to a shortage of culturally and medically knowledgeable healthcare providers (Office of Disease Prevention and Health Promotion, 2020). These compounding issues

result from minimal, inadequate, or no previous education in regard to transgender informed care for healthcare providers.

The purpose of this DNP project was to improve healthcare for transgender patients through education of student healthcare professionals. The goal of this project was to increase this knowledge base for accelerated Bachelor of Science in Nursing (BSN) students through an educational intervention with a pre- and post-survey evaluation component in order to promote transgender informed healthcare and improve transgender healthcare experiences.

Summary of Project

Transgender patients continue to face disparities and discrimination as healthcare providers lack the knowledge to provide transgender care. The U.S. Trans Survey found 54% of respondents felt their provider lacked the knowledge to deliver responsible care (National Center for Transgender Equality, 2015). This lack of knowledge stems from an educational gap placing transgender patients at a disadvantage, as healthcare providers are not required to complete baseline education related to their specific healthcare needs.

As of 2018, transgender healthcare curriculum was not required during healthcare provider education or for general nursing education programs (Lally & Paradiso, 2018). This lack of required education increases the knowledge gap for healthcare providers and therefore places transgender patients at a disadvantage when seeking out healthcare. Education, which promotes increased knowledge and cultural appropriateness, is a key component of providing clinically sound and adept care (Landry & Tartavouille, 2021). Educational interventions are being used to close this gap, but continued opportunities are

needed for healthcare providers (Balthazar et al., 2021). Therefore, this DNP project implemented an educational intervention at an accredited school of nursing.

Background

The Centers for Disease Control and Prevention (CDC) have placed patient-centered care at the forefront of their recommended practices for healthcare settings, especially for transgender patients who they describe as a diverse group of humans facing health disparities due to a lack of understanding in the medical community of their healthcare needs and perspectives (2020). Their unique physical, emotional, and medical needs are often not understood, or providers have no educational background regarding their care. These complex needs include specific transgender services in addition to primary prevention, routine, and emergency care (Lally & Paradiso, 2018).

Patients who identify as transgender can experience judgmental and aversive interactions when pursuing care. Assumptions from providers regarding sexual orientation and gender conformity can make it stressful and difficult to obtain medical care (Centers for Disease Control and Prevention, 2020). In 2015, 23% of respondents to the U.S. Trans Survey stated they refrained from needed healthcare due to fear of mistreatment and 42% reported mistreatment by a healthcare provider (National Center for Transgender Equality). Al-Hiraki, Tran, & O'Connor (2021) surveyed 4049 transgender patients and found that 50% of respondents delayed seeking medical care. This is in comparison to only 20% of cis gender patients delaying medical care (Al-Hiraki, Tran, & O'Connor, 2021). Half of these respondents attributed the delay in care to fear of discrimination while the other half attributed their delay due to financial constraints (Al-Hiraki, Tran, & O'Connor, 2021).

This discrimination against transgender individuals is associated with poor health outcomes including high rates of psychiatric disorders, substance abuse, and suicide (Healthy People 2020). Healthy People 2020 also found that transgender individuals have a high prevalence of sexually transmitted infections, human immunodeficiency virus, victimization, mental health disorders, suicide, and are less likely to have health insurance than heterosexual or lesbian, gay, or bisexual individuals.

Eliminating barriers to healthcare for transgender people is crucial in order to provide quality and appropriate care (National Center for Transgender Equality). An insufficient number of knowledgeable healthcare providers regarding transgender issues places patients at risk for decreased access to needed care. Education is at the forefront to combat healthcare discrimination and a lack of transgender specific healthcare has caused this gap in access.

Review of the Literature

A literature review of evidence was conducted using an online library database during the Fall 2021 academic semester. The PRISMA Flowchart was used to organize the information collected (PRISMA, 2020). Research studies published between 2016 and 2021 were included. During the identification phase, the online catalog from the University of Massachusetts W.E.B. DuBois library was utilized. The specific databases used included Cumulated Index to Nursing and Allied Health Literature Complete (CINAHL), Academic Search Premier, APA PsychInfo, Gale Academic OneFile, Gale Academic OneFile Select, Complementary Index, Social Sciences Citation Index, Scient Citation Index, Gale OneFile: Health and Medicine, Supplemental Index, ScienceDirect, Directory of Open Access Journals, LGBTQ+ Source, Social Sciences Abstracts,

Criminal Justice Abstracts, Environmental Index, Gale General OneFile, Linguistics Abstracts Online, Business Source Complete, and Library, Information Science & Technology Abstracts.

Inclusion criteria began with only articles published in the past five years under the subject of transgender. Records were further screened to only include academic journals and scholarly peer reviewed articles. From these submissions, articles were included if considered research or systemic reviews. Full text or non-English language articles were excluded. A total of 16 articles, out of 461 initially identified, were selected for this review of literature (Appendix A).

Articles included in this literature reviewed identified four main themes: 1) a lack of education regarding transgender focused care, 2) educational interventions to improve transgender specific healthcare skills including interventions and assessments, 3) lack of knowledge concerning transgender healthcare disparities and specific necessities, and 4) a need for cultural proficiency among healthcare providers in order to provide non-biased care. At times, more than one theme was seen throughout an article. Subthemes of a lack of required curriculum in healthcare provider education was found. Main themes and the subtheme overlapped numerous times in this literature review.

Lack of Education

A lack of education among healthcare providers has created barriers to improving healthcare for transgender patients. Minimal educational requirements due to a gap in healthcare curriculum has limited educational opportunities (Balthazar et al., 2021; Braun et al., 2017; Bristol et al., 2018; Carabez & Scott, 2016; Collins, 2021; Landry & Tartvoulle, 2021; Porter et al., 2021). A lack of education limits exposure to transgender

healthcare content. Implementing educational opportunities improved healthcare provider and students' awareness and knowledge, and has laid groundwork to provide respectful informed care, use gender identity-based skills, as well as create respectful patient-provider relationships and boundaries in their future careers (Balthazar et al., 2021; Braun et al., 2017; Bristol et al., 2018; Collins, 2021; Kolne et al., 2019; Kaiafas & Kennedy, 2021; Landry & Tartavouille, 2021).

Educational Interventions

A pre-test, post-test, and educational intervention supported increased knowledge (Balthazar et al., 2021; Braun et al., 2017; Bristol et al., 2018; Landry & Tartavouille, 2021), attitudes (Balthazar et al., 2021; Bristol et al., 2018), and cultural competencies (Balthazar et al., 2021; Braun et al., 2017; Bristol et al., 2018; Kaiafas & Kennedy, 2021; Landry & Tartavouille, 2021; Traister, 2021). Studies focused on assessing if educational advocacy programs improved healthcare students culturally sensitive care for lesbian, gay, bisexual, transgender (LGBT) patients (Braun et al., 2017; Bristol et al., 2018; Kaiafas & Kennedy, 2021; Landry & Tartavouille; Traister, 2021). The Ally Identity Measure (Jones, Brewster, & Jones, 2014) tool was used for pre- and post-intervention surveys and helped better understand knowledge related to previous transgender knowledge and educational opportunities (Bristol et al., 2018; Kaiafas & Kennedy, 2021).

Lack of Knowledge

Three systemic reviews were used to help better understand deficits in transgender healthcare (Banks et al., 2021; Kolne et al., 2019; Lerner & Robles, 2019). The systemic review conducted by Banks et al. (2018) included twenty studies that

identified lack of healthcare system and provider knowledge as a main contributor to negative transgender healthcare experiences. This review also highlighted three other themes which included negative healthcare provider communication, dependent and vulnerable relationship dynamics, and negative experiences with the healthcare system, which can be identified under the subtheme of cultural competencies. Recommendations to address these negative perceptions and experiences included increased healthcare provider education (Balthazar et al., 2021; Braun et al., 2017; Bristol et al., 2018; Carabez et al., 2016; Chen et al., 2019; Collins, 2021; Kolne et al., 2019; Kaiafas & Kennedy, 2021; Lally and Paradiso, 2018; Landry & Tartavouille, 2021; Porter et al., 2020; Traister, 2021; Ziegler, 2020). Other proposals included routinely asking about preferred pronouns, creating environmentally friendly healthcare spaces for transgender individuals, and elimination of sex-segregation when possible (Banks et al., 2018).

Cultural Humility

Cultural humility in the healthcare setting is the ability to effectively integrate beliefs, values, language, thoughts, and actions of different racial, ethnic, religious, or social groups into specific standards of practice, attitudes, and policies in order to increase the quality of services and improve outcomes (Centers for Disease Control and Prevention, 2021). In relation to transgender informed care, cultural competency is correlated to a lack of knowledge and education. Correct terminology and transphobia scores decreased (Braun et al., 2017; Landry & Tartavouille, 2021) and cultural competency increased when caring for LGBT patients, and these changes were observed through educational interventions (Braun et al., 2017, Bristol et al., 2018, Kaiafas & Kennedy, 2021; Landry & Tartavouille, 2021; Traister, 2021). Studies found the

continued need to promote cultural competencies in healthcare to create a positive environment (Braun et al., 2017, Bristol et al., 2018, Cerratti et al. 2018; Kaiafas & Kennedy, 2021; Landry & Tartavouille, 2021; Traister, 2021; Ziegler, 2020).

A systemic review by Kolne et al. (2019) assessed if educational training based on gender sensitivity for healthcare providers could help to improve gender-based health inequalities. A significant increase in gender-related knowledge, attitudes, and practices of healthcare workers after implementation of training programs was again seen (Braun et al., 2017; Bristol et al., 2018; Kaiafas & Kennedy, 2021; Landry & Tartavouille; Traister, 2021).

Overlapping Themes

The main themes connected to these findings found that a lack of cultural competency is related to a lack of knowledge and education due to minimal educational requirements. Educational interventions have helped to promote increased transgender informed care.

A gap in knowledge was presented or found in thirteen of the sixteen studies. This lack of knowledge correlated heavily with limited educational opportunities for understanding specific healthcare needs of transgender patients. Five studies used a pre-test, educational intervention, and post-test intervention to assess knowledge, attitudes, and cultural understanding before and after the intervention (Balthazar, et al., 2021; Banks et al., 2018; Braun et al., 2017; Bristol, Kostelec, & MacDonald, 2018; Collins, 2021; Landry & Tartavouille, 2021; Kaiafas & Kennedy, 2021; Kolne et al., 2019; Lally & Paradiso, 2018; Lerner & Robles, 2017; Carabez & Scott, 2016; Porter, Qureshi, & Zha, 2020; Traister, 2021). Each study found an increase in knowledge, attitudes, and

cultural understanding post educational intervention. These findings acknowledge a need for better understanding of LGBT healthcare requirements, and also recognize the positive impact of education.

A need for education was found in fourteen of the sixteen studies. Highlights of these studies included failure to provide educational opportunities, as well as successful educational intervention. These interventions correlated to the other main themes as they produced positive outcomes in changing healthcare providers knowledge, attitudes, and cultural competency.

Summary

Overall, this literature review found that there is a gap in knowledge, education, and cultural competencies among healthcare providers when treating transgender patients, and that educational interventions have helped to close these gaps. Although there are some articles that only include nurses, there are more studies that include healthcare providers in general. More research is needed solely on transgender patients and registered nurses in order to provide more recommendations for care by nurses in this field.

Evidence Based Practice: Verification of Chosen Option

A thorough appraisal of the literature provided evidence that shows a lack of health care worker knowledge and education when caring for LGBT patients. This lack of knowledge and education has created poor cultural awareness, and together these themes contribute to LGBT healthcare disparities. Grouping of transgender patients with lesbian, gay, and bisexual individuals was often found in articles, but a need for continued education for transgender based issues is vital.

A review of the literature provided support for an educational intervention to improve transgender informed healthcare. Educational interventions for nurses are supported by evidence-based practice and improve patient outcomes (Wu & Brettle, 2018). These educational interventions have been widely used to implement evidence-based practice for healthcare providers, including registered nurses and nursing students. The review also provided key information regarding successful implantation of educational programs to bridge this gap in lack of education and acquired knowledge. These educational interventions, along with pre- and post-surveys helped to improve knowledge, education, and cultural competency. Therefore, healthcare providers should have the opportunity to understand their personal lack of knowledge regarding transgender healthcare through an evidence-based pre-survey, and then identify learned information through a post-survey after an educational implementation.

Theoretical Framework

Madeleine Leininger's Cultural Care Diversity and Universality Theory provided an excellent theoretical framework for this project focused on gender considerations (Appendix B). The basis of this theory is to provide culturally sensitive and congruent care (Leininger & McFarland, 2010). This is achieved through cognitively based acts or decisions, that assist, facilitate, and support specific individual's or groups' cultural beliefs, values, and lifestyles (Leininger, 1991). Transgender patients necessitate specific healthcare requirements, and this is supported through nursing practice that should be a line with the clients' particular cultural needs (Leininger & McFarland, 2010).

This DNP project aligned with Leininger's (1991) theory as it aimed to provide culturally appropriate care to transgender patients. This project and theoretical framework aspired to increase cultural awareness through actions of the healthcare provider. These cognitively based acts outlined by Leininger and McFarland (2010) are directly correlated with the educational interventions to increase awareness and improve attitudes towards transgender patients as highlighted in the literature review. Changing providers' way of interacting and critically thinking about transgender healthcare fall under the framework of this cultural care theory.

Leininger and McFarland (2010) state that culturally appropriate care must be provided through new research and knowledge. There is no mention of what educational components should be used to better understand cultural competencies, however this theory does state that research and data should be applied. This data, denoting areas for improvement in care, aligns with this theoretical framework as supported evidence regarding cultural competencies are applied in an educational manner.

Overall, Madeleine Leininger's Cultural Care Diversity and Universality Theory supports the use of assistive acts, such as an educational intervention, in order for healthcare providers, especially nursing students, to learn and understand how to provide culturally proficient care.

Methods

The project design was an educational intervention with a pre-survey, post-survey, and four-week follow-up survey. The intervention included an in-person presentation utilizing a PowerPoint for visual support, and was implemented at an institute of higher education, along with the three surveys by this DNP student (Appendix

D). One educational session was provided and was one hour in duration. The pre-survey was provided and completed prior to the presentation and the post-survey was completed within one week after the educational intervention implementation. The follow-up survey was available four weeks after the implantation.

This in-person presentation focused on the unique needs of transgender patients. Evidence for this curriculum was obtained from the American Academy of Family Physicians (AAFP), the Centers for Disease Control and Prevention, The Fenway Institute, Healthy People 2030, The National Center for Transgender Equality, and the World Health Organization. Although the AAFP instructions, titled Recommended Curriculum Guidelines for Family Medicine Residents: Bisexual, Transgender, Queer/Question, and Asexual Health, are stated to provide this information to medical residents, the material can be correlated to the nursing profession through the position of the American Nurses Association (ANA). The statement from the ANA (Stokes, 2018) highlights that nurses in all roles and settings must provide culturally congruent and competent care through sensitive, safe, inclusive, and ethical interventions and interactions with transgender patients. This position by the ANA aligns with the curriculum set forth by the AAFP.

The AAFP outline, along with supplemental material from the five other institutions, highlighted the competencies required by healthcare providers in order to provide culturally appropriate care. Guidelines included patient-centered treatment and care, respectful and sensitive communication, and understanding key differences in past medical histories and physical exams to start (American Academy of Family Physicians, 2019). The topic of attitudes encompassed health disparities, stigma, and the

disproportional impact of mental health conditions (American Academy of Family Physicians, 2019). The topic of knowledge included understanding terminology, barriers to healthcare, unique health needs, and community resources (American Academy of Family Physicians, 2019). The topic of skills incorporated creating welcoming environments, describing terminology correctly, advocating for patients, and respectfully conducting a physical exam (American Academy of Family Physicians, 2019).

The presentation outline for the curriculum focused on the competencies set forth by the AAFP aimed at improving participants understanding of the need for the intervention, along with vocabulary and skills focused on creating inclusive environments and improving outcomes in the medical setting. The PowerPoint include these specific topics: 1) Background; 2) Statistics; 3) Terminology; 4) Pronouns; 5) Barriers to care; 6) Healthcare Priorities; 7) Creating an Inclusive Environment; 8) Medical and Anatomical Language; and 9) Programs and Services.

Transgender patient perspectives were used to provide recommendations for improved transgender healthcare utilization (Lerner & Robles, 2017). These included transgender specific healthcare needs based on both physical and mental health necessities. Cultural responsibility was addressed through the lens of decreasing discrimination and stigma. Tools to provide this care to transgender patients using culturally appropriate attitudes and language was presented. An understanding of the importance of this topic in healthcare, which included patient experiences and data, helped to guide the educational intervention. Overall, this presentation and project aimed to the expand the knowledge base regarding transgender informed healthcare for student

participants, allowing for an increased number of competent transgender healthcare providers during clinical rotations and post-graduation.

The Sexual Orientation Counselor Competency Scale (SOCCS) was used for both the pre-, post-, and follow-up survey (Appendix E). This approach provided baseline data of participants prior understanding of transgender informed healthcare as well as information indicating if the intervention provided appropriate material to cause and retain an increase in knowledge, attitudes, and skills. The Qualtrics © (2020) web-based data management system was utilized to disseminate the two surveys and obtain all response data. The Qualtrics © (2020) surveys were accessed via the D2L online learning platform provided by the educational institution.

Goals and Objectives

The overall aim of this DNP proposal was to implement and evaluate an evidenced-based educational intervention for accelerated-BSN students at an institution of higher learning on the topic of transgender informed healthcare. Five objectives were measured to help facilitate this goal:

1. Students would demonstrate a statistically significant improvement in overall knowledge, attitude, and skills related to transgender informed healthcare from pre-survey to post-survey.
2. Students would demonstrate the importance of creating a positive and inclusive environment when caring for transgender patients as measured by a statistically significant improvement in the attitudinal awareness sub-domain of the SOCCS survey immediately post educational intervention.

3. Students would acquire a skill set for providing culturally sensitive care to transgender patients as measured by statistically significant improvement in the skills sub-domain of the SOCCS survey immediately post educational intervention.
4. Students would demonstrate an increase in knowledge of transgender specific healthcare needs as measured by a statistically significant improvement in the knowledge sub-domain of the SOCCS survey immediately post educational intervention.
5. Students will maintain post-educational improvement in overall knowledge, attitude, and skills, as well as in each individual sub-domain, related to transgender informed healthcare as evidenced by statistically significant SOCCS scores on the four-week follow-up survey.

Measurement Instrument

In order to measure the outcomes of this DNP Project, the SOCCS survey was used to assess students' attitudinal awareness, skills, and knowledge pre-intervention and post-intervention. The scale was created in 2005 by Dr. Markus P. Bidell, a counseling and psychology professor at Hunter College, to assess the healthcare knowledge and ability of mental health counselors to provide culturally sensitive care to lesbian, gay, bisexual, and transgender patients. In 2015, Dr. Bidell broadened the use of the SOCCS assessment tool to include nursing and other healthcare professions, as well as adding an additional version (3) specifically for the assessment of transgender healthcare.

Three versions of the SOCCS are available for use. For this project, Version 3 was used as it assesses transgender clinical competency and aims to explore ethical clinical care for transgender patients (Bidell, 2015). This scale, based on the tripartite

framework, consists of 29 questions with three subscales which are combined to provide a total SOCCS score. Subscales have also been referred to as domains by Bidell (2015). The first subscale (1), skills, comprises 11 items. The second subscale (2), awareness, comprises 10 items and the third subscale (3), knowledge, comprises eight items. Altogether, these subscales assess healthcare providers overall knowledge and ability to deliver culturally sensitive healthcare to the transgender community. The SOCCS uses a self-reported rating scale with a range from one to seven. Only numbers one, four, and seven, consist of descriptive comparisons. A “1” designates “not at all true”, a “4” designates “somewhat true”, and a “7” designates “totally true”.

Psychometric research has found the SOCCS is a “psychometrically valid and reliable self-assessment” tool (Bidell, 2005, p.267). Internal consistency for the overall 29-item SOCCS was established at 0.90. Participants educational level and sexual orientation were used for criterion validity. Ali, et al. (2020) support the validity of this tool and concur with the internal consistency for the overall 29-item SOCCS score as Cronbach’s α of .90 is displayed.

The post-survey included four additional qualitative questions allowing the student participants to provide open-ended feedback (Appendix F). The qualitative questions, developed by the DNP student, were aimed at collecting data to provide insight into the participants overall satisfaction of the DNP student’s presentation of the topic, the participants gained knowledge post intervention, and the participants liking of the educational format. The first qualitative question asked participants what they liked about the educational intervention. The second qualitative question asked what could be improved. The third question asked if the intervention was helpful in understanding

transgender informed healthcare, while the final questions asked for suggestions to improve the presentation.

Project Site and Population

This DNP project took place at an accredited institution of higher education in the State of Massachusetts. The accredited institution of higher education is an interprofessional healthcare school, including Bachelor of Nursing and graduate nursing degrees. Founded in 1977, this institution is accredited by the New England Commission of Higher Education. Support for this DNP project came from this accredited institution of higher education's program director for prelicensure.

As of December 2020, 1,636 students were enrolled from 43 states and 10 different countries. Student demographics include 83% women and 17% men, with 1% American-Alaska Native, 13% Asian, 7% Black or African-American, 8% Hispanic, 60% White, 3% two or more races, and 8% unknown. International learners make up 1% of the student population and the graduation rate from this institute of higher education is 96%.

The accredited institution of higher education is composed of three schools of health science, which includes the School of Health and Rehabilitation Sciences (SHRS), School of Nursing (SON), and the School of Healthcare Leadership (SHL). Within these schools both entry-level and graduate-level programs in nursing, communication sciences and disorders, genetic counseling, occupational therapy, physical therapy, and physician assistant studies are offered.

Participants were comprised of students enrolled in the accelerated-BSN program second semester cohort in 2022. Students enrolled at this accredited institution of higher

education are required to have a previous bachelor's degree in any subject prior to matriculation for all programs. The program director for prelicensure at this accredited institution of higher education selected the second semester cohort and specifically the class NS510 Nursing Practice: Process and Skills for Day of Implantation. This cohort consisted of 67 students all with previous bachelor's degrees in other subjects besides nursing, and were all age 22 years and above.

Students were informed in person by the class professor at the start of the semester of the project implementation and the opportunity to participate in the educational intervention. The educational session occurred for one hour during a scheduled class time on Tuesday, September 20, 2022. The date was decided jointly by this DNP student and the stake holders, which include the two professors. This DNP student continued to remain in contact with the two professors throughout the semester via email and zoom to provide information regarding the project. Participation was voluntary, and there were no exclusion criteria for willing students. Student accessed all surveys via their online learning platform named D2L.

Ethical Considerations/Protection of Human Subjects

Prior to beginning this DNP project, approval for the involvement of human subjects was granted by The University of Massachusetts, Amherst (UMass) Internal Review Board (IRB). Authorization was obtained on June 2, 2022 (Appendix C). IRB approval through the accredited institution of higher education was not required as this project fell under the scope of quality improvement. The accredited institution of higher education provided a letter of support for this DNP Project. The IRB at The University of

Massachusetts – Amherst stated this project did not meet the definition of human subject research under federal regulations.

All participants were protected by the Health Insurance Portability and Accountability Act of 1996 (HIPAA) which, among other guarantees, protects the privacy of patients' health information (Modifications to the HIPAA Privacy, Security, Enforcement, and Breach Notification Rules, 2013). Additionally, this DNP student, with the assistance of the onsite advisor, conducted this project following the Standards of Care for practice in an educational setting. All information collected as part of evaluating the impact of this project did not include any potential participant identifiers.

The risk to participants partaking in this project was no different from the risks of any party receiving any educational intervention and information. Participants confidentiality was assured by coding the participants using individual identification numbers. The list of participants and their identifying numbers was kept on a password protected computer, only accessible to this DNP student. All electronic files containing identifiable information were password protected to prevent access by unauthorized users and only this DNP student had access to these passwords.

Data Collection Procedure

The Qualtrics© (2020) software tool, supplied by Umass – Amherst, was used to administer the consent form, ID code form, pre-survey, post-survey, and follow-up survey. This web-based software tool allows users to create and conduct surveys, collect data, evaluate data, and generate reports. Each question from the SOCCS tool, as well as qualitative questions on the post-survey, were entered into the platform manually by this DNP student. The pre-survey was accessed by the participants via an online link on their

computer or mobile device prior to the educational intervention while the post-survey was accessed immediately after the intervention and the follow-up survey was accessed four weeks post intervention.

Organization of the survey data was conducted using this Qualtrics © (2020) data-management system and Microsoft Excel Version 16.43 for data transfer. All links were password protected. Only this DNP student had access to the Qualtrics © (2020) data via a password protected computer.

Pre-intervention

Participants were recruited from an accredited institution of higher education. The participants were second semester accelerated-BSN students. The director of pre-licensure nursing education at this accredited institution of higher education decided students in the NS520 cohort were acceptable for participant recruitment prior to the implantation start. This DNP student communicated via email and zoom conference with the two professors of the class to set up the D2L learning platform survey information and select a time for the educational session. Student participation was voluntary.

All students were invited to participate in this educational session that was voluntary. At the beginning of the intervention the students were asked to create a five letter or number combination identification code and this code was entered with each survey in order to track student participation for post-test comparison. These identification codes were locked on a password protected computer.

Intervention

On the day of the intervention, the educational session was delivered via a lecture and PowerPoint visual support by this DNP student. The intervention included

information regarding educational information on transgender informed healthcare. Three major themes were addressed in the presentation, including increased knowledge, cultural competency (attitudes), and skills related to transgender informed healthcare.

Post-intervention

The post-intervention survey was immediately distributed to student participants after completion of the intervention, again via an online link for Qualtrics © (2020). Students were also reminded of the follow-up survey that would be available from Tuesday October 18, 2022 until Tuesday November 1, 2022. A reminder was posted on D2L when the follow-up survey was available. An Amazon gift card for \$50 was raffled off at the completion of this educational intervention. To be eligible, students must have completed all three surveys. The winner was randomly chosen from the pool of identification codes. Once the follow-up survey was closed, a winner was chosen. The code, with no other identifying details was posted on D2L and the student contacted this DNP student to retrieve their gift card via email.

Data Analysis

All surveys were assessed for matching codes in order to track student participation. Only surveys that had matching codes were included in the final statistical analysis. Participants' scores were downloaded from The Qualtrics© (2020) system and entered into Microsoft Excel to create datasets. These datasets were then uploaded to the IBM SPSS Base Gradpack 29 (2020) for statistical analysis. A paired t-test was used to compare the SOCCS scores from the pre-surveys and post-surveys testing for statistical significance ($p < .05$). Descriptive statistics including mean, standard deviation, frequency,

and percentage were also used to describe participating students' demographic characteristics.

Results

The pre-survey was available from September 13, 2023, until September 19, 2023, with the educational intervention implemented on September 20, 2023, and the post-survey available immediately after the implementation from September 20, 2023 until October 4, 2023.

The number of students who completed the pre-survey was 67, but only 54 students were included as 13 students did not complete the attached consent form. The number of students who completed the post-survey was 41 (61%). The 41 students' identification codes from the post-survey were matched with identification codes from the pre-survey, and these 41 surveys served as the sample size. Early promotion and awareness of the opportunity to participate in this implementation session helped to secure a total of 41 surveys.

After completion of the project, only eight students (12%) responded to the final follow-up survey and therefore this survey was eliminated from statistical analysis due to the insufficient number of responses. As the pre- and post-surveys boosted 33 more responses, comparing these data sets would not be appropriate and would produce false comparison findings. Therefore, the decision to forgo the SOCCS scores from the final 4-week post-intervention follow-up survey and remove this from data analysis was decided after the closing of the project.

Demographic Data

Demographic data, including the students' gender, age, and ethnicity, can be found in Table 1. The sample (n = 41) was comprised of 75% females (n=31) and 25% males (n=10), with no other gender identification reported. Ages 22 - 30 represented 73% (n=30) of the participants, while ages 31- 40 made up 27% (n=11) of the students. In regard to ethnicity, 73% (n=30) of students identified as White Non-Hispanic and 12.% (n=5) identified as Asian. An even number and percentage of students, at 7.3% (n=3) identified as Black or African-American and Hispanic/Latino. All student participants held a bachelor's degree in a subject other than nursing and were second semester students in an accelerated-BSN program.

Table 1

Students' Demographic Characteristics

	n	Percent
<i>Gender</i>		
Female	31	76%
Male	10	24%
Other	0	0%
<i>Age</i>		
22-30	30	73%
31-40	11	27%
40 & above	0	0%
<i>Ethnicity</i>		
White non-Hispanic	30	73%
Black or African American	3	7%
American Indian or Alaska Native	0	0%
Asian	5	12%

Hispanic/Latino	3	7%
Native Hawaiian or other Pacific Islander	0	0%

SOCCS Results and Outcomes

This overall score, as well as the sub-scores of the domains attitudinal awareness, skills, and knowledge were examined to identify changes in responses from pre-intervention to post-intervention.

Objective 1. *Students will demonstrate a statistically significant improvement in overall knowledge, attitude, and skills related to transgender informed healthcare from the pre-survey to post-survey.*

The overall SOCCS score was calculated from all 29 questions. There was an increase in the overall mean scores from the pre-survey (M = 4.44, SD = .537) to the post-survey (M = 5.26, SD = .791). This increase was statistically significant at the 95% confidence interval with *paired t* (40) = -5.508 and $p < .001$ (Table 2). These results indicate an improvement in student participants overall knowledge, attitude, and skills regarding transgender informed healthcare after the implementation of an educational intervention as $p < 0.001$.

Objective 2. *Students will demonstrate the importance of creating a positive and inclusive environment when caring for transgender patients as measured by a statistically significant improvement in the attitudinal awareness sub-domain of the SOCCS survey immediately post educational intervention.*

The attitudinal awareness sub-domain score included 10 questions from the SOCCS survey. This data showed no significant increase in attitudinal awareness means

from the pre-survey (M = 6.34, SD = .669) and post-survey (M = 6.42, SD = .526). Although the mean increased by 0.089 post-intervention, this improvement was not significant at the 95% confidence interval with *paired t* (40) = -.601 and $p = .551$ (Table 2). These results indicate there was no significant change in students' attitudes post educational intervention.

Objective 3. *Students will acquire a skill set for providing culturally sensitive care to transgender patients as measured by statistically significant improvement in the skills sub-domain of the SOCCS survey immediately post educational intervention.*

The skills sub-domain score consisted of 11 questions. There was an increase in the skills score from the pre-survey (M = 2.58, SD = .838) to the post-survey (M = 3.89, SD = 1.055). The increase was statistically significant at the 95% confidence interval, *paired t* (40) = -5.817 and $p < .001$ (Table 2). The skills score means improved by 1.31 points from prior to after the educational intervention. This data indicates there was a significant increase in the student participants' skills regarding transgender informed healthcare as $p < 0.001$.

Objective 4. *Students will demonstrate an increase in knowledge of transgender specific healthcare needs as measured by a statistically significant improvement in the knowledge sub-domain of the SOCCS survey immediately post educational intervention.*

The knowledge sub-domain score consisted of eight questions. There was an increase in the knowledge mean score from the pre-survey (M = 4.652, SD = 1.31) to the post-survey (M = 5.28, SD 1.05). These results were statistically significant at the 95% confidence interval, *paired t*(40) = -2.51 and $p = 0.016$ (Table 2). The knowledge score means increased by 0.628 after the implementation of the educational intervention. These

results indicate there was a significant increase in student participants' knowledge concerning transgender healthcare after the completion of the educational intervention.

Objective 5. *Students will maintain post-educational improvement in overall knowledge, attitude, and skills, as well in each individual sub-domain, related to transgender informed healthcare as evidenced by statistically significant SOCCS scores on the four-week follow-up survey.*

The follow-up survey was excluded from statistical analysis due to minimal participation and therefore, this outcome was not met. However, the overall SOCCS score (M = 5.051, SD = 0.565), sub-domain of attitudinal awareness (M = 6.212, SD = 0.502), sub-domain of skills (M = 3.75, SD = 0.769), and sub-domain of knowledge, (M = 4.656, SD = 0.783) means were calculated. As there was only 19% (n = 8) participation in the follow-up survey, these means were not compared to the pre- and post-survey data as the results would not provide valid statistical analysis.

Table 2

Results of SOCCS Survey

Survey Domain	Pre-Survey		Post-Survey		Paired-t test			
	M	SD	M	SD	n	t	df	p
Overall	4.44	.537	5.26	.791	41	-5.508	40	<.001*
Attitude Sub-domain	6.34	.669	6.42	.526	41	-.601	40	.551
Skills Sub-domain	2.58	.838	3.89	1.05	41	-5.817	40	<.001*
Knowledge Sub-domain	4.65	1.31	5.28	1.05	41	-2.512	40	.016*

* Indicates p is significant at <0.05

Student Participants' Program Feedback

Students were asked to provide feedback after the completion of the post-intervention survey (Appendix F). Open-ended questions were included to gain an understanding of what was successful and what could be improved about the educational session. Qualitative questions were stated as: 1) What did you like about the educational intervention; 2) What could be improved; 3) Did you find the educational intervention helpful in understanding transgender informed healthcare; and 4) Any other suggestions to improve this educational intervention.

The first qualitative question gained 23 respondents. In response to this question, what did you like about the educational intervention, students' indicated the information was beneficial in understanding terminology, learning to use the right pronouns, understanding health disparities, and how to ask questions respectfully and in an open-ended manner. One student noted, "It was very informative and inclusive! I appreciated the content considering we are not taught much about this very prevalent and important topic in nursing school otherwise". Another student shared they benefitted from "going over disparities I was unaware of".

The second qualitative question asked, what could be improved, and 24 students responded. Feedback overwhelming related to the request for more interactive activities. The third qualitative question stated, did you find the educational intervention helpful in understanding transgender informed healthcare, and 26 students commented. Feedback was tremendously positive, with 94% (n = 24) students' commenting "yes". However, 3% (n = 1) of the respondents, stated "I felt as if I already knew most of the information while another 3% (n = 1) stated "somewhat".

The fourth qualitative questions gained 16 responses. While 69% (n = 11) of these students responded no to the question of any other suggestions to improve this educational intervention, 19% (n = 3) again replied requesting more interactive or hands-on material. The other 12% (n = 2) suggested the inclusion of intersex individuals in the presentation would be beneficial. The student feedback helped to understand the positive aspects of this educational intervention and what areas could be improved for future use.

Discussion

The goal of this DNP quality improvement project was to promote understanding of transgender specific healthcare through the use of an educational intervention. This intervention was tailored and provided to accelerated-BSN students and aimed to improve their attitudinal awareness, skills, and knowledge on this topic. An in-depth look into the results of this DNP project and the literature review highlight the similarities and support for an educational intervention on transgender informed healthcare. The evidence for this project can also be found in the literature, which indicates a lack of educational opportunities and therefore a lack of knowledge regarding culturally responsible transgender healthcare (Balthazar et al., 2021; Braun et al., 2017; Bristol et al., 2018; Carabez & Scott, 2016; Collins, 2021; Landry & Tartvoulle, 2021; Porter et al., 2021). The value of this project was seen through improvement in students' knowledge and skills. These improvements will help to create inclusive healthcare settings and promote, rather than discourage, transgender patients to seek care.

The improvement in overall SOCCS scores, which included the categories of attitudinal awareness, skills, and knowledge, as well as the individual sub-domains of skills and knowledge, show the importance of Madeline Leninger's Cultural Care Theory

(1991). By increasing their skills and knowledge regarding transgender healthcare, the student participants can now provide culturally congruent nursing care by understanding the values and practices of care seeking patients (Leininger & McFarland, 2010).

Knowledge is at the forefront of Leninger's (1991) theory, and now students and future nurses will be equipped to better serve this population of transgender patients. This theory suggests that new research and discovered knowledge must be obtained from the people, but there is no clear indication of how this should be facilitated. Adjusting this theory to clearly state how to better understand culturally sensitive care would help to translate research to clinical practice.

The statistically significant improvement in overall SOCCS scores provides evidence that this educational intervention increased the students' attitudinal awareness, skills, and knowledge regarding transgender informed healthcare. The overall score does not differentiate between sub-domains, and therefore does not indicate if sub-domains evenly or unevenly increased this score. However, a positive and statistically significant increase in the overall means indicates that this educational intervention successfully provided needed transgender healthcare information to nursing students.

The sub-domain of attitudinal awareness did show an increase in means, however, the data from the pre-survey and post-survey indicate the results were not statistically significant. Therefore, the data indicates the intervention did not positively change or alter students' attitudes towards transgender patients. These results are likely due to the fact that this student populations' mean score was 1.67 points higher on the pre-survey than Biddell's baseline mean for attitudinal awareness at 4.66 (Ali et al., 2016). This indicates that this specific group of students' biases towards transgender patients is lower

than the baseline associated with this scoring criteria. The reason for this increase in attitudinal awareness since the SOCCS survey inception is unknown as this data point was not assessed. However, students may have transgender friends, family, and patients and therefore have a better understanding, appreciation, and un-biased perceptions of this group since there has been a significant increase in the number of transgender people over the past decade. The 2010 United State Census (Harris, 2015) found that approximately 568,000 individuals identified as transgender, and since then that number has increased to over 1 million in 2020 (Player & Jones, 2020). This increase only highlights the ongoing need for greater understanding of transgender informed healthcare. Although students' attitudinal awareness did not improve significantly after the educational intervention, the mean still increased, and the students' baseline attitudinal awareness scores indicated previous positive perceptions.

The statistically significant improvement in mean scores of the sub-domain skills from the pre-survey to the post-survey signify that the educational intervention helped to improve student participants' skills competency for transgender patients. These results indicate that obtaining proficiency in this sub-domain post-educational intervention guided students to utilize inclusive language, pronouns, create inclusive environments, and respectfully examine patients. Improvement in these set of skills will allow patients to have access to providers competent in caring for transgender patients. This improvement will help patients feel comfortable and accepted in the healthcare setting (Balthazar et al., 2021; Kolne et al., 2019)

The statistically significant improvement in mean scores of the sub-domain knowledge from the pre-survey to the post-survey indicates that the educational

intervention based on transgender informed healthcare improved the student participants' knowledge regarding this topic. This improvement also indicates that education is important in facilitating healthcare professionals to understand and acknowledge these unique needs and requirements of transgender patients. Possessing a foundation of knowledge based in transgender healthcare will help to provide competent care and trust. Creating this environment will then allow for patients to return for other healthcare needs and not refrain from seeking needed medical treatment. These results continue to prove that education is needed to obtain this knowledge base (Balthazar et al., 2021; Braun et al., 2017; Bristol et al., 2018; Landry & Tartavouille, 2021).

Overall, the data obtained from the SOCCS survey pre- and post-intervention supports the implementation of an educational session focused on transgender healthcare. The increased competency in the areas of skills and knowledge will aid in promoting healthcare inclusivity for transgender patients. Hopefully, this inclusivity will encourage an increased number of transgender patients to seek out needed medical care and maintain annual healthcare visits for preventative services.

The literature review provided evidence that the healthcare community lacks medical professionals knowledgeable in transgender informed healthcare and education is needed to improve this awareness. The results of this DNP project, which highlight the need for educational interventions focused on transgender healthcare, align with the key components of this literature review and the study by McEwing (2020). McEwing (2020) also implemented an educational intervention focused on transgender healthcare using the SOCCS survey. Similar results were found as the overall SOCCS score, and the scores of the sub-domains skills and knowledge indicated statistically significant improvement,

while the sub-domain of attitudinal awareness was not significant for either this DNP project or McEwing (2020). Similarly, McEwing (2020) found that the baseline attitudinal awareness scores were relatively high, and described this finding as the reason for no statistically significant increase.

Braun et al. (2017) found that an educational intervention successfully provided teaching to healthcare students, while Kaiafas and Kennedy (2021) discovered that education is at the forefront in providing culturally appropriate care. Banks et al. (2018), Collins (2021), Traister (2021), and Lally and Paradiso (2018) also provided similar results and found that education is required to improve nursing care competencies, and Lerner and Robles (2017) provide recommendations to improve provider knowledge through online educational tools. Landry and Tartavouille (2021) also highlight the importance of combating bias and although the sub-domain of attitudinal awareness was not statistically significant, the students baseline knowledge was above average which aligns with this this topic of the literature review.

The qualitative feedback provided by the students was helpful in understanding improvement opportunities for both this DNP student as a presenter, the PowerPoint presentation, and overall educational material. Feedback was overwhelming focused on the need for simulated learning opportunities. Students found the session helpful, with many wanting to continue to expand their new knowledge concerning transgender healthcare.

Strengths and Limitations

A major strength of this project was the design of an in-person presentation. Students were engaged and attentive to the material that was being presented in real time. This allowed for them to ask questions during and immediately after the presentation.

A limitation to this project was observed in regard to the four-week follow-up study. The inability to garner more than eight participants is likely due to difficulty engaging a student group in a long-term project that is not tied to their grade average and is voluntary. The method of analysis was then changed to only include the pre- and post-survey for data evaluation. Only one cohort of nursing students were presented with the educational intervention as allowed by the institute of higher education. Future studies may consider having a larger number of participants to help increase the number of completed follow-up surveys. Also, having a member actively engaged on the school campus as a professor or instructor in order to promote survey adherence in a recommendation for future studies. Overall a low sample size is another limitation in the generalizability of these findings.

Another limitation of this project included time constraints and the classroom setting. This educational intervention was implemented during a scheduled class time, and the presentation could not exceed the time limit of one hour due to the students' class schedule. Also, the presentation was conducted in the classroom setting which did not allow for hands on practice. Although the data supports an overall improvement in students' knowledge and skill post-intervention, there was no opportunity for practical experience due to both the time constraints and setting.

Conclusion

Transgender people have unique healthcare needs that necessitate an understanding of these requirements by all medical providers who must put patient-centered care at the forefront of their practice. Improving transgender healthcare is imperative to providing and promoting healthy lives for these individuals. Health disparities deter transgender patients from seeking medical care and are exacerbated by a shortage of providers that are knowledgeable regarding transgender healthcare, have received sufficient training in this area, and practice culturally responsible care. This discrimination is seen through higher risks of sexually transmitted disease, increased use of tobacco and alcohol products, and a scarcity of appointments made for preventive screening and services, as well as a lack of faith in healthcare providers.

This gap in knowledge, education, and cultural awareness of healthcare providers is correlated heavily with limited educational opportunities for understanding specific healthcare needs of transgender patients. Healthcare providers are inadequately prepared to care for transgender individuals due to a lack of educational opportunities creating gaps and disparities for these patients seeking medical attention. The Joint Commission and Health People 2020 have recommended hospitals increase their educational opportunities in support of transgender patients. An appraisal of the literature has found that an educational intervention is a tool that helps improve skills, knowledge, and cultural competencies.

The purpose of this DNP project was to improve attitudes, skills, and knowledge of nursing students in an accelerated-BSN program. This was overall accomplished by implementing a transgender informed healthcare educational intervention with a pre-survey and post-survey to analyze these changes. The data analysis showed positive

improvements in the overall scores, as well as the sub-domains of skills and knowledge. The sub-domain of attitudinal awareness did not significantly increase; however, students' pre-survey scores were higher than the baseline scores conducted in 2016. Therefore, this evidence demonstrates that student participants possessed positive attitudes towards transgender patients prior to starting the intervention.

This DNP project supports the need for baseline and continuing informational sessions on transgender informed healthcare as education is at the forefront of improving healthcare for all, especially transgender patients. Student feedback also supported the need for simulated educational sessions. Access to continuing education is imperative in order for healthcare providers to become and maintain competent in providing care to transgender patients. Although this project did not survey licensed healthcare professionals, a future study using this intervention would be helpful in understanding the knowledge base and educational needs of this population.

In order to increase awareness and competency, educational requirements for obtaining and renewing a professional medical license should include mandatory continuing education hours on the topic of transgender healthcare. This will promote and guarantee that healthcare providers have access to educational support and information. Also, instruction should be initiated at the student level, as all accredited nursing schools should promote this educational information in order to create and promote inclusive healthcare environments for transgender patients.

Upon completion of the data analysis, the results were provided to the program director for pre-licensure nursing students and supporting professor at the accredited institution of higher learning to help guide their need for future educational interventions.

These results may help guide future education and implementation of this material to incoming cohorts of accelerated-BSN students. Although this project focused on the understanding and knowledge of nursing students, this project could be utilized to further assess this same understanding and knowledge of licensed providers. This educational intervention can be provided online with a voice-over lecture, allowing for providers to access the material and gain a better understanding of transgender informed healthcare. Disseminating this intervention to other healthcare providers and student nurses is the next step and goal.

This project contributes to the growing body of evidence suggesting the need for increased educational programs focused on improving overall understanding of transgender healthcare. The results of this project bring to light the specific need for education based on improving skills and knowledge. Healthcare providers, including nursing students, should have the opportunity to understand their personal gap in knowledge, attitudes, and skills regarding transgender healthcare through a pre-survey, and then identify learned information through a post-survey after an educational intervention. Promoting baseline education, as well as continuing education, of transgender informed healthcare is imperative in order to improve transgender patient's healthcare experiences and outcomes.

Reference

- Al-Hiraki, S., Tran, A., & O'Connor, K. (2021). Addressing the disparities transgender patients face in the US health care system. *Georgetown Medical Review*, 5(1).
<https://doi.org/10.52504/001c.29779>
- Ali, S., Bloom, Z.D., & Lambie, G. (2020). An Exploratory Factor Analysis of the Sexual Orientation Counselor Competency Scale: Examining the Variable of Experience. *The Professional Counselor*, 7(3), 223-237.
<https://doi.org/10.15241/sa.7.3.223>
- American Academy of Family Physicians. (2019). American Academy of Family Physicians Recommended Curriculum Guidelines for Family Medicine Residents Lesbian, Gay, Bisexual, Transgender, Queer/Questioning, and Asexual Health. AAFP Reprint No. 289D. Available from: https://www.aafp.org/dam/AAFP/documents/medical_education_residency/program_directors/Reprint289D_LGBT.pdf
- American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). Author.
- Balthazar, M., Bower, B., Clark, K.D., Klepper, M., McDowell, A., & Sherman, A.D.F. (2021). Transgender and gender diverse health education for future nurses: Students' knowledge and attitudes. *Nurse Education Today*, 97, 1-6.
<https://doi.org/10.1016/j.nedt.2020.104690>
- Banks, J., Heal, C., Heng, A., & Preston, R. (2018). Transgender peoples' experiences and perspectives about general healthcare: A systemic review. *International Journal of*

- Transgenderism*, 19(4), 359-378. <https://doi.org/10.1080/15532739.2018.1502711>
- Bidell, M. P. (2005). The Sexual Orientation Counselor Competency Scale: Assessing Attitudes, Skills, and Knowledge of Counselors Working with Lesbian, Gay, and Bisexual Clients. *Counselor Education and Supervision*, 44(4), 267-279. <https://doi.org/10.1002/j.1556-6978.2005.tb01755.x>
- Bidell, M. (2015). Using the Sexual Orientation Counselor Competency Scale (SOCCS) in Mental Health and Healthcare Settings: An Instructor's Guide. *MedEdPORTAL Publications*. http://doi.org/10.15766/mep_2374-8265.10040
- Braun, H.M., Deutsch, M.B., Garcia-Grossman, I.R., Quinones-Rivera, A. (2017). Outcome and impact evaluation of a transgender health course for health profession students. *LGBT Health*, 4(1), 55-61. <https://doi.org/10.1089/lgbt.2016.0119>
- Bristol, S., Kostelec, T., & MacDonald, R. (2018). Improving emergency health care workers' knowledge, competency, and attitudes toward lesbian, gay, bisexual, and transgender patients through interdisciplinary cultural competency training. *Journal of emergency Nursing*, 44(6), 632-639. <https://doi.org/10.1016/j.jen.2018.03.013>
- Burgwal, A., Gvianishvili, N., Hard, V. Kata, J., Nieto, I.G., Orre, C., Smiley, A., Vidic, J., & Motmans, J. (2020). The impact of training in transgender care on healthcare providers competence and confidence: A cross-sectional survey. *Healthcare*, 6(967), 1-15. <https://doi.org/10.3390/healthcare9080967>
- Carabez, R. & Scott, M. (2016). Nurses don't deal with these issues: Nurses' role in advance care planning for lesbian, gay, bisexual and transgender patients. *J Clin Nurs*, 25: 3707-3715. <https://doi.org/10.1111/jocn.13336>

- Centers for Disease Control and Prevention. (2021). *Cultural Competence in Health and Human Services*. Retrieved March 5, 2023 from <https://npin.cdc.gov/pages/cultural-competence>
- Centers for Disease Control and Prevention. (2021). *Lesbian, gay, bisexual, and Transgender Health*. Retrieved November 14, 2021, from <https://www.cdc.gov/lgbthealth/index.htm>
- Centers for Disease Control and Prevention. (2020). *Patient-Centered Care for Transgender People: Recommended Practices for Health Care Settings*. Retrieved November 13, 2021, from <https://www.cdc.gov/hiv/clinicians/transforming-health/health-care-providers/affirmative-care.html>
- Cerratti, F., Cipollone, F., Cicolini, G., Della Pelle, C., & Di Giovanni, P. (2018), Attitudes towards and knowledge about lesbian, gay, bisexual, and transgender patients among Italian nurses: An Observational Study. *Journal of Nursing Scholarship, 50*, 367-374. <https://doi.org/10.1111/jnu.12388>
- Chen, D., Kolbuck, V.D., Nahata, L., Quinn, G. Sutter, M.E., & Tishelman, A.C. (2019). Knowledge, practice behaviors, and perceived barriers to fertility care among providers of transgender healthcare. *Journal of Adolescent Health, 64*(2), 226-234. <https://doi.org.10.1016/j.adohealth.2018.08.025>
- Coleman, E., Feldman, J., Garofalo, R., Hembree, W., Radix, A., Safer, J.D., & Sevelius, J. (2016). Barriers to health care for transgender individuals. *Curr Opin Endocrinol Diabetes Obes, 23*(2), 168-171. <https://doi.org/10.1097/MED.000000000000227>
- Collins, CA. (2021). Pediatric nurse practitioners' attitudes/beliefs and

- knowledge/perceived competence in caring for transgender and gender-nonconforming youth. *J Spec Pediatr Nurs*, 26(2). <https://doi.org/1111/jspn.12321>
- Garrard, J. (2027). *Health sciences literature review made easy: The matrix method*. (6th ed.). Jones and Bartlett Learning, LLC.
- Gonzalo, A. (2021). *Madeleine Leininger: Transcultural nursing theory*. Nurseslabs. Retrieved March 17, 2022, from <https://nurseslabs.com/madeleine-leininger-transcultural-nursing-theory/>
- Harris, B.C. (2015). Likely transgender individuals in the U.S. federal administrative records and the 2010 census. U.S. Census. Bureau. Retrieved February 19, 2023, from Likely Transgender Individuals in U.S. Federal Administrative Records and the 2010 Census
- IBM Corp. Released 2020. IBM SPSS Statistics for Windows, Version 27.0. Armonk, NY: IBM Corp
- Joint Commission, (2016). Advancing effective communication, cultural competence and patient- and family centered care for the lesbian, gay, bisexual and transgender community. Retrieved March 18, 2022 from <https://www.jointcommission.org/lgbt/>
- Jones, K. N., Brewster, M. E., & Jones, J. A. (2014). The creation and validation of the LGBT Ally Identity Measure. *Psychology of Sexual Orientation and Gender Diversity*, 1(2), 181–195. <https://doi.org/10.1037/sgd0000033>
- Kolne, K., Lindsay, S., Osten, V., Rezai, M. (2019). Outcomes of gender-sensitivity educational interventions for healthcare providers: A systemic review. *Health Education Journal*, 78(8), 958-976. <https://doi.org10.1177/0017896919859908>

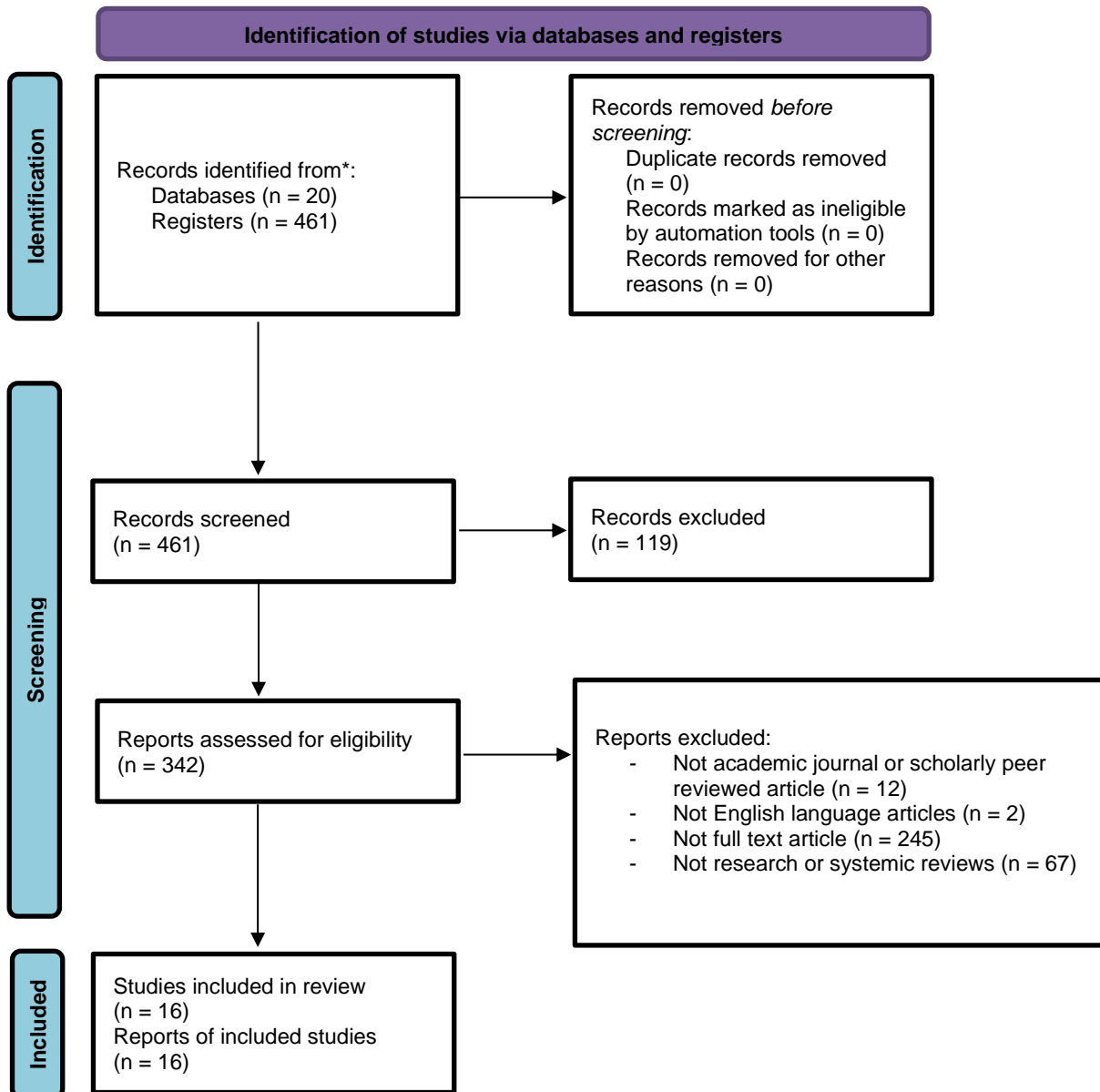
- Kaiafas, K.N. & Kennedy, T. (2021). Lesbian, gay, bisexual, transgender, queer cultural competency training to improve the quality of care: An evidence-based practice project. *Journal of Emergency Nursing*, 47(4), 654-660.
<https://doi.org/10.1016/j.jen.2020.12.007>
- Lally, M.R. & Paradiso, C. (2018). Nurse practitioner knowledge, attitudes, and beliefs when caring for transgender people. *Transgender Health*, 3(1), 48-46.
<https://doi.org/10.1089.trgh.2017.0048>
- Landry, J. & Tartavouille, T. (2021). Educating nursing students about delivering culturally sensitive care to lesbian, gay, bisexual, transgender, questioning/queer, intersex, plus patients: The impact of an advocacy program on knowledge and attitudes. *Nursing Education Perspectives*, 42(4), 15-19.
<https://doi.org/10.1097/01.NEP.0000000000000819>
- Leininger, M. (1991). Transcultural care principles, human rights, and ethical considerations. *Journal of Transcultural Nursing*, 3(1), 21-23.
<https://doi.org/10.1177/104365969100300105>
- Leininger, M.M. & McFarland, M. R. (2010). Madeleine Leininger's theory of culture care diversity and universality. *Nursing theories and nursing practice*, 317-336. Retrieved February 25, 2022, from <http://stikesyahoedsmg.ac.id/web/media/pdf/1.pdf#page=338>
- Lerner, J.E., & Robles, G. (2017). Perceived barriers and facilitators to health care utilization in the United States for transgender people: A review of recent literature. *Journal of Health Care for the Poor and Underserved* 28(1), 127-152. <https://doi.org/10.1353/hpu.2017.0014>.

- Lesbian, gay, bisexual, and Transgender Health*. Healthy People 2020. (n.d.). Retrieved March 12, 2022, from <https://www.healthypeople.gov/2020/topics-objectives/topic/lesbian-gay-bisexual-and-transgender-health?topicid=25>
- LGBT*. Healthy People 2030. (n.d.). Retrieved April 21, 2022, from <https://health.gov/healthypeople/objectives-and-data/browse-objectives/lgbt>
- McEwing, E. (2017). Delivering culturally competent care to the lesbian, gay, bisexual, and transgender (LGBT) population: Education for nursing students. *Nurse Educ Today*, *94*, 104573. <https://doi.org/10.1016/j.nedt.2020.104573>
- National Center for Transgender Equality. (2015) *U.S. Trans Survey*. Retrieved March 17, 2022, from <https://transequality.org/sites/default/files/docs/usts/USTS-Full-Report-Dec17.pdf>
- Porter, S., Qureshi, R., & Zha, P. (2020). An assessment of lesbian, gay, bisexual, and transgender health competencies among bachelors-prepared registered nurses in graduate-level study. *Academic Medicine*, *95*(12), 113-120. <https://doi.org/10.1097/ACM.00000000000003681>
- Player, M. & Jones, A. (2020). Compulsory Transgender health education: The time has come. *Family Medicine*, *53*(6), 395-397 <https://doi.org/10.22454/FamMed.2020.647521>
- PRISMA. (2020). Prisma Flow Diagram. Retrieved from <http://prisma-statement.org/PRISMAStatement/FlowDiagram.aspx>
- Qualtrics software, Version Design XM of Qualtrics. Copyright © 2020 Qualtrics.

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- <https://www.qualtrics.com>
- Qualtrics - Southern Illinois University Edwardsville / SIUE*. (n.d.). Retrieved March 16, 2022, from <https://www.siue.edu/its/qualtrics/pdf/QualtricsFAQs.pdf>
- Stokes, L. (2018). The ANA Position Statement: Nursing advocacy for LGBTQ+ populations. *The Online Journal of Issues in Nursing*. <https://doi.org/10.3912/OJIN.Vol24No01PoSCol02>
- Traister, T. (2021). Improving LGBTQ cultural competence of RNs through education. *The Journal of Continuing Education in Nursing*, *51*(8), 359-366. <https://doi.org/10.3928/0022012420200716-05>
- World Health Organization. *Transgender People*. Retrieved November 14, 2021, from <https://www.who.int/teams/global-hiv-hepatitis-and-stis-programmes/populations/transgender-people>
- Wu, Y., Brettle, A., Zhou, C., Ou, J., Wang, Y., & Wang, S. (2018). Do educational interventions aimed at nurses to support the implementation of evidence-based practice improve patient outcomes? A systematic review. *Nurse Education Today*, *70*, 109-114. <https://doi.org/10.1016/j.nedt.2018.08.026>
- Ziegler, E. (2020). The integral role of nurses in primary care for transgender people: A qualitative descriptive study. *JNurse Manag*, *29*, 95-103 <https://doi.org/10.1111/jonm.13190>

Appendix A

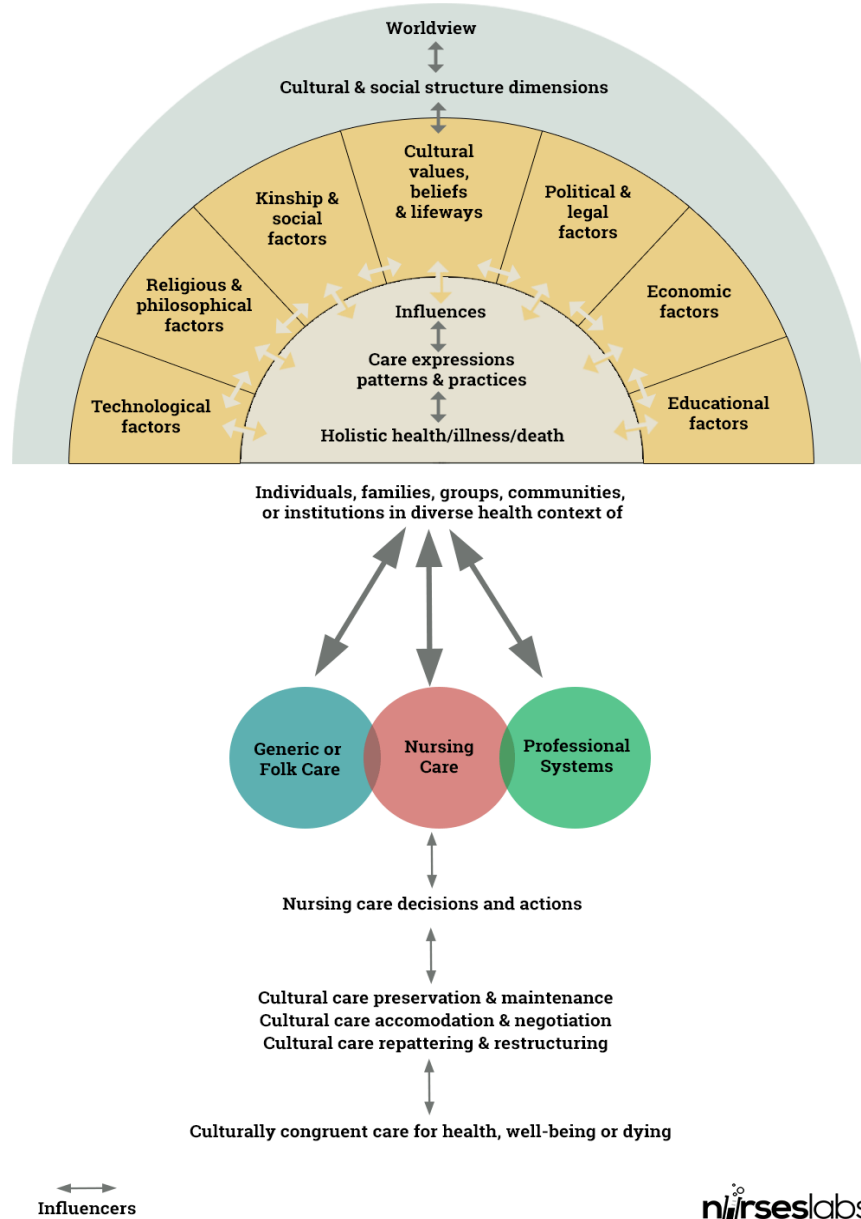
Prisma Flow-Diagram for Literature Review



Appendix B

Madeline Leininger's Transcultural Nursing Model

Madeleine Leininger's Transcultural Nursing The Sunrise Enabler to Discover Culture Care Sunrise Model



(Gonzalo, 2021)

Appendix C

Umass IRB Form

UMassAmherst

Human Research Protection Office

Mass Venture Center
100 Venture Way, Suite 116
Hadley, MA 01035
Telephone: 413-545-3428

Memorandum – Not Human Subjects Research Determination

Date: June 2, 2022

To: Olivia Bass, College of Nursing

Project Title: *Improving Transgender Informed Healthcare for Nursing Students: An Educational Intervention*

HRPO Determination Number: 22-101

The Human Research Protection Office (HRPO) has evaluated the above named project and has made the following determination based on the information provided to our office:

- The proposed project does not involve research that obtains information about living individuals [45 CFR 46.102(f)].
- The proposed project does not involve intervention or interaction with individuals OR does not use identifiable private information [45 CFR 46.102(f)(1), (2)].
- The proposed project does not meet the definition of human subject research under federal regulations [45 CFR 46.102(d)].

Submission of an Application to UMass Amherst IRB is not required.

Note: This determination applies only to the activities described in the submission. If there are changes to the activities described in this submission, please submit a new determination form to the HRPO prior to initiating any changes. *Researchers should NOT include contact information for the UMass Amherst IRB on any project materials.*

A project determined as “Not Human Subjects Research,” must still be conducted ethically. The UMass Amherst HRPO strongly expects project personnel to:

- treat participants with respect at all times
- ensure project participation is voluntary and confidentiality is maintained (when applicable)
- minimize any risks associated with participation in the project
- conduct the project in compliance with all applicable federal, state, and local regulations as well as UMass Amherst Policies and procedures which may include obtaining approval of your activities from other institutions or entities.

Please do not hesitate to call us at 413-545-3428 or email humansubjects@ora.umass.edu if you have any questions.



Jorge A. Guzman, Assistant Director
Human Research Protection Office

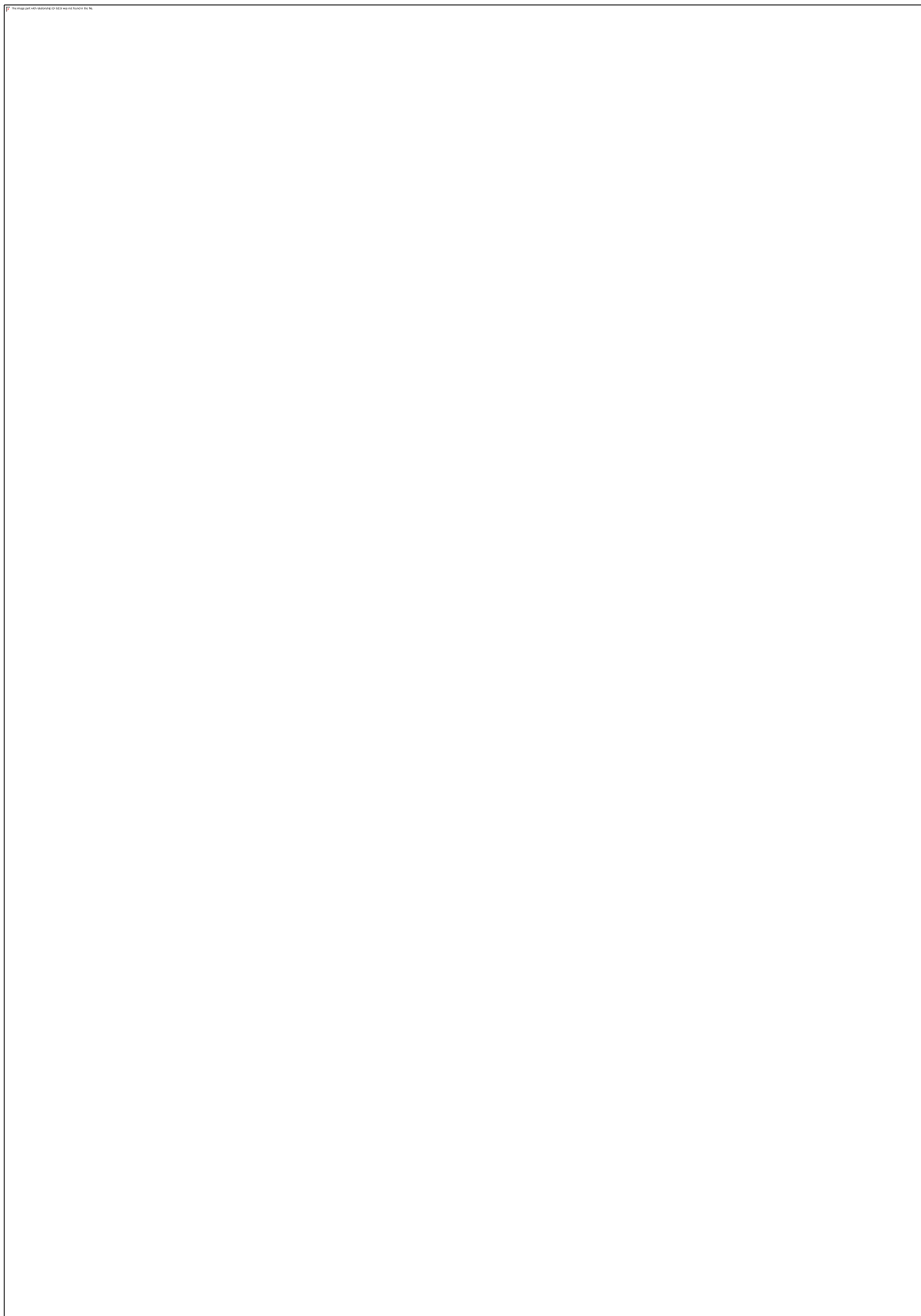
Appendix D

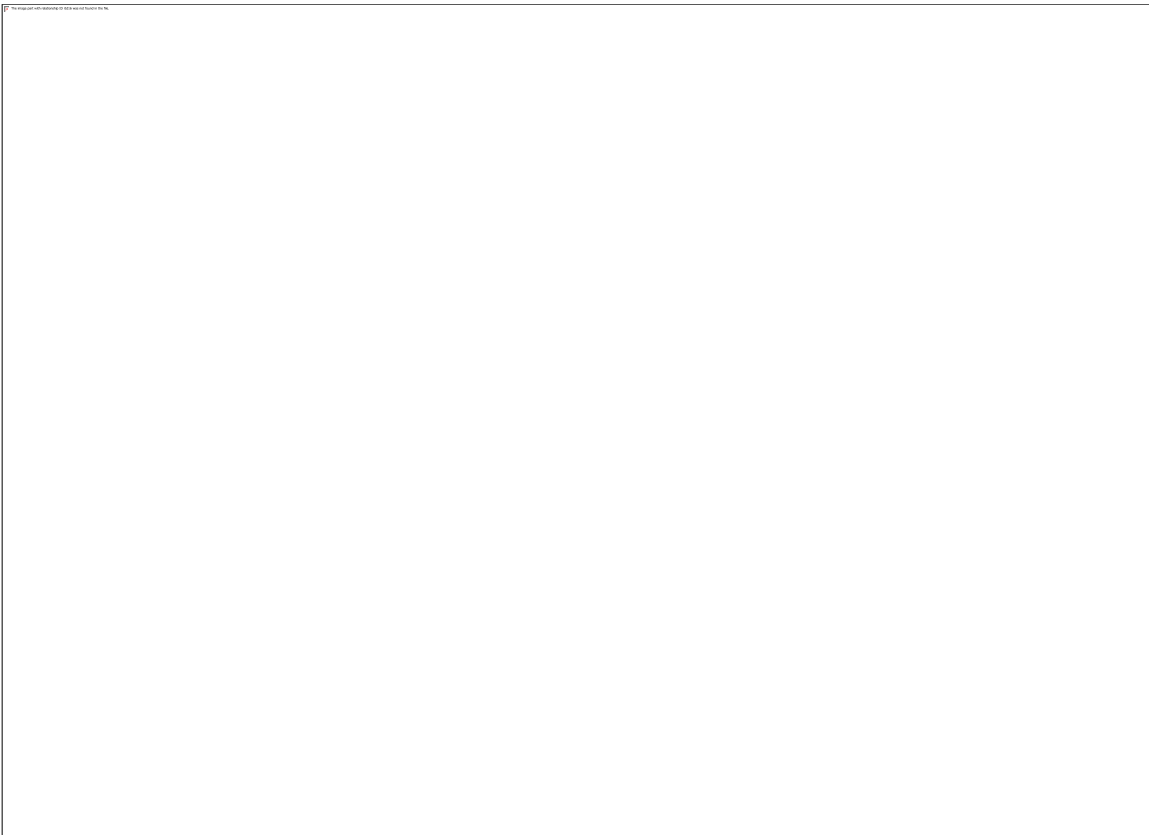
PowerPoint Presentation Outline

Appendix E

Sexual Orientation Counseling Competency Scale Version 3

A large, empty rectangular box with a thin black border, occupying most of the page below the title. It appears to be a placeholder for content that is not present in this version of the document.





Appendix F

Student Feedback

Question 1: What did you like about the educational intervention?

- It provided a lot of helpful information to use in the clinical setting.
- It was very informative!
- Going over health disparities I was unaware of.
- Pertinent lesson.
- Informative, organized.
- It was relevant and informative.
- It was very informative and inclusive! I appreciated the content considering we are not taught much about this very prevalent and important topic in nursing school otherwise.
- I think I benefitted from learning new terminology and learning the right pronouns to use.
- It gave light to a topic that is typically not acknowledged.
- It was helpful learning more and gaining new insight!
- Had good background on the topic.
- This is a necessary topic in all health programs.
- It was very informative and helpful!
- Very informative, foundational information for providing care to transgender individuals
- Information was presented well

- It was more than I have learned regarding a transitioning lifestyle.
- I loved the flow of the presentation and the applicable language in healthcare.
- Interesting topic and research.
- Informative for people who don't know about people who are transgender.
- The examples on how to ask questions respectfully and in an open-ended way.
- It was nice to talk about issues that would otherwise be invisible throughout the education.

Question 2: What could be improved?

- More interactive
- Include more anecdotes
- More captivating and less textbook reading like maybe add activities
- More about nursing interventions/how it relates to the profession. More engaging with the class and less reading off the slides.
- Make more interactive.
- More resources?
- Videos, pictures, more visuals or examples.
- The order of the slides
- Maybe be more interactive

- I personally would benefit from more specific examples of how to address transgender-specific topics in the clinic setting
- Maybe a few more activities to keep us engaged
- Just a small detail in case you are using the presentation again in the future, but the misconceptions slide made it seem as though the bullets were misconceptions themselves rather than interventions.
- Nothing!
- Perhaps more interactive engagement.
- I think I would benefit from more examples of phrases/communication strategies when assessing a transgender individual.
- You had great content, be confident about it!
- Could be more interactive!

Question 3: Did you find the educational intervention helpful in understanding transgender informed healthcare?

- Yes.
- Yes!
- Yes.
- Yes.
- Yes.
- Yes. It's important to learn how to care for clients and this helped so much
- Yes.

- Yes.
- Yes!
- Yes, it was presented very clearly.
- Of course.
- Yes.
- Yes, I think this info and topic is highly relevant and helped to break down some misconceptions and provided quality education.
- Yes.
- I learned how people who are transitioning/transitioned feel about healthcare. I would like more information on anatomical and physiological as well how to do health assessments specifically in each step.
- Yes.
- Yes!!
- Yes.
- I think it had a good foundation; I would definitely love more information in the future in order to better care for patients who are transgender to meet their needs.
- Yes, now I know how to communicate while being respectful.
- This presentation was a nice foundation, but I would've liked it to go further.
- Yes.

- Somewhat.
- Yes.

Question 4: Any other suggestions to improve this educational intervention?

- When talking about sex, don't forget to mention intersex individuals.
- Add kahoot/anonymous question forum for questions that are anonymous/sensitive for people to feel more comfortable sharing.
- Nope!
- No.
- Thank you!!
- More case studies/opportunities for student participation.
- Nope!
- Nope!
- No.
- There are so many intersex individuals, and any of the identify as transgender and/or GNC/non-binary. It would be interesting and important to educate on that. Discuss ways that gender affirming hormone treatment/HRT can affect lab values that rely on sex binary (Hgb, Hct, troponin, etc.)
- No.
- Nope!
- Could benefit from being a bit more engaged with some hands-on activities/clinical role-playing would be helpful.

- No.

- No.